

# NOTICE OF COUNCIL MEETING

## PUBLIC AGENDA

An Ordinary Meeting of City of Parramatta Council will be held in PHIVE (COUNCIL CHAMBER) 2 Civic Place, Parramatta on Monday, 27 February 2023 at 6:30PM.

Bryan Hynes  
ACTING CHIEF EXECUTIVE OFFICER

# EMERGENCY EVACUATION DIAGRAM

Level 4 East

2 Civic Place, Parramatta NSW 2150

## Evacuation Procedures

### IN CASE OF FIRE

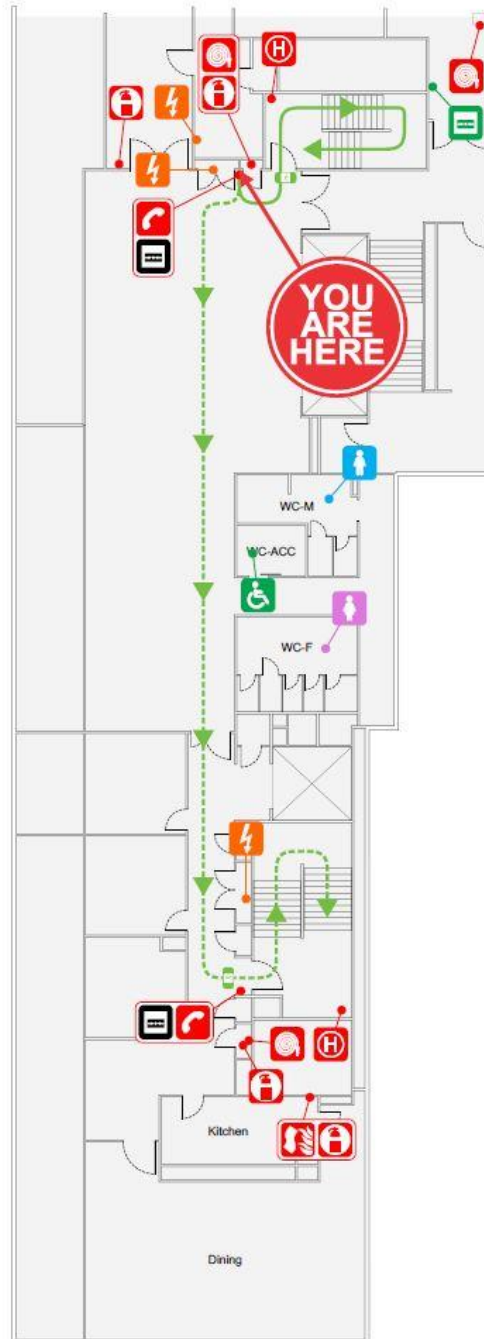
- (R)** REMOVE people from immediate danger
- (A)** ALERT people nearby and raise an alarm (Dial 000)
- (C)** CONFINE fire and smoke (Close doors behind you if safe to do so)
- (E)** EVACUATE via the nearest emergency exit

## Legend

 Amenities Disabled	 Amenities Female	 Amenities Male
 Emergency Door Release	 Emergency Call Point	 Dry Chemical Powder
 Fire Blanket	 Hose Reel	 Hydrant
 Switchboard	 Warden Intercommunication Point	 Exit
 Alternate Evacuation Path	 Evacuation Path	 Assembly Area

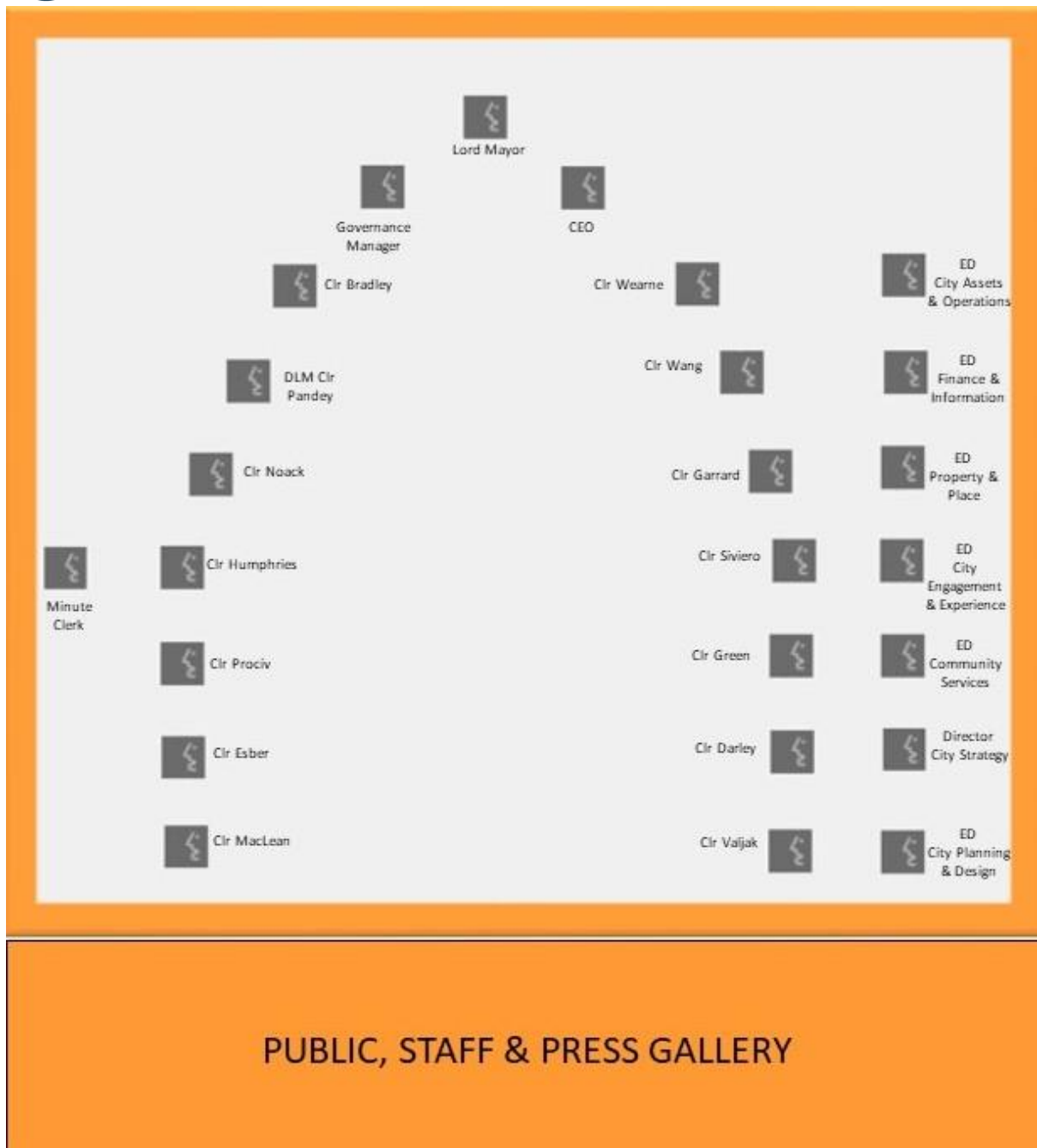
## Site Plan

Parramatta PHIVE



**Chubb**





**PUBLIC, STAFF & PRESS GALLERY**

## STATEMENT OF ETHICAL OBLIGATIONS:

In accordance with clause 3.23 of the Model Code of Meeting Practice, Council is obligated to remind Councillors of the oath or affirmation of office made under section 233A of the Local Government Act 1993, and of their obligations under Council's Code of Conduct to disclose and appropriately manage conflicts of interest – the ethical obligations of which are outlined below:

Obligations	
<b>Oath [Affirmation] of Office by Councillors</b>	I swear [solemnly and sincerely declare and affirm] that I will undertake the duties of the office of Councillor in the best interests of the people of the City of Parramatta Council and the City of Parramatta Council that I will faithfully and impartially carry out the functions, powers, authorities and discretions vested in me under the Local Government Act 1993 or any other Act to the best of my ability and judgement.
Code of Conduct Conflict of Interests	
<b>Pecuniary Interests</b>	<p>A Councillor who has a <b>pecuniary interest</b> in any matter with which the Council is concerned, and who is present at a meeting of the Council at which the matter is being considered, must disclose the nature of the interest to the meeting.</p> <p>The Councillor must not be present at, or in sight of, the meeting:</p> <ol style="list-style-type: none"> <li>At any time during which the matter is being considered or discussed, or</li> <li>At any time during which the Council is voting on any question in relation to the matter.</li> </ol>
<b>Non-Pecuniary Conflict of Interests</b>	A Councillor who has a <b>non-pecuniary conflict of interest</b> in a matter, must disclose the relevant private interest in relation to the matter fully and on each occasion on which the non-pecuniary conflict of interest arises in relation to the matter.
<b>Significant Non-Pecuniary Conflict of Interests</b>	A Councillor who has a <b>significant</b> non-pecuniary conflict of interest in relation to a matter under consideration at a Council meeting, must manage the conflict of interest as if they had a pecuniary interest in the matter.
<b>Non-Significant Non-Pecuniary Interests</b>	A Councillor who determines that they have a non-pecuniary conflict of interest in a matter that is <b>not significant</b> and does not require further action, when disclosing the interest must also explain why conflict of interest is not significant and does not require further action in the circumstances.

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*This report is confidential in accordance with section 10A (2) (d) of the Local Government Act 1993 as the report contains commercial information of a confidential nature that would, if disclosed (i) prejudice the commercial position of the person who supplied it; or (ii) confer a commercial advantage on a competitor of the Council; or (iii) reveal a trade secret.*

16.2 Technology One - One Council Unsolicited Proposal

*This report is confidential in accordance with section 10A (2) (c) (d) of the Local Government Act 1993 as the report contains information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business; AND the report contains commercial information of a confidential nature that would, if disclosed (i) prejudice the commercial position of the person who supplied it; or (ii) confer a commercial advantage on a competitor of the Council; or (iii) reveal a trade secret.*

16.3 Microsoft Licensing Agreement RRQ Outcome

*This report is confidential in accordance with section 10A (2) (d) of the Local Government Act 1993 as the report contains commercial information of a confidential nature that would, if disclosed (i) prejudice the commercial position of the person who supplied it; or (ii) confer a commercial advantage on a competitor of the Council; or (iii) reveal a trade secret.*

**17 PUBLIC ANNOUNCEMENT**

**18 CONCLUSION OF MEETING**

***After the conclusion of the Council Meeting, and if time permits, Councillors will be provided an opportunity to ask questions of staff.***

MINUTES OF THE MEETING OF CITY OF PARRAMATTA COUNCIL HELD IN THE COUNCIL CHAMBER AT 5 PARRAMATTA SQUARE, PARRAMATTA ON MONDAY, 13 FEBRUARY 2023 AT 6:30PM

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*These are draft minutes and are subject to confirmation by Council at its next meeting. The confirmed minutes will replace this draft version on the website once confirmed.*

PRESENT

The Lord Mayor, Councillor Donna Davis and Councillors Phil Bradley, Kellie Darley, Pierre Esber, Henry Green, Ange Humphries, Cameron Maclean, Paul Noack, Sameer Pandey, Dr Patricia Prociv, Dan Siviero, Georgina Valjak and Donna Wang.

1. OPENING MEETING

The Lord Mayor, Councillor Donna Davis, opened the meeting at 6:34PM.

2. ACKNOWLEDGEMENT TO TRADITIONAL OWNERS OF LAND

The Lord Mayor, acknowledged the Burramattagal people of The Darug Nation as the traditional owners of this land, and paid respect to their ancient culture and to their elders past, present and emerging.

3. WEBCASTING ANNOUNCEMENT

The Lord Mayor, advised that this public meeting is being recorded and streamed live on the internet. The recording will also be archived and made available on Council's website.

The Lord Mayor further advised that all care will be taken to maintain privacy, however as a visitor in the public gallery, the public should be aware that their presence may be recorded.

4. GENERAL RECORDING OF MEETING ANNOUNCEMENT

As per Council's Code of Meeting Practice, the recording of the Council Meeting by the public using any device, audio or video, is only permitted with Council permission. Recording a Council Meeting without permission may result in the individual being expelled from the Meeting.

5. APOLOGIES AND APPLICATIONS FOR LEAVE OF ABSENCE OR ATTENDANCE BY AUDIO-VISUAL LINK BY COUNCILLORS

PROCEDURAL MOTION

4154 RESOLVED (Esber/Siviero)

- (a) **That** the apology received from Councillor Garrard and Wearne due to personal reasons be accepted and leave of absence granted.



- (b) **Further, that** the request to attend the Ordinary Council Meeting dated 13 February 2023 via remote means submitted by Councillor Humphries due to personal reasons be accepted.

6. CONFIRMATION OF MINUTES

SUBJECT: Minutes of the Council Meeting held on 12 December 2022  
4155 RESOLVED (Noack/Wang)

**That** the minutes be taken as read and be accepted as a true record of the Meeting.

7. DISCLOSURES OF INTEREST

There were no Disclosures of Interest made at this meeting.

8. MINUTES OF THE LORD MAYOR

8.1 SUBJECT Türkiye and Syria Earthquake Appeal

REFERENCE F2022/00105 - D08865093

REPORT OF Lord Mayor, Councillor Donna Davis

4156 RESOLVED (Davis/Pandey)

- (a) **That** the City of Parramatta donate \$10,000 AUD to assist the humanitarian efforts in Türkiye and Syria following the earthquakes on 6 February 2023, and that donations be made up of:

- a. \$5,000 to CARE Australia's Emergency Appeal; and
- b. \$5,000 to Australian Red Cross – Türkiye-Syria Earthquake Appeal.

- (b) **That** Council write to the Turkish Consulate General in Sydney and the Syrian Honorary Consulate in Sydney to pass on its condolences;

- (c) **That**, Lord Mayor write to the Greater Sydney Councils to also assist in the humanitarian efforts in Türkiye and Syria;

- (d) **That** a condolence book be placed in the City of Parramatta libraries for the community to pay their respects; and

- (e) **Further, that** Council observe a minute silence to pay our respects to all those impacted by this tragedy.

**Note: Council held a minute's silence.**

8.2 SUBJECT Condolence Motion: Willem (Bill) Tibben

REFERENCE F2022/00105 - D08865212

4157 REPORT OF Lord Mayor, Councillor Donna Davis  
RESOLVED (Davis/Bradley)

- (a) **That** Council acknowledge the passing of Willem (Bill) Tibben, long-time local community volunteer, founding member of Granville Men's Shed and 2008 Parramatta City Council Senior Citizen of the Year;
- (b) **That** a letter of condolence be sent from the Lord Mayor to Bill's family on behalf of the City of Parramatta; and
- (c) **Further, that** the Chamber hold a minute's silence as a gesture of respect on Mr Tibben's passing and in recognition of his contributions to the Parramatta community.

**Note: Council held a minute's silence.**

8.3 SUBJECT 2023 Australia Day Honours

REFERENCE F2022/00105 - D08865228

REPORT OF Lord Mayor, Councillor Donna Davis

4158 RESOLVED (Davis/Prociv)

- (a) **That** Council congratulate the following recipients of the Order of Australia's 2023 Australia Day Honours for their contributions to the Parramatta community, being:
  - a. Member (AM) in the General Division
    - i. Emeritus Professor Richard Lionel Howitt AM
    - ii. Professor Clara Kaye Chow AM
    - iii. The late Mr John Moxon AM
    - iv. Professor Anna Poidevin (De Fazio) AM
  - b. Medal (OAM) in the General Division
    - i. Dr Kristin Bindley OAM
    - ii. Brother Anthony Paul Boyd OAM
    - iii. Dr Roslyn Allayne Crampton OAM
    - iv. Ms Katherine Maka OAM
    - v. Dr Coralie Wales OAM
- (b) **That** Council congratulate Amar Singh, founder of Turbans for Australia, who was recognised as Australia's Local Hero in the 2023 Australian of the Year Awards; and
- (c) **Further, that** Council writes to each recipient with a letter of congratulations.

8.4 SUBJECT i4Give Day 2023

REFERENCE F2022/00105 - D08865268

REPORT OF Lord Mayor, Councillor Donna Davis

4159 RESOLVED (Davis/Wang)

**That** Council acknowledge the Abdallah and Sakr families, Council officers and all who played a part in the delivery of i4give Day in Prince Alfred Square, Parramatta, on Saturday 04 February 2023.

8.5 SUBJECT International Mother Language Day

REFERENCE F2022/00105 - D08865289

REPORT OF Lord Mayor, Councillor Donna Davis

4160 RESOLVED (Davis/Siviero)

**That** Council acknowledge International Mother Language Day on 21 February and recognises and celebrates the cultural and linguistic diversity which makes up our vibrant community.

## 9. PUBLIC FORUM

Nil

## 10. PETITIONS

10.1 SUBJECT Mixed-Use Land on Burroway Road, Wentworth Point  
FROM Paul Noack

We the undersigned call on Council to ensure the Mixed-Use Land on Burroway Road, Wentworth Point, currently owned by the NSW Government (Transport for NSW) be handed back to the local community and not be used for residential development, as;

1. We need to ensure the promised Peninsula Park is 3.9 hectares, and the planned school oval is not included in this;
2. Our community needs additional space for playing fields, sporting and recreation facilities, child care facilities, a dog park, children's playground etc; and
3. Need to protect our precincts environment, in particular a coastal saltmarsh and grey mangrove ecology as well migratory birds that utilise the bird sanctuaries of Haslams Creek and Parramatta River.

We therefore call on the Council to not allow the new application by Landcom, as this will be detrimental to the future planning of the growing Wentworth Point community.

We also call on Council to Lobby both the NSW Government and opposition to demand this vital land be handed back to the community, consistent with the previous unanimous decision by Council on this matter.

**Note: As a matter of practice, the petition will be referred to the relevant Council officer/s, and a copy of the petition distributed to all Councillors, upon receipt of the petition from the Councillor.**

PROCEDURAL MOTION

4161 RESOLVED (Esber/Prociv)

**That** items 12.1, 12.2, 12.3, 13.1, 13.2, 13.3, 13.5, and 13.6 be resolved enbloc.

11. RESCISSION MOTIONS

Nil

12. REPORTS TO COUNCIL - FOR NOTATION

12.1 SUBJECT Minutes of Audit Risk and Improvement Committee Meeting held on 12 August 2022 and 6 October 2022

REFERENCE F2022/00105 - D08776935

REPORT OF Coordinator Internal Audit

4162 RESOLVED (Esber/Prociv)

**That** Council notes the minutes of the Audit Risk and Improvement Committee meetings as provided at **Attachment 1 and Attachment 2.**

12.2 SUBJECT Investment Report for November 2022

REFERENCE F2022/00105 - D08794135

REPORT OF Tax and Treasury Accountant

4163 RESOLVED (Esber/Prociv)

**That** Council receive and note the Investment Report for November 2022.

12.3 SUBJECT Investment Report for December 2022

REFERENCE F2022/00105 - D08826028

REPORT OF Tax and Treasury Accountant

4164 RESOLVED (Esber/Prociv)

**That** Council receive and note the Investment Report for December 2022.

12.4      SUBJECT      Parramatta Light Rail Stage 2 - Environmental Impact Statement (EIS) Submission by Council

REFERENCE   F2022/00105 - D08831135

REPORT OF   Project Officer

4165      RESOLVED      (Noack/Siviero)

(a)   **That** Council notes the submission (**Attachment A**) provided to the Department of Planning and Environment on the Parramatta Light Rail (PLR) Stage 2 Environmental Impact Statement (EIS), noting that the submission strongly supports the delivery of PLR Stage 2 (the Project) and includes the following key matters for consideration:

- 1)   Council supports the alternate light rail alignment to the south of the Sekisui site, but only if the light rail stop adjacent the Ferry Wharf is retained, a spur line is constructed along Hill Road to near the Ferry Wharf, and a full width active transport link (ATL) is constructed by the Project enabling works between the bridge ATL and the Ferry Wharf.
- 2)   The EIS should rule out bridge construction methods which do not meet the design principles. In accordance with the Secretary's Environmental Assessment Requirements (SEARs) for PLR Stage 2 the bridge structures in the Project should be design-led, and not be left solely to the main infrastructure design and construct process.
- 3)   Council recommends to TfNSW the provision of green track, permeable paving and wire-free running in green space and business areas as detailed in the submission.
- 4)   The Project should place significant design-led emphasis on mitigating the impacts of site cut and fill, to ensure that the community retains convenient pedestrian crossing points over and across the light rail line, for example, in Boronia Street.
- 5)   The EIS Chapter 22 waste management strategy has a target of 100% of clean/usable excavation spoil diverted from landfill, and maximising reuse of spoil on site. The EIS impact assessment of not managing spoil appropriately is wholly inadequate, in that it omits the impact on public pathways, roads, parks, and the like from the retention of an estimated 73,000 cubic metres of spoil. Direct construction evidence from Stage 1 of the PLR demonstrates the adverse and unsafe outcomes of this numeric approach.



- 6) The EIS planning approval must have a condition requiring Secretary approval of a TfNSW detailed cut and fill strategy which justifies on a positive public domain outcome basis, the amount and location of spoil to be retained along the alignment, not as a set percentage of retention on site. This work can be carried out by TfNSW and stakeholders as part of the urban design requirements report or incorporated into pre-main-tender processes to provide reasonable certainty for tenderers.
- 7) The EIS planning approval should incorporate, in accordance with the SEARs, a condition requiring that all spoil retention during the design and construct phase of the Project be based on a design led process with a positive public domain outcome basis.
- 8) TfNSW should create a community reference group which includes representation from residents and businesses in suburbs along the alignment, the purpose of that reference group being in part to advise TfNSW and contractors of construction impacts, and to respond to TfNSW with recommendations to any contractor request for night work and/or noise intensive work.
- 9) Council recommends that the protection of residential amenity during light rail operation be a strong focus of the EIS, employing world class practices to minimise ground-borne vibration, ground-borne noise and airborne noise from rail operation. This is particularly relevant where the track runs through existing green spaces.
- 10) TfNSW develop within PLR Stage 2 a suitable track insert to assist the Project to provide seamless, coherent, visible, and safe pedestrian and cycle access throughout and adjacent to the PLR corridor.
- 11) The Project not worsen existing flood impacts along the alignment, and stormwater upgrade works be the subject of close engagement between TfNSW and Council, to avoid duplication of work and unnecessary cost.
- 12) The loss of existing street parking during construction, and permanently, particularly in Wentworth Point, with little requirement for effective management of worker vehicles.
- 13) There is no clear strategy to manage residual land, particularly to offset impacts of loss of parking along the route.
- 14) The EIS canvasses sea level rise across the life of the Project. Wentworth Point is presently significantly impacted by stormwater events at relatively low rainfall levels. The Project should not construct elevated track embankments

which may divert storm water or sea level rise into the residential area of the suburb.

- 15) Stage 2 of the PLR proposes to remove over double the number of trees than Stage 1. The EIS Addendum report should outline measures to preserve mature canopy, and provide full justification for tree removal in a tree register along with possible design mitigation measures.
  - 16) We call on both Government and Opposition to bring forward the date of completion as 2031 is too late given the projected population increase in the new few years.
- (b) Further, that TfNSW improve the process of assessment, design and community engagement in respect of Project impact on heritage items and heritage precincts, by completing and publishing heritage assessments before the relevant infrastructure contract is let, and enabling full community consultation on the impact and outcomes for the heritage item(s).

*In accordance with section 375A of the Local Government Act a Division of votes is recorded on this planning matter.*

**DIVISION**      *A division was called, the result being:-*

**AYES:**            Councillors Bradley, Darley, Davis, Esber, Green, Humphries, Maclean, Noack, Pandey, Prociv, Siviero, Valjak and Wang

The planning proposal moved by Councillor Noack and seconded by Councillor Siviero was CARRIED UNANIMOUSLY.

12.5      **SUBJECT**      Variations to Standards under Clause 4.6 of Parramatta LEP 2011, Auburn LEP 2010, Holroyd LEP 2-13, The Hills LEP 2012, Hornsby LEP 2013

**REFERENCE**    F2022/03176 - D08853820

**REPORT OF**    Group Manager - Development and Traffic Services

4166      **RESOLVED**    (Bradley/Esber)

**That** the report be received and noted and the approval of DA/932/2021 with height variation 111.25% and floor space ratio variation 69% be referred to the Department of Planning & Environment for consideration in their current review of clause 4.6.

*In accordance with section 375A of the Local Government Act a Division of votes is recorded on this planning matter.*

**DIVISION**      *A division was called, the result being:-*

AYES: Councillors Bradley, Darley, Davis, Esber, Green, Humphries, Maclean, Noack, Pandey, Prociv, Siviero, Valjak and Wang

The planning proposal moved by Councillor Bradley and seconded by Councillor Esber was CARRIED UNANIMOUSLY.

### 13. REPORTS TO COUNCIL - FOR COUNCIL DECISION

13.1 SUBJECT Heritage Advisory Committee: Recommendations from meeting of 1 November 2022

REFERENCE F2022/00105 - D08657347

REPORT OF Project Officer Land Use

4167 RESOLVED (Esber/Prociv)

(a) **That** Council approve the Heritage Grant recommendations, as detailed in paragraph 5 of this report as follows:

- 1) Refuse a grant of \$3,300 for 84 Harris Street, Harris Park
- 2) Make a grant of \$2,607 for 105 Railway Parade, Wentworthville
- 3) Make a grant of \$3,300 for 83 Eastwood Avenue, Eastwood
- 4) Make a grant of \$1,850 for 35 Wigram Street, Harris Park
- 5) Make a grant of \$60 for 12 Epping Avenue, Eastwood
- 6) Make a grant of \$2,111 for 30 The Boulevard, Epping
- 7) Make a grant of \$3,300 for 29 Lakeside Road, Eastwood

(b) **Further, that** outgoing members of the Committee, and in particular Associate Professor Carol Liston, be thanked for their contribution to the Committee and to the City of Parramatta.

13.2 SUBJECT Naming Proposal for the West Unnamed Bushland Reserve along Plympton Road in Beecroft

REFERENCE F2022/00105 - D08733343

REPORT OF Senior Project Officer Place Services

4168 RESOLVED (Esber/Prociv)

(a) **That** Council endorse the name of 'Finch Reserve' for the Western Parcel of Bushland Reserve (Lot 2 DP 215840, Lot 6 DP 207548, Lot 43, DP 31392, Lot 5 DP 234158, known informally as Plympton Road West Bushland Reserve) which runs between Orchard Road

and Carlingford High School, Beecroft, as illustrated in the Site Map (see **Attachment 1**).

- (b) **Further, that** the preferred name of 'Finch Reserve' for the Western Parcel of Bushland Reserve, be referred to the Geographical Names Board (GNB) of NSW for formal assignment and Gazettal under the Geographical Names Act 1996.

13.3      SUBJECT      Council becoming a signatory to the NSW Smart Places Charter

REFERENCE   F2022/00105 - D08753495

REPORT OF   Senior Project Officer

4169      RESOLVED      (Esber/Prociv)

**That** Council becomes a signatory to the NSW Smart Places Charter.

13.4      SUBJECT      Sydney WorldPride 2023

REFERENCE   F2022/00105 - D08833462

REPORT OF   Group Manager Social and Community Services

[4170]      RESOLVED      (Humphries/Prociv)

- (a) **That** Council welcomes to the City of Parramatta all those who have travelled from around Australia and the world to be part of Sydney WorldPride 2023.
- (b) **That** Council note the broad range of activities being held in the Parramatta LGA during Sydney WorldPride, as detailed in Attachment 1.
- (c) **That** Council fly the Rainbow flag alongside the Australian National Flag at Council's flagpole on the Parramatta River foreshore 16 February – 5 March 2023, in celebration of our local LGBTIQ+ community with a priority on the following dates:
- a.    16-19 February 2023
  - b.    24-26 February 2023
  - c.    2-5 March 2023
- (d)    That Council acknowledges the Aboriginal Flag will continue to be flown at Ermington Library and Mays Hill Cemetery throughout Sydney WorldPride 2023.
- (e)    Further, that the flying of the Rainbow Flag at the River foreshore will be subject to consultation with First Nations community

members via Council's First Nations Advisory Committee Meeting, at its meeting on the 14th February 2023.

**Note: Councillor Noack left the chamber during discussion of Item 13.4 at 7:39pm and returned at 7:42pm.**

13.5      SUBJECT      Change of Council Meeting Date from 27 November 2023 to 20 November 2023

REFERENCE   F2022/00105 - D08809192

REPORT OF   Council Secretariat & Registers Officer

4171      RESOLVED      (Esber/Prociv)

**That** Council vacates the 27 November 2023 meeting date and adopts the following meeting date:

Date	Location
20 November 2023	PHIVE, 2 Civic Place, Parramatta NSW 2150

13.6      SUBJECT      Post Exhibition: Adoption of Loan Borrowing Policy

REFERENCE   F2022/00105 - D08783615

REPORT OF   Policy Officer

4172      RESOLVED      (Esber/Prociv)

(a)   **That** Council notes that no submissions were received following public exhibition of the draft Loan Borrowing Policy.

(b)   **Further, that** Council adopts the draft Loan Borrowing Policy as attached to this report.

13.7      SUBJECT      Post Exhibition: Adoption of Removal of Printed Promotional Materials Policy

REFERENCE   F2022/00105 - D08783620

REPORT OF   Policy Officer

MOTION      Maclean/Prociv

(a)   **That** Council notes the submission received following public exhibition of the draft Removal of Printed Promotional Materials Policy.

(b)   **That** Council amend clause 3.5.1 of the Policy to read '*Subject to the conditions set out in this clause 3.5, A-Frames may be used as Printed Election Campaign Material or by current Councillors or Members of State or Federal Parliament for the purposes of*



*carrying out their official duties (e.g. community consultation). No more than two (2) A-Frames can be placed on a footpath or nature strip so as not to obstruct pedestrians, and they cannot be more than ten (10) metres apart, without a candidate or their representative being within ten (10) metres of the A-Frames, to ensure pedestrian safety.'*

- (c) **Further, that** Council adopts the draft Removal of Printed Promotional Materials Policy attached to this report.

AMENDMENT (Humphries/Valjak)

**That** Council defer consideration of this matter for discussion at a Councillor Workshop and brought back to Council.

*DIVISION A division was called, the result being:-*

**AYES:** Councillors Green, Humphries, Noack, Pandey, Siviero, Valjak and Wang

**NOES:** Councillors Bradley, Darley, Davis, Esber, Maclean and Prociv

4173 **RESOLVED** (Humphries/Valjak)

**That** Council defer consideration of this matter for discussion at a Councillor Workshop and brought back to Council.

13.8 **SUBJECT** Administration of the City of Parramatta September 2024 Local Government Elections

**REFERENCE** F2022/00105 - D08853815

**REPORT OF** Governance Manager

4174 **RESOLVED** (Darley/Valjak)

(a) **That** Council resolves pursuant to:

- (a) s.296(2) and (3) of the *Local Government Act 1993* (NSW) ("the Act") that an election arrangement be entered into by contract for the Electoral Commissioner to administer all elections of the Council.
- (b) s.296(2) and (3) of the Act, as applied and modified by s. 18, that a council poll arrangement be entered into by contract for the Electoral Commissioner to administer all council polls of the Council.
- (c) s.296(2) and (3) of the Act, as applied and modified by s. 18, that a constitutional referendum arrangement be entered into

by contract for the Electoral Commissioner to administer all constitutional referenda of the Council.

- (b) **Further that**, Council delegates authority to the Lord Mayor and/or Chief Executive Officer to finalise and execute the contract under Council seal, as required.

**Note: Questions were taken on notice for this item.**

14. NOTICES OF MOTION

Nil

15. QUESTIONS WITH NOTICE

15.1      SUBJECT      Questions Taken on Notice - 12 December 2022 Council Meeting

REFERENCE   F2022/00105 - D08808968

REPORT OF   Governance Manager

1.      Paragraph 9.23 of Council's Code of Meeting Practice states:

*"Where a councillor or council employee to whom a question is put is unable to respond to the question at the meeting at which it is put, they may take it on notice and report the response to the next meeting of the Council."*

**STAFF RESPONSE**

Item 12.1 - Fish Kill and Reducing Organic Matter in Waterways – Update

During discussion on Item 12.1 Fish Kill and Reducing Organic Matter in Waterways – Update, Councillor Garrard asked the following question:

*Council to take on notice that staff spend time on reports and therefore cost money regardless of whether it is from the existing budget. What are these reports worth, so Councillors are aware of the cost of extra work to the organisation?*

*Executive Director City Assets & Operations*

In relation the cost for Council staff time to produce the *Fish Kill and Reducing Organic Matter in Waterways Report* it is estimated at \$3,000. In relation to this report significant time was spend by the Parramatta River Catchment Group Stormwater Subcommittee, the representatives of this subcommittee are not Council staff, so their costs have not been included.

Item 12.2 – Workforce Diversity

During discussion on Item 12.2 – Workforce Diversity, Councillor Prociw asked the following question:

*Have staff looked into partnering with the University of Western Sydney for working students and creating Sandwich Courses with them?*

*Executive Director People, Culture and Workplace*

There are multiple definitions of “sandwich courses” including:

- Formal degree designed and established between an employer and a tertiary education provider which featured rotational FT study and FT work placement.
- Formal internship placements during study breaks (winter and summer) for students in their penultimate year of university.

Council is exploring formal internships and have identified several potential partner organisations including Western Sydney University. As part of the 2023, Council is committed to piloting formal Internships early as part of the early careers framework that is currently being scoped and designed.

A further update will be provided as part of the Workforce Diversity Report Update scheduled in April.

Item 12.4 - Annual Code of Conduct Complaint Statistics Returned to the Office of Local Government

During discussion on Item 12.4 - Annual Code of Conduct Complaint Statistics Returned to the Office of Local Government, Councillor Garrard asked the following question:

*Why are we getting the report in the last meeting of the year when the report is only to 31 August?*

*Internal Ombudsman Shared Services:*

The Office of Local Government issued the request for statistics on 22 November 2022. As the deadline for Council papers for the 12 December 2021 Council meeting was 25 November 2022, this report was submitted to the next available Council meeting. The reporting timeframe of 1 September 2021 to 31 August 2022 is set by the Office of Local Government.

Item 12.4 - Annual Code of Conduct Complaint Statistics Returned to the Office of Local Government

During discussion on Item 12.4 - Annual Code of Conduct Complaint Statistics Returned to the Office of Local Government, Councillor Valjak asked the following question:

*There are three complaints and three finalised matters in the report, can the Internal Ombudsman provide information on how the complaints were dealt with?*

*Internal Ombudsman Shared Services:*

As outlined in the report, the three complaints received were referred to another agency. The relevant agencies advised the complaints were closed and all three were recorded as finalised.

Item 13.13 - DEFFERED ITEM: Exhibition Outcomes - Draft Planning Proposal, Draft Site-Specific DCP and Draft Planning Agreement - Holdmark Sites (Melrose Park South) (Deferred from 5 December 2022 Council Meeting)

During discussion on Item 13.5 DEFFERED ITEM: Exhibition Outcomes - Draft Planning Proposal, Draft Site-Specific DCP and Draft Planning Agreement - Holdmark Sites (Melrose Park South) Councillor Bradley asked the following question:

*Did the developer pay for the TMAP?*

*Executive Director City Planning and Design:*

The preparation of the Melrose Park Transport Management and Accessibility Plan (TMAP) was a requirement of the Gateway determination issued by the Department of Planning and Environment in 2016 for the Melrose Park North Planning Proposal. The TMAP was commissioned by Payce as the major landholder in the Northern Precinct. This is normal practice for Planning Proposals initiated by the landowner as it would be unreasonable to expect Council or the State Government to fund studies that are required to support private development.

To ensure transparency and that all issues of concerns were properly addressed, a clear governance structure was established to ensure the TMAP scope and methodology was suitable to properly identify what traffic and transport improvements would be required to support the land use changes proposed for the entire precinct. To this end, a Steering Group was formed with representatives from City of Parramatta Council, Department of Planning and Environment, Transport for NSW, the former Roads and Maritime Service, Payce, Goodman and Holdmark to ensure that issues raised and matters that needed to be discussed and agreed between relevant stakeholders were addressed. The Steering Group concluded that all members were satisfied that the TMAP conclusions were accurate and based upon agreed inputs.

Item 14.1 - Play Equipment

During discussion on Item 14.1 Play Equipment, Councillor Wearne asked the following question:

*Although Council owns part of the strata title, were there any restrictions on Council when it acquired the strata title and would the body corporate need to agree to the development of a playground?*

*Executive Director Property and Place*

The Wentworth Point Library forecourt is Lot 28 in Community Plan DP 270778. Any structure proposed to be erected on the land would require:

- a. Building management committee approval (similar to strata body corporate approval);
- b. Removal of a range of easements that burden the land, in particular easement for public access, easement for emergency egress, easement for services, easement for support and shelter.

**Note: Prior to moving into Closed Session, the Lord Mayor invited members of the public gallery to make representations as to why any item had been included in Closed Session. No member of the gallery wished to make representations.**

16. CLOSED SESSION

4175      RESOLVED      (Noack/Esber)

**That** members of the press and public be excluded from the meeting of the Closed Session and access to the correspondence and reports relating to the items considered during the course of the Closed Session be withheld. This action is taken in accordance with Section 10A(s) of the Local Government Act, 1993 as the items listed come within the following provisions:-

- 1      Legal Status Report as at 25 December 2022. (D08798736) - *This report is confidential in accordance with section 10A (2) (e) of the Local Government Act 1993 as the report contains information that would, if disclosed, prejudice the maintenance of law.*
- 2      Lego Exhibition at PHIVE - Tender Exemption.. (D08818180) - *This report is confidential in accordance with section 10A (2) (d) of the Local Government Act 1993 as the report contains commercial information of a confidential nature that would, if disclosed (i) prejudice the commercial position of the person who supplied it; or (ii) confer a commercial advantage on a competitor of the Council; or (iii) reveal a trade secret.*

16.1      SUBJECT      Legal Status Report as at 25 December 2022

REFERENCE      F2022/00105 - D08798736

REPORT OF      Group Manager Legal Services

4176      RESOLVED      (Siviero/Darley)



**That** Council note the Legal Status Report as at 25 December 2022.

**Note: Questions were taken on notice for this item.**

16.2      SUBJECT      Lego Exhibition at PHIVE - Tender Exemption

REFERENCE   F2022/00105 - D08818180

REPORT OF   Manager Programming and Venue Services

4177      RESOLVED      (Esber/Siviero)

- (a)   **That** Council, approves the exemption to the tendering requirements for the Lego Exhibition at PHIVE pursuant to section 55(3)(i) of the *Local Government Act 1993*.
- (b)   **That** Council, notes the extenuating circumstance for the tendering exemption, is that Brickman Exhibitions (Australia) Pty Ltd, is the sole authorised supplier of Lego Brickman exhibitions in Australia and a satisfactory result would not have been achieved by inviting tenders.
- (c)   **Further that**, Council notes that the documents have been executed by the Chief Executive Officer to enable the exhibition to take place.

PROCEDURAL MOTION

4178      RESOLVED      (Esber/Noack)

**That** Council resume into Open Session.

17.   REPORTS OF RESOLUTIONS PASSED IN CLOSED SESSION

The Chief Executive Officer read out the resolutions for Items 16.1 to 16.2.

18.   CONCLUSION OF MEETING

The meeting terminated at 8:15 pm.

THIS PAGE AND THE PRECEDING 16 PAGES ARE THE MINUTES OF THE ORDINARY/EXTRAORDINARY COUNCIL MEETING HELD ON Monday, 13 February 2023 AND CONFIRMED ON Monday, 27 February 2023.

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Chairperson

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## **REPORTS TO COUNCIL - FOR NOTATION**

**27 FEBRUARY 2023**

12.1	Investment Report for January 2023 .....	26
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**REPORTS TO COUNCIL - FOR NOTATION**

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<b>ITEM NUMBER</b>	12.1
<b>SUBJECT</b>	Investment Report for January 2023
<b>REFERENCE</b>	F2022/00105 - D08854124
<b>REPORT OF</b>	Tax and Treasury Accountant
<b>CSP THEME:</b>	<b>FAIR</b>

**WORKSHOP/BRIEFING DATE:** NIL

**PURPOSE:**

The purpose of this report is to inform Council of the investment portfolio performance and compliance for the month of January 2023.

**RECOMMENDATION**

**That** Council receive and note the Investment Report for January 2023.

**BACKGROUND**

1. In accordance with clause 212 of the *Local Government (General) Regulation 2021 (the Regulation)*, a report setting out details of all money invested must be presented to Council monthly.
2. The report must include a certificate as to whether the investments have been made in accordance with the *Local Government Act 1993 (the Act)*, the *Local Government (General) Regulation 2021* and Council's Investment Policy.

**ISSUES/OPTIONS/CONSEQUENCES**

**Investment Portfolio Summary**

3. The investment portfolio closing balance as at 31 January 2023 was \$504.2m. The average portfolio holdings held throughout the month was \$506.9m.
4. The majority of Council's investment portfolio is in term deposits (74%). The portfolio also includes liquid floating rate notes (FRNs), cash, and the TCorp Long Term Growth Fund (LTGF).
5. Approximately 8.5% of the portfolio comprises of less conservative long-term investments with exposure to credit markets and domestic and international shares. The investment portfolio is well diversified and weighted towards higher-rated institutions.

6. The table below lists the diversified range of investments held by Council as at 31 January 2023.

*Table 1: Summary of investment portfolio*

Investment Product	000's	% Held	Monthly Return	Annualised Return
Term Deposits	371,450	0.74	0.20	2.40
Floating Rate Notes	33,461	0.07	0.36	4.33
Bonds	32,678	0.06	0.09	1.11
Cash at Call	22,789	0.05	0.28	3.35
31 Day Notice Funds	163	0.00	0.30	3.55
CFS Global Managed Funds (CFS)	14,400	0.03	1.17	14.64
TCorp Long Term Growth Fund (LTGF)	29,277	0.06	3.73	53.85
<b>Total Investment Funds</b>	<b>504,217</b>	<b>1.00</b>	<b>0.36</b>	<b>4.35</b>
<b>*COPC Internal Benchmark</b>			<b>0.12</b>	<b>7.06</b>
<b>Ausbond Bank Bill Index Benchmark</b>			<b>0.27</b>	<b>3.18</b>
<b>(Underperformance) / Outperformance &gt; Ausbond BBI</b>				<b>1.17</b>

**\*COPC Internal Benchmark returns** - based on Council's individual benchmarks across the various asset classes it invests within its own portfolio. The following individual benchmarks are the measurements, used for each asset class.

**Cash:** RBA Cash Rate

**Term Deposits:** based on Council's weighted average duration using multiple ADIs average monthly rate

**FRNs:** AusBond Credit FRN Index

**CFS Global Credit Income Fund:** AusBond Credit Index

**NSW TCorpLM Long-Term Growth Fund:** NSW TCorpLM Internal Benchmark

7. **Investment performance for the month.** The investment portfolio reported a monthly- actual return of 0.36% for January 2023 (or 4.35% on an annualised basis). Outperforming the monthly Ausbond bank bill index by 117 basis points on an annualised basis.

The TCorp Fund (3.73% actual) was the main contributor to performance this month, as Domestic and international shares rose, as various central banks, hinted that the peak of the interest rate cycle may be approaching quicker than originally anticipated.

The longer-term outperformance continues to be anchored by the handful of longer-dated deposits that were locked-in prior to the RBA's rate cuts, as well as the FRNs locked in at attractive margins, boosted by the strategic sales implemented over the past few years.

8. **Historical investment performance.** The table below provides year-to-date and historical investment performance compared to the Ausbond Bank Bill Index.

*Table 2: Historical investment portfolio performance*

Past and Present Performance	FYTD	1 Year	2 Year	3 Year
Total Portfolio	2.78	1.39	1.42	1.53
Ausbond Bank Bill Index Benchmark	2.46	1.52	0.77	0.61
<b>Outperformance</b>	<b>0.32</b>	<b>-0.13</b>	<b>0.65</b>	<b>0.92</b>

9. **Investment Revenue:** As at the end of January 2023, the cumulative actual interest/income earned, was approximately **\$499k** above the budget for the month, largely driven by the strong rebound of shares in January 23.

Advisors exercise caution given the volatility from the TCorp Long-Term Growth Fund during any month, as was highlighted in the past two months alone - the TCorp Fund gained over +\$1m in January after falling close to -\$900k in December.

*Table 3: Cumulative Interest table*

Month-End	Cumulative Budget	Cumulative Investment Revenue	Difference (\$)
Jul 2022	\$1,101,748	\$1,966,804	\$865,056
Aug 2022	\$2,203,497	\$2,695,126	\$491,629
Sep 2022	\$3,305,245	\$2,607,147	-\$698,098
Oct 2022	\$4,406,993	\$4,706,137	\$299,144
Nov 2022	\$5,508,742	\$6,578,791	\$1,070,049
Dec 2022	\$6,610,490	\$6,767,315	\$156,825
Jan 2023	\$7,712,238	\$8,210,705	\$498,467
Feb 2023	\$8,813,987		
Mar 2023	\$9,915,735		
Apr 2023	\$11,017,483		
May 2023	\$12,119,232		
Jun 2023	\$13,220,980		

**Note:** Council values all managed funds, Floating rate notes, and bonds on a mark to market basis each month. Any gain or loss in valuation is capitalised to interest income based on actual monthly statements.

*Table 4: Managed Fund Valuations Capitalised*

Managed Funds Long-Term Investments	Asset Valuation December- 22	Asset Valuation January- 23	Value Capitalised Net Return	Monthly Interest Return Actual
TCorp Long Term Growth Fund	\$28,224,872	\$29,276,760	\$1,051,888	3.73%
CFS Global Managed Fund	\$14,233,799	\$14,399,934	\$166,135	1.17%
<b>Total:</b>	<b>\$42,458,670</b>	<b>\$43,676,694</b>	<b>\$1,218,023</b>	<b>2.89%</b>

During January, unrealised capital gain valuations on Managed funds equated to approximately **\$1.218m**. This increase in valuation, has been capitalised and is included in the cumulative investment revenue shown in table 3.

**The NSW TCorp Fund** the NSW TCorp Fund accounts for 5.75% of Council's total investment portfolio. The Fund returned +3.73% (actual) during January 2023.

The Fund should be looked at with a long-term view, with a minimum holding period of +7 years. Given the exposure to the volatile asset of shares, Council should expect to see, on average, a negative month once every 3 months over a long-term holding period.

**The CFS Global Credit fund** accounts for around 2.75% of Council's total investment portfolio. The Fund returned +1.17% (actual) in January, as the

market valuation of the fund's assets in global credit securities increased during the month.

10. **Maturities and Transactions:** Overall, the portfolio remains well diversified from a maturity perspective, with around 18% of assets directed to medium term (2-5 years).

Where liquidity permits, Imperium recommend new surplus funds be directed towards 1–2-year horizons given this is where the most attractive value can be found.

The following Investment transactions occurred during January 2023:

*Table 5: Investment Maturities*

Type	Issuer	Rating	Principal (\$)	Purchase Date	Maturity Date	Coupon (%)
TD	NAB	AA-	3,000,000.00	02-Sep-22	05-Jan-23	3.25
TD	BankVic	BBB+	3,000,000.00	02-Sep-22	12-Jan-23	3.4
TD	Auswide Bank	BBB	3,000,000.00	12-Sep-22	19-Jan-23	3.5
TD	Gateway Bank	BBB	2,000,000.00	13-Oct-22	25-Jan-23	3.61
			<b>11,000,000.00</b>			

*Table 6: New Investment Purchases*

Type	Issuer	Rating	Principal (\$)	Purchase Date	Maturity Date	Coupon (%)	Fossil Fuel- Green
FRN	Bendigo and Adelaide	BBB+	1,103,332.07	27-Jan-23	27-Jan-27	4.73	Yes
FRN	ICBC Sydney Branch	A	1,500,968.66	19-Jan-23	19-Jan-26	4.34	Yes
			<b>2,604,300.73</b>				

During the month Council invested \$2.6m, all of which was invested in **environmentally sustainable fossil fuel free deposits/Floating Rate Notes**

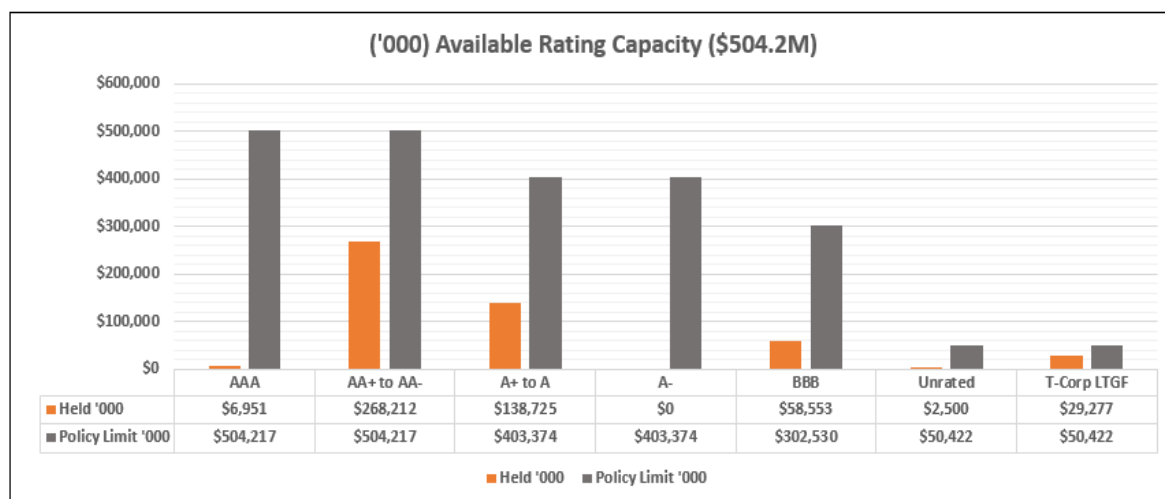
Any funds remaining after maturities and reinvestment are used to replenish cash at call, and to fund weekly operational expenditure.

*Table 7: Maturity profile*

Compliant	Horizon	Invested (\$)	Invested (%)	Min. Limit (%)	Max. Limit (%)	Available (\$)
✓	0 - 365 days	\$243,351,582	48.29%	20%	100%	\$260,562,275
✓	1 – 2 years	\$139,561,524	27.70%	0%	70%	\$213,178,175
✓	2 – 5 years	\$91,723,991	18.20%	0%	50%	\$210,624,323
✓	5 – 10 years	\$29,276,760	5.81%	0%	25%	\$46,310,319
		<b>\$503,913,857</b>	<b>100.00%</b>			

11. The portfolio complies with Council's Investment Policy limits, with ample investment opportunity still available within all institutional rating, duration, and counterparty limits.

Graph 1: Investment Policy rating capacity



\*BBB-/BBB+ limits combined under Council's investment policy.

12. **Counterparty Limits.** All individual counterparty limits comply with council's investment policy, with the following exceptions:

Table 8: Exceptions to counterparty limits

Institution	Policy Limit (\$'000)	Held (\$'000)	Overweight (\$'000)	Reason	Compliance Date
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No  
Exceptions

As at the end of January 2023, Council did not have an overweight position to any single ADI. Overall, the portfolio is well diversified across the entire credit spectrum, including some exposure to unrated ADIs.

**A full list of counterparty holdings is available on page 9 of the Imperium comprehensive report (attachment 2)**

13. **Current Yields** Councils Floating Rate Notes are currently yielding between around 3.67% FYTD.

**The CFS Global Credit Fund** holds a diverse range of securities across the global credit market. It remains very well diversified by issuer to mitigate default risk. It invests in nearly 600 corporate bonds from issuers in various countries and industry sectors. Any spread contraction going forward allows credit and asset-backed holdings to enjoy significant capital gains. With a running yield of around +4-4.5% per annum, Council will continue to hold this fund.

**Council's term deposit portfolio** (74% of the portfolio) was yielding 2.31% p.a. at month-end, with a weighted average duration of around 346 days or 1 year.

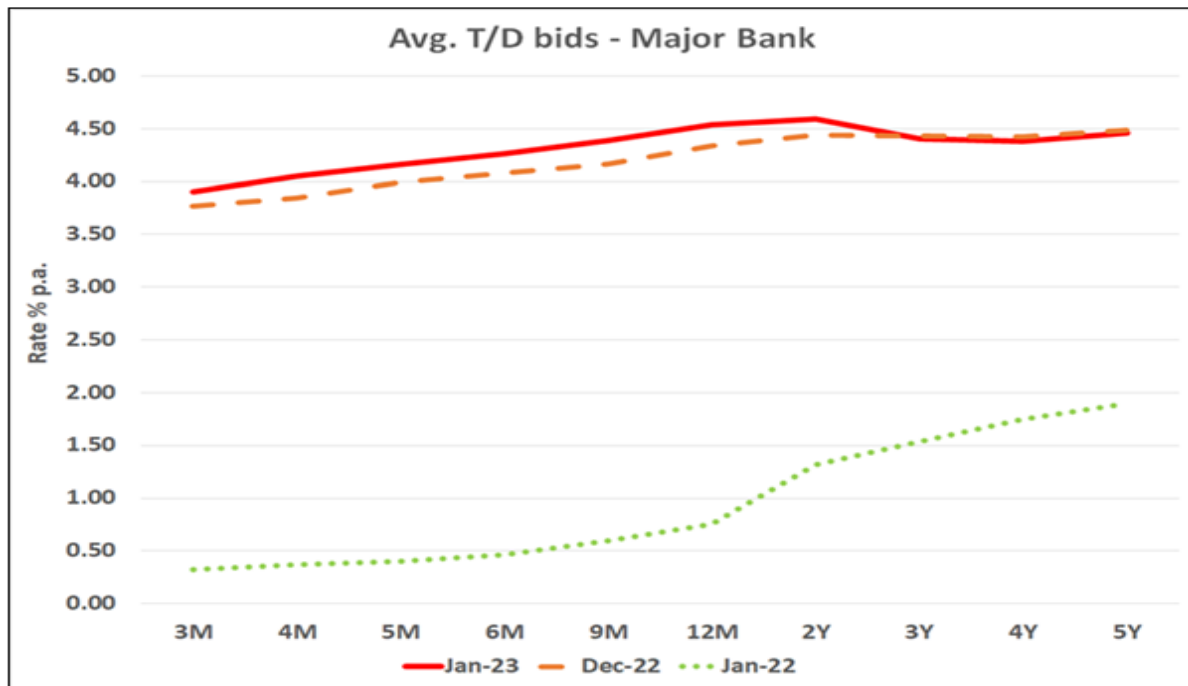
Despite more rate rises on the horizon, given an upward sloping deposit curve, maintaining a slightly longer average duration position on deposits will continue to outperform shorter durations. The deposit market has largely already



factored in the current rate hike cycle, reflected by the flattening of the curve demonstrated by the longer-term tenors (+2yrs) over the past few months (the market is also factoring in a recession over coming years). Interestingly, amongst the major banks, some 2–5-year deposit rates are now being offered slightly below 12 month rates

New investments above 4¼-4½% p.a. now appear likely if Council can continue to place the majority of its surplus funds for terms of 12 months to 2 years.

*Graph 2: Term Deposit Yields*



14. Council engages Imperium Markets for assistance in all investment matters relating to advice, risk and portfolio weighting. Imperium monitor the portfolio daily and conduct a monthly health check review. This confirms that Council's portfolio is being conducted in accordance with the Act, the Regulation and the Investment Policy.
15. Detailed investment performance commentary in relation to each investment product /type and counterparty, can be found in the Imperium comprehensive report attached (**Attachment 2**).

### **Certification of Investments**

16. I hereby certify the investments for the month of January 2023 have been made in compliance with the Act, the Regulations, Council's Investment Policy, and the adviser's recommendations.

***John Angilley, Chief Financial and Information Officer***

## CONSULTATION & TIMING

### Stakeholder Consultation

17. The following stakeholder consultation has been undertaken in relation to this matter:

Date	Stakeholder	Stakeholder Comment	Council Officer Response	Responsibility
31 Jan 2023	Imperium Markets	All Investments are within Policy guidelines and supported by Councils independent advisor.  Refer Imperium Comprehensive Report	All Investments are within Policy limits and reconcile to the General Ledger as at 31 Jan 2023	John Angilley CFIO  Bruce MacFarlane Treasury & Tax Accountant

### Councillor Consultation

18. The following Councillor consultation has been undertaken in relation to this matter:

Date	Councillor	Councillor Comment	Council Officer Response	Responsibility
N/A	N/A	N/A	N/A	N/A

## LEGAL IMPLICATIONS FOR COUNCIL

19. There are no legal implications resulting from this report.

## FINANCIAL IMPLICATIONS FOR COUNCIL







20. As at 31<sup>st</sup> January 2023, cumulative interest income **exceeds the year-to-date budget by approximately \$498k**. This overall investment interest budget was increased by approximately \$3.1m as at the December 22 quarterly review. Further review will take place in March.

Bruce MacFarlane  
**Tax and Treasury Accountant**

John Angilley  
**Chief Financial and Information Officer**

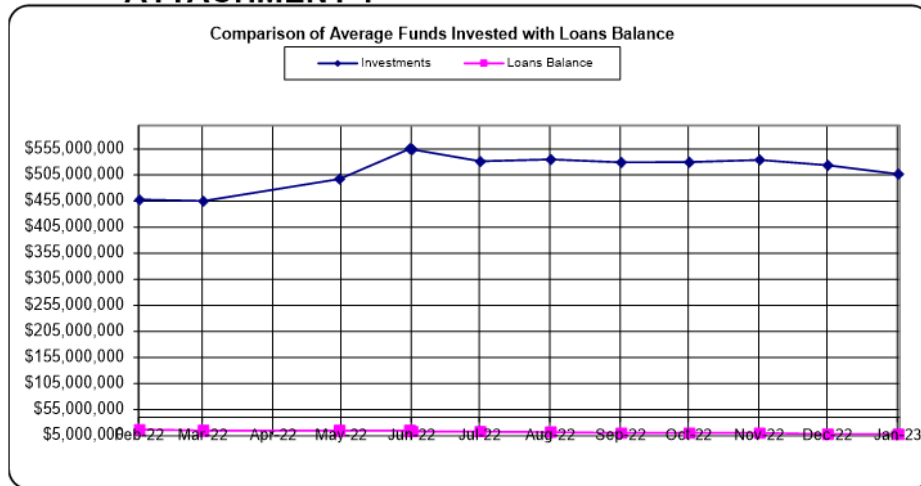
Bryan Hynes  
**Acting Chief Executive Officer**

**ATTACHMENTS:**

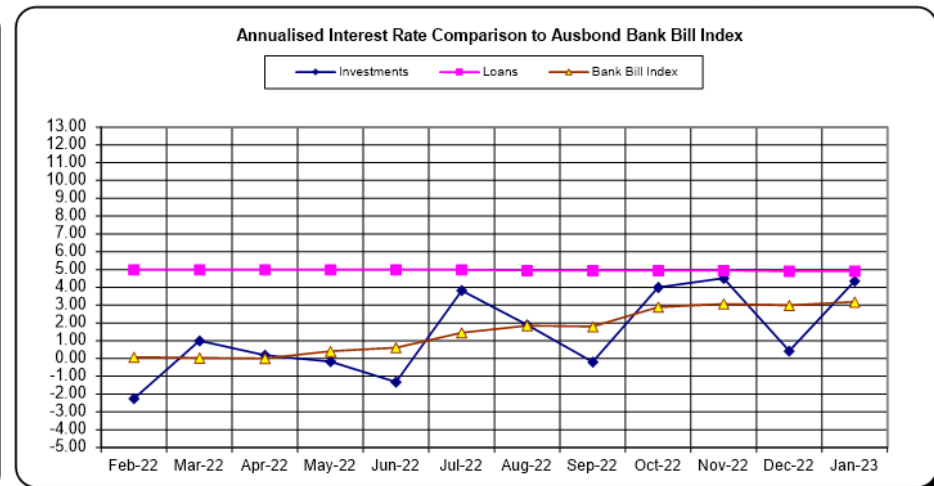
- |   |   |   |  |          |
|---|---|---|--|----------|
| 1 |  |  | Investment and Loans Performance Graph Jan 2023.pdf      | 1 Page   |
| 2 |  |  | Imperium Comprehensive Investment Report Jan 23 .pdf     | 33 Pages |
| 3 |  |  | List of Council Investments by maturity January 2023.pdf | 7 Pages  |

**REFERENCE MATERIAL**

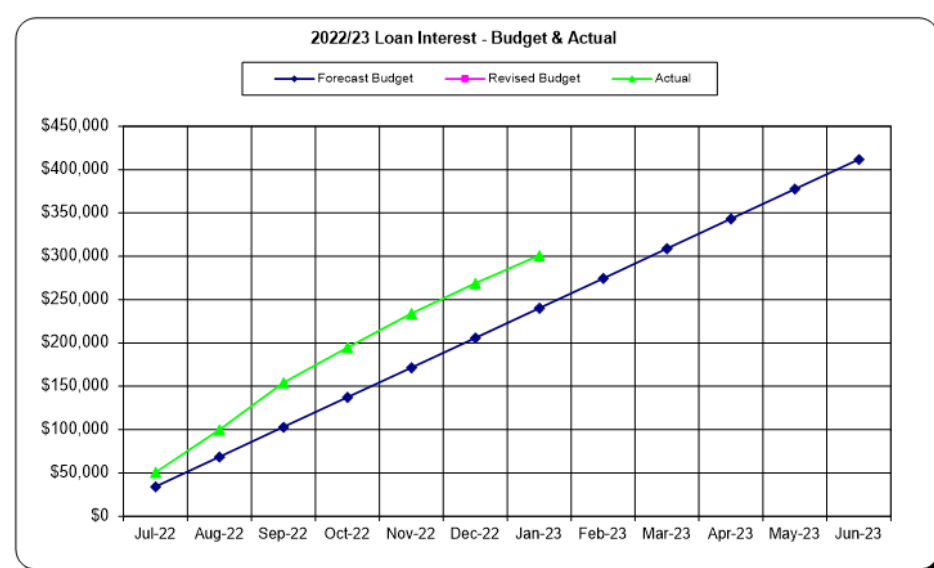
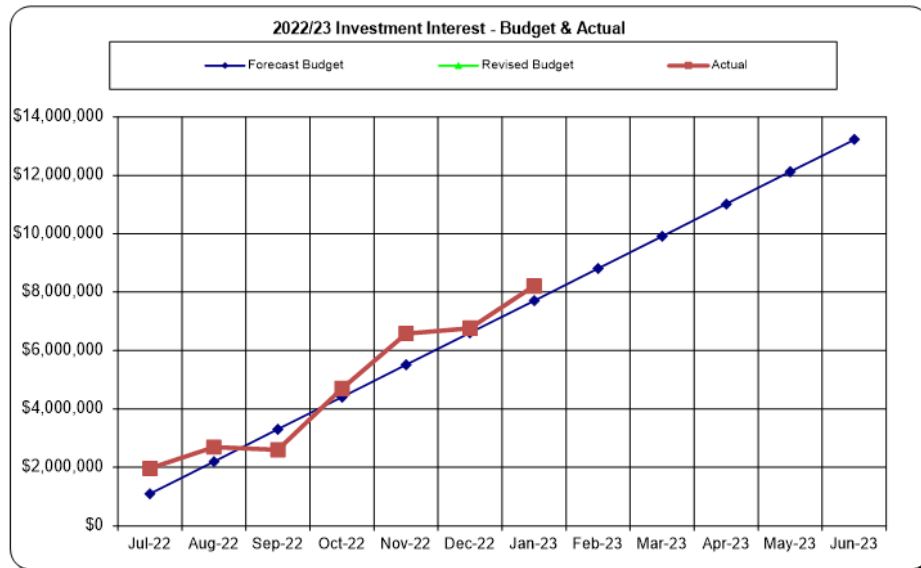
## ATTACHMENT 1



## CL..... Governance &amp; Corporate




## Investments and Loans Interest - Year to Date Budget Performance





## Monthly Investment Report

### January 2023

 IMPERIUM MARKETS	<p>Imperium Markets Pty Ltd ABN: 87 616 579 527 Authorised Representative of Libertas Financial Planning Pty Ltd AFSL 429 718 Phone: +61 2 9053 2987 Email: <a href="mailto:michael.chandra@imperium.markets">michael.chandra@imperium.markets</a> Level 9 Suite 06, 70 Phillip Street, Sydney NSW 2000</p>



## Summary

### Market Update Summary

Risk markets were aided in January as recent data indicated there were signs the global economy may be weathering inflation better than previously anticipated. Several global central banks also hinted they may pause their aggressive rate hike cycles in the near future.

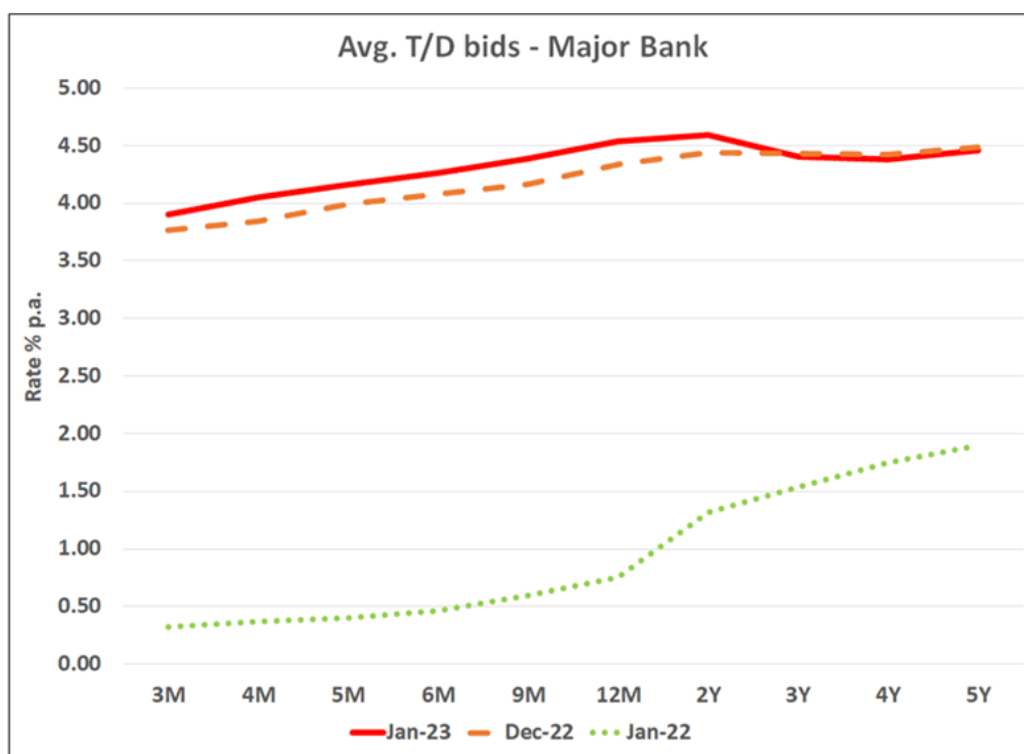
Domestically, the labour market remains tight, but timely indicators of labour demand are off their peaks as labour supply has normalised and frictions associated with rapid employment growth out of pandemic impacts moderate. Although labour costs pressures are evident in the latest CPI figures for Q4 2022, there are reasons to be optimistic that some stabilisation in wages growth can occur without a sharply higher unemployment rate, including the normalisation in labour supply. For now, the RBA continues to signal that it expects to increase interest rates further over the period ahead, with up to 2-3 hikes already largely priced into the market by Q2-Q3 2023, taking the cash rate up to 3¾%. Thereafter, noting the lags in monetary policy, a pause around the end of Q2-Q3 is likely whilst the RBA monitors the economic data.

### Term Deposits

Term Deposits (fixed and floating) account for around 74% of the total investment portfolio at month-end. Council's term deposit portfolio was yielding 2.31% p.a. at month-end, with a weighted average duration of around 346 days or ~11½ months. We note the following:

- The highest deposit rate from any rated ADI in the market is now ~4.80% p.a. for 5 years;
- The highest deposit rates amongst the "AA-" rated ADIs (major banks) is now yielding between 4.50%-4.60% p.a. (depending on terms between 12m – 5 years);
- The highest deposit rates amongst the "A" rated ADIs was yielding between 4.50%-4.80% p.a. (depending on terms between 12m – 5 years);
- The highest deposit rates amongst the "BBB" rated ADIs was yielding between 4.50%-4.75% p.a. (depending on terms between 12m – 5 years).

Despite more rate rises on the horizon, given an upward sloping deposit curve, maintaining a slightly longer average duration position on deposits will continue to outperform shorter durations. The deposit market has largely already factored in the current rate hike cycle, reflected by the flattening of the curve demonstrated by the longer-term tenors (+2yrs) over the past few months (the market is also factoring in a recession over coming years). Interestingly, amongst the major banks, some 2-5 year deposit rates are now being offered slightly below 12 month rates:



Source: Imperium Markets

**'New' investments above 4¼-4½% p.a. is now possible if Council can place the majority of its surplus funds for terms of 12 months to 2 years.** With recessionary fears being priced in coming years, investors may take an insurance policy by investing across 3-5 year fixed deposits and locking in rates above 4½% p.a. (small allocation only), ahead of any potential rate cuts should inflation be under control.

#### Senior FRNs

Council's senior floating rate notes (FRNs) make up around 6½% of the total investment portfolio at month-end. The market valuation of Council's FRNs collectively rose around **+0.12% (actual)** in January 2023 (or **+\$40,071 in dollar terms**).

Summary	31 Dec 2022	31 Jan 2023	Net Flow (\$)	Monthly Change %
Face Value	\$30,650,000	\$33,250,000	\$2,600,000	+8.48%
Market Value	\$30,662,834	\$33,302,905	+\$40,071	+0.12%

We highlight that Council's FRNs are senior ranked assets and high in the bank capital structure. We expect that, if held to maturity, the FRNs will pay back its original face value (\$100.00), along with its quarterly coupons throughout the life of the security. That is, we do not expect Council to lose any capital or interest payments from its current holding in its senior FRNs given all banks continue to maintain high capital buffers as required by APRA.



At month-end, Council's FRNs are now marked at an **unrealised capital gain of +\$59,959** (noting some were purchased at a slight discount to par in the secondary market).

#### **BBB rated senior FRNs**

As per all FRNs, we have no issues with Council's investments in "BBB" rated senior FRNs given all counterparties continue to hold robust balance sheets with high levels of capital. On a mark-to-market basis, collectively they rose around **\$17,170 in dollar terms or +0.22% (actual)** for the month:

Summary	31 Dec 2022	31 Jan 2023	Net Flow (\$)	Monthly Change %
Face Value	\$6,800,000	\$7,900,000	\$1,100,000	+16.18%
Market Value	\$6,773,045	\$7,890,215	+\$17,170	+0.22%

At month-end, Council's "BBB" rated FRNs are now marked at an **unrealised capital loss of ~\$9,681**.

#### **Senior Bonds**

Since September 2020, Council has an outstanding \$29m placed in Northern Territory Treasury Corporation (NTTC) fixed bonds rated AA- (same as the domestic major banks), locking in yields between 0.90%-1.40% p.a. The weighted average yield on these investments was 1.09% p.a., with a current weighted average duration of 2.64 years.

We believe these investments were sensible given the unprecedented low rate environment and the RBA's forward guidance at the time of investment (no rate rises "until at least 2024"). We reiterate that the NTTC bonds are a 'retail' offering and not 'wholesale' issuances. Given the lack of liquidity and high penalty costs if they were to be sold/redeemed prior to the maturity date, they are considered to be a hold-to-maturity investment and will be marked at par value (\$100.00) throughout the term of investment.

During August 2021, Council purchased \$600k in the ING (AAA) covered fixed bond at a yield of 1.16% p.a., which we thought was an attractive yield given the super-senior and highly ranked asset. This is likely to be held for at least 3-4 years, with a view to reassess depending on the prevailing market conditions. Given it is now trading at a significant discount to par, we recommend buying additional units if available, to average-in at a more attractive yield.

#### **TCorp Long-Term Growth Fund**

The NSW TCorp Fund accounts for ~5% of Council's total investment portfolio. **The Fund returned +3.73% (actual) during January.** Domestic and international shares rose as various central banks hinted that the peak of the interest rate cycle may be approaching quicker than they first anticipated.

Summary	31 Dec 2022	31 Jan 2023	Investment (\$)	Net Return (\$)	Net Return (%)
Market Value	\$28,224,872	\$29,276,760	\$0	\$1,051,888	+3.73%

The US economy is showing signs of tiring with growth slowing and the disinflation process unfolding before the market's eyes. Already, goods prices are turning down from a cut back in demand and the healing of supply chains. Another element of inflation – housing services, rents – is soon expected to





turn as the flattening in new rental leases works through into the stock of rents captured in the CPI and PCE deflator measurements. In the US, the markets belief is that the US Federal Reserve (Fed) hiking cycling is almost done and that rate cuts will be in focus by late 2023.

The Fund should be looked at with a long-term view, with a minimum holding period of +7 years. Given the exposure to the volatile asset of shares, Council should expect to see, on average, a negative month once every 3 months over a long-term holding period.

#### CFS Global Credit Income

The CFS Global Credit Income Fund accounts for around 2¼% of Council's total investment portfolio. **The Fund returned +1.17% (actual) in January**, as the market valuation of the fund's assets in global credit securities increased during the month.

Summary	31 Dec 2022	31 Jan 2023	Difference (\$)	Difference (%)
Market Value	\$14,233,799	\$14,399,934	+\$166,135	+1.17%

The Fund holds a diverse range of securities across the global credit market. It remains very well diversified by issuer in order to mitigate default risk. It invests in nearly 600 corporate bonds from issuers in various countries and industry sectors. Any spread contraction going forward allows credit and asset-backed holdings to enjoy significant capital gains.

With a running yield of around +4 – 4½% p.a., we recommend Council retains this “grandfathered” Fund given the alternative to invest in cash and deposits (Council's approval list) are yielding comparably lower.

#### Cash Accounts

Cash accounts make up around 4½% of Council's investment portfolio at month-end. Council's cash accounts are likely to yield up to 0.15% p.a. (at most) above the official cash rate over coming years i.e. yield up to 3.25% p.a. at current yields, but likely higher as the RBA increases official rates. Short-dated term deposits will continue to outperform overnight cash accounts in most cases so we recommend keeping cash levels at a bare minimum to meet ongoing liquidity requirements.



### Council's Budgeted Income for FY2022-2023

Council's budgeted income for FY2022-2023 has been revised to \$13.221m. Based on an average total investment portfolio size of around \$500m, that equates to a budgeted yield of around 2.64% for the current financial year.

For the month ending January 2023, the cumulative interest revenue earned was roughly \$4985 above the revised budgeted income, largely driven by the strong rebound in in shares in recent months. We exercise caution given the volatility from the TCorp Long-Term Growth Fund during any month, as was highlighted in the past two months alone - the TCorp Fund gained over +\$1m in January after falling close to -\$900k in December.

Month-End	Cumulative Budget	Cumulative Investment Revenue	Difference (\$)
Jul 2022	\$1,101,748	\$1,966,804	\$865,056
Aug 2022	\$2,203,497	\$2,695,126	\$491,629
Sep 2022	\$3,305,245	\$2,607,147	-\$698,098
Oct 2022	\$4,406,993	\$4,706,137	\$299,144
Nov 2022	\$5,508,742	\$6,578,791	\$1,070,049
Dec 2022	\$6,610,490	\$6,767,315	\$156,825
Jan 2023	\$7,712,238	\$8,210,705	\$498,467
Feb 2023	\$8,813,987		
Mar 2023	\$9,915,735		
Apr 2023	\$11,017,483		
May 2023	\$12,119,232		
Jun 2023	\$13,220,980		

For the current financial year, we remain cautious given that risks remain to the downside, particularly if there is a continued selloff in equities and/or bonds as the market factors in a global recession.



## Council's Portfolio & Compliance

### Asset Allocation

As at the end of January 2023, the portfolio was mainly directed to fixed and floating rate term deposits (74%). The remaining portfolio is directed to FRNs (7%), overnight cash accounts (5%), bonds (6%), and the managed funds with CFS Global Credit Income Fund and NSW T-Corp Long Term Growth Fund (8%, combined).

**Senior FRNs are now becoming more attractive as spreads have widened over the past year – new issuances should now be considered again on a case by case scenario.** In the interim, fixed deposits for 12 months to 3 years appear quite appealing following the spike in medium-to longer-term yields during the rate hike cycle. With recessionary fears being priced in coming years, those investors that can allocate longer-term surplus funds may take an insurance policy by investing across 3-5 year fixed deposits, locking in and targeting yields above 4½% p.a.





### Term to Maturity

Overall, the portfolio remains well diversified from a maturity perspective with around 18% of assets directed to medium-term assets (2-5 years). All minimum and maximum criteria meet within the Policy guidelines:



Where liquidity permits, we recommend new surplus funds be directed to 1-2 year horizons given this is where the most attractive value can be found. We suggest this be allocated to any remaining attractive fixed term deposits (refer to respective sections below).

Compliant	Horizon	Invested (\$)	Invested (%)	Min. Limit (%)	Max. Limit (%)	Available (\$)
✓	0 - 365 days	\$243,351,582	48.29%	20%	100%	\$260,562,275
✓	1 - 2 years	\$139,561,524	27.70%	0%	70%	\$213,178,175
✓	2 - 5 years	\$91,723,991	18.20%	0%	50%	\$210,624,323
✓	5 - 10 years	\$29,276,760	5.81%	0%	25%	\$46,310,319
		<b>\$503,913,857</b>	<b>100.00%</b>			



### Counterparty

As at the end of January 2023, Council did not have an overweight position to any single ADI. Overall, the portfolio is well diversified across the entire credit spectrum, including some exposure to the unrated ADIs.

Compliant	Issuer	Rating	Invested (\$)	Invested (%)	Max. Limit (%)	Available (\$)
✓	BoQ Covered	AAA	\$903,357	0.18%	50.00%	\$251,053,571
✓	Bendigo Covered	AAA	\$4,007,844	0.80%	50.00%	\$247,949,085
✓	Suncorp Covered	AAA	\$532,676	0.11%	50.00%	\$251,424,252
✓	ING Covered	AAA	\$1,506,960	0.30%	50.00%	\$250,449,969
✓	ANZ	AA-	\$4,035,224	0.80%	40.00%	\$197,530,319
✓	CBA	AA-	\$62,382,588	12.38%	40.00%	\$139,182,955
✓	NAB	AA-	\$131,590,824	26.11%	40.00%	\$69,974,718
✓	Northern Territory	AA-	\$32,000,000	6.35%	40.00%	\$169,565,543
✓	Westpac	AA-	\$37,900,000	7.52%	40.00%	\$163,665,543
✓	Citibank NA	A+	\$1,000,147	0.20%	25.00%	\$124,978,317
✓	Macquarie	A+	\$28,724	0.01%	25.00%	\$125,949,740
✓	Suncorp	A+	\$5,501,534	1.09%	25.00%	\$120,476,930
✓	UBS AG	A+	\$3,243,381	0.64%	25.00%	\$122,735,083
✓	CFS Global CI	A	\$14,399,934	2.86%	25.00%	\$111,578,530
✓	ICBC	A	\$98,550,969	19.56%	25.00%	\$27,427,496
✓	ING Bank Aus.	A	\$16,000,000	3.18%	25.00%	\$109,978,464
✓	Aus. Military Bank	BBB+	\$8,000,000	1.59%	15.00%	\$67,587,079
✓	Aus. Unity Bank	BBB+	\$9,000,000	1.79%	15.00%	\$66,587,079
✓	BoQ	BBB+	\$18,002,585	3.57%	15.00%	\$57,584,493
✓	Bendigo-Adelaide	BBB+	\$2,855,858	0.57%	15.00%	\$72,731,221
✓	QT Mutual Bank	BBB+	\$974,640	0.19%	15.00%	\$74,612,439
✓	AMP Bank	BBB	\$10,162,719	2.02%	15.00%	\$65,424,359
✓	Bank Australia	BBB	\$1,305,078	0.26%	15.00%	\$74,282,000
✓	CUA	BBB	\$1,752,054	0.35%	15.00%	\$73,835,024
✓	MyState Bank	BBB	\$4,000,000	0.79%	15.00%	\$71,587,079
✓	P&N Bank	BBB	\$2,500,000	0.50%	15.00%	\$73,087,079
✓	Police CU SA	Unrated	\$2,500,000	0.50%	1.00%	\$2,539,139
✓	TCorpIM LTG	Unrated	\$29,276,760	5.81%	10.00%	\$21,114,626
			<b>\$503,913,857</b>	<b>100.00%</b>		



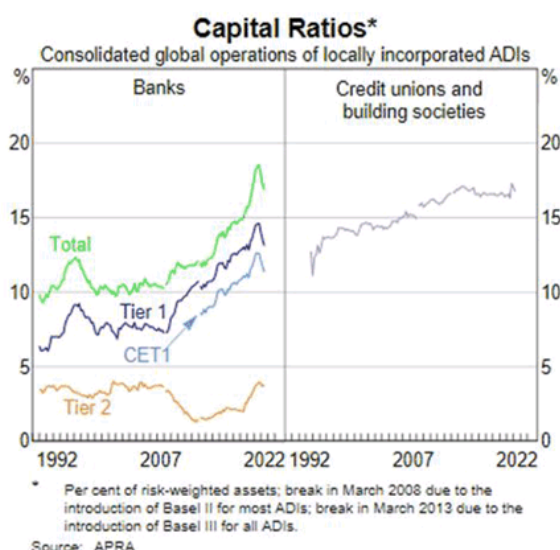
During December 2022, we welcomed Council's decision to adopt a new Investment Policy which not only allows for further diversification, but also reduces concentration risk and provides better opportunities to maximise the overall returns of the portfolio.

In late June 2022, Standard & Poor's downgraded Suncorp-Metway from AA- to A+ (negative watch). Suncorp recently announced that it is undertaking a strategic review of its banking operations. The downgrade reflects S&P's view that the Suncorp Group's likelihood of support for the bank had "slightly" diminished and that it was no longer a core part of the Group. In July 2022, ANZ (AA-) announced it was putting a bid to buy Suncorp's banking division for ~\$4bn. Should that takeover be formalised, Suncorp-Metway's (A+) current credit rating is likely to be upgraded to ANZ's (AA-).

We note the lower rated ADIs (BBB and unrated) are generally now in a better financial position than they have been historically (see the Capital Ratio figure below). APRA's outgoing Chair Wayne Byres recently noted that the Common Equity Tier 1 capital of Australian banks now exceeds a quarter of a trillion dollars. It has increased by \$110 billion, or more than 70%, over the past eight years. Over the same time, banks' assets have grown by 44%. Some of the extra capital is supporting growth in the banking system itself but clearly, there has been a strengthening in overall resilience and leverage in the system is lower.

We believe that deposit investments with the lower rated ADIs should be considered going forward, particularly when they offer 'above market' specials. Not only would it diversify the investment portfolio and reduce credit risk, it would also improve the portfolio's overall returns. The lower rated entities are generally deemed to be the more 'ethical' ADIs compared to the higher rated ADIs.

In the current environment of high regulation and scrutiny, all domestic (and international) ADIs continue to carry high levels of capital. There is minimal (if any) probability of any ADI defaulting on their deposits going forward – this was stress tested during the GFC and the pandemic period. **APRA's mandate is to "protect depositors" and provide "financial stability".**





### Domestic versus International

Noting Council's (internationally) demographic ratepayer base, we summarise where its investments are currently placed:

ADI Category by APRA / Country of Region	Amount Invested	Percentage
Australian Owned ADI	\$304,010,137	60.33%
Australia	\$304,010,137	60.33%
Branches of Foreign Bank	\$139,694,350	27.72%
China	\$98,550,969	19.56%
Switzerland	\$3,243,381	0.64%
United States	\$37,900,000	7.52%
Foreign Subsidiary Banks	\$16,532,676	3.28%
Netherlands	\$16,532,676	3.28%
Global <sup>^</sup>	\$43,676,694	8.67%
International	\$43,676,694	8.67%
<b>Total</b>	<b>\$503,913,857</b>	<b>100.00%</b>

Source: <https://www.apra.gov.au/register-of-authorized-deposit-taking-institutions>

<sup>^</sup>Global: The NSW TCorpIM LTGF and CFS Global Credit Income Fund invests in hundreds of underlying securities globally, from which the portfolio composition is likely to change regularly.

Overall, approximately 60% of Council's total investment portfolio is placed with domestic ADIs, while the remaining 40% is placed with international banks and corporate entities.

In response to global financial crisis (GFC), the Financial Stability Board (FSB) came up with a range of financial metrics to ascertain which banks were effectively deemed "*too big to fail*". A list of Globally Systemic Important Banks (G-SIBs) was developed, in which these banks required to hold much higher levels of capital compared to their smaller peers to ensure their financial stability under various stress test scenarios (e.g. another GFC).

We note that Council's exposure to the international banks are generally with such Globally Systemic Important Banks (G-SIBs), including ICBC (China), ING Bank (Netherlands), UBS (Switzerland), Credit Suisse (Switzerland), HSBC (Hong Kong) and Citibank (US).

**Overall, we have no concerns with Council's exposure to international banks given they are largely considered to be globally systematic important banks that are '*too big to fail*'.**





### Fossil Fuel Investments

#### **What is Council's current exposure to institutions that fund fossil fuels?**

Using the following link <http://www.marketforces.org.au/banks/compare>, based on the Council's investment portfolio balance as at 31/01/2023 (\$503.91m), we can roughly estimate that ~71% of the investments have some form of exposure. This is likely to drift higher given the new Policy limits imposed by NSW Treasury Corporation.

Council's exposure is summarised as follows:

Counterparty	Credit Rating	Funding Fossil Fuel
BoQ Covered	AAA	Yes
Bendigo Covered	AAA	No
Suncorp Covered	AAA	No
ING Covered	AAA	Yes
ANZ	AA-	Yes
CBA	AA-	Yes
NAB	AA-	Yes
Northern Territory	AA-	Yes
Westpac	AA-	Yes
Citibank NA	A+	Yes
Macquarie	A+	Yes
Suncorp	A+	No
UBS AG	A+	No
CFS Global Credit^^	A	Yes
ICBC	A	No
ING Bank	A	Yes
Aus Military Bank	BBB+	No
Aus Unity Bank	BBB+	No
BOQ	BBB+	Yes
Bendigo-Adelaide	BBB+	No
QT Mutual Bank	BBB+	No
AMP Bank	BBB	Yes
Bank Australia	BBB	No
CUA	BBB	No
MyState Bank	BBB	No
P&N Bank	BBB	No
Police CU SA	Unrated	No
T-CorpIM LTG Fund^^	Unrated	Yes

^^The underlying exposure in these managed funds includes the domestic major banks.

Source: <https://www.marketforces.org.au/info/compare-bank-table/>

Summary	Amount	Invested %
Yes	\$358,215,540	71%
No	\$145,698,317	29%
	<b>\$503,913,857</b>	<b>100%</b>



**Transition to investments without major exposure to fossil fuels**

Council has not made a decision to divest from the current portfolio of investments which have exposure to fossil fuels. To do so would have unfavourable implications to the credit quality, rating and interest income forecasts.

However, where possible, and within the ministerial and policy guidelines, Council will continue to favour newly issued fossil fuel free investment products, providing it does not compromise the risk and return profile.

In time it is Council's intention to move to a more balanced portfolio which has less exposure to fossil fuels, providing it is prudent to do so.

**What would be implications on our portfolio credit rating?**

By adopting a free fossil fuel policy or an active divestment strategy, this would eliminate the major banks rated "AA-" as well as some other "A" rated banks (Citi, Macquarie and ING). Council would be left with a smaller sub-sector of banks to choose to invest with.

**What would be risks and implications on Council's portfolio performance?**

Some implications include:

- High concentration risk – limiting Council to a selected number of banks;
- Increased credit/counterparty risk;
- May lead to a reduction in performance (e.g. most of the senior FRN issues are with the higher rated ADIs);
- Underperformance compared to other Councils which could result in a significant loss of income generated – could be in excess of hundreds of thousands of dollars per annum.

It may actually be contrary to Council's primary objective to preserve capital as the investment portfolio's risk would increase (all things being equal). Council may not be maximising its returns – this is one of the primary objectives written in the Investment Policy.



### Credit Quality

Following the most recent adopted Policy in January 2023, all aggregate ratings categories are currently within the Policy limits:

Compliant	Credit Rating	Invested (\$)	Invested (%)	Max. Limit (%)	Available (\$)
✓	AAA Category	\$6,950,836	1%	100%	\$496,963,021
✓	AA Range or Major Banks	\$267,908,637	53%	100%	\$236,005,220
✓	A Category	\$138,724,689	28%	80%	\$264,406,396
✓	BBB Category	\$58,552,935	12%	30%	\$92,621,222
✓	Unrated ADI Category	\$2,500,000	0%	10%	\$47,891,386
✓	TCorplM Funds	\$29,276,760	6%	25%	\$96,701,704
		<b>\$503,913,857</b>	<b>100.00%</b>		

The portfolio remains well diversified across the entire credit spectrum, including some exposure to the unrated ADI sector.

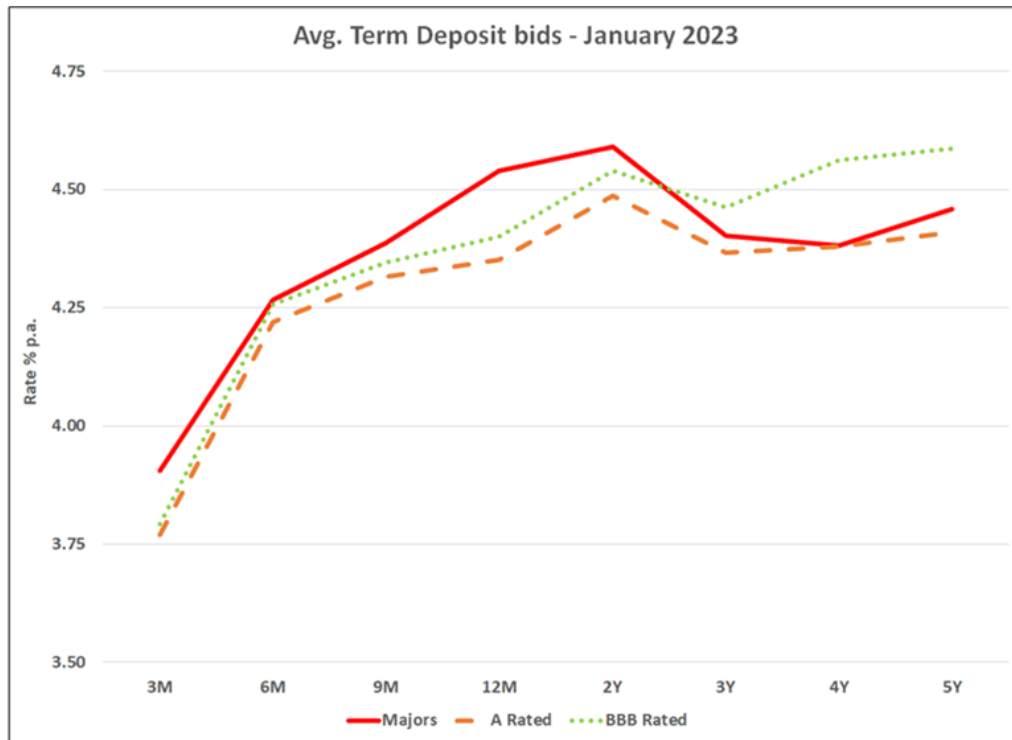
There is high capacity to invest in the higher rated ADIs (A or higher), particularly after the downgrades of BoQ and AMP Bank over the past few years, as all have now fallen back into the “BBB” rated category (previously in the “A” rated category).

Pre-pandemic (March 2020), a 'normal' marketplace meant the lower rated ADIs (i.e. BBB category) were offering higher rates on term deposits compared to the higher rated ADIs (i.e. A or AA rated). But due to the cheap funding available provided by the RBA via their Term Funding Facility (TFF) since mid-2020<sup>1</sup>, allowing the ADIs to borrow as low as 0.10% p.a. fixed for 3 years, those lower rated ADIs (BBB rated) did not require deposit funding from the wholesale deposit from the likes of Council. Given the higher rated banks had more capacity to lend (as they have a greater pool of mortgage borrowers), they subsequently were offering higher deposit rates. In fact, some of the lower rated banks were not even offering deposit rates at all. As a result, most investors placed a higher proportion of their deposit investments with the higher rated (A or AA) ADIs over the past three years.

In the interim, the 'abnormal' marketplace still largely exists, with the higher rated banks (majors) often paying a higher rate of return over the lower rated institutions across various parts of the curve on any particular day. Over the next few years, with the RBA now removing these cheap borrowing facilities, this should result in some of the lower rated banks (BBB rated) starting to become more competitive as the market starts to 'normalise'. Council should have a larger opportunity to invest a higher proportion of its surplus funds with the lower rated institutions (up to Policy limits), from which the majority are not lending to the Fossil Fuel industry or considered more 'ethical'.

We are slowly seeing this trend emerge, as has been the case in recent months:

<sup>1</sup> The RBA's Term Funding Facility (TFF) allowed the ADI to borrow as low as 0.10% fixed for 3 years: <https://www.rba.gov.au/mkt-operations/term-funding-facility/overview.html>



Source: Imperium Markets



### Performance

Council's performance (actual returns) for the month ending 31 January 2023 is summarised as follows:

Performance (Actual)	1 month	3 months	6 months	FYTD	1 year	2 years	3 years
Official Cash Rate	0.26%	0.75%	1.32%	1.44%	1.56%	0.83%	0.64%
AusBond Bank Bill Index	0.27%	0.77%	1.31%	1.44%	1.52%	0.77%	0.61%
PCC Internal Benchmark*	0.58%	1.18%	1.85%	2.30%	2.05%	1.45%	1.38%
PCC Cash Portfolio	0.28%	0.80%	1.43%	1.56%	1.78%	1.12%	1.00%
PCC T/D Portfolio	0.20%	0.60%	1.15%	1.31%	1.92%	1.60%	1.70%
PCC FRN Portfolio	0.36%	1.04%	1.91%	2.15%	2.68%	2.17%	2.02%
PCC Bond Portfolio	0.09%	0.28%	0.56%	0.65%	1.10%	1.07%	-
PCC Credit Fund	1.17%	2.92%	3.34%	4.82%	0.96%	0.75%	0.89%
PCC TCorp Growth Fund	3.73%	3.40%	3.49%	7.29%	-3.36%	3.74%	2.75%
<b>PCC's Total Portfolio</b>	<b>0.36%</b>	<b>0.76%</b>	<b>1.31%</b>	<b>1.63%</b>	<b>1.39%</b>	<b>1.42%</b>	<b>1.53%</b>
<b>Outperf. (BBI)</b>	<b>0.10%</b>	<b>0.00%</b>	<b>-0.01%</b>	<b>0.19%</b>	<b>-0.13%</b>	<b>0.65%</b>	<b>0.92%</b>
<b>Outperf. (Int. Bench.)</b>	<b>-0.22%</b>	<b>-0.42%</b>	<b>-0.55%</b>	<b>-0.67%</b>	<b>-0.66%</b>	<b>-0.03%</b>	<b>0.15%</b>

\*The Internal Benchmark returns are based on Council's individual benchmarks across the various asset classes it invests within its own portfolio. The following individual benchmark's are used for each asset class that Council invests in:

Cash: RBA Cash Rate

Term Deposits: Deposit benchmark based on Council's weighted average duration using multiple ADIs average monthly rate

FRNs: AusBond Credit FRN Index

CFS Global Credit Income Fund: AusBond Credit Index

NSW TCorpIM Long-Term Growth Fund: Fund's return itself

**For the month of January, the total investment portfolio (including cash) provided a return of +0.36% (actual) or +4.35% p.a. (annualised),** outperforming the AusBond Bank Bill Index return of +0.27% (actual) or +3.18% p.a. (annualised), while underperforming Council's internal benchmark return of +0.58% (actual) or +7.06% p.a. (annualised). The CFS (+1.17% actual) and TCorp Fund (+3.73% actual) were the main contributors to performance this month.

The longer-term outperformance continues to be anchored by the handful of longer-dated deposits that were locked-in prior to the RBA's rate cuts, as well as the FRNs locked in at attractive margins, boosted by the strategic sales implemented over the past few years. This is now reflected in the longer-term returns with the FRN portfolio now slightly ahead of fixed term deposits over 1-3 year time periods.



The annualised returns as of 31 January 2023 are shown in the following table:

Performance (% p.a.)	1 month	3 months	6 months	FYTD	1 year	2 years	3 years
Official Cash Rate	3.10%	3.02%	2.64%	2.45%	1.56%	0.83%	0.64%
AusBond Bank Bill Index	3.18%	3.08%	2.63%	2.46%	1.52%	0.77%	0.61%
PCC Internal Benchmark*	7.06%	4.78%	3.71%	3.94%	2.05%	1.45%	1.38%
PCC Cash Portfolio	3.35%	3.20%	2.86%	2.67%	1.78%	1.12%	1.00%
PCC T/D Portfolio	2.40%	2.39%	2.28%	2.24%	1.92%	1.60%	1.70%
PCC FRN Portfolio	4.33%	4.21%	3.82%	3.67%	2.68%	2.17%	2.02%
PCC Bond Portfolio	1.11%	1.11%	1.11%	1.11%	1.10%	1.07%	-
PCC Credit Fund	14.64%	12.10%	6.74%	8.31%	0.96%	0.75%	0.89%
PCC TCorp Growth Fund	53.85%	14.17%	7.05%	12.69%	-3.36%	3.74%	2.75%
<b>PCC's Total Portfolio</b>	<b>4.35%</b>	<b>3.06%</b>	<b>2.61%</b>	<b>2.78%</b>	<b>1.39%</b>	<b>1.42%</b>	<b>1.53%</b>
<b>Outperf. (BBI)</b>	<b>1.18%</b>	<b>-0.01%</b>	<b>-0.02%</b>	<b>0.33%</b>	<b>-0.13%</b>	<b>0.65%</b>	<b>0.92%</b>
<b>Outperf. (Int. Bench.)</b>	<b>-2.71%</b>	<b>-1.72%</b>	<b>-1.10%</b>	<b>-1.16%</b>	<b>-0.66%</b>	<b>-0.03%</b>	<b>0.15%</b>



### Council's Term Deposit Portfolio & Recommendation

As at the end of January 2023, Council's deposit portfolio was yielding **2.31% p.a.** (down 2bp from the previous month), with a weighted average duration of around 346 days (~11½ months).

Over a longer-term cycle, investors are rewarded if they can continue to maintain a slightly longer average duration. In a 'normal' marketplace, yields at the long-end are generally offered at a slight premium over shorter tenors.

At the time of writing, we see value in:

	LT Credit Rating	Term	T/D Rate
ING	A	3 years	4.62% p.a.
ING	A	2 years	4.61% p.a.
CBA	AA-	2 years	4.64% p.a.
BoQ	BBB+	2 years	4.55% p.a.
Westpac	AA-	2 years	4.50% p.a.
NAB	AA-	2 years	4.50% p.a.
Hume Bank	BBB+	2 years	4.50% p.a.
Suncorp	A+	2 years	4.45% p.a.

The above deposits are suitable for investors looking to maintain diversification and lock-in a premium compared to purely investing short-term. For terms under 12 months, we believe the strongest value is currently being offered by the following ADIs (dependent on daily funding requirements):



ADI	LT Credit Rating	Term	T/D Rate
CBA	AA-	12 months	4.69% p.a.
NAB	AA-	12 months	4.60% p.a.
Westpac	AA-	12 months	4.59% p.a.
ING	A	12 months	4.55% p.a.
Suncorp	A+	12 months	4.50% p.a.
BoQ	BBB+	12 months	4.50% p.a.
Hume Bank	BBB+	12 months	4.50% p.a.
CBA	A+	6 months	4.41% p.a.
BoQ	BBB+	6 months	4.40% p.a.
CBA	AA-	3 months	4.13% p.a.

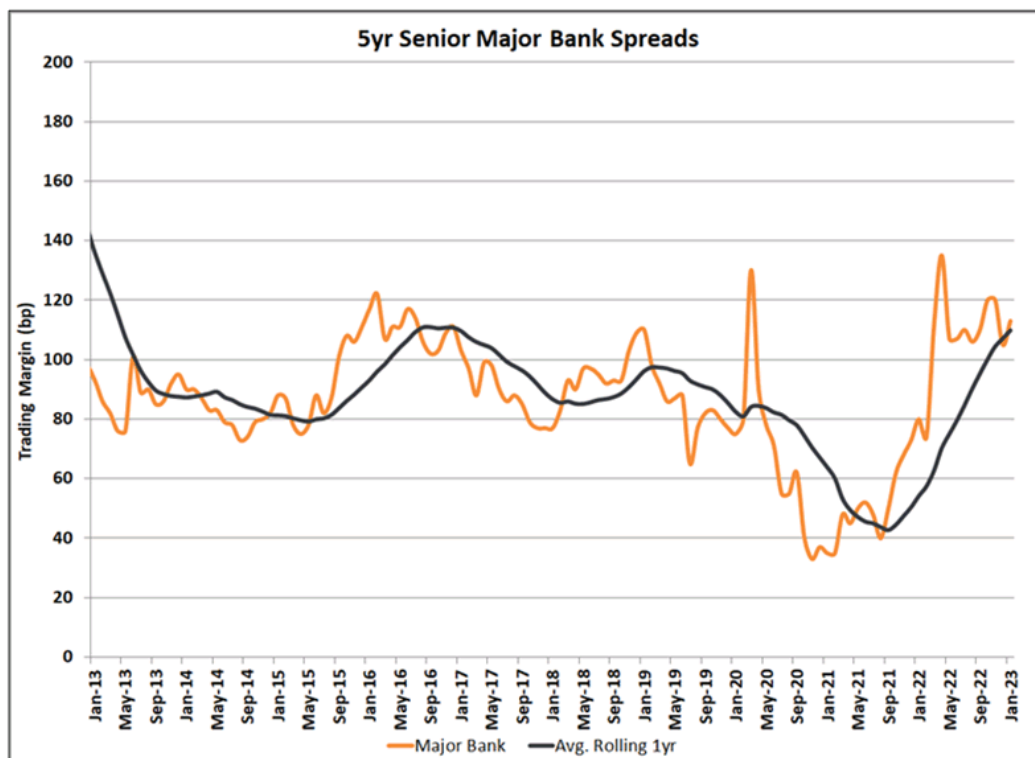
*If Council does not require high levels of liquidity and can stagger its investments longer-term, it will be rewarded over coming years if it can roll for an average min. term of 12 months - 2 years (this is where we see current value), yielding, on average, up to ¼% p.a. higher compared to those investors that entirely invest in short-dated deposits (under 6-9 months).*

*With recessionary fears being priced in coming years, assuming inflation is under control, Council may consider taking an insurance policy by investing across 3-5 year fixed deposits and locking in rates above 4½ p.a., ahead of any potential future rate cuts*



### Senior FRNs Review

Over January, amongst the senior major bank FRNs, physical credit securities widened up to 10bp at the long-end of the curve. This was mainly driven by CBA's (AA-) dual 3 and 5 year primary issuance at +90bp and +115bp respectively. Major bank senior securities are now looking fairly attractive again in a rising rate environment (5 year margins above the +110bp level):



Source: IBS Capital

During January, there were other noticeable new primary issuances from:

- ICBC, Sydney Branch (A) 3 year senior 'green' FRN at 103bp
- Rabobank, Australian Branch (A+) 5 year senior FRN at +118bp
- Bendigo-Adelaide (BBB+) 4 year senior FRN at +135bp
- BoQ (BBB+) 4 year senior FRN at +135bp
- Great Southern Bank (BBB) 4 year senior FRN at +165bp

Amongst the "A" rated sector, the securities were marked up to 5bp wider at the 5 year part of the curve, whilst the "BBB" rated sector was marked up to 15bp tighter (on the 3 year part of the curve) due to recent new issuances.





Credit securities are looking much more attractive given the widening of spreads in 2022. FRNs will continue to play a role in investor's portfolios mainly on the basis of their liquidity and the ability to roll down the curve and gross up returns over ensuing years (in a relatively stable credit environment).

Senior FRNs (ADIs)	31/01/2023	31/12/2022
"AA" rated – 5yrs	+113bp	+105bp
"AA" rated – 3yrs	+88bp	+82bp
"A" rated – 5yrs	+130bp	+125bp
"A" rated – 3yrs	+103bp	+105bp
"BBB" rated – 3yrs	+150bp	+165bp

Source: IBS Capital

We now generally recommend switches ('benchmark' issues only) into new primary issues, out of the following senior FRNs that are maturing:

- **On or before early 2025 for the "AA" rated ADIs (domestic major banks);**
- On or before early 2024 for the "A" rated ADIs; and
- Within 6-9 months for the "BBB" rated ADIs (consider case by case).

Investors holding onto the above senior FRNs ('benchmark' issues only) in their last few years are now generally holding sub-optimal investments and are not maximising returns by foregoing realised capital gains. In the current challenging economic environment, any boost in overall returns should be locked in when it is advantageous to do so, particularly as switch opportunities become available.

*Primary (new) FRNs are now looking more appealing and should be considered on a case by case scenario.*



### Council FRNs – Recommendations for Sale/Switches

Following the selloff in credit assets in 2022, we now recommend Council holds its FRN portfolio at this stage. We will inform Council when there is an opportunity to sell out of any sub-optimal FRN and switch into a higher yielding complying asset.

This strategy has worked very well as Council has ultimately boosted the overall returns of the investment portfolio. A summary of the previous financial year's sales are as follows – given the turn in the market over the past few months, these sales would not have been undertaken unless Council was actively managing its portfolio prudently:

Issuer	Maturity Date	Month Sold	Face Value	Trading Margin	Capital Price	Realised Capital Gains
ME (BBB+)	18/07/2022	Jul 2021	\$2,000,000	+15.0bp	\$100.813	\$16,260
TMB (BBB)	28/10/2022	Jul 2021	\$1,000,000	+23.0bp	\$100.839	\$8,390
NAB (AA-)	19/06/2024	Aug 2021	\$1,300,000	+18.25bp	\$102.081	\$27,053
ANZ (AA-)	29/08/2024	Aug 2021	\$1,500,000	+19.0bp	\$101.744	\$26,160
UBS (A+)	08/03/2023	Sep 2021	\$3,000,000	+23.0bp	\$100.963	\$28,890
B. Comm (A-)	28/10/2022	Sep 2021	\$1,500,000	+25.0bp	\$100.691	\$10,365
WBC (AA-)	16/08/2024	Sep 2021	\$1,600,000	+29.0bp	\$101.682	\$28,416
B. China (A)	17/10/2022	Oct 2021	\$1,000,00	+29.0bp	\$100.687	\$6,870
Soc. Gen. (A)	17/07/2023	Nov 2021	\$2,750,00	+33.0bp	\$100.992	\$27,280
C. Suisse (A+)	26/05/2023	Nov 2021	\$6,500,00	+32.0bp	\$101.252	\$81,380
B. Aust. (BBB)	2/12/2022	Jan 2022	\$1,000,000	+42.0bp	\$100.431	\$4,310
NPB (BBB)	6/02/2023	Jan 2022	\$400,000	+35.0bp	\$101.121	\$5,088
NPB (BBB)	6/02/2023	Jan 2022	\$1,000,000	+35.0bp	\$101.121	\$12,420
NPB (BBB)	6/02/2023	Jan 2022	\$2,500,000	+35.0bp	\$101.121	\$28,025
HSBC (AA-)	27/09/2024	Jan 2022	\$2,000,000	+40.0bp	\$101.140	\$22,800
<b>Total Realised Capital Gains FY2021-2022</b>						<b>\$333,707</b>



### Council's Senior Fixed Bonds

Since September 2020, Council placed parcels in NTTC (AA-) fixed bonds as follows:

Investment Date	Maturity Date	Principal	Rate % p.a. <sup>^</sup>	Remaining Term (Yrs)	Interest Paid
30/09/2020	15/12/2023	\$2,000,000	1.00%	0.87	Annually
24/11/2020	16/12/2024	\$1,000,000	0.90%	1.88	Annually
16/02/2021	16/06/2025	\$1,000,000	0.90%	2.38	Annually
16/02/2021	15/06/2026	\$5,000,000	1.00%	3.37	Annually
12/05/2021	17/06/2024	\$3,000,000	0.80%	1.38	Annually
12/05/2021	16/06/2025	\$3,000,000	1.10%	2.38	Annually
12/05/2021	15/06/2026	\$3,000,000	1.30%	3.37	Annually
20/05/2021	16/06/2025	\$3,500,000	1.10%	2.38	Annually
09/09/2021	16/12/2024	\$2,500,000	0.90%	1.88	Semi-Annually
09/09/2021	15/12/2026	\$5,000,000	1.40%	3.87	Semi-Annually
<b>Totals / Wgt. Avg.</b>		<b>\$29,000,000</b>	<b>1.09%</b>	<b>2.64 yrs</b>	

We believe these investments were prudent especially after the rate cut delivered in early November 2020 and its subsequent forward guidance on official interest rates (no rate rises "until at least 2024"). The NTTC bonds are a 'retail' offering and not 'wholesale' issuances. Given the lack of liquidity and high penalty costs if they were to be sold/redeemed prior to the maturity date, they are considered to be a hold-to-maturity investment and will be marked at par value (\$100.00) throughout the term of investment.

During August 2021, Council also purchased into the following AAA rated covered fixed bond with ING Bank Australia. With yields rising significantly in 2022, Council may consider purchasing additional units in this security in the secondary market at the current yield to 'average-in' a better overall purchase price.

Issuer	Rating	Maturity Date	ISIN	Face Value	Purchase Yield	Current Yield	Unrealised Gain / Loss (\$)
ING	AAA	19/08/2026	AU3CB0282358	\$600,000	1.16%	4.56%	-\$65,578



### Senior Fixed Bonds – ADIs (Secondary Market)

As global inflationary pressures have escalated, this has seen a significant lift in longer-term bond yields (valuations fell) as markets have reacted accordingly.

This has resulted in some opportunities in the secondary market. We currently see value in the following fixed bond lines, with the majority now being marked at a significant discount to par (please note supply in the secondary market may be limited on any day):

ISIN	Issuer	Rating	Capital Structure	Maturity Date	~Remain. Term (yrs)	Fixed Coupon	Indicative Yield
AU3CB0255776	ING	AAA	Covered	07/09/2023	0.60	3.00%	4.21%
AU3CB0258465	Westpac	AA-	Senior	16/11/2023	0.79	3.25%	4.17%
AU3CB0265403	Suncorp	AA-	Senior	30/07/2024	1.50	1.85%	4.53%
AU3CB0265593	Macquarie	A+	Senior	07/08/2024	1.55	1.75%	4.53%
AU3CB0265718	ING	AAA	Covered	20/08/2024	1.55	1.45%	4.39%
AU3CB0266179	ANZ	AA-	Senior	29/08/2024	1.59	1.55%	4.30%
AU3CB0266377	Bendigo	BBB+	Senior	06/09/2024	1.62	1.70%	4.57%
AU3CB0268027	BoQ	BBB+	Senior	30/10/2024	1.76	2.00%	4.65%
AU3CB0269710	ANZ	AA-	Senior	16/01/2025	1.98	1.65%	4.37%
AU3CB0269892	NAB	AA-	Senior	21/01/2025	1.98	1.65%	4.32%
AU3CB0270387	Macquarie	A+	Senior	12/02/2025	2.05	1.70%	4.56%
AU3CB0287415	Westpac	AA-	Senior	17/03/2025	2.14	2.70%	4.30%
AU3CB0291508	Westpac	AA-	Senior	11/08/2025	2.54	3.90%	4.34%
AU3CB0291672	CBA	AA-	Senior	18/08/2025	2.56	4.20%	4.30%
AU3CB0280030	BoQ	BBB+	Senior	06/05/2026	3.26	1.40%	4.97%
AU3CB0234623	CBA	AA-	Senior	11/06/2026	3.35	4.20%	4.47%
AU3CB0282358	ING	AAA	Covered	19/08/2026	3.56	1.10%	4.61%
AU3CB0284149	BoQ	BBB+	Senior	27/10/2026	3.75	2.10%	4.89%
AU3CB0286037	Westpac	AA-	Senior	25/01/2027	4.00	2.40%	4.55%



### CFS Global Credit Income Fund

For the month of January, the CFS Global Credit Income Fund returned ++1.17% (actual), outperforming the AusBond Bank Bill Index return of +0.27% (actual), whilst underperforming the AusBond Credit Index return of +2.19% (actual).

The outlook for credit markets remains volatile. The base case call is for a recession in 2023 and that inflation will continue to fall through the year. This combination will prove to be good news for sovereign bond yields. However, demand destruction is bad news for consumer spending and corporate earnings. This implies that credit spreads are vulnerable to widening from current levels.

Although it has been a relatively volatile environment for credit over the past few years, it has been one of Council's best performing assets over the longer-term. The portfolio continues to accumulate high running-income in excess of the benchmark across all corporate and financial sectors. The Fund holds a diverse range of securities across the global credit market. It remains very well diversified by issuer in order to mitigate default risk. It invests in nearly 600 corporate bonds from issuers in various countries and industry sectors. Any spread contraction going forward allows credit and asset-backed holdings to enjoy significant capital gains.

*With a running yield of ~4-4½% p.a., we recommend Council to retain this investment given the alternative investments in complying fixed interest products are largely earning below this rate of return.*



### NSW T-CorpIM Growth Fund

**The Growth Fund returned +3.73% (actual) for the month of January.** The gains this month were attributed to international shares (the MSCI World ex-Australia Index rose +6.92%) and domestic shares (the S&P ASX 200 Accumulation Index added +6.23%). Also contributing to the gains was the exposure to fixed bonds (AusBond Composite Bond Index rose +2.76%).

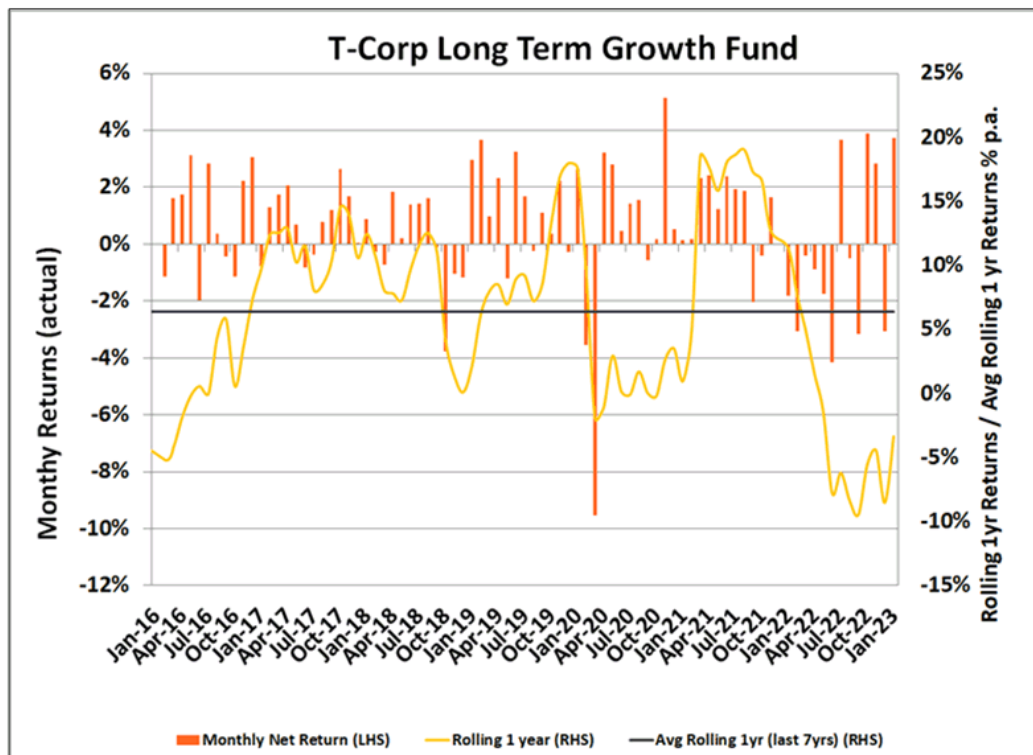
The past year has been dominated by escalating supply tensions emanating from the war in Ukraine which pushed inflation much higher and for longer than anyone was expecting. The ramped-up response by central banks, in retrospect, was largely expected.

Looking into 2023, asset markets will have to work through the consequences of the above events of 2022. Geopolitical tensions are likely to remain elevated and these tensions could take an unexpected turn at any time. Be warned and be prepared to adapt. Many supply problems have dissipated and while there is no return to the pre-Covid norm, the economic impact from supply is likely to be much less in 2023. The year ahead may see some demand destruction wreaked by the most aggressive monetary policy tightening cycle since the 1980s. The prevailing conditions for households and corporates have been robust compared to past tightening cycles, however the signalling from central banks is they intend to cause stress for both groups.

Overall, we remain cautious on the future performance of the T-Corp Growth Fund given the high volatility associated with a diversified growth fund, which generally allocates a range of 60%-80% in domestic and international shares. Investors are bracing for central banks to raise official rates more aggressively than previously anticipated to combat inflation driven by supply-chain bottlenecks, a global energy crunch and ongoing geopolitical risks.

The Fund should be looked at with a long-term view, with a minimum holding period of +7 years. Given the exposure to the volatile asset of shares, Council should expect to see, on average, a negative month once every 3 months over a long-term holding period.

Since Inception	T-Corp Long Term Fund
Negative Months	138 (~1 in 3 months)
Positive Months	265
Total Months	403 (33.6 yrs)
Average Monthly Return	+0.64% (actual)
Median Monthly Return	+1.02% (actual)
Lowest 1 year Rolling Return	-21.12% p.a. (Nov 2008)
Highest 1 year Rolling Return	+29.89% p.a. (Jan 1994)







## Economic Commentary

Risk markets were aided in January as recent data indicated there were signs the global economy may be weathering inflation better than previously anticipated. Several global central banks also hinted they may pause their aggressive rate hike cycles in the near future.

Across equity markets, the S&P 500 Index rose +6.18%, while the NASDAQ surged +10.68%. Europe's main indices also gained, led by France's CAC (+9.40%), Germany's DAX (+8.65%) and UK's FTSE (+4.29%).

The US core CPI index, which excludes volatile food and energy items, rose +0.3% m/m, in line with the consensus. Encouragingly for the Fed, the core PCE printed +4.4% y/y, the lowest since October 2021, generating a 3-month annualised rate to +2.9% from +3.5%, the lowest read since January 2021.

US Q4 GDP beat expectations at +2.9% quarter annualised versus +2.6% expected. US headline retail was -1.1% m/m versus -0.9% expected. The important core control measure was also weak at -0.7% m/m against -0.3% expected.

The Bank of Canada (BoC) explicitly signalled a pause to the hiking cycle after hiking by 25bp during the month. Their explicit pause signal has many thinking whether other central banks will do likewise noting they were one of the first to start the initial hiking cycle. Canadian CPI data supported the theme of slower global inflationary pressure, with the headline and core measures falling to +6.3% and +5.6% respectively.

The Bank of Japan (BoJ) bought ¥5 trillion of JGBs to defend the target, its largest ever daily amount of bond buying, which followed ¥4.6 trillion of purchases earlier.

Eurozone Q4 GDP surprised at +0.1% q/q against -0.1 expected, raising hopes that a recession may be avoided. However, Italian GDP was weaker at -0.1% q/q, along with German GDP at -0.2% q/q with the possibility of downward revisions given German retail sales for December printed at -5.3% m/m against -0.2% expected.

Chinese trade data saw exports at -9.9% y/y (consensus -11.1%) and imports down -7.5% y/y (consensus -10.0%), though the impact of Covid in December clouds the numbers. China's population dropped in 2022 for the first time since 1961, by 850,000 to 1.412 billion. There are fears that as China's population declines, this will constrain potential growth. Meanwhile, China's re-opening continues to drive optimism, resulting in most commodity prices to trade higher.

The MSCI World ex-Aus Index rose +6.92% for the month of January:

Index	1m	3m	1yr	3yr	5yr	10yr
S&P 500 Index	+6.18%	+5.28%	-9.72%	+8.12%	+7.62%	+10.53%
MSCI World ex-AUS	+6.92%	+9.06%	-9.32%	+5.98%	+4.78%	+7.29%
S&P ASX 200 Accum. Index	+6.23%	+9.59%	+12.21%	+5.96%	+8.51%	+8.75%

Source: S&P, MSCI





### Domestic Market

The unemployment rate in December was unchanged at 3.5% from an upwardly revised November figure. The participation rate fell 0.2% to 66.6% from 66.8%, back to its October level after the bounce in November, and has also been broadly steady at 66.6% in H2 2022.

With unemployment hovering around a 48-year low, businesses are finding it incredibly difficult to find workers. About 90% of bosses expect staffing shortages will affect their business this year, according to the Australian Industry Group's annual survey of CEO expectations.

Q4 CPI rose more than expected at +1.9% (consensus +1.5%), taking the annual rate to +7.8%, the highest peak since 1990, driven by increases in domestic holidays, international travel and higher electricity prices. The trimmed mean rose +1.7% over the quarter, with the annual rate coming in at +6.9%.

Sydney house prices have had their steepest annual fall on record, declining 10.9% last year as rising interest rates took a toll on buyer demand and spending power. House prices are now 11.3% below their early 2022 peak, but is still 24.2% higher than they were when the market troughed in mid-2020.

Dwelling approvals fell -9.0% m/m in November (consensus 0%). That's the third consecutive month of decline and follows October's 5.6% fall.

Retail sales fell a sharp -3.9% m/m in December (consensus -0.2%), following an upwardly revised November to +1.7% m/m (from 1.4%). The key implication is that we may be starting to see the first signs that monetary tightening is starting to weigh on consumption.

The November trade balance was up 0.5bn to \$13.2bn from an upwardly revised October figure.

The Australian dollar gained +3.87%, finishing the month at US70.37 cents (from US67.75 cents the previous month).

### Credit Market

The global credit indices tightened significantly over January in the 'risk-on' environment. They are now back to their levels in early 2022 (prior to the rate hike cycle from most central banks):

Index	January 2023	December 2022
CDX North American 5yr CDS	72bp	86bp
iTraxx Europe 5yr CDS	79bp	98bp
iTraxx Australia 5yr CDS	82bp	91bp

Source: Markit



## Fixed Interest Review

### Benchmark Index Returns

Index	January 2023	December 2022
Bloomberg AusBond Bank Bill Index (0+YR)	+0.27%	+0.25%
Bloomberg AusBond Composite Bond Index (0+YR)	+2.76%	-2.06%
Bloomberg AusBond Credit FRN Index (0+YR)	+0.42%	+0.34%
Bloomberg AusBond Credit Index (0+YR)	+2.19%	-0.62%
Bloomberg AusBond Treasury Index (0+YR)	+2.94%	-2.37%
Bloomberg AusBond Inflation Gov't Index (0+YR)	+4.87%	-2.74%

Source: Bloomberg

### Other Key Rates

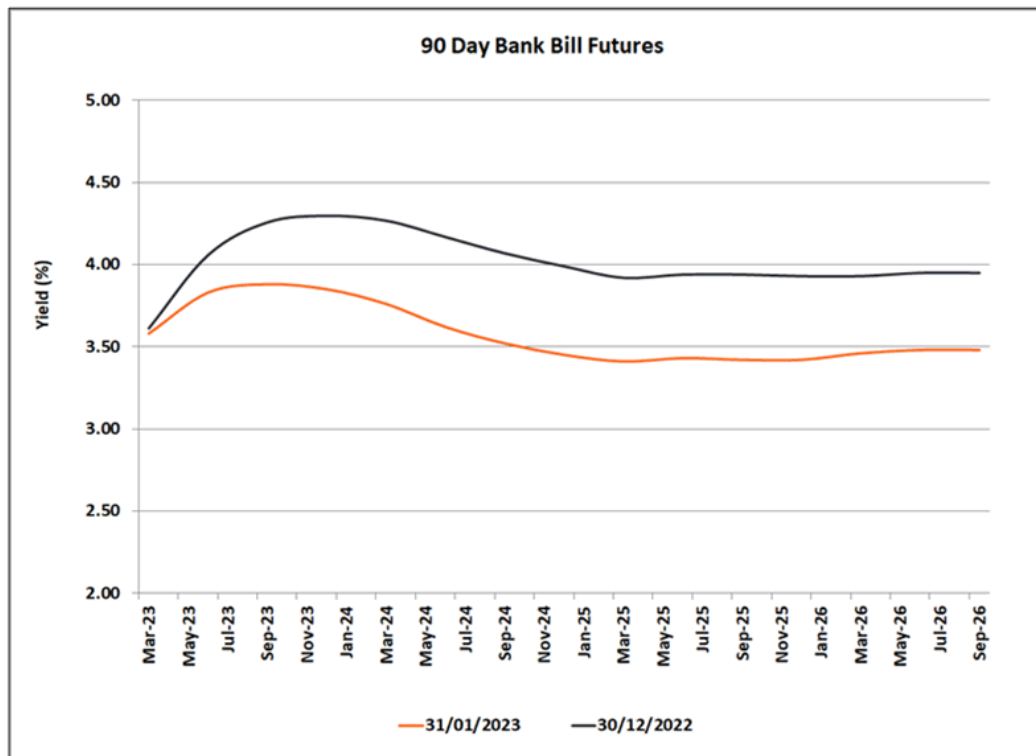
Index	January 2023	December 2022
RBA Official Cash Rate	3.10%	3.10%
90 Day (3 month) BBSW Rate	3.37%	3.26%
3yr Australian Government Bonds	3.17%	3.51%
10yr Australian Government Bonds	3.55%	4.05%
US Fed Funds Rate	4.25%-4.50%	4.25%-4.50%
3yr US Treasury Bonds	3.90%	4.22%
10yr US Treasury Bonds	3.52%	3.88%

Source: RBA, AFMA, US Department of Treasury



### 90 Day Bill Futures

Over January, bill futures fell across the board, with the market reacting to central bank rhetoric, hinting that a pause in the rate hike cycle was fast approaching. The markets continue to factor in the possibility of a global recession over the next few years, highlighted by the drop in the futures pricing in early 2024:



Source: ASX



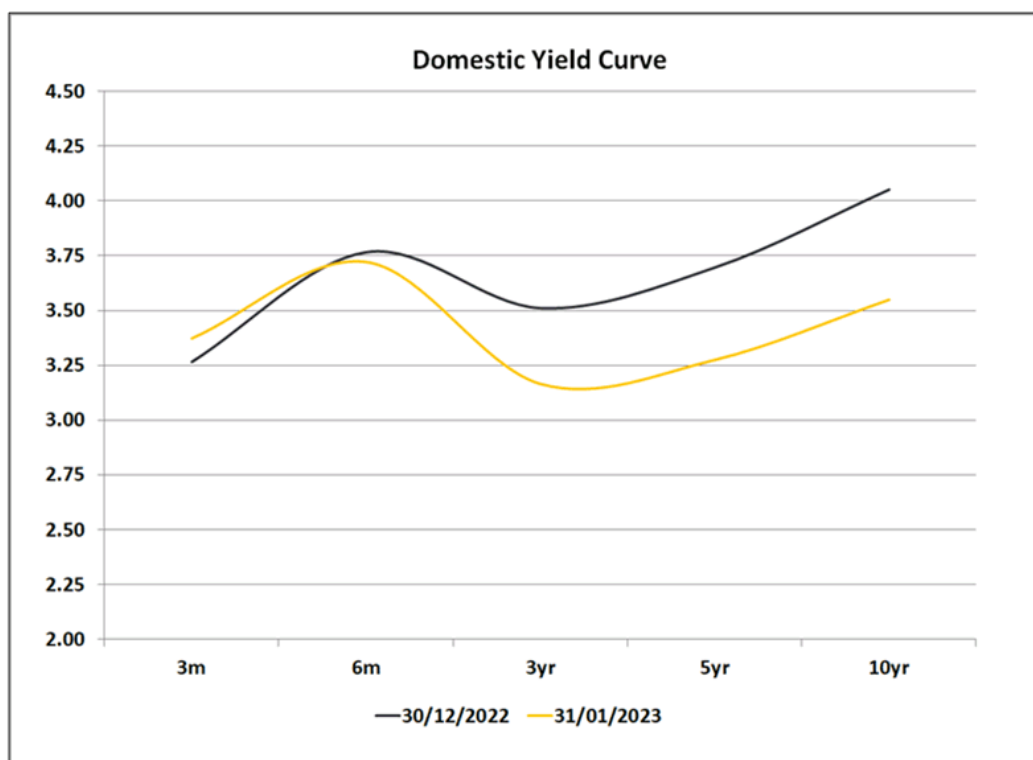
## Fixed Interest Outlook

Following the recent soft inflation figures in the US, Fed Funds pricing is now expecting a 25bp hike on 1<sup>st</sup> February, with around a 40% chance they may also leave rates unchanged.

Domestically, the headline inflation outlook has somewhat receded with growing confidence that construction inflation is in retreat and signs of goods disinflation globally. The labour market remains tight, but timely indicators of labour demand are off their peaks as labour supply has normalised and frictions associated with rapid employment growth out of pandemic impacts moderate. Although labour costs pressures are evident in the latest CPI figures for Q4 2022, there are reasons to be optimistic that some stabilisation in wages growth can occur without a sharply higher unemployment rate, including the normalisation in labour supply.

For now, the RBA continues to signal that it expects to increase interest rates further over the period ahead, with up to 2-3 hikes already largely priced into the market by Q2-Q3 2023, taking the cash rate up to 3¾%. Thereafter, noting the lags in monetary policy, a pause around the end of Q2-Q3 is likely whilst the RBA monitors the economic data.

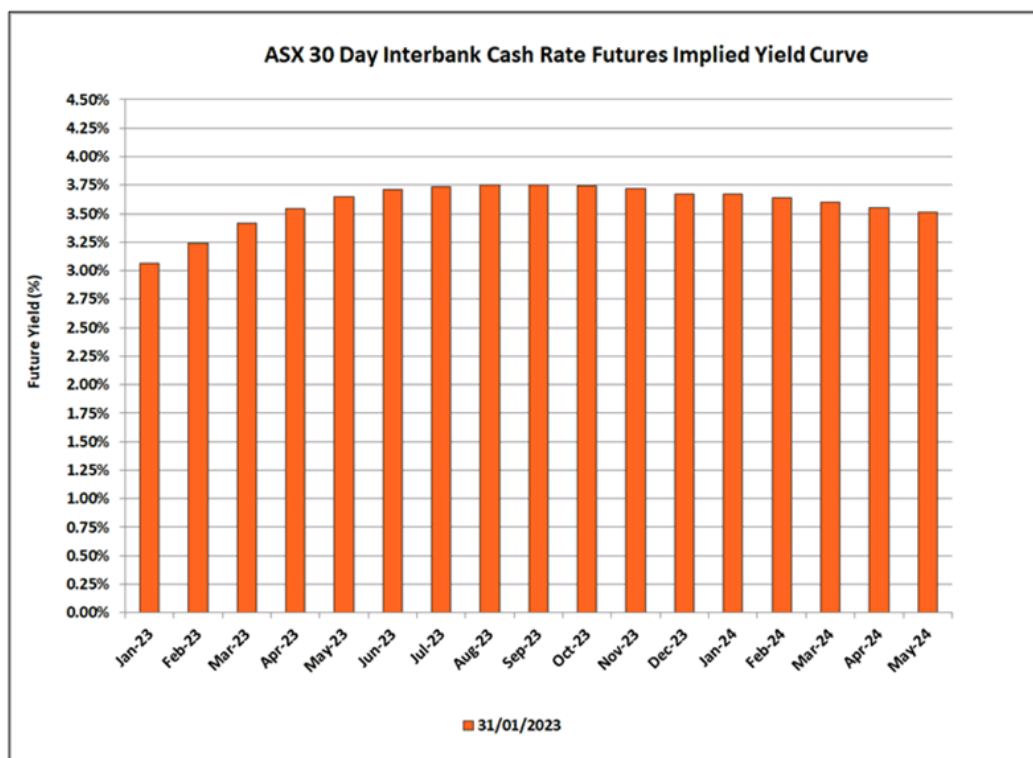
Over the month, yields fell up to 50bp at the long-end of the curve:



Source: AFMA, ASX, RBA



Markets are currently pricing in around 2-3 additional rate rises into mid-2023 (up to 3.75%). Fears of a looming global recession have actually seen rate cuts start to be priced in towards the start of 2024, although this seems unlikely for now.



Source: ASX

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## Investment Report

01/01/2023 to 31/01/2023



## Portfolio Valuation as at 31/01/2023

Issuer	Rating	Type	Alloc	Interest	Purchase	Maturity	Rate	Capital Value	Accrued	Accrued MTD
NAB	AA-	TD	GENERAL	At Maturity	25/10/2022	02/02/2023	3.7000	3,000,000.00	30,106.85	9,427.40
AMP Bank	BBB	TD	GENERAL	At Maturity	17/02/2022	17/02/2023	1.0000	2,000,000.00	19,123.29	1,698.63
AMP Bank	BBB	TD	GENERAL	At Maturity	17/02/2022	17/02/2023	1.0000	2,000,000.00	19,123.29	1,698.63
MyState Bank	BBB	TD	GENERAL	At Maturity	08/11/2022	09/03/2023	3.8400	4,000,000.00	35,769.86	13,045.48
Police Credit Union SA	Unrated	TD	GENERAL	At Maturity	16/12/2022	16/03/2023	4.0000	2,500,000.00	12,876.71	8,493.15
ING Direct	A	TD	GENERAL	At Maturity	31/03/2022	30/03/2023	1.6800	3,000,000.00	42,391.23	4,280.55
NAB	AA-	TD	GENERAL	Annual	30/03/2021	30/03/2023	0.5500	5,000,000.00	23,205.48	2,335.62
AMP Bank	BBB	TD	GENERAL	Annual	05/04/2019	05/04/2023	2.8000	3,000,000.00	69,501.37	7,134.25
NAB	AA-	TD	GENERAL	Annual	30/03/2021	06/04/2023	0.5500	5,000,000.00	23,205.48	2,335.62
NAB	AA-	TD	GENERAL	At Maturity	10/11/2022	13/04/2023	4.1000	3,000,000.00	27,969.86	10,446.58
ING Direct	A	TD	GENERAL	At Maturity	14/04/2022	14/04/2023	1.8800	4,000,000.00	60,366.03	6,386.85
Commonwealth Bank	AA-	TD	GENERAL	At Maturity	21/04/2022	20/04/2023	2.2000	4,000,000.00	68,953.42	7,473.97
Commonwealth Bank	AA-	TD	GENERAL	Semi-Annual	22/04/2022	27/04/2023	2.4100	35,000,000.00	67,017.81	67,017.81
BOQ	BBB+	TD	GENERAL	Annual	03/05/2019	03/05/2023	2.7000	3,500,000.00	70,939.73	8,026.03
Commonwealth Bank	AA-	TD	GENERAL	At Maturity	03/05/2022	04/05/2023	2.7400	1,000,000.00	20,568.77	2,327.12
Suncorp	A+	TD	GENERAL	At Maturity	10/11/2022	11/05/2023	4.2400	3,000,000.00	28,924.93	10,803.29
ING Direct	A	TD	GENERAL	At Maturity	12/05/2022	11/05/2023	3.0800	4,000,000.00	89,446.58	10,463.56
BOQ	BBB+	TD	GENERAL	At Maturity	24/05/2022	25/05/2023	3.2000	2,000,000.00	44,361.64	5,435.62



Issuer	Rating	Type	Alloc	Interest	Purchase	Maturity	Rate	Capital Value	Accrued	Accrued MTD
BOQ	BBB+	TD	GENERAL	At Maturity	20/05/2022	26/05/2023	3.1900	2,000,000.00	44,922.19	5,418.63
Westpac	AA-	FRTD	GENERAL	Quarterly	30/05/2018	30/05/2023	4.0885	2,000,000.00	14,113.73	6,944.85
ICBC Sydney Branch	A	TD	GENERAL	Annual	02/06/2020	01/06/2023	1.4600	4,000,000.00	39,040.00	4,960.00
ICBC Sydney Branch	A	TD	GENERAL	Annual	01/06/2020	01/06/2023	1.4500	5,000,000.00	48,664.38	6,157.53
Westpac	AA-	TD	MAAS	Quarterly	25/06/2020	29/06/2023	1.0400	11,400,000.00	11,368.77	10,069.48
NAB	AA-	TD	MAAS	Annual	25/06/2020	29/06/2023	1.1500	18,600,000.00	128,340.00	18,166.85
ING Direct	A	TD	MAAS	Annual	25/06/2020	29/06/2023	1.1000	5,000,000.00	33,000.00	4,671.23
NAB	AA-	TD	GENERAL	Annual	25/06/2020	29/06/2023	1.1500	7,000,000.00	48,300.00	6,836.99
BOQ	BBB+	TD	GENERAL	Annual	03/09/2020	07/09/2023	1.0500	3,000,000.00	12,858.90	2,675.34
BOQ	BBB+	TD	GENERAL	At Maturity	08/09/2022	14/09/2023	4.1500	3,000,000.00	49,800.00	10,573.97
P&N Bank	BBB	TD	GENERAL	Annual	05/10/2018	05/10/2023	3.4500	1,500,000.00	16,871.92	4,395.21
Australian Military Bank	BBB+	TD	GENERAL	Annual	11/10/2019	10/10/2023	1.8200	3,000,000.00	16,903.56	4,637.26
P&N Bank	BBB	TD	GENERAL	Annual	19/10/2018	18/10/2023	3.4800	1,000,000.00	10,010.96	2,955.62
AMP Bank	BBB	TD	GENERAL	At Maturity	20/10/2022	20/10/2023	4.7500	1,000,000.00	13,534.25	4,034.25
ICBC Sydney Branch	A	TD	GENERAL	Annual	09/11/2021	09/11/2023	1.2200	3,000,000.00	8,423.01	3,108.49
Australian Unity Bank	BBB+	TD	GENERAL	At Maturity	14/11/2022	16/11/2023	4.4500	3,000,000.00	28,894.52	11,338.36
ICBC Sydney Branch	A	TD	GENERAL	Annual	19/11/2021	23/11/2023	1.3200	4,500,000.00	11,717.26	5,044.93
NAB	AA-	TD	GENERAL	Annual	30/11/2020	30/11/2023	0.6800	12,000,000.00	14,084.38	6,930.41
NAB	AA-	TD	GENERAL	Annual	26/11/2020	30/11/2023	0.7000	4,000,000.00	4,986.30	2,378.08
ICBC Sydney Branch	A	TD	GENERAL	Annual	10/12/2021	14/12/2023	1.3900	4,000,000.00	7,768.77	4,722.19





Issuer	Rating	Type	Alloc	Interest	Purchase	Maturity	Rate	Capital Value	Accrued	Accrued MTD
Northern Territory Treasury	AA-	BOND	GENERAL	Annual	30/09/2020	15/12/2023	1.0000	2,000,000.00	2,630.14	1,698.63
NAB	AA-	TD	GENERAL	At Maturity	17/12/2020	18/12/2023	0.7000	1,400,000.00	20,835.07	832.33
NAB	AA-	TD	GENERAL	Annual	21/12/2020	21/12/2023	0.7000	4,000,000.00	3,221.92	2,378.08
NAB	AA-	TD	GENERAL	Annual	17/12/2020	21/12/2023	0.7000	5,000,000.00	4,219.18	2,972.60
Australian Unity Bank	BBB+	TD	GENERAL	Annual	12/07/2022	18/01/2024	4.3900	6,000,000.00	147,215.34	22,370.96
NAB	AA-	TD	GENERAL	Annual	20/01/2021	25/01/2024	0.7000	15,000,000.00	3,452.05	3,452.05
Westpac	AA-	FRTD	GENERAL	Quarterly	05/04/2019	05/04/2024	4.2866	12,000,000.00	38,050.92	38,050.92
Westpac	AA-	FRTD	GENERAL	Quarterly	08/04/2019	08/04/2024	4.3285	3,000,000.00	8,182.64	8,182.64
Australian Military Bank	BBB+	TD	GENERAL	Annual	13/04/2021	17/04/2024	0.7600	5,000,000.00	30,608.22	3,227.40
NAB	AA-	TD	GENERAL	Annual	13/04/2021	18/04/2024	0.7700	5,000,000.00	31,010.96	3,269.86
ICBC Sydney Branch	A	TD	GENERAL	Annual	22/04/2022	02/05/2024	3.3400	25,000,000.00	651,986.30	70,917.81
Commonwealth Bank	AA-	TD	GENERAL	Semi-Annual	22/04/2022	02/05/2024	3.2600	21,000,000.00	54,392.88	54,392.88
BOQ	BBB+	TD	GENERAL	Annual	03/05/2019	03/05/2024	2.8000	3,500,000.00	73,567.12	8,323.29
NAB	AA-	TD	GENERAL	At Maturity	12/05/2021	16/05/2024	0.7600	3,000,000.00	39,353.42	1,936.44
ICBC Sydney Branch	A	TD	GENERAL	Annual	20/05/2022	20/05/2024	3.7000	6,000,000.00	156,312.33	18,854.79
Westpac	AA-	FRTD	GENERAL	Quarterly	30/05/2019	30/05/2024	4.0485	6,000,000.00	41,926.93	20,630.71
Westpac	AA-	FRTD	GENERAL	Quarterly	06/06/2019	06/06/2024	4.0586	3,500,000.00	22,183.31	12,064.61
Northern Territory Treasury	AA-	BOND	GENERAL	Annual	12/05/2021	17/06/2024	0.8000	3,000,000.00	15,189.04	2,038.36
Suncorp	A+	FRN	GENERAL	Quarterly	15/08/2019	30/07/2024	4.1612	2,501,534.18	570.03	570.03
Bendigo and Adelaide	BBB+	FRN	GENERAL	Quarterly	06/09/2019	06/09/2024	4.0386	1,752,525.64	11,037.00	6,002.58



Issuer	Rating	Type	Alloc	Interest	Purchase	Maturity	Rate	Capital Value	Accrued	Accrued MTD
ICBC Sydney Branch	A	TD	GENERAL	At Maturity	13/09/2022	12/09/2024	4.4000	2,300,000.00	39,093.70	8,595.07
AMP Bank	BBB	TD	GENERAL	Annual	13/10/2022	17/10/2024	4.7500	2,000,000.00	28,890.41	8,068.49
ICBC Sydney Branch	A	TD	GENERAL	Annual	21/10/2021	21/10/2024	1.3000	4,000,000.00	14,673.97	4,416.44
Great Southern Bank	BBB	FRN	GENERAL	Quarterly	24/10/2019	24/10/2024	4.4033	1,752,054.31	1,688.94	1,688.94
ICBC Sydney Branch	A	TD	GENERAL	Annual	29/10/2021	29/10/2024	1.6500	1,000,000.00	4,204.11	1,401.37
BOQ	BBB+	FRN	GENERAL	Quarterly	30/10/2019	30/10/2024	4.4812	1,002,585.34	245.55	245.55
ICBC Sydney Branch	A	TD	GENERAL	Annual	15/11/2021	14/11/2024	1.7900	3,000,000.00	11,475.62	4,560.82
ICBC Sydney Branch	A	TD	GENERAL	Annual	09/11/2021	14/11/2024	1.6800	3,000,000.00	11,598.90	4,280.55
Citibank, N.A.	A+	FRN	GENERAL	Quarterly	15/11/2019	14/11/2024	3.9130	1,000,146.95	8,469.23	3,323.37
ICBC Sydney Branch	A	TD	GENERAL	Annual	19/11/2021	21/11/2024	1.7500	4,750,000.00	16,397.26	7,059.93
ICBC Sydney Branch	A	TD	GENERAL	Annual	13/12/2021	12/12/2024	1.8600	3,000,000.00	7,643.84	4,739.18
ICBC Sydney Branch	A	TD	GENERAL	Annual	10/12/2021	12/12/2024	1.8200	4,000,000.00	10,172.05	6,183.01
Northern Territory Treasury	AA-	BOND	GENERAL	Annual	01/10/2021	16/12/2024	1.0000	3,000,000.00	3,945.21	2,547.95
Northern Territory Treasury	AA-	BOND	GENERAL	Semi-Annual	09/09/2021	16/12/2024	0.9000	2,500,000.00	2,958.90	1,910.96
Northern Territory Treasury	AA-	BOND	GENERAL	Annual	24/11/2020	16/12/2024	0.9000	1,000,000.00	1,183.56	764.38
NAB	AA-	FRN	GENERAL	Quarterly	21/01/2020	21/01/2025	4.0579	2,002,677.89	2,001.16	2,001.16
ICBC Sydney Branch	A	TD	GENERAL	Annual	22/04/2022	24/04/2025	3.6800	15,000,000.00	431,013.70	46,882.19
Suncorp	AAA	FRN	GENERAL	Quarterly	27/04/2020	24/04/2025	4.4033	705,202.09	675.57	675.57
BOQ	AAA	FRN	GENERAL	Quarterly	14/05/2020	14/05/2025	4.1030	903,356.93	7,992.42	3,136.27
NAB	AA-	TD	GENERAL	Annual	12/05/2021	15/05/2025	1.0500	3,000,000.00	22,869.86	2,675.34



Issuer	Rating	Type	Alloc	Interest	Purchase	Maturity	Rate	Capital Value	Accrued	Accrued MTD
RACQ Bank	BBB+	FRN	GENERAL	Quarterly	23/05/2022	23/05/2025	4.3200	974,639.58	8,284.93	3,669.04
NAB	AA-	FRN	GENERAL	Quarterly	30/05/2022	30/05/2025	3.9885	1,707,702.10	11,703.24	5,758.74
Northern Territory Treasury	AA-	BOND	GENERAL	Annual	20/05/2021	16/06/2025	1.1000	3,500,000.00	24,365.75	3,269.86
Northern Territory Treasury	AA-	BOND	GENERAL	Annual	12/05/2021	16/06/2025	1.1000	3,000,000.00	20,884.93	2,802.74
Northern Territory Treasury	AA-	BOND	GENERAL	Annual	16/02/2021	16/06/2025	0.9000	1,000,000.00	5,695.89	764.38
UBS AG	A+	FRN	MAAS	Quarterly	30/07/2020	30/07/2025	4.2512	3,243,381.21	757.06	757.06
ICBC Sydney Branch	A	TD	GENERAL	Annual	24/08/2022	25/08/2025	4.7500	2,000,000.00	41,904.11	8,068.49
ICBC Sydney Branch	A	TD	GENERAL	Annual	09/09/2022	11/09/2025	4.5200	3,500,000.00	62,846.58	13,436.16
Suncorp	AAA	FRN	GENERAL	Quarterly	17/10/2022	17/10/2025	4.2039	801,757.52	1,382.10	1,382.10
Bendigo and Adelaide	AAA	FRN	GENERAL	Quarterly	11/11/2022	11/11/2025	3.9812	4,007,843.58	35,776.26	13,525.17
Bank Australia	BBB	FRN	GENERAL	Quarterly	22/12/2022	24/11/2025	4.6963	1,305,078.43	6,857.88	5,185.23
ICBC Sydney Branch	A	FRN	GENERAL	Quarterly	19/01/2023	19/01/2026	4.3350	1,500,968.66	2,315.96	2,315.96
NAB	AA-	TD	GENERAL	At Maturity	04/03/2021	05/03/2026	1.3400	3,000,000.00	76,985.75	3,414.25
NAB	AA-	TD	GENERAL	Annual	12/05/2021	14/05/2026	1.3000	3,000,000.00	28,315.07	3,312.33
NAB	AA-	TD	GENERAL	Annual	20/05/2021	21/05/2026	1.3000	3,500,000.00	32,036.99	3,864.38
Northern Territory Treasury	AA-	BOND	GENERAL	Annual	12/05/2021	15/06/2026	1.3000	3,000,000.00	24,682.19	3,312.33
Northern Territory Treasury	AA-	BOND	GENERAL	Annual	16/02/2021	15/06/2026	1.0000	5,000,000.00	31,643.84	4,246.58
ING Direct	AAA	BOND	GENERAL	Semi-Annual	19/08/2021	19/08/2026	1.1000	532,676.08	3,001.64	560.55
Northern Territory Treasury	AA-	BOND	GENERAL	Semi-Annual	09/09/2021	15/12/2026	1.4000	5,000,000.00	9,205.48	5,945.21
Commonwealth Bank	AA-	FRN	GENERAL	Quarterly	14/01/2022	14/01/2027	4.0457	1,287,138.50	2,305.49	2,305.49



Issuer	Rating	Type	Alloc	Interest	Purchase	Maturity	Rate	Capital Value	Accrued	Accrued MTD
Bendigo and Adelaide	BBB+	FRN	GENERAL	Quarterly	27/01/2023	27/01/2027	4.7321	1,103,332.07	713.06	713.06
ANZ Bank	AA-	FRN	GENERAL	Quarterly	04/11/2022	04/11/2027	4.2593	4,035,224.12	41,542.76	14,469.95
NAB	AA-	FRN	GENERAL	Quarterly	25/11/2022	25/11/2027	4.2961	1,715,756.24	13,606.28	6,202.86
Macquarie Bank	A+	CASH	GENERAL	Monthly	31/01/2023	31/01/2023	3.3000	28,724.39	80.28	80.28
NAB	AA-	CASH	GENERAL	Monthly	31/01/2023	31/01/2023	3.3500	22,664,688.26	57,589.87	57,589.87
CFS WGCIIF	A	FUND	GENERAL	Monthly	30/06/2016	02/02/2026	0.0000	14,399,933.85	-	-
NSWTC IM LTGF	Unrated	FUND	GENERAL	Annual	31/10/2017	03/02/2028	0.0000	29,276,759.85	-	-
AMP Bank	BBB	CASH	GENERAL	Monthly	31/01/2023	31/01/2023	3.5500	162,719.41	489.18	489.18
Commonwealth Bank	AA-	CASH	GENERAL	Monthly	31/01/2023	31/01/2023	3.1000	95,449.59	254.71	254.71
<b>TOTALS</b>								<b>503,913,856.79</b>	<b>3,845,821.29</b>	<b>869,869.28</b>

## **REPORTS TO COUNCIL - FOR COUNCIL DECISION**

### **27 FEBRUARY 2023**

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**REPORTS TO COUNCIL - FOR COUNCIL DECISION**

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<b>ITEM NUMBER</b>	13.1
<b>SUBJECT</b>	Quarterly Budget Review - December 2022
<b>REFERENCE</b>	F2022/00105 - D08852334
<b>REPORT OF</b>	Financial Planning and Analysis Manager

**CSP THEME:**       **FAIR**

**WORKSHOP/BRIEFING DATE:** SEE CONSULTATION SECTION

**PURPOSE:**

To present for adoption the December 2022 Quarterly Budget Review Statement (QBRs).

**RECOMMENDATION**

- (a) **That** Council adopt the December 2022 Quarterly Budget Review Statement (QBRs) and the Responsible Accounting Officer's report on the financial position of the Council (**Attachment 1**).
- (b) **Further, that** Council approve the revised budget for the 2022/23 financial year:
  - i) Net operating result (including capital) of \$92.6m
  - ii) capital revenue of \$84.4m
  - iii) capital expenditure of \$242.1m.

**BACKGROUND**

- 1. Clause 203 of the Local Government (General) Regulation 2021 requires the Responsible Accounting Officer (Chief Finance and Information Officer) to prepare and submit to the Council a Quarterly Budget Review Statement that shows by reference to the estimates of income and expenditure set out in the Operational Plan, a revised estimate of the income and expenditure for the full financial year.
- 2. The Responsible Accounting Officer is also required to report whether the financial position of the Council is satisfactory, having regard to the original estimate of income and expenditure.

**ISSUES/OPTIONS/CONSEQUENCES**

- 3. The attached December 2022 Quarterly Budget Review Statement (QBRs) includes an analysis of the reasons for the major variances from the previously adopted budget. Explanations for major variances are in line with the parameters previously agreed by Council i.e. Budget variations greater than +/- 10% of the current budget or greater than +/- \$100,000 of the current budget. Below is a summary of key variances.

4. Underlying Net Operating Result (excl Capital & Asset Disposals) of \$0.9m is \$35k better than the September 2022 Quarterly Forecast, with the key movements being :

- i. Uplift in Income by \$4.2m because of:
  - a) \$3.3m Interest – current global investment outlook, higher return on Term Deposits, and Council approved revised Investment Policy.
  - b) \$0.5m Rates & Annual Charges – Mainly from higher CBD rates.
  - c) \$0.4m Other Revenue – Events revenue for Parramatta Nights Recovery program.
- ii. Increase of (\$4.1m) in Expenses mainly driven by:
  - a) (\$2.4m) Depreciation & Amortisation – (\$1.1m) Revaluation of Right to use assets, (\$0.6m) Roads & (\$0.6m) Open Space,
  - b) (\$1.5m) Materials & Contracts – (\$1.3m) Legal fee property assets, (\$0.5m) marketing for Parramatta Aquatic Centre opening. Offset with \$0.3m lower consultancy costs for HR system implementation.
  - c) (\$1.2m) Other Operating Expense – (\$0.6m) Events & Festivals – Parramatta Lanes, Live music program, New Years Eve celebrations; (\$0.3m) increase in bank charges; (\$0.2m) State Emergency Services.
  - d) \$1.0m Employee Costs – Vacant positions across the organisation continue to provide cost savings to budget.

5. The decline of \$17.2m in capital expenditure to \$242.1m (Sep Forecast : \$259.3m) is primarily driven by projects such as Dense Park Pool \$11.4m, Community Recycling Facility \$2.0m, PRUAIP - FS Garside \$1.7m, Phillip Street Smart St Stage-2 \$1.7m, Barrack Lane Parramatta \$1.0m, Major Drainage Construction At Lyndelle Place Carlingford \$1.0m, Ermington Foreshore Stage-3 \$0.7m, Stewart Street Reserve Upgrade \$0.5m; partly offset with the increase for Upgrade of the Town Hall (\$1.5m).

## CONSULTATION & TIMING

### Stakeholder Consultation

6. The following stakeholder consultation has been undertaken in relation to this matter:

Date	Stakeholder	Stakeholder Comment	Council Officer Response	Responsibility
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Dec22-Jan23	Business managers and Executive	Feedback has been incorporated in the QBRS document	Report and budgets updated as agreed	Finance/CFIO
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### Councilor Consultation

7. The following Councilor consultation has been undertaken in relation to this matter:

Date	Councilor	Councilor Comment	Council Officer Response	Responsibility
22 <sup>nd</sup> Feb 2023	Finance Committee	NA	December reforecast to be discussed.	Finance/CFIO

### **LEGAL IMPLICATIONS FOR COUNCIL**

8. There are no legal implications for Council associated with this report.

### **FINANCIAL IMPLICATIONS FOR COUNCIL**


9. If Council resolves to approve this report in accordance with the proposed resolution, the financial impacts on the budget are summarized above and detailed in the attached QBRS.

Amit Sharma  
**Financial Planning and Analysis Manager**

John Angilley  
**Chief Financial and Information Officer**

Bryan Hynes  
**Acting Chief Executive Officer**

### **ATTACHMENTS:**

1  Attachment 1 - QBRS Dec22 16 Pages

### **REFERENCE MATERIAL**



# QUARTERLY BUDGET REVIEW STATEMENT

CITY OF PARRAMATTA COUNCIL

December 2022 Quarter



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## Executive Summary

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### RECOMMENDATIONS

That Council adopt the December 2022 Quarterly Budget Review Statement and the Responsible Accounting Officer's report on the financial position of the Council.

Underlying Net Operating Result (excl Capital & Asset Disposals) of \$0.9m is \$35k better than the September Forecast.

The Net Operating result excluding capital is forecasted at Net surplus of \$8.2m, which is \$10.8m higher than September Forecast.

Key Highlights:

- Improvements to the P&L:
  - Interest income +\$3.3m - higher return on Term Deposits
  - Vacancies savings +\$1.1m
  - Uplift in Fine Revenue +\$0.4m
- Reductions to the P&L:
  - Increase in Materials & Contracts (\$1.5m)
  - Increase in Other Opex (\$1.2m)
  - Increase in Depreciation (\$2.4m)



## December 2022 Financial Statements &amp; Movements

The City of Parramatta's financial position is reflected in the following pages of the 2022-23 December Quarterly Review.

\$'000	2022/23 Original Budget	Approved September Adjustments	Current Budget	Proposed Adjustments	December QR	December YTD Actual
<b>Income</b>						
Rates & Annual Charges	211,246	41	211,287	462	211,749	211,581
User Charges & Fees	34,325	2,393	36,718	(105)	36,614	16,181
Other Revenue	20,720	(1,126)	19,594	360	19,954	7,944
Interest	8,581	2,874	11,455	3,310	14,765	7,211
Operating Grants	20,224	3,640	23,865	(376)	23,489	5,155
Capital Grants	45,755	14,115	59,869	795	60,665	19,455
Operating Contributions & Donations	3,167	(224)	2,943	307	3,249	705
Capital Contributions & Donations	14,872	1,451	16,323	7,383	23,706	12,379
Internal Revenue	15,239	(7,115)	8,123	2,956	11,080	4,406
Gain in Share in Joint Venture	500	-	500	-	500	-
<b>Total Operating Revenue</b>	<b>374,628</b>	<b>16,050</b>	<b>390,677</b>	<b>15,093</b>	<b>405,770</b>	<b>285,017</b>
<b>Expense</b>						
Employee Costs	136,897	2,357	134,539	1,101	133,439	67,512
Borrowing Costs	425	(131)	555	(21)	576	340
Materials & Contracts	60,947	(7,068)	68,014	(1,471)	69,485	28,635
Depreciation & Amortisation	49,652	(4,381)	54,033	(2,351)	56,384	27,302
Other Operating Expenses	47,455	(885)	48,340	(1,182)	49,522	22,821
Internal Expenses	16,017	9,032	6,986	(5,527)	12,513	2,841
<b>Total Operating Expenses</b>	<b>311,392</b>	<b>(1,076)</b>	<b>312,467</b>	<b>(9,450)</b>	<b>321,918</b>	<b>149,452</b>
<b>Operating Surplus/Deficit</b>	<b>63,236</b>	<b>14,974</b>	<b>78,210</b>	<b>5,642</b>	<b>83,852</b>	<b>135,565</b>
Loss/(Gain) on Asset Disposal	-	4,573	4,573	(13,289)	(8,716)	(9,127)
<b>Net Operating Result</b>	<b>63,236</b>	<b>10,401</b>	<b>73,637</b>	<b>18,931</b>	<b>92,568</b>	<b>144,692</b>
<b>Operating Surplus/(Deficit) before Capital</b>	<b>2,610</b>	<b>(5,165)</b>	<b>(2,556)</b>	<b>10,753</b>	<b>8,198</b>	<b>112,858</b>
<b>Underlying Operating Surplus / (Deficit) (ex Capital &amp; Asset Disposals)</b>	<b>3,388</b>	<b>(2,508)</b>	<b>880</b>	<b>35</b>	<b>915</b>	<b>102,166</b>

## KEY MOVEMENTS

The net operating result before capital revenue is \$10.8m higher than September Forecast and higher by \$18.9m (incl. Capital revenue).

### Revenue – favourable by \$15.1m:

- \$7.4m Capital Grants & Contributions – Mainly driven by additional \$7.8m developer contributions & \$1.1m Parramatta Aquatic Centre Grant.
- \$3.3m Interest – current global investment outlook, higher return on Term Deposits, and Council approved revised Investment Policy.
- \$0.5m Rates & Annual Charges – Mainly from higher CBD rates.
- \$0.4m Other Revenue – Events revenue for Parramatta Nights Recovery program.
- \$3.0m Internal Revenue – Reallocation of Fleet charge-out between Internal Expense/Revenue.

### Expenses – unfavourable by (\$9.5m):

- (\$2.4m) Depreciation & Amortisation – (\$1.1m) Revaluation of Right to use assets, (\$0.6m) Roads & (\$0.6m) Open Space.
- (\$1.5m) Materials & Contracts – (\$1.3m) Legal fee property assets, (\$0.5m) marketing for Parramatta Aquatic Centre opening. Offset with \$0.3m lower consultancy costs for HR system implementation.
- (\$1.2m) Other Operating Expense – (\$0.6m) Events & Festivals – Parramatta Lanes, Live music program, New Years Eve celebrations; (\$0.3m) increase in bank charges; (\$0.2m) State Emergency Services.
- \$1.0m Employee Costs – Vacant positions across the organisation continue to provide cost savings to budget.
- (\$5.5m) Internal Expense – Reallocation of Fleet charge-out between Internal Expense/Revenue.
- \$13.3m Gain on asset disposal – Revaluation of Buildings \$7.0m, Roads \$2.1m, Footpaths \$2.5m.

## Directorate P&L Summary

Table 1.2: Operating Result summarises the key movements by revenue & operating expense for each directorate.

\$'000	2022/23 Original Budget	Approved September Adjustments	Current Budget	Proposed Adjustments	December QR	December YTD Actual
<b>Income</b>						
Corporate Services & Executive Office	185,781	2,762	188,543	4,119	192,662	175,438
City Engagement and Experience	954	201	1,156	270	1,426	865
City Strategy	1,612	687	2,298	20	2,319	762
Property & Place	44,466	39	44,506	2,416	46,922	20,915
City Assets and Operations	105,172	10,560	115,732	858	116,590	63,947
Community Services	17,036	(755)	16,281	(373)	15,907	7,217
City Planning and Design	19,606	2,556	22,162	7,783	29,945	15,874
<b>Total Income</b>	<b>374,628</b>	<b>16,050</b>	<b>390,677</b>	<b>15,092</b>	<b>405,770</b>	<b>285,017</b>
<b>Expense</b>						
Corporate Services & Executive Office	48,802	(1,574)	50,376	(1,824)	52,200	26,953
City Engagement and Experience	20,280	(1,463)	21,744	(180)	21,923	10,164
City Strategy	8,646	(124)	8,770	154	8,616	3,271
Property & Place	27,319	(7,718)	35,037	(1,319)	36,356	14,188
City Assets and Operations	136,368	6,496	129,872	(6,750)	136,623	64,895
Community Services	46,622	2,863	43,759	(222)	43,981	20,136
City Planning and Design	23,353	444	22,910	692	22,218	9,846
<b>Total Expense</b>	<b>311,392</b>	<b>(1,075)</b>	<b>312,467</b>	<b>(9,450)</b>	<b>321,918</b>	<b>149,452</b>
Loss/(Gain) on Asset Disposal	-	4,573	4,573	(13,289)	(8,716)	(9,127)
<b>Net Operating Result</b>	<b>63,236</b>	<b>10,401</b>	<b>73,637</b>	<b>18,931</b>	<b>92,568</b>	<b>144,692</b>
<b>Operating Surplus/(Deficit) before Capital</b>	<b>2,610</b>	<b>(5,166)</b>	<b>(2,556)</b>	<b>10,753</b>	<b>8,198</b>	<b>112,858</b>
<b>Underlying Operating Surplus / (Deficit) (ex Capital &amp; Asset Disposals)</b>	<b>3,388</b>	<b>(2,508)</b>	<b>880</b>	<b>35</b>	<b>915</b>	<b>102,166</b>

## KEY MOVEMENTS BY DIRECTORATE

- Corporate Services / Exec Office \$2.3m favourable - driven by Interest income adjustment, partly offset with increased depreciation costs due to revaluation of Right to use assets.
- CA&O's (\$5.9m) unfavourable mainly due to reduction in Capital Contributions and increase in depreciation from addition of roads & open spaces.
- Property & Place \$1.1m favourable mainly due to increase in Capital Grants, partly offset with increase in M&C costs and drop-in user fees & charges
- City Planning \$8.5m favourable mainly due to increase in additional \$7.8m developer contributions & \$1.1m Parramatta Aquatic Centre Grant.
- Community Services (\$0.6m) unfavourable mainly due to increase in M&C costs and decline in user fees & charges.
- City Engagement \$0.1m favourable driven by increase in CBD Parramatta Nights Grants.
- City Strategy \$0.2m favourable mainly due to vacant positions.

### Capital Expenditure Statement

Table 1.3: Summarises the key movements in Capital expenditure by directorate, with corresponding funding source movements.

\$'000	2022/23 Original Budget	Approved September Adjustments	Current Budget	Proposed Adjustments	December QR	December YTD Actual
<b>Capital Expenditure</b>						
Corporate Services & Executive Office	4,638	195	4,832	232	5,064	1,558
City Strategy	300	284	584	-	584	34
Property & Place	104,343	41,237	145,580	(14,032)	131,548	53,333
City Assets and Operations	85,970	7,234	93,204	(2,440)	90,765	19,808
Community Services	7,872	2,491	10,363	(4)	10,359	1,461
City Planning and Design	5,900	(1,159)	4,741	(988)	3,753	481
<b>Total Capital Expenditure</b>	<b>209,022</b>	<b>50,282</b>	<b>259,304</b>	<b>(17,232)</b>	<b>242,072</b>	<b>76,674</b>
<b>Funding Source</b>						
Transfer From Special Rates Reserve	2,120	(670)	1,450	(413)	1,037	230
Transfer From Domestic Waste Reserve	14,900	260	15,160	(1,960)	13,200	13
Transfer From Section 94	50,897	13,237	64,135	(23,405)	40,730	13,142
Transfer From Grants & Contributions Reserves	50,539	1,170	51,710	2,835	54,545	18,831
Transfer From Stormwater Levy Reserve	560	-	560	320	880	38
Transfer from Internally Restricted Reserves	90,005	36,285	126,290	5,390	131,680	43,411
<b>Total Funding Source</b>	<b>209,022</b>	<b>50,282</b>	<b>259,304</b>	<b>(17,232)</b>	<b>242,072</b>	<b>75,665</b>
<b>Net Budget Result</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,009</b>



### Capital Major Works

Key Capital works with Total project cost in excess of \$10m.

\$'000	Funding	Original Budget	Current Budget	December QR	2023/24	2024/25	2025/26	Project Update
1. Parramatta Square Public Domain Development	Working Funds; s94/s7.11	3,527	27,141	27,143	-	-	-	River Flow Capital costs to be finalized in design development including landscaping works that depart from base/reference design.
2. Aquatic Centre Parramatta	Working Funds; s94/s7.11; Grants	30,478	41,971	41,993	-	-	-	Handover from Lipman in April 2023, for operational readiness by July 2023.
3. 5 Parramatta Square Development - New Council Facilities	Working Funds	477	3,931	3,955	-	-	-	Facilities opened in Sep 2022. Rollover due to delays in opening facilities
4. Riverside Theatre Redevelopment	Property Reserve	-	1,155	1,174	99,000	-	-	Post-budget Council approval of \$1.0m to be spent on business case preparation and design competition, funded by Property Reserve.
5. Upgrade of The Town Hall	Property Reserve	15,755	21,641	23,103	-	-	-	Post-budget Council approval to increase budget to \$32m, design finalisation for Town Hall underway including AV and lighting.
6. Dence Park Pool	s94/s7.11; Grants	15,941	11,814	423	6,122	661	-	Awaiting engineers report to finalise scope and costs, Project repathed to future years. Targeting opening in summer 2024/25.

### Capital Major Works

Capital works with budget in excess of \$10m (cont.).

\$'000	Funding	Original Budget	Current Budget	December QR	2023/24	2024/25	2025/26	Project Update
7. Pedestrian Bridge Works - Morton/Alfred	Working Funds; Grants	8,598	12,356	12,357	-	-	-	Construction continuing, currently scheduled for completion in April 2023.
8. Civic Link Program (Capital)	s94/s7.11	1,715	753	477	4,213	13,202	-	Draft Design and Performance Brief developed, including implementation staging
9. Community Recycling Facility	DWM	10,000	14,960	13,000	-	-	-	Staff are currently identifying suitable sites within the Parramatta LGA. Staff still anticipate having acquired a site by 30 June 2023.
10. PRUAIP - Fs Garside	s94/s7.11; Grants	10,099	9,351	7,691	3,500	-	-	Estimated to be completed by October 2023.
11. Charles Street Square Works	s94/s7.11; Grants	6,767	7,923	7,923	-	-	-	Construction continuing and currently scheduled for completion in March 2023.

### Capital Variances

Variance in capital works in excess of \$500k.

\$'000	2022/23 Original Budget	Current Budget	Proposed Adjustments	December QR	December YTD Actual	Project Status	Comment
Af1 Dence Park Pool	15,941	11,814	(11,391)	423	55	Progressing - behind schedule	Project rephased to future years, est. completion 24/25.
Community Recycling Facility	10,000	14,960	(1,960)	13,000	13	In Progress - on track	Rephasing budget to FY24 to fund building centre.
Phillip Street Smart St Stage 2	1,872	2,700	(1,700)	1,000	409	In Progress - on track	Further grant funding secured for stage 2 (Your High St Grant and Places to Love Grants), majority of work rephased to be completed in FY24
PRUAIP - FS Garside	10,099	9,351	(1,660)	7,691	3,180	In Progress - on track	Remaining PRUAIP grant funding from other projects transferred to this project, est. completion November 2023.
Upgrade Of The Town Hall	15,755	21,641	1,462	23,103	6,923	In Progress - on track	Project budget increased to 32m, increase in Dec QR due to rephasing of expenditure, est. completion Oct 2023
Barrack Lane, Parramatta	1,300	1,300	(1,000)	300	14	In Progress	Budget reduced to align with anticipated progress and expenditure. This project is in the detailed design phase and requires extensive European/Aboriginal Heritage investigation and approval from Heritage NSW.
Major Drainage Construction At Lyndelle Place, Carlingford	1,060	1,300	(955)	345	-	Not yet started	WestInvest funding approved, rephased majority of work to be completed in FY24
WI Max Ruddock Reserve Amenities	-	-	453	453	-	Not yet started	Budget added in accordance with NSW Government WestInvest Funding Announcement.

### Capital Variances

Variance in capital works in excess of \$500k (cont.).

\$'000	2022/23 Original Budget	Current Budget	Proposed Adjustments	December QR	December YTD Actual	Project Status	Comment
WI Doyle Ground Sports Facility Improvements	-	-	769	769	-	Not yet started	Budget added in accordance with NSW Government WestInvest Funding Announcement.
Ermington Foreshore Stage 3	875	740	(700)	40	28	In Progress - on hold	Budget rephased to 2023/24 to align with TfNSW grant approval timelines.
22/23 Get NSW Active Program	-	-	607	607	98	In Progress - on track	Budget added in accordance with recently awarded Get NSW Active Program Grant from TfNSW.
WI Somerville Park Improvement	-	-	576	576	-	Not yet started	Budget added in accordance with NSW Government WestInvest Funding Announcement.
WI Let's Play at Kilpack	-	-	576	576	-	Not yet started	Budget added in accordance with NSW Government WestInvest Funding Announcement.
Council's Public Toilet Program - CBD	500	500	(500)	-	-	Cancelled	Project was funded by developer contributions which cannot fund the relocation of toilets outside of the CBD.
Stewart Street Reserve Upgrade	-	1,000	(500)	500	38	In Progress - on hold	Pending confirmation of grant funding

### Reserve Balance Summary

The following table provides a forecast of Councils restricted cash (internally and externally restricted reserves) and the forecast movements to and from reserves for the 2022/23 December Forecast.

	2022/23 Original Budget \$'000	Approved Changes \$'000	Current Budget \$'000	Proposed Adjustments \$'000	Dec QR \$'000	Actuals as at 31 Dec2022 \$'000
<b><u>Externally Restricted Cash Reserves:</u></b>						
Domestic Waste Management	43,051	(4,603)	38,448	1,024	39,472	68,630
Grants and Contributions	32,618	17,108	49,727	(15,977)	33,750	33,654
Developer Contributions	138,773	(51,147)	87,626	31,277	118,903	135,095
Special Rates	8,572	(2,633)	5,939	522	6,462	7,875
Stormwater Levy	1,715	(350)	1,365	(269)	1,096	2,787
Cultural Reserve	34,054	705	34,759	0	34,759	34,054
<b>Total Externally Restricted Cash Reserves</b>	<b>258,784</b>	<b>(40,920)</b>	<b>217,864</b>	<b>16,577</b>	<b>234,440</b>	<b>282,094</b>
<b><u>Internally Restricted Reserves:</u></b>						
Employee Leave Entitlements	6,400	0	6,400	0	6,400	6,400
Parking Meters	414	184	598	62	660	102
Property Development Reserve	284,831	(89,330)	195,501	(7,451)	188,050	248,218
CBD Infrastructure	945	(945)	0	999	999	(297)
Ward Works	219	0	219	0	219	219
<b>Total Internally Restricted Cash Reserves</b>	<b>292,809</b>	<b>(90,091)</b>	<b>202,718</b>	<b>(6,390)</b>	<b>196,328</b>	<b>254,642</b>
<b>Total Restricted Reserves</b>	<b>551,593</b>	<b>(131,012)</b>	<b>420,581</b>	<b>10,187</b>	<b>430,768</b>	<b>536,736</b>
<b>Working Funds Reserve</b>	<b>93,365</b>	<b>(2,339)</b>	<b>91,026</b>	<b>7,589</b>	<b>98,615</b>	<b>173,785</b>

Council's cash position estimates an **unrestricted balance of \$98.6m** as of end of Jun 2023, against the \$173.8 million recorded as at 31<sup>st</sup> December. The unrestricted balance will continue to diminish as Council expends it on operational expenses and capital projects during the last quarter of the financial year. The funds have been invested in accordance with Council's investment policy.

### Tender Contracts Awarded

The following table provides a list of tender contracts for specific works for the period 1 October to 31 December 2022.

Council Meeting Approval Date	Term	Contractor	Description	Tender Number	Contract Amount (excl GST)	Budgeted
31-Oct-22	5 years	Grace Records Management	Secure Physical Offsite Storage and Services	14/2022	\$1,204,545	Y
28-Nov-22	4 + 2 + 4 Years	Perfect Gym Solutions ABN: 51 612 163 532	Leisure Facility Management System	21/2022	\$625,762	Y

### External Legal & Consultancy Fees

The following table provides a total of Legal & Consultancy services to 31<sup>st</sup> December 2022.

Expense	Expenditure YTD \$'000	Budgeted (Y/N)
External Legal Fees	1,605	Y
Consultancy Fees	1,732	Y

A consultant is a person or organisation engaged under contract on a temporary basis to provide recommendations or high-level specialist or professional advice to assist decision making by management. Generally, it is the advisory nature of the work that differentiates a consultant from other contractors.

Where any expenses for Consultancy or Legal Fees (including Code of Conduct expenses) have not been budgeted for, an explanation is to be given. Report on external expenses only (not internal expenses).

## RESPONSIBLE ACCOUNTING OFFICERS REPORT

### Responsible Accounting Officer's Statement

#### Quarterly Budget Review

*For the period 1 October 2022 to 31 December 2022*

The following statement is made in accordance with Clause 203(2) of the Local Government (General) Regulations 2005:

It is my opinion that the Quarterly Budget Review statement for the City of Parramatta Council for the quarter ended 31/12/2022 indicates that Council's projected financial position at 30/6/2023 will be satisfactory at year-end, having regard to the projected estimates of income and expenditure and the original budgeted income and expenditure.

John Angilley  
Responsible Accounting Officer



## REPORTS TO COUNCIL - FOR COUNCIL DECISION

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<b>ITEM NUMBER</b>	13.2
<b>SUBJECT</b>	Post Exhibition: Planning Proposal and Draft Planning Agreement for 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford
<b>REFERENCE</b>	F2022/00105 - D08780776
<b>APPLICANT/S</b>	Karimbla Construction Services (NSW) Pty Ltd
<b>OWNERS</b>	Karimbla Properties (No. 61) Pty Ltd
<b>REPORT OF</b>	Project Officer Land Use

**COUNCILLOR BRIEFING DATE:** 22 February 2023

### DEVELOPMENT APPLICATIONS CONSIDERED BY SYDNEY CENTRAL CITY PLANNING PANEL

Deferred Commencement Development Consent No.1103/2011/JP issued by the Joint Regional Planning Panel for demolition of existing structures and associated construction of five apartment buildings 9-11 stories containing 450 units and basement parking for 662 cars (active consent granted 21 July 2015).

A development application (DA/53/2022) was lodged on 21 January for 6 x 10-12 storey buildings comprising 629 residential units, childcare centre for 110 children, 17 neighbourhood retail shops and 1,146 basement car parking spaces; publicly accessible open spaces and through site links; landscaping; tree removal; demolition of existing buildings. The application was refused by the Sydney Central City Planning Panel on 7 December 2022.

### PURPOSE

To detail submissions received during the public exhibition of a Planning Proposal and draft Planning Agreement relating to land at 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford. The report seeks Council's approval to finalise the Planning Proposal and draft Planning Agreement.

### RECOMMENDATION

- (a) **That** Council receives and notes submissions (**Table 4** of LPP report at **Attachment 3**) made during the public exhibition of the Planning Proposal and draft Planning Agreement for 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford.
- (b) **That** Council approve the Planning Proposal (**Attachment 1**) for land at 263 - 273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford for finalisation that seeks to amend the Parramatta (former The Hills) Local Environmental Plan 2012 to facilitate retail floor space, neighbourhood supermarket along with specialty retail, business and recreational uses in the R4 High Density Residential zoned part of the site through the following measures:

- i. Addition of shops, food and drink premises, business premises and recreational facility (indoor) as additional permitted uses (limited to a maximum of 2,000sqm) to Schedule 1; and
  - ii. Addition of 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford to the Additional Permitted Uses Map to facilitate retail floor space, neighbourhood supermarket along with specialty retail, business, and recreational uses.
- (c) **That** Council approve the Planning Agreement at **Attachment 2** amended as referred to in this report and the Chief Executive Officer be authorised to sign/execute the Planning Agreement on behalf of Council which proposes:
  - i. A shared walking/cycling pathway through Council owned Shirley Street Reserve which forms part of the connection to the Carlingford Light Rail stop; and
  - ii. A raised pedestrian crossing accommodating cyclists and pedestrians on Shirley Street.
- (d) **That** Council authorise the Chief Executive Officer to exercise the plan making delegations as granted by the Gateway Determination for this Planning Proposal.
- (e) **Further**, that Council delegates authority to the Chief Executive Officer to make any minor amendments and corrections of a non-policy and administrative nature that may arise during the plan amendment process relating to the Planning Proposal and finalisation of the Planning Agreement.

## BACKGROUND

1. In 2007 the then Baulkham Hills Shire Council rezoned the Carlingford Precinct to facilitate further growth. The subject site (**Figure 2**) is located within the Carlingford Precinct.
2. The Joint Regional Planning Panel (JRPP) granted development approval (DA1103/2011/JP) in April 2012 for the construction of five apartment buildings (9-11 storeys) containing 450 units and 662 basement parking spaces at 18 Shirley Street, Carlingford which is part of the Planning Proposal subject site. The application was subsequently activated by demolition and other early site works. After this approval, a further six properties at 263-273 Pennant Hills Road were acquired by Karimbla Properties (No. 61) Pty Ltd .
3. Part of the subject site (18 Shirley Street and 279R Pennant Hills Road) was previously owned by Dyldam and was purchased in December 2020 by Karimbla Properties (No. 61) Pty Ltd (part of the Meriton Group). It is noted that this part of the site (**Figure 1**) is already subject to a Planning Agreement relating to the dedication of land zoned RE1 Public Recreation to Council. This is further detailed in the Planning Agreement section of this report.

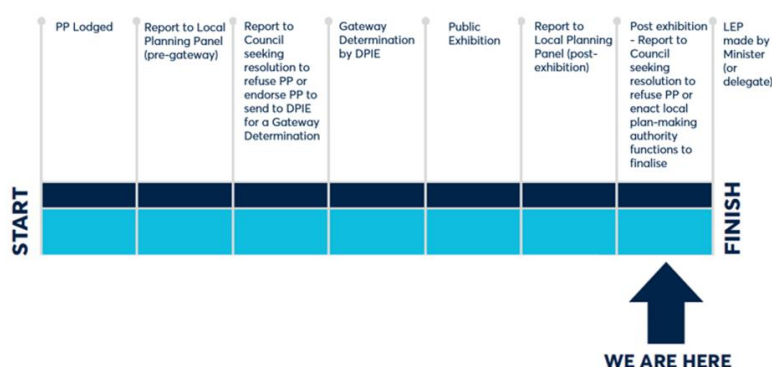


**Figure 1 - Land subject to the existing Planning Agreement**

4. On 22 November 2021, the applicant, Karimbla Construction Services (NSW) Pty Ltd, on behalf of the landowner, Karimbla Properties (No. 61) Pty Ltd, lodged a Planning Proposal with the City of Parramatta Council for land at 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford. The objective of the subject Planning Proposal is to facilitate additional permitted uses of up to 2,000sqm of 'shops' and 'food and drink premises' along with 'business premises' and 'recreational facility (indoor)' on the R4 High Density Residential part of the site.
5. In December 2021 the applicant lodged a development application (DA/53/2022) for the construction of six buildings up to 12 storeys in height, containing 629 residential apartments, a childcare facility and neighbourhood shops on the larger set of properties acquired by the current owner. It is noted that the additional land uses sought under the subject Planning Proposal are not included within the current development application. The application was refused by the Sydney Central City Planning Panel on 7 December 2022. The Planning Proposal exceeded height and floor space ratio controls and did not meet design principles in the State Environmental Planning Policy 65 (Design Quality of Residential Apartment Development) or the Apartment Design Guide. There were also unresolved site planning issues including isolation of neighboring properties, stormwater management, design and dedication of roads and parks and it do not demonstrate how the land zoned SP2 Infrastructure 'Classified Road' will be dedicated to the relevant acquisition authority.
6. On 17 May 2022, the Local Planning Panel (LPP) provided advice to Council recommending it endorse the submitted Planning Proposal for the purpose of requesting a Gateway Determination.
7. At its meeting on 14 June 2022, Council resolved to endorse the Planning Proposal for the purpose of requesting a Gateway Determination and to amend Schedule 1 and amend the Additional Permitted Uses (APU) Map, consistent with the recommendation of the Local Planning Panel. Council also resolved to prepare a draft Planning Agreement to be exhibited with the Planning Proposal.

8. On 29 July 2022, the Department of Planning and Environment issued a Gateway determination (**Attachment 4**) with an expiry date of 31 May 2023 which allowed the Planning Proposal to proceed to public exhibition.
9. The Planning Proposal and draft Planning Agreement were publicly exhibited from 12 October 2022 to 9 November 2022. This report addresses the outcomes of that exhibition and makes recommendations for progressing the matter.
10. The Planning Proposal and draft Planning Agreement were reported to the Local Planning Panel on 20 December 2022 (**Attachment 3**). The Local Planning Panel resolved to support the Council Officer recommendations in finalising the Planning Proposal and draft Planning Agreement.

## PLANNING PROPOSAL TIMELINE



## SITE DESCRIPTION

11. The subject site is known as 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford and comprises of 8 lots which are legally described as follows in Table 1:

**Table 1 – Property address, Lots and DPs**

Property Address	Lot & DP
263 Pennant Hills Road	Lot 22, DP 21386
265 Pennant Hills Road	Lot 2, DP 9614
267 Pennant Hills Road	Lot 3, DP 9614
269 Pennant Hills Road	Lot 4, DP 9614
271 Pennant Hills Road	Lot 62, DP 819136
273 Pennant Hills Road	Lot 61, DP 819163
279R Pennant Hills Road	Lot 1, DP 531044
18 Shirley Street	Lot 1, DP 1219291

12. The site has a total area of approximately 27,985sqm (**Figure 2**).
13. The site is located on the eastern side of Pennant Hills Road (classified road) and the northern and western sides of Shirley Street (local road). The site is predominately undeveloped and cleared of vegetation however there are five detached two-storey dwellings fronting Pennant Hills Road.

14. A pedestrian pathway runs along Pennant Hills Road, with connections into Lloyds Avenue to the south and Carlingford Town Centre to the north. The site is located approximately 400 metres east from of the Carlingford Light Rail stop (under construction).

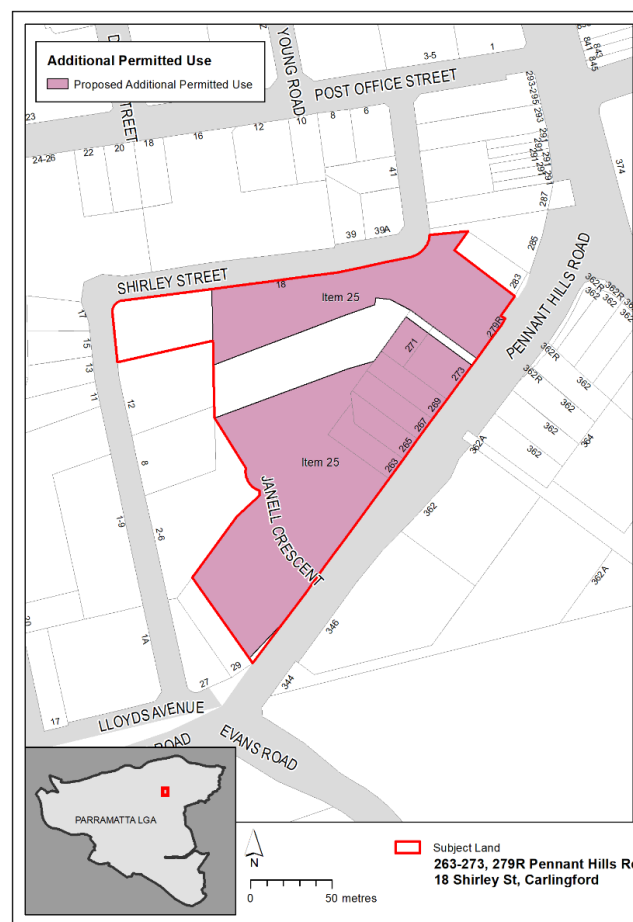


**Figure 2 – Subject Site**

## PLANNING PROPOSAL

15. The objective of this Planning Proposal is to facilitate the permissibility of 'shops' and 'food and drink premises' along with 'business premises' and 'recreational facility (indoor)' up to a combined total GFA of 2,000sqm on the R4 High Density Zoned areas of the site.
16. Specifically, the Planning Proposal seeks to amend the Parramatta (former The Hills) Local Environmental Plan 2012 as follows:
- Amend Schedule 1 to permit 'shops' and 'food and drink premises', 'business premises' and 'recreational facility (indoor)' up to a combined total GFA of 2,000sqm on the site.
  - Amend Additional Permitted Uses map to add the R4 High Density Residential area of the subject site (refer **Figure 3**).
17. A copy of the Planning Proposal is included at **Attachment 1**.
18. The site is within the R4 High Density Residential Zone which currently allows a range of non-residential (and commercial) uses including childcare and minor neighbourhood shops (less than 100sqm). Refer to **Table 2** in the LPP Report at **Attachment 3** which outlines the current non-residential uses permitted under the Parramatta (Former The Hills) LEP 2012 on the site and what is sought under the Planning Proposal.





**Figure 3 - Proposed amendment to the Additional Permitted Use Map**

## PLANNING AGREEMENT

19. The Planning Proposal was exhibited concurrently with an associated draft Planning Agreement (**Attachment 2**) which proposes to deliver the following public benefits:
  - a. A shared pathway through Council owned Shirley Street Reserve which forms part of a connection from Shirley Street to the Parramatta Light Rail stop; and
  - b. A raised pedestrian crossing accommodating cyclists and pedestrians on Shirley Street.
20. The Planning Agreement offers a link from the subject site to deliver a part of the planned cycle/pedestrian network on public land adjacent to the site. This will improve connectivity and access to the Parramatta Light Rail for the wider Carlingford precinct and surrounding neighbourhood, and a pedestrian crossing on Shirley Street (Refer **Figure 4**). An amendment has been made to the Planning Agreement following consideration of the proposal by the Local Planning Panel (see below for details) to require the works to be delivered prior to the occupation of any dwellings on the site. Further details about the draft Planning Agreement can be seen in the LPP report at **Attachment 3** and the draft Planning Agreement at **Attachment 2**.



**Figure 4 – Subject Site and Planning Agreement Items**

21. It is noted that the site is already subject to an existing Planning Agreement (**Figure 1**). That Planning Agreement was entered into in April 2015 between The Hills Shire Council and the then owners. Further details of this agreement are explained in the LPP report at **Attachment 3**. The existing Planning Agreement does not relate to the recently exhibited planning proposal and draft Planning Agreement which are the subjects of this report.

## SUMMARY OF PUBLIC EXHIBITION

22. A total of four (4) submissions were received comprising of three (3) from the community and one (1) from a public agency (Transport for NSW). Overall, one submission supported the proposal and the draft Planning Agreement in full, one objected in full, one partially supported the Proposal, and the agency submission from Transport for NSW neither stated objection nor support. Refer to the Local Planning Panel report at **Attachment 3** for full details of the consultation undertaken for this exhibition.
23. Submissions received during the public exhibition period raised concerns regarding the proposed amendments, with the key issues relating to traffic generation, necessity for a supermarket, infrastructure in the local area and increase in density on the site. As the Planning Proposal notes the APU will not facilitate additional density on the site will only facilitate a small neighbourhood supermarket of no more than 1,000sqm. Council Officers are satisfied based on the traffic analysis exhibited with the Planning Proposal that any additional traffic associated with the supermarket is not significant to warrant refusal of the Planning Proposal. There is a limited supply of supermarket floorspace in the Carlingford area so there is sufficient demand and infrastructure to support the proposed changes including the improvements to the pedestrian/cycle network (**Attachment 2**). As such there is not sufficient justification raised during the public consultation period to warrant an amendment to the exhibited Planning

Proposal. Refer to the Local Planning Panel report at **Attachment 3** for further details on the key issues raised and Council officer responses and recommendations.

24. However, as noted above, an alteration to the exhibited Planning Agreement is proposed to reflect the LPP recommendation of 20 December 2022 that the infrastructure upgrade works be delivered prior to the occupation of any of the dwellings on the site. This change has been agreed with the applicant. Given the change is minor and does not impact the deliverables of the Planning Agreement, it can be made without the need for re-exhibition.
25. Following consideration of the results of the public exhibition and the Local Planning Panel recommendations, the Planning Proposal is recommended to proceed for finalisation as exhibited.

## CONSULTATION AND TIMING

26. As noted above, the Planning Proposal and draft Planning Agreement were subject to public and agency consultation. Details of the consultation results are in the LPP report at **Attachment 3**.
27. In addition to the community and agency consultation noted above, the following stakeholder and Councillor consultation has been undertaken in relation to this matter.

### Stakeholder Consultation

Date	Stakeholder	Stakeholder Comment	Council Officer Response	Responsibility
November 2021 to present	Karimbla Construction Services (NSW) Pty Ltd (applicant)	Various comments in relation to finalising the Planning Proposal and Planning Agreement for public exhibition.	Extensive consultation has been undertaken to date with the proponent to develop the draft planning provisions and Planning Agreement. This represented an agreed position for the purposes of public exhibition as endorsed by Council on 14 June 2022.	City Planning and Design



### Councillor Consultation

28. The following Councillor consultation has been undertaken in relation to this matter:

Date	Councillor	Councillor Comment	Council Officer Response	Responsibility
6 June 2022 – briefing session	All	Various questions relating to density and infrastructure provision and necessity for a supermarket.	Responses provided to Councillors.	City Planning and Design

### **LOCAL PLANNING PANEL OUTCOMES**

29. On 20 December 2022, the Local Planning Panel (LPP) provided advice on the exhibition outcomes of the Planning Proposal and draft Planning Agreement. The LPP recommended Council approve the Planning Proposal and draft Planning Agreement for finalisation as per the Council officer recommendations.
30. In addition to the Council officer recommendations, the LPP also requested the works that make up the Planning Agreement “be delivered prior to the occupation of any of the dwellings on the site”. Both Council officers and the applicant support this additional recommendation

### **PLAN MAKING DELEGATIONS**

31. Council is delegated as the plan-making authority as granted by the Gateway Determination on 29 July 2022. The Gateway Determination (**Attachment 4**) has set the timeframe for completion of this Planning Proposal as 31 May 2023.

### **LEGAL IMPLICATIONS FOR COUNCIL**

32. The legal implications associated with this report relate to the draft Planning Agreement that is proposed to be entered into between Council, Karimbla Properties (No. 61) Pty Ltd and Meriton Properties Pty Ltd. Council’s legal team were assisted by an external expert in the drafting and finalisation of the Planning Agreement. The finalisation of the Planning Agreement will be undertaken by the above mentioned parties in accordance with the recommendations of this report.

### **FINANCIAL IMPLICATIONS FOR COUNCIL**

33. If Council resolves to approve this report in accordance with the recommendation, the draft Planning Agreement is for the following works with an approximate value of \$431,388.45 (subject to CPI):

- a. A shared walking/cycling pathway through Council owned Shirley Street Reserve which forms part of the connection to the Carlingford Light Rail stop; and
  - b. A raised pedestrian crossing accommodating cyclists and pedestrians on Shirley Street.
34. It is noted that part of the future shared path and the pedestrian crossing is on Council land and will be subject to ongoing maintenance costs. However, it is acknowledged that these items will have a public benefit by facilitating an improved part of the connection to the Carlingford Light Rail stop with the broader cycle/pedestrian network. Council Officers have approached TfNSW and Greater River City Light Rail (GRCLR) to discuss the connecting link between the proposed share pathway in the Planning Agreement and the Parramatta Light Rail and Active Transport Link (ATL) throughout and are waiting for TfNSW and GRCLR to review the proposal with the aim to meet and discuss funding, maintenance, and future land ownership.
35. It is proposed that the works would be completed prior to an Occupation Certificate being issued for any of the dwellings on the site.
36. The costs associated with the preparation, exhibition and finalisation of the draft Planning Agreement involve internal resources and legal costs. The developer has/will reimburse any legal costs relating to the negotiation and execution of the Planning Agreement, which will then result in nil cost to Council for this item.
37. If Council resolves to endorse the recommendations of this report, the financial impacts on the budget are set out in the table below.

	FY 20/21	FY 21/22	FY 22/23	FY 23/24
<b>Revenue Contribution</b>				\$431,388.45
<b>Operating Result</b>				
External Costs				
Internal Costs				
Depreciation				
Other				
<b>Total Operating Result</b>				\$431,388.45
<b>Funding Source</b>				VPA contribution
<b>CAPEX</b>				
CAPEX				
External				
Internal				
Other				
<b>Total CAPEX</b>				
<b>Funding Source</b>				

## CONCLUSION AND NEXT STEPS

38. It is recommended that Council endorse the draft Planning Agreement for 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford for finalisation/execution amended as referred to in this report.
39. It is recommended that Council approve the Planning Proposal for 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford as exhibited and for Council to exercise its plan-making delegations as granted by the Gateway Determination and work with Parliamentary Counsel Office on the legal drafting and mapping of the amendment. The LEP amendment will then be signed by the CEO before being notified on the NSW Legislation website.

Rafael Morrissey  
**Project Officer Land Use**

Belinda Borg  
**Team Leader Land Use Planning**

Michael Rogers  
**Land Use Planning Manager**

David Birds  
**Group Manager, Major Projects and Precincts**

Robert Cologna  
**Acting Executive Director, City Planning & Design**

Ian Woodward  
**Group Manager Legal Services**

John Angilley  
**Chief Financial and Information Officer**

Bryan Hynes  
**Acting Chief Executive Officer**

## **ATTACHMENTS:**

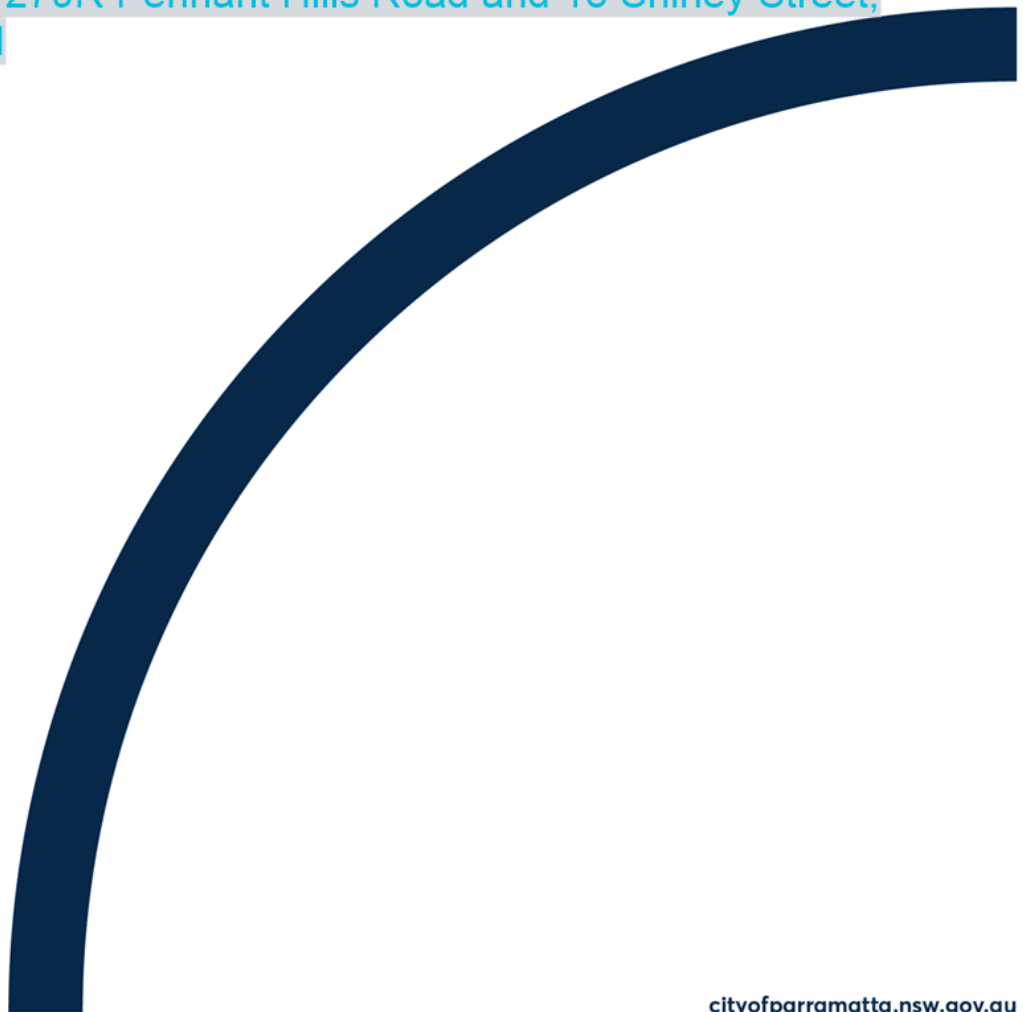
1 	Planning Proposal	34 Pages
2 	Draft Planning Agreement	36 Pages
3 	LPP Minutes & Report - 20 December 2022	22 Pages
4 	Gateway Determination	2 Pages

## REFERENCE MATERIAL



# PLANNING PROPOSAL

263-273 & 279R Pennant Hills Road and 18 Shirley Street,  
Carlingford



[cityofparramatta.nsw.gov.au](http://cityofparramatta.nsw.gov.au)



# PLANNING PROPOSAL

263-273 & 279R Pennant Hills Road and 18 Shirley Street,  
Carlingford

[cityofparramatta.nsw.gov.au](http://cityofparramatta.nsw.gov.au)

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PLANNING PROPOSAL – 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford

### Planning Proposal drafts

No.	Author	Details	Version
1	URBIS	As submitted to City of Parramatta Council	28 October 2021
2	City of Parramatta Council	Submission to the DPE for Gateway Determination	24 June 2022
3	City of Parramatta Council	Exhibition version in accordance with Gateway Conditions	26 September 2022

PLANNING PROPOSAL – 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford

# INTRODUCTION

This planning proposal explains the intended effect of, and justification for, the proposed amendment to *Parramatta (former The Hills) Local Environmental Plan 2012*. It has been prepared in accordance with Section 3.33 of the *Environmental Planning and Assessment Act 1979* and the Department of Planning and Environment (DP&E) guide, 'A Guide to Preparing Local Environment Plans' (December 2021).

## Background and context

On 22 November 2021, the applicant, Karimbla Construction Services (NSW) Pty Ltd (a subsidiary of Meriton Group), on behalf of the landowner, Karimbla Properties (No. 61) Pty Ltd (a subsidiary of Meriton Group), lodged a Planning Proposal with the City of Parramatta Council for land at 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford.

The site (**figure 1**) has a total area of approximately 27,985sqm and is located within the Carlingford Precinct and is made up of 6 lots:

Lots	DP
Lot 1	DP 1219291
Lot 22	DP 21386
Lots 2, 3 & 4	DP 9614
Lots 61 & 62	DP 819136
Lot 1	DP 531044

The site features a 275m frontage to Pennant Hills Road (a classified state main road) to the east, and a 255m frontage to Shirley Street (a local road) to the north and west. The site is predominately undeveloped and cleared of vegetation however there are five two-storey unoccupied dwellings fronting Pennant Hills Road.

The site is located approximately 400 metres east from the planned Carlingford Light Rail stop.



**Figure 1** – Site at 263-273 & 279R Pennant Hills Rd and 18 Shirley St, Carlingford subject to the planning proposal



PLANNING PROPOSAL – 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford

Under *Parramatta (former The Hills) Local Environmental Plan 2012* the site:

- is zoned part R4 High Density Residential and part RE1 Public Recreation.
- has a maximum building height of 27 metres fronting Pennant Hills Road and 33 metres fronting Shirley Street with the RE1 Public Recreation zoned land does not have a maximum building height.
- has a maximum floor space ratio (FSR) of 2.3:1 with the RE1 Public Recreation zoned land not having a maximum FSR.
- non-residential uses permitted with development consent in R4 High Density Residential land use zone includes centre-based and home-based child care facilities; community facilities; neighbourhood shops; places of public worship. Under Clause 5.4 (7), the retail floor area of neighbourhood shops must not exceed 100 square metres

An extract of each the above maps is provided at **Figures 4 to 7** in Section 4.1 Existing controls.

PLANNING PROPOSAL – 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford

## PART 1 – OBJECTIVES AND INTENDED OUTCOMES

The objective of this Planning Proposal is to facilitate the permissibility of ‘shops’, ‘food and drink premises’, ‘business premises’ and ‘recreational facility (indoor)’ up to a gross floor area (GFA) of 2,000sqm. The proposed future development of the site seeks to incorporate a metro-style supermarket.

The site’s current land use zoning R4 High Density Residential currently allows a range of non-residential uses including ‘centre-based childcare facilities’, ‘home-based childcare’, ‘community facilities’, ‘neighbourhood shops’ and ‘places of public worship’, however under Clause 5.4 (7) of the LEP, the retail floor area of neighbourhood shops must not exceed 100 square metres.

The site also contains a portion of land zoned RE1 Public Recreation, but the planning proposal will not affect this portion of the site.

PLANNING PROPOSAL – 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford

## PART 2 – EXPLANATION OF PROVISIONS

In order to achieve the desired objectives, the following amendments to the *Parramatta (former The Hills) Local Environmental Plan 2012* would need to be made:

1. Addition of shops, food and drink premises, business premises and recreational facility (indoor) as additional permitted uses (limited to a maximum of 2,000sqm) to Schedule 1.
2. Addition of 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford to the Additional Permitted Uses Map.

### Note – new Parramatta Local Environmental Plan 2022

Council has prepared a Planning Proposal for a new Local Environmental Plan (LEP) for the City of Parramatta Local Government Area (LGA). The new LEP will replace the existing LEPs that currently apply to land in the LGA and will be the primary planning document for guiding development and land use decisions made by Council. The focus of the Planning Proposal is harmonisation (or consolidation) of existing LEP controls. The Planning Proposal does not propose major changes to zoning or increases to density controls. The Planning Proposal and supporting documents was publicly exhibited from Monday 31 August 2020 until Monday 12 October 2020.

On 12 July 2021, Council resolved to approve the Harmonisation Planning Proposal and Draft Parramatta Local Environmental Plan (LEP), with minor amendments, and to be forwarded to the Department of Planning, Industry and Environment (DPIE) for finalisation. The Harmonisation Planning Proposal and Draft Parramatta LEP have now been submitted to the Department of Planning, Industry and Environment for finalisation.

If supported by DPIE and Council, it is likely that this Planning Proposal would be completed following the finalisation of the new LEP. Therefore, the controls may be required to formally amend a newly consolidated Parramatta Local Environmental Plan (rather than the Parramatta (former The Hills) LEP 2012 as outlined in this document).

### 2.1 Other relevant matters

#### Voluntary Planning Agreement

A Letter of Offer submitted by the applicant proposes to deliver the following public benefits:

- A shared pedestrian and cycle pathway through Council owned Shirley Street Reserve; and
- A raised pedestrian crossing accommodating both cyclists and pedestrians on Shirley Street

The Planning Agreement offers a link from the subject site to deliver a part of the planned cycle/pedestrian network on public land adjacent to the site that will improve connectivity and

PLANNING PROPOSAL – 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford  
access to the Parramatta Light Rail for the wider Carlingford precinct and surrounding neighbourhood and a pedestrian crossing on Shirley Street (Refer **Figure 2**).

The need for a Planning Agreement has been identified as an appropriate mechanism to ensure the increase in demand for infrastructure (e.g. due to additional pedestrian foot traffic) due to the Planning Proposal is satisfactorily addressed. The shared path and crossing noted in the Letter of Offer relate to the provision of community infrastructure that will directly benefit and service future development at the site given the likely increase in demand for services and infrastructure arising from the Planning Proposal.



**Figure 2 – Subject Site and Planning Agreement Items**



PLANNING PROPOSAL – 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford

## PART 3 – JUSTIFICATION OF STRATEGIC AND SITE-SPECIFIC MERIT

This part describes the reasons for the proposed outcomes and development standards in the planning proposal.

### 3.1 Section A - Need for the planning proposal

This section establishes the need for a planning proposal in achieving the key outcome and objectives. The set questions address the strategic origins of the proposal and whether amending the LEP is the best mechanism to achieve the aims on the proposal.

#### 3.1.1 Is the planning proposal a result of an endorsed local strategic planning statement, strategic study, or report?

Yes, the proposal is consistent with and builds upon strategic directions of the Local Strategic Planning Statement in particular the need deliver an improved 'place-based' outcome by delivering a level of convenience to future local residents as a result of co-location of uses and *"increased retail and commercial floor space within mixed-use development of local centres"*.

#### 3.1.2 Is the Planning Proposal the best means of achieving the objectives or intended outcomes, or is there a better way?

The proposed approach will facilitate a select range of compatible non-residential uses at ground level and residential apartments above. It is noted that 'shop top housing' is already a permissible use in the R4 High Density Residential zone, and the proposal seeks to broaden the non-residential uses that are permissible at ground level. The additional uses are considered appropriate for a high-density residential context and within the broader Carlingford area.

The site is an appropriate place to allow for limited additional commercial floor space, as it immediately adjoins the B2 Local Centre Zone and provides the primary access between the centre and light rail. It will not impact on the existing Carlingford town centre because there is sufficient growth within the market to accommodate the proposed development without adversely impacting the viability of existing and proposed retail centres, due to the substantial population growth across the area and the moderate scale of proposed development. Therefore, allowing the proposed additional permitted uses in a limited capacity is the best means of achieving the objectives or intended outcomes.

### 3.2 Section B – Relationship to strategic planning framework

This section assesses the relevance of the Planning Proposal to the directions outlined in key strategic planning policy documents. Questions in this section consider state and local government plans including the NSW Government's Plan for Growing Sydney and subregional strategy, State Environmental Planning Policies, local strategic and community plans and applicable Ministerial Directions.

PLANNING PROPOSAL – 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford

### 3.2.1 Will the planning proposal give effect to the objectives and actions of the applicable regional, or district plan or strategy (including any exhibited draft plans or strategies)?

#### **A Metropolis of Three Cities**

In March 2018, the NSW Government released the *Greater Sydney Region Plan: A Metropolis of Three Cities* ("the GSRP") a 20 year plan which outlines a three-city vision for metropolitan Sydney for to the year 2036.

The GSRP is structured under four themes: Infrastructure and Collaboration, Liveability, Productivity and Sustainability. Within these themes are 10 directions that each contain Potential Indicators and, generally, a suite of objective/s supported by a Strategy or Strategies. Those objectives and or strategies relevant to this planning proposal are discussed below.

#### **Infrastructure and Collaboration**

An assessment of the planning proposal's consistency with the GSRP's relevant Infrastructure and Collaboration objectives is provided in Table 1, below.

**Table 1** – Consistency of planning proposal with relevant GSRP Actions – Infrastructure and Collaboration

Infrastructure and Collaboration Direction	Relevant Objective	Comment
<b>A city supported by infrastructure</b>	<b>O1:</b> Infrastructure supports the three cities	The subject site is located 400m of the proposed Carlingford Light Rail Station, and therefore the proposal's location is compatible with promoting optimal use of the light rail.
	<b>O2:</b> Infrastructure aligns with forecast growth – growth infrastructure compact	
	<b>O3:</b> Infrastructure adapts to meet future need	
	<b>O4:</b> Infrastructure use is optimised	

#### **Liveability**

An assessment of the planning proposal's consistency with the GSRP's relevant Liveability objectives is provided in Table 2, below.

**Table 2** – Consistency of planning proposal with relevant GSRP Actions – Liveability

Liveability Direction	Relevant Objective	Comment
<b>A city for people</b>	<b>O6:</b> Services and infrastructure meet communities' changing needs	The proposed additional permitted retail use will provide opportunities and better access to jobs and services for current and future population.
	<b>O7:</b> Communities are healthy, resilient and socially connected	The Planning Proposal will encourage greater opportunity to access to local retailers of fresh food.

PLANNING PROPOSAL – 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford

### **Productivity**

An assessment of the planning proposal's consistency with the GSRP's relevant Productivity objectives is provided in Table 3, below.

**Table 3 – Consistency of planning proposal with relevant GSRP Actions – Productivity**

Productivity Direction	Relevant Objective	Comment
<b>A well connected city</b>	<b>O14:</b> The plan integrates land use and transport creates walkable and 30 minute cities	The subject site is located 400m of the proposed Carlingford Light Rail Station, and therefore the proposal's location is compatible with promoting optimal use of the light rail. The proposed development provides opportunities to access to jobs, goods and services.
	<b>O15:</b> The Eastern, GOP and Western Economic Corridors are better connected and more competitive	
<b>Jobs and skills for the city</b>	<b>O19:</b> Greater Parramatta is stronger and better connected	The retail Impact assessment (Appendix 1) indicates that the metro style supermarket will provide employment generation in the region of 76 jobs.

### **Central City District Plan**

In March 2018, the NSW Government released Central City District Plan which outlines a 20 year plan for the Central City District which comprises The Hills, Blacktown, Cumberland and Parramatta local government areas.

Taking its lead from the GSRP, the Central City District Plan ("CCDP") is also structured under four themes relating to Infrastructure and Collaboration, Liveability, Productivity and Sustainability. Within these themes are Planning Priorities that are each supported by corresponding Actions. Those Planning Priorities and Actions relevant to this planning proposal are discussed below.

### **Infrastructure and Collaboration**

An assessment of the planning proposal's consistency with the CCDP's relevant Infrastructure and Collaboration Priorities and Actions is provided in Table 4, below.

PLANNING PROPOSAL – 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford

**Table 4 – Consistency of planning proposal with relevant CCDP Actions – Infrastructure and Collaboration**

Infrastructure and Collaboration Direction	Planning Priority/Action	Comment
<b>A city supported by infrastructure</b> <b>O1:</b> Infrastructure supports the three cities <b>O2:</b> Infrastructure aligns with forecast growth – growth infrastructure compact <b>O3:</b> Infrastructure adapts to meet future need <b>O4:</b> Infrastructure use is optimised	<b>PP C1: Planning for a city supported by infrastructure</b> <ul style="list-style-type: none"> <li>• <b>A1:</b> Prioritise infrastructure investments to support the vision of <i>A metropolis</i></li> <li>• <b>A3:</b> Align forecast growth with infrastructure</li> <li>• <b>A5:</b> Consider the adaptability of infrastructure and its potential shared use when preparing infrastructure strategies and plans</li> </ul>	<p>The subject site is located 400m of the proposed Carlingford Light Rail Station, and therefore the proposal's location is compatible with promoting optimal use of the light rail. The proposed development provides opportunities to access to jobs, goods and services.</p> <p>The retail Impact assessment (Appendix 1) indicates that the metro style supermarket will provide employment generation in the region of 76 jobs.</p>

### Liveability

An assessment of the planning proposal's consistency with the CCDP's relevant Liveability Priorities and Actions is provided in Table 5, below.

**Table 5 – Consistency of planning proposal with relevant CCDP Actions – Liveability**

Liveability Direction	Planning Priority/Action	Comment
<b>A city for people</b> <b>O6:</b> Services and infrastructure meet communities' changing needs	<b>PP C3: Provide services and social infrastructure to meet people's changing needs</b> <ul style="list-style-type: none"> <li>• <b>A8:</b> Deliver social infrastructure that reflects the need of the community now and in the future</li> </ul>	<p>The proposed additional permitted uses will provide opportunities and better access to services for current and future population.</p>
<b>O7:</b> Communities are healthy, resilient and socially connected	<b>PP C4: Working through collaboration</b> <ul style="list-style-type: none"> <li>• <b>A10:</b> Deliver healthy, safe and inclusive places for people of all ages and abilities that support active, resilient and socially connected communities by (a-d).</li> <li>• <b>A15:</b> Strengthen social connections within and between communities through better understanding of the nature of social networks</li> </ul>	<p>The Planning Proposal will encourage greater physical activity and social connection by locating services locally. It also provides better access to local retailers of fresh food.</p>



PLANNING PROPOSAL – 263-273 &amp; 279R Pennant Hills Road and 18 Shirley Street, Carlingford

	and supporting infrastructure in local places	
<b>A city of great places</b> <b>O12:</b> Great places that bring people together.	<b>PP C6: Creating and renewing great places and local centres, and respecting the District's heritage</b> • <b>A20:</b> Use place-based planning to support the role of centres as a focus for connected neighbourhoods	

### Productivity

An assessment of the planning proposal's consistency with the CCDP's relevant Productivity Priorities and Actions is provided in Table 6, below.

**Table 6 – Consistency of planning proposal with relevant CCDP Actions – Productivity**

Productivity Direction	Planning Priority/Action	Comment
<b>A well-connected city</b> <b>O19:</b> Greater Parramatta is stronger and better connected	<b>PP C7: Growing a stronger and more competitive Greater Parramatta</b> • <b>A23:</b> Strengthen the economic competitiveness of Greater Parramatta and grow its vibrancy • <b>A26:</b> Prioritise infrastructure investment	The proposed development provides opportunities to access to jobs, goods and services. The retail Impact assessment (Appendix 1) indicates that the metro style supermarket will provide employment generation in the region of 76 jobs.
<b>Jobs and skills for the city</b> <b>O15:</b> The Eastern, GPOP and Western Economic Corridors are better connected and more competitive	<b>PP C8: Delivering a more connected and competitive GPOP Economic Corridor</b> • <b>A29:</b> Prioritise public transport investment to deliver the 30-minute city objective for strategic centres along the GPOP Economic Corridor	The subject site is located 400m of the proposed Carlingford Light Rail Station, and therefore the proposal's location is compatible with promoting optimal use of the light rail. The proposed development provides opportunities to access to jobs, goods and services.
<b>O14:</b> The plan integrates land use and transport creates walkable and 30 minute cities	<b>PP C9: Delivering integrated land use and transport planning and a 30-minute city</b> • <b>A32:</b> Integrate land use and transport plans to deliver a 30-minute city	

PLANNING PROPOSAL – 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford

<b>O23:</b> Industrial and urban services land is planned, retained and managed	<b>PP C10: Growing investment, business opportunities and jobs in strategic centres</b> <b>•A37:</b> Provide access to jobs, goods and services in centres	The proposed development provides opportunities to access to jobs, goods and services. The retail impact assessment (Appendix 1) indicates that the metro style supermarket will provide employment generation in the region of 76 jobs.
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### Sustainability

An assessment of the planning proposal's consistency with the CCDP's relevant Productivity Priorities and Actions is provided in Table 7, below.

**Table 7 – Consistency of planning proposal with relevant CCDP Actions – Sustainability**

Sustainability Direction	Planning Priority/Action	Comment
<b>O31:</b> Public open space is accessible, protected and enhanced	<b>PP C17: Delivering high quality open space</b> <b>•A71:</b> Maximise the use of existing open space and protect, enhance and expand public open space by (a-g) [abridged]	N/A

### 3.2.2 Will the planning proposal give effect to a council's endorsed local strategic planning statement, or another endorsed local strategy or strategic plan?

The following local strategic planning documents are relevant to the planning proposal:

#### Parramatta 2038 Community Strategic Plan

Parramatta 2038 is a long term Community Strategic Plan for the City of Parramatta and it links to the long-term future of Sydney. The plan formalises several big and transformational ideas for the City and the region.

The planning proposal is considered to meet the strategies and key objectives identified in the plan including:

**Accessible:** The proposed additional permitted retail use will provide opportunities and better access to jobs and services for current and future population.

**Thriving:** Contributes to the vibrancy of Parramatta, provides opportunities and better access to jobs and services, which promotes a better quality of life.

**Innovative:** The Planning Proposal provides local retail service to local and the broader community.

#### Parramatta Local Strategic Planning Statement

In March 2018 the NSW Government introduced requirements for councils to prepare a Local Strategic Planning Statement (LSPS) as part of planning legislation to align state and

PLANNING PROPOSAL – 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford

local government plans as well as to guide long term planning and infrastructure decisions. LSPS responds to the planning priorities and objectives within the NSW Government's Central City District Plan as well as the statutory requirements set out in section 3.9 of the Environmental Planning and Assessment Act 1979 (EP&A Act 1979) and supporting regulations.

The LSPS provides greater weight to strategic planning in the broader plan making process and any new planning proposal must justify any inconsistency with this framework and the supporting Local Housing Strategy (LHS) and Employment Lands Strategy (ELS).

Council's Local Strategic Planning Statement was published on 31 March 2020. The LSPS provides strategic direction on how the City of Parramatta is planning for the next 20 years. The site is in an area identified for further population growth, and given there is an existing undersupply of supermarket floorspace in the broader region and the potential job creation from the proposal, it is considered that the Proposal is generally consistent with the LSPS as it is line with Planning Priority 11 which aims to *"Build the capacity of the Parramatta CBD, Strategic Centres, Local Centres and Employment Lands to be strong, competitive and productive"* as the proposal will help to facilitate *"retail and commercial floorspace within mixed use development of local centres."*

### **Parramatta Local Housing Strategy**

The City of Parramatta Local Housing Strategy (Housing Strategy) provides direction at the local level about when and where future housing growth will occur and identifies the relationship with the broader NSW government strategic objectives as identified in the Greater Sydney Region Plan – A Metropolis of Three Cities and the Central City District Plan.

The provision of non-residential uses at the site is aligned with the vision and objectives established in the Housing Policy and will only very slightly reduce the site's ability to deliver residential offerings, as it 'replaces' some of the gross floor area permitted with non-residential uses. The site will still be able to assist in achieving the housing target identified for Carlingford as it is an *"already rezoned precinct which has significant further capacity"*.

The co-location of appropriately scaled retail, business, recreation and residential uses will achieve an improved 'place-based' outcome by delivering a level of convenience to future residents which and *"create activity in neighbourhoods and provide an opportunity for the market to either deliver more housing or commercial space"*. The small-scale nature of the proposed facilities combined with its direct pedestrian connections to the B2 zoned land to the north suggests that this proposal will contribute and support the overall vibrancy of the Carlingford Town Centre, which will rely on activated and pedestrian spaces to more broadly enhance connectivity of the town centre to the Station. A mix of uses creates activity in neighbourhoods, such as cafes and small bars, providing more social opportunity. In some locations, such as near the Parramatta CBD core, it provides an opportunity for the market to either deliver more housing or commercial space depending on the best and highest use of the site.

### **3.2.3 Is the planning proposal consistent with any other applicable State and regional studies or strategies?**

#### **Future Transport Strategy 2056**

The Planning Proposal is in line with 'Future Transport Strategy 2056' principle of the 'Accessible Services'. The associated planning agreement consists of a shared walking and

PLANNING PROPOSAL – 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford  
cycle path through Shirley Street Reserve which will help facilitate connection from the Carlingford light rail stop to the broader pedestrian and cycle network.

### State Infrastructure Strategy

The planning proposal is in line with the State Infrastructure Strategy objective of 'Service Growing Communities'. The associated Planning Agreement will deliver quality infrastructure to match population growth and the evolving needs of the community is a fundamental role of Government which includes better access to essential services provided by the proposed supermarket.

#### 3.2.4 Is the planning proposal consistent with the applicable State Environmental Planning Policies?

The following State Environmental Planning Policies (SEPPs) are of relevance to the site (refer to Table 8 below).

**Table 8 – Consistency of planning proposal with relevant SEPPs**

State Environmental Planning Policies (SEPPs)	Consistency: Yes = ✓ No = x N/A = Not applicable	Comment
<b>SEPP No 1 Development Standards</b>	N/A	Not relevant to proposed amendment.
<b>SEPP 4 – Development Without Consent and Miscellaneous Exempt and Complying Development</b>	N/A	Not relevant to proposed amendment.
<b>SEPP 60 – Exempt and Complying Development</b>	N/A	This SEPP is not applicable to the subject land under Clause 1.9 of the Parramatta LEP 2011.
<b>SEPP No 65 Design Quality of Residential Flat Development</b>	✓	Detailed compliance with SEPP 65 will be demonstrated at the time of making a development application for the site facilitated by this Planning Proposal.
<b>SEPP (BASIX) 2004</b>	N/A	Detailed compliance with SEPP (BASIX) will be demonstrated at the time of making a development application for the site facilitated by this Planning Proposal.
<b>SEPP (Exempt and Complying Development Codes) 2008</b>	✓	May apply to future development of the site.
<b>SEPP (Housing) 2021</b>	N/A	Not relevant to proposed amendment.



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<b>SEPP (Resilience and Hazards) 2021</b>	✓	There is no proposed works as a part of this Planning Proposal.
<b>SEPP (Industry and Employment) 2021</b>	N/A	Not relevant to proposed amendment. May be relevant to future DAs in relation for advertising and signage associated with associated retail/commercial space.
<b>SEPP (Transport and Infrastructure) 2021</b>	✓	May apply to future development of the site for a future DA.
<b>SEPP (Biodiversity and Conservation) 2021</b>	N/A	The proposed development is not located directly on the Sydney Harbour Catchment foreshore. Any potential impacts as a result of development on the site, such as stormwater runoff, will be considered and addressed appropriately at DA stage.
<b>SEPP (Planning Systems) 2021</b>	N/A	May apply to future development of the site.
<b>SEPP (Precincts – Central River City) 2021</b>	N/A	Not relevant to proposed amendment.

### 3.2.5 Is the planning proposal consistent with applicable Ministerial Directions (s.9.1 directions)

In accordance with Clause 9.1 of the *EP&A Act 1979* the Minister issues directions for the relevant planning authorities to follow when preparing planning proposals for new LEPs. The directions are listed under nine focus areas:

1. Planning Systems and Planning Systems – Place Based
2. Design and Place (This Focus Area was blank when the Directions were made)
3. Biodiversity and Conservation
4. Resilience and Hazards
5. Transport and Infrastructure
6. Housing
7. Industry and Employment
8. Resources and Energy
9. Primary production

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The following directions are considered relevant to the subject Planning Proposal:

**Table 9 – Consistency of planning proposal with relevant Section 9.1 Directions**

Relevant Direction	Comment	Compliance
<b>1. Planning Systems and Planning Systems – Place Based</b>		
Direction 1.1 – Implementation of Regional Plans The objective of this direction is to give legal effect to the vision, land use strategy, goals, directions and actions contained in Regional Plans.	The Planning Proposal applies to land within Sydney's Central City. The Planning Proposal is consistent with the goals, directions and actions contained in the Greater Sydney Region Plan.	Yes
Direction 1.3 – Approval and Referral Requirements The objective of this direction is to ensure that LEP provisions encourage the efficient and appropriate assessment of development.	The Planning Proposal does not introduce any provisions that require any additional concurrence, consultation or referral.	N/A
Direction 1.4 – Site Specific Provisions The objective of this direction is to discourage unnecessarily restrictive site specific planning controls.	This Planning Proposal seeks to amend Schedule 1 of the Parramatta (former The Hills) LEP 2012 to allow 'shops' to facilitate a metro-style supermarket, 'food and drink premises', 'business premises' and 'recreational facility (indoor)' up to a gross floor area (GFA) of 2,000sqm. It is considered that a site specific provision is required for this planning proposal in order to facilitate uses for which there is an identified demand as per the Retail Impact Assessment (Appendix 1) which notes the undersupply of supermarket floorspace in the Parramatta LGA. The amendment will generate additional employment on R4 High Density Residential Land. Rezoning this whole site would facilitate the additional uses over the entire site and result in unintended/greater impacts from a traffic and economic perspectives than what has currently been considered. For example, rezoning the whole site could allow for a larger or multiple supermarkets to develop on the site, the impacts of which have not been assessed.	Yes

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Relevant Direction	Comment	Compliance
	A site specific provision is considered the best approach to facilitate the proposed use and mitigate any unintended impacts that could result from the entire site being rezoned. This is proposed to be achieved via a site specific provision limiting the additional uses on the site to a maximum cap of 2,000 sqm, thereby ensuring that the site does not develop outside a clearly defined parameter.	
<p>Direction 1.7 - Implementation of Greater Parramatta Priority Growth Area Interim Land Use and Infrastructure Implementation Plan</p> <p>The objective of this direction is to ensure development within the Greater Parramatta Priority Growth Area is consistent with the Greater Parramatta Priority Growth Area Interim Land Use and Infrastructure Implementation Plan dated July 2017 (the Interim Plan).</p>	The planning proposal aligns with the plan's vision of next generation living from Camellia to Carlingford by helping facilitate the living, learning and leisure district that is planned for this northern area of GPOP as it facilitates retail and recreation facilities providing the "conveniences of 'inner-city' living"	Yes
<b>2. Design and Place</b>		
This Focus Area was blank at the time the Directions were made.		N/A
<b>3. Biodiversity and Conservation</b>		
<p>Direction 3.1 – Conservation Zones</p> <p>The objective of this direction is to protect and conserve environmentally sensitive areas.</p>	The Planning Proposal is consistent with this direction, in that it does not apply to environmentally sensitive areas or alter provisions for land in a conservation zone.	Yes
<p>Direction 3.2 – Heritage Conservation</p> <p>The objective of this direction is to protect and conserve environmentally sensitive areas.</p>	The Planning Proposal is consistent with this direction, in that it has no impact to heritage or environmentally sensitive areas.	Yes
<p>Direction 3.5 – Recreation Vehicle Areas</p> <p>The objective of this direction is to protect sensitive land or land with significant conservation</p>	The Planning Proposal is consistent with this direction, in that it: is not proposing to enable land to be developed for the purpose of a recreation vehicle area.	Yes

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Relevant Direction	Comment	Compliance
values from adverse impacts from recreation vehicles.		
<b>4. Resilience and Hazards</b>		
<p>Direction 4.1 – Flooding</p> <p>The objectives of this direction are to:</p> <ul style="list-style-type: none"> <li>(a) Ensure that development of flood prone land is consistent with the NSW Government's Flood Prone Land Policy and the principles of the Floodplain Development Manual 2005, and</li> <li>(b) Ensure that the provisions of an LEP that apply to flood prone land are commensurate with flood behaviour and includes consideration of the potential flood impacts both on and off the subject land.</li> </ul>	The Planning Proposal is consistent with this direction, in that it is not proposing to development on flood prone land.	Yes
<p>Direction 4.3 Planning for Bushfire Protection</p> <p>The objectives of this direction are to:</p> <ul style="list-style-type: none"> <li>(a) Protect life, property and the environment from bush fire hazards, by discouraging the establishment of incompatible land uses in bush fire prone areas, and</li> <li>(b) Encourage sound management of bush fire prone areas.</li> </ul>	The Planning Proposal is consistent with this direction, in that it is not proposing to development on bushfire prone land.	Yes
<p>Direction 4.4 – Remediation of Contaminated Land</p> <p>The objective of this direction is to reduce the risk of harm to human health and the environment by ensuring that contamination and remediation are considered by planning proposal authorities.</p>	The land is not within an investigation area within the meaning of the Contaminated Land Management Act 1997 and has not been subject to development as described in Table 1 of the contaminated land planning guidelines.	Yes



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Relevant Direction	Comment	Compliance
<p>Direction 4.1 - Acid Sulphate Soils</p> <p>The objective of this direction is to avoid significant adverse environmental impacts from the use of land that has a probability of containing acid sulfate soils.</p>	<p>Acid sulphate soils will be addressed further at the development application stage.</p>	N/A
<b>5. Transport and Infrastructure</b>		
<p>Direction 5.1 – Integrating Land Use and Transport</p> <p>The objective of this direction is to ensure that development reduces dependence on cars, increases the choice of available transport and improves access to housing, jobs and services by walking, cycling and public transport.</p>	<p>The Planning Proposal is consistent with this direction, in that it:</p> <ul style="list-style-type: none"> <li>will enable future workers to walk or cycle to work as the site is in close proximity to the Carlingford light rail service.</li> <li>will maintain and provide additional retail/commercial premises in proximity to existing transport links</li> </ul>	Yes
<p>Direction 5.2 – Reserving Land for Public Purposes</p> <p>The objectives of this direction are to facilitate the provision of public services and facilities by reserving land for public purposes and facilitate the removal of reservations where the land is no longer required for acquisition.</p>	<p>The Planning Proposal does not include the identification of or removal of land required for acquisition.</p>	Yes
<p>Direction 6.3 - Site Specific Provisions</p>	<p>The Planning Proposal does not introduce any site -specific provisions.</p>	Yes
<b>6. Housing</b>		
<p>Direction 6.1 – Residential Zones</p> <p>The objectives of this direction are to encourage a variety and choice of housing types, make efficient use of existing infrastructure and services and minimise the impact of residential development.</p>	<p>The Planning Proposal may result in the reduction of housing potential on the subject site, as it allows for 2,000sqm GFA for non-residential uses. However, this impact would be minimal (between 20-25 units) on the overall housing permitted within the current planning controls in the Carlingford Precinct.</p>	Yes
<b>7. Industry and Employment</b>		
<p>Direction 7.1 – Business and Industrial Zones</p> <p>The objectives of this direction are to:</p>	<p>A Retail Impact Assessment (Appendix 1) has been prepared and concludes that there is sufficient growth in the market to accommodate the proposed development without</p>	Yes

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Relevant Direction	Comment	Compliance
(a) Encourage employment growth in suitable locations, (b) Protect employment land in business and industrial zones; and (c) Support the viability of identified centres.	adversely impacting the ongoing viability of existing retail centres. The assessment indicates that the metro style supermarket will provide employment generation in the region of 76 jobs.	

### 3.3 Section C – Environmental, social and economic impact

This section considers the potential environmental, social and economic impacts which may result from the Planning Proposal.

#### 3.3.1 Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected as a result of the proposal?

The site is not affected by critical habitat or threatened species, populations or ecological communities, or their habitats.

#### 3.3.2 Are there any other likely environmental effects as a result of the planning proposal and how are they proposed to be managed?

##### Traffic and Transport

The expected additional trips as shown in the traffic and parking assessment (**Appendix 2**) on the main road network would be limited to around 47 to 113 vehicles per hour (vph) during the weekday AM peak period and around 92 to 152 vph in the PM peak periods, which is equivalent to one to three additional vehicles per minute, which is considered minor in the surrounding context. The traffic and parking assessment notes:

- If there is no retail component within this precinct, then trips to retail developments beyond the site by the approved residential component would generate external trips to the road network to access other local retail centres.
- The site is within walking distance of the light rail station and bus stops so many of the trips would be walk by trips from public transport customers.
- The site would accommodate a small metro style supermarket (1,200sqm) which will provide limited day to day items and groceries so it will not necessarily require or encourage access by cars unlike larger format supermarkets.

The proposed additional land uses will service local residents in the area and are therefore likely to reduce vehicle trips to outside of the area. A wider footpath will connect the supermarket to the Parramatta Light Rail. This will be discussed further in the Planning Agreement section of the report.

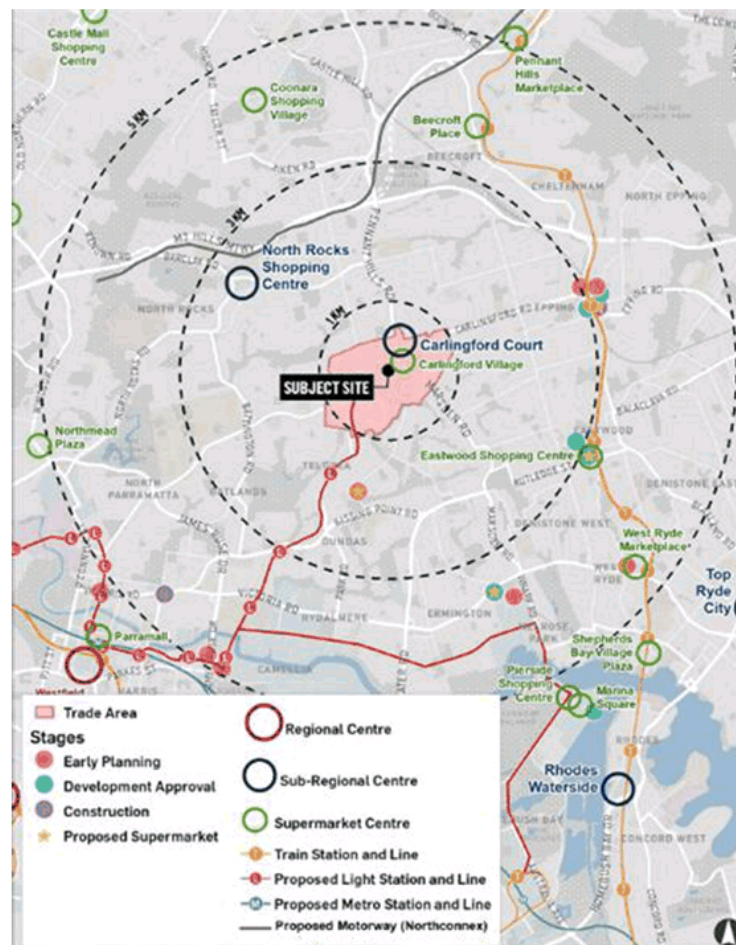
The parking requirement of the proposal will be provided in accordance with Part C of The Hills Development Control Plan 2012 - a minimum car parking requirement of 1 space per 18.5m<sup>2</sup> gross leasable floor area (GLFA) for retail shops (including shopping centres and general business retail). Assuming that GLFA is approximately 75% of GFA, the proposed retail yield of 1,500sqm GLFA will require a total minimum car parking requirement of 81 spaces.

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### 3.3.3 Has the planning proposal adequately addressed any social and economic effects?

#### Economic Effects – Retail Impact

The proposed supermarket will assist in addressing the substantial undersupply of supermarket floorspace within the Carlingford area, trade area and competition (**figure 3**). The retail impact assessment (**Appendix 1**) notes there is sufficient supermarket floorspace demand over the short to long term to justify the proposed development on the subject site. The study also notes supermarket and ground floor retail facilities at the subject site will address an immediate need for future on-site residents by providing convenient top-up shopping amenity close to home, and reducing the need for people to drive to undertake daily or top-up shopping.



**Figure 3 – Trade Area and Competition**

The proposed supermarket at the subject site will have no significant impact on the surrounding network of centres and will have positive benefits in terms of addressing undersupply, catering to future demand, creating amenity and economic benefits such as employment. Furthermore, the assessment report notes upon completion of the development, the ongoing operational phase of the retail uses would support a total of 76 additional jobs.

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The proposal aligns well with objectives at state, district and local level. The scale and mix of non-residential uses are suitable for that of a local centre. The ambition to re-activate the site and create a focal point for the wider precinct is particularly supported. The potential job creation associated with the proposed development and existing undersupply of supermarket space within the trade area as articulated in the supporting assessment.

#### Social Effects

In terms of social impacts, in allowing for a metro style supermarket in an area with an identified shortage of supermarket floor space, the planning proposal will provide for the day-to-day needs of the local population in the area and therefore provide positive social impacts.

### **3.4 Section D – State and Commonwealth Interests**

#### **3.4.1 Is there adequate public infrastructure for the planning proposal?**

The Proposal does not intend to facilitate any new development, rather the Planning Proposal will facilitate additional permitted uses.

The Planning Agreement will provide an appropriate mechanism to ensure that issues associated with the increase in demand for infrastructure as a result of the Planning Proposal are satisfactorily addressed.

#### **3.4.2 What are the views of State and Commonwealth public authorities consulted in accordance with the gateway determination?**

Consultation with the State and Commonwealth public authorities will be undertaken with Transport for NSW and Transport for NSW (Parramatta Light Rail Team) as required by the gateway determination during the public consultation period.



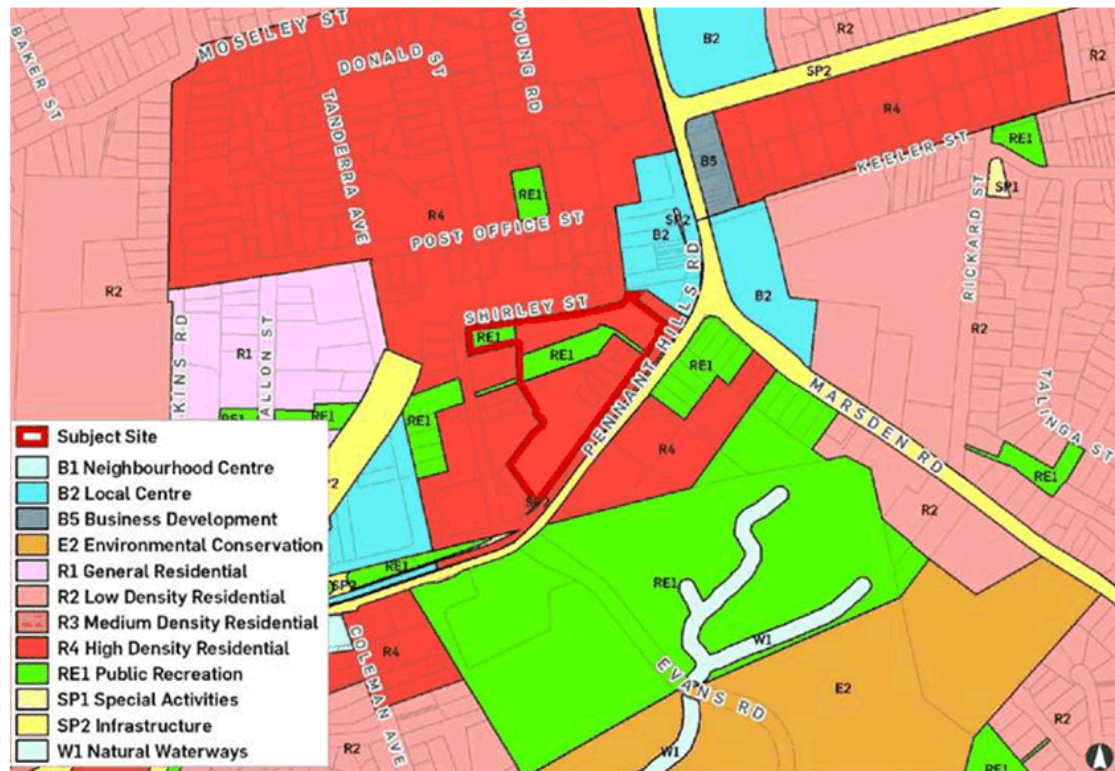
PLANNING PROPOSAL – 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford

## PART 4 – MAPS

This section contains the mapping for this planning proposal in accordance with the DP&E's guidelines on LEPs and Planning Proposals.

### 4.1 Existing controls

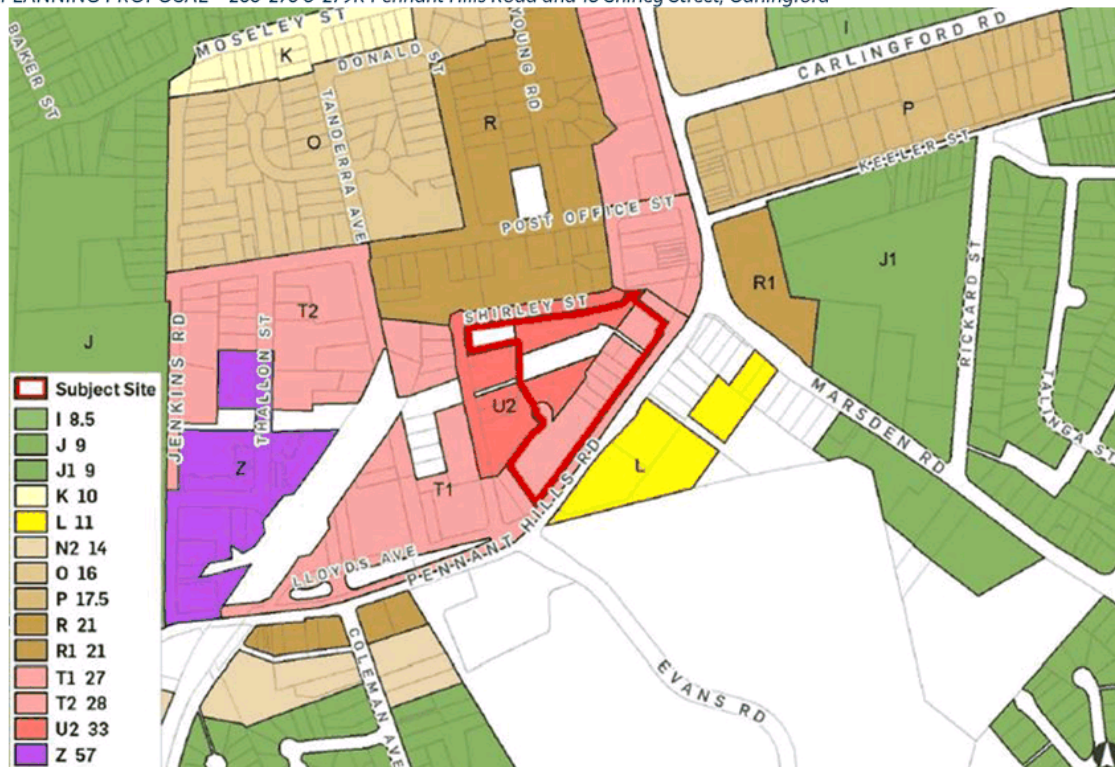
This section illustrates the current *Parramatta (former The Hills) Local Environmental Plan 2012* controls which apply to the site.



**Figure 4 – Existing zoning from Parramatta (former The Hills) LEP 2012 Land Zoning Map**

Figure 4 illustrates the existing zoning is part R4 High Density Residential and part RE1 Public Recreation

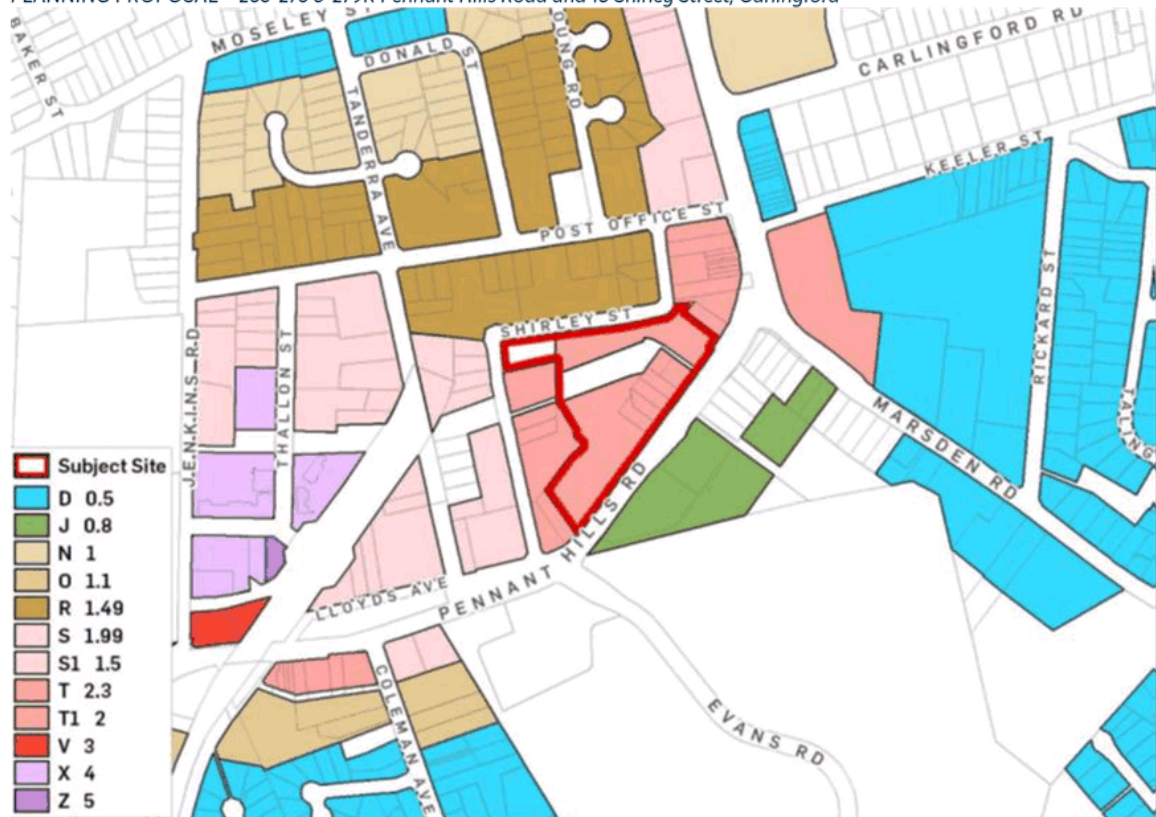
PLANNING PROPOSAL – 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford



**Figure 5 – Existing building heights extracted from the Parramatta (former The Hills) LEP 2012 Height of Buildings Map**

Figure 5 illustrates maximum heights of 33m along Shirley Street and 27m along Pennant Hills Road.

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**Figure 6** – Existing floor space ratio extracted from the Parramatta (former The Hills) LEP 2012 Floor Space Ratio Map

Figure 6 illustrates the existing Floor Space Ratio on the RE1 High Density Residential Land is 2.3:1 and that RE1 Public Recreation Land has no Floor Space Ratio.

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**Figure 7** – Existing additional permitted uses extracted from Parramatta (former The Hills) LEP 2012 Floor Space Ratio Map.

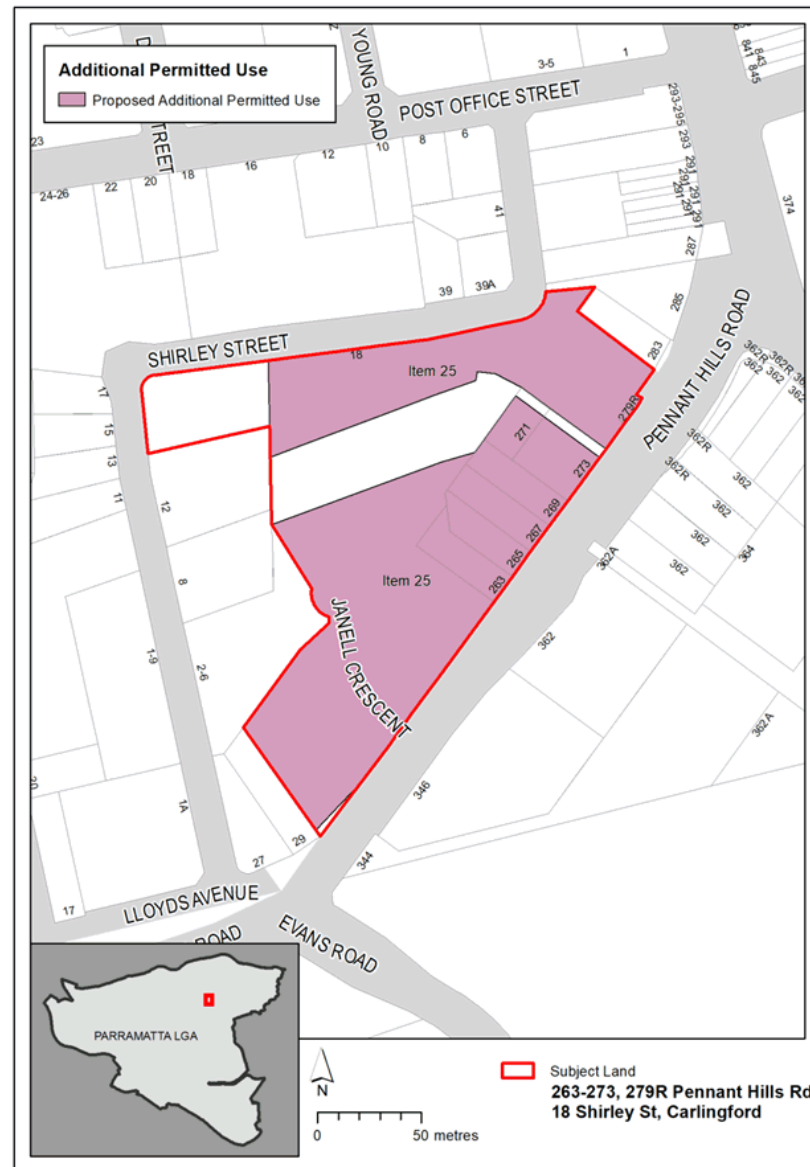
Figure 7 illustrates the existing additional permitted uses on the site.



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## 4.2 Proposed controls

No changes to the zoning, height, and FSR controls are proposed as a part of this Planning Proposal. The proposal is seeking to amend Schedule 1 of the Parramatta (former The Hills) Local Environmental Plan 2012 by adding additional permitted uses.



**Figure 8 – Proposed amendment to the Parramatta (former The Hills) LEP 2012 Additional Permitted Use Map**

Figure 8 above illustrates the proposed additional permitted use to permit 'shops', 'food and drink premises', 'business premises' and 'recreational facility (indoor)' (limited to a maximum of 2,000m<sup>2</sup>) on the R4 High Density Residential parts of the site.

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## PART 5 – COMMUNITY CONSULTATION

The planning proposal is to be publicly available for community consultation. It is noted that consistent with sections 3.34(4) and 3.34(8) of the EP&A Act 1979, where community consultation is required, an instrument cannot be made unless the community has been given an opportunity to make submissions and the submissions have been considered.

Public exhibition will include:

- newspaper advertisement;
- display on the Council's web-site;
- written notification to adjoining landowners; and
- hard copies at the council customer service centre and Carlingford library.

As required by the gateway determination the planning proposal will be made publicly available for a minimum of 20 days; and will be sent to Transport for NSW and Transport for NSW (Light Rail Team).

Each public authority will be provided with a copy of the planning proposal and any relevant supporting material via the NSW Planning Portal and given at least 30 days to comment on the proposal.

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## PART 6 – PROJECT TIMELINE

Once the planning proposal has been referred to the Minister for review of the Gateway Determination and received a Gateway determination, the anticipated project timeline will be further refined, including at each major milestone throughout the planning proposal's process.

Table 10 below outlines the anticipated timeframe for the completion of the planning proposal.

**Table 10** – Anticipated timeframe to planning proposal process

MILESTONE	ANTICIPATED TIMEFRAME
Report to LPP on the assessment of the PP	17 May 2022
Report to Council on the assessment of the PP	14 June 2022
Referral to Minister's delegate for review of Gateway determination	24 June 2022
Date of issue of the Gateway determination	29 July 2022
Date of issue or revised Gateway determination (if relevant)	N/A
Commencement and completion dates for public exhibition period	Commencement: by 29 October 2022 Completion: 29 November 2022
Commencement and completion dates for government agency notification	Commencement: by 29 October 2022 Completion: by 29 November 2022
Consideration of submissions	December 2022 – January 2023
Consideration of planning proposal post exhibition and associated report to Council	by 29 March 2022
Submission to the Department to finalise the LEP	April 2022
Notification of instrument	by 31 May 2023

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## **Appendix 1 – Retail Impact Assessment**

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## **Appendix 2 – Traffic and Parking Assessment**

## Voluntary Planning Agreement – draft version – post exhibition for reporting to Council

**[Date]**

City of Parramatta Council  
*ABN 49 907 174 773*

Karimbla Properties (No. 61) Pty Ltd  
*ACN 622 383 751*

Meriton Properties Pty Ltd  
*ACN 000 698 626*

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# Agreement

## Date

## Parties

### First party

**Name** City of Parramatta Council (**Council**)  
**ACN** 49 907 174 773  
**Contact** Manager, Land Use Planning  
**Telephone** (02) 9806 5050

### Second party

**Name** Karimbla Properties (No. 61) Pty Ltd (**Developer**)  
**ACN** 622 383 733  
**Contact** Executive Manager - Planning and Government  
**Telephone** (02) 9287 2888

### Third Party

**Name** Meriton Properties Pty Ltd (**Guarantor**)  
**ACN** 000 698 626  
**Contact** Executive Manager - Planning and Government  
**Telephone** (02) 9287 2888

## Background

On 20 April 2022, the Developer made an application to the Council for the Instrument Change for the purpose of making a Development Application to the Council for Development Consent to carry out the Development on the Land.

The Instrument Change application was accompanied by an offer by the Developer and the Guarantor to enter into this agreement to make contributions for public purposes associated with the Instrument Change and the Development.

## Operative part

### 1 Definitions

In this agreement, unless the context indicates a contrary intention:

**Act** means the *Environmental Planning and Assessment Act 1979* (NSW);

**Additional Permitted Uses** means shops, food and drink premises, business premises and recreation facilities (indoor), up to a maximum of 2,000 square metres in aggregate total Gross Floor Area (as defined in the Instrument);

**Address** means a party's address set out in the Notices clause of this agreement;

**Approval** means any certificate, licence, consent, permit, approval or other requirement of any Authority having jurisdiction in connection with the activities contemplated by this agreement;

**Authority** means any government, semi-governmental, statutory, administrative, fiscal or judicial body, department, commission, authority, tribunal, public or other person;

**Bank Guarantee** means an irrevocable and unconditional undertaking that is not limited in time and does not expire by one of the following trading banks:

- (a) Australia and New Zealand Banking Group Limited,
- (b) Commonwealth Bank of Australia,
- (c) Macquarie Bank,
- (d) National Australia Bank,
- (e) St George Bank Limited,
- (f) Westpac Banking Corporation, or
- (g) Other financial institution approved by the Council,

to pay an amount or amounts of money to the Council on demand and containing terms and conditions reasonably acceptable to the Council;

**Business Day** means a day on which banks are open for general banking business in Sydney, excluding Saturdays and Sundays;

**Certificate of Practical Completion** means the written certificate confirming the Works, or part of the Works, have been completed to the Council's satisfaction (acting reasonably) issued under clause 8.1(b)(i) of Schedule 2;

**Claim** means any claim, loss, liability, damage, proceeding, order, judgment or expense arising out of the operation of this agreement;

**Construction Certificate** means a construction certificate as defined under section 6.4 of the Act, or if the Former Building and Subdivision Provisions apply, section 109C of the Act;

**Construction Terms** means the terms set out in Schedule 2;

**Contributions Plan** has the same meaning as under the Act;

**CPI** means the All Groups Consumer Price Index applicable to Sydney published by the Australian Bureau of Statistics;

**Dealing**, in relation to the Land, means, without limitation, selling, transferring, assigning, mortgaging, charging, encumbering or otherwise dealing with the Land;

**Development** means the proposed future development of the Land for the purposes of mixed-use development containing car parking, retail shops and residential accommodation;

**Development Application** has the same meaning as in the Act;

**Development Consent** has the same meaning as in the Act;

**Fax Number** means a party's facsimile number set out in the Notices clause of this agreement;

**Former Building and Subdivision Provisions** has the same meaning as in clause 18 of the *Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017*;

**GST** has the same meaning as in the GST Law;

**GST Law** has the meaning given to that term in *A New Tax System (Goods and Services Tax) Act 1999* (Cth) and any other Act or regulation relating to the imposition of or administration of the GST;

**Insolvent** means, in relation to a party:

- (a) that party makes an arrangement, compromise or composition with, or assignment for, the benefit of its creditors or a class of them;
- (b) a receiver, receiver and manager, administrator, provisional liquidator, trustee, controller, inspector or analogous person is appointed in relation to, or over, all or any part of that party's business, assets or securities;
- (c) a presumption of insolvency has arisen under legislation because of the party's failure to comply with a statutory demand or analogous process;
- (d) an application for the winding up of, or for the appointment of a receiver to, that party, other than winding up for the purpose of solvent reconstruction or re amalgamation, is presented and not withdrawn or dismissed within 21 days (or such longer period agreed to by the parties), or an order is made or an effective resolution is passed for the winding up of, or for the appointment of a receiver to, that party, or any analogous application is made or proceedings initiated;
- (e) any shareholder or director of that party convenes a meeting for the purpose of considering or passing any resolution for the winding up or administration of that party;
- (f) that is an individual, a creditor's petition or a debtor's petition is presented to the Official Receiver or analogous authority in relation to that party;
- (g) an execution or analogous process is levied or enforced against the property of that party;
- (h) that party ceases or suspends, or threatens to cease or suspend, the conduct of all or a substantial part of its business;
- (i) that party disposes of, or threatens to dispose of, a substantial part of its assets;
- (j) that party stops or suspends, or threatens to stop or suspend, payment of all or a class of its debts; or
- (k) that party is unable to pay the party's debts as and when they become due and payable.

**Instrument** means the *Parramatta (former The Hills) Local Environmental Plan 2012*;

**Instrument Change** means an amendment to the Instrument which inserts an additional clause into Schedule 1 to the Instrument to enable development for the additional purposes of the Additional Permitted Uses to be carried out with development consent on the parts of the Land that are within the land use zone R4 High Density Residential for the purposes of the Instrument;

**Land** means 263-273 & 279R Pennant Hills Road and 18 Shirley Street (being Lot 22 DP21386, Lot 2 DP9614, Lot 3 DP9614, Lot 4 DP9614, Lot 61 DP819136, Lot 62 DP819136, Lot 1 DP1219291 and Lot 1 DP531044);

**Law** means:

- (a) any law applicable including legislation, ordinances, regulations, by-laws and other subordinate legislation;
- (b) any Approval, including any condition or requirement under it; and
- (c) any fees and charges payable in connection with the things referred to in paragraphs (a) and (b);

**Occupation Certificate** means an occupation certificate as defined under section 6.4 of the Act, or if the Former Building and Subdivision Provisions apply, section 109C of the Act, and includes an interim Occupation Certificate, a final Occupation Certificate or a partial Occupation Certificate as the case may be;

**Public Road** has the same meaning as in the *Roads Act 1993*;

**Register** means the Torrens title register maintained under the *Real Property Act 1900* (NSW);

**Regulation** means the *Environmental Planning and Assessment Regulation 2000*;

**Related Body Corporate** has the meaning given to that term in s 9 of the *Corporations Act 2001* (Cth);

**Transferee** has the meaning given in clause 12.3;

**Works** means the work set out in Schedule 1 on the Works Land; and

**Works Land** means the parts of Shirley Street Reserve (being Lot 10 DP1255614) and the adjoining Shirley Street road reserve on which the Works and any associated activities are to be carried out.

## 2 Interpretation

In this agreement, unless the context indicates a contrary intention:

- (a) **(documents)** a reference to this agreement or another document includes any document which varies, supplements, replaces, assigns or novates this agreement or that other document;
- (b) **(references)** a reference to a party, clause, paragraph, schedule or annexure is a reference to a party, clause, paragraph, schedule or annexure to or of this agreement;
- (c) **(headings)** clause headings and the table of contents are inserted for convenience only and do not affect interpretation of this agreement;
- (d) **(person)** a reference to a person includes a natural person, corporation, statutory corporation, partnership, the Crown and any other organisation or legal entity and their personal representatives, successors, substitutes (including persons taking by novation) and permitted assigns;
- (e) **(party)** a reference to a party to a document includes that party's personal representatives, executors, administrators, successors, substitutes (including persons taking by novation) and permitted assigns;

- (f) **(president, CEO, general manager or managing director)** the president, CEO, general manager or managing director of a body or Authority includes any person acting in that capacity;
- (g) **(requirements)** a requirement to do any thing includes a requirement to cause that thing to be done, and a requirement not to do any thing includes a requirement to prevent that thing being done;
- (h) **(including)** including and includes are not words of limitation, and a list of examples is not limited to those items or to items of a similar kind;
- (i) **(corresponding meanings)** a word that is derived from a defined word has a corresponding meaning;
- (j) **(singular)** the singular includes the plural and vice-versa;
- (k) **(gender)** words importing one gender include all other genders;
- (l) **(parts)** a reference to one or more things includes each part and all parts of that thing or group of things but nothing in this clause implies that part performance of an obligation constitutes performance of that obligation;
- (m) **(rules of construction)** neither this agreement nor any part of it is to be construed against a party on the basis that the party or its lawyers were responsible for its drafting;
- (n) **(legislation)** a reference to any legislation or provision of legislation includes all amendments, consolidations or replacements and all regulations or instruments issued under it;
- (o) **(time and date)** a reference to a time or date in connection with the performance of an obligation by a party is a reference to the time and date in Sydney, Australia, even if the obligation is to be performed elsewhere;
- (p) **(joint and several)** an agreement, representation, covenant, right or obligation:
  - (i) in favour of two or more persons is for the benefit of them jointly and severally; and
  - (ii) on the part of two or more persons binds them jointly and severally;
- (q) **(writing)** a reference to a notice, consent, request, approval or other communication under this agreement or an agreement between the parties means a written notice, request, consent, approval or agreement;
- (r) **(replacement bodies)** a reference to a body (including an institute, association or Authority) which ceases to exist or whose powers or functions are transferred to another body is a reference to the body which replaces it or which substantially succeeds to its power or functions;
- (s) **(Australian currency)** a reference to dollars or \$ is to Australian currency;
- (t) **(month)** a reference to a month is a reference to a calendar month; and
- (u) **(year)** a reference to a year is a reference to twelve consecutive calendar months.

### 3 Planning Agreement under the Act

- (a) The parties agree that this agreement is a planning agreement within the meaning of section 7.4 of the Act.
- (b) Schedule 4 of this agreement summarises the requirements for planning agreements under section 7.4 of the Act and the way this agreement addresses those requirements.

### 4 Application of this agreement

This agreement applies to:

- (a) the Instrument Change, and
- (b) the Development, and
- (c) the Land.

### 5 Operation of this agreement

This agreement commences on and from the date it is executed by all parties.

### 6 Contributions to be made under this agreement

#### 6.1 Works

- (a) The Developer will carry out the Works in accordance with this agreement, including the Construction Terms and any Development Consent or other relevant approval granted for the Works.
- (b) The Works or any part of the Works required under this agreement will be taken to have been completed for the purposes of this agreement when a Certificate of Practical Completion has been issued for those Works.
- (c) The Works must be delivered to the Council after gazettal of the Instrument Change and prior to the issue of an Occupation Certificate for the Development or any part of the Development which contains ~~the Additional Permitted Uses~~ [a residential dwelling](#).
- (d) The parties agree and acknowledge that the Works serve the following public purposes:
  - (i) a critical link in the broader pedestrian/cycle network that has been identified in Council's public domain and local infrastructure planning; and
  - (ii) increase pedestrian accessibility and mobility around the Carlingford Precinct (including the Land) and to the Carlingford Light Rail station.

#### 6.2 Access to Works Land

- (a) Subject to the Developer first complying with any relevant requirements under section 68 of the *Local Government Act 1993*, section 138 of the *Roads Act 1993* (including payment of any relevant application fees) and any other relevant Laws, the Council agrees to permit the Developer, upon receiving at least 10 Business Days' prior notice, to enter, pass through or occupy any Council owned or controlled land being the Works Land, for no additional fees, in order to enable the Developer to properly perform its obligations under this agreement. Nothing in this clause creates or gives the Developer any estate or interest in any part of the Works Land.

- (b) The Developer indemnifies the Council, its employees, officers, agents and contractors from and against all Claims in connection with the entry or access by the Developer to, or any presence of the Developer on, the Works Land for the purposes of performing its obligations under this agreement, except to the extent such Claim arises directly as a result of the Council or its employees, officers, agents, contractors or workmen's negligence, default, act or omission.

## 7 Application of s 7.11, s 7.12 and s 7.24 of the Act to the Development

- (a) This agreement does not exclude the application of section 7.11 of the Act to the Development.
- (b) This agreement does not exclude the application of section 7.12 of the Act to the Development.
- (c) This agreement does not exclude the application of section 7.24 of the Act to the Development.

## 8 Registration of this agreement

### 8.1 Developer Interest

The Developer represents and warrants to the Council that on the date of this agreement it is the registered proprietor of the Land.

### 8.2 Registration of this agreement

- (a) The Developer agrees to procure the registration of this agreement under the *Real Property Act 1900* (NSW) in the relevant folios of the Register of the Land in accordance with section 7.6 of the Act.
- (b) The Developer, at its own expense, must:
  - (i) procure the lodgement of this agreement with the Registrar-General as soon as reasonably practicable after this agreement comes into operation, but in any event, no later than 10 Business Days after that date;
  - (ii) procure the registration of this agreement by the Registrar-General in the relevant folios of the Register for the Land as soon as reasonably practicable after this agreement is lodged for registration; and
  - (iii) provide documentary evidence that the registration of this agreement has been completed to Council within 5 Business Days of receiving confirmation that the registration has occurred.
- (c) The Developer at its own expense will take all practical steps, and otherwise do anything that the Council reasonably requires to procure:
  - (i) The consent of each person who:
    - (A) has an estate or interest in the Land registered under the *Real Property Act 1900* (NSW); or
    - (B) is seized or possessed of an estate or interest in the Land,
  - (ii) An acceptance of the terms of this agreement and an acknowledgement in writing from any existing mortgagee in relation to the Land that the



mortgagee will adhere to the provisions of this agreement if it takes possession of the Land as mortgagee in possession,

- (iii) The execution of any documents; and
- (iv) The production of the relevant duplicate certificates of title,

to enable the registration of this agreement in accordance with this clause 8.2.

### 8.3 *Removal from Register*

- (a) The Council will provide a release and discharge of this agreement so that it may be removed from the folios of the Register for the Land (or any part of it) provided the Council is satisfied the Developer has duly fulfilled its obligations under this agreement, and is not otherwise in default of any of the obligations under this agreement.
- (b) Council agrees that if the Land is subdivided such that development takes place in more than one stage, the registration of this agreement will be removed from the title of any allotment of the Land subject to a strata scheme under the *Strata Schemes Development Act 2015*, provided that this agreement remains registered against the title to the common property within the strata scheme.

### 8.4 *Caveat*

- (a) The Developer acknowledges and agrees that:
  - (i) when this agreement is executed, the Council is deemed to have acquired and the Developer is deemed to have granted, an equitable estate and interest in the Land for the purposes of section 74F(1) of the *Real Property Act 1900* (NSW) and consequently the Council will have a sufficient interest in the Land in respect of which to lodge a caveat over the Land notifying that interest;
  - (ii) it will not object to the Council lodging a caveat in the relevant folios of the Register for the Land nor will it seek to remove any caveat lodged by the Council provided the caveat does not prevent registration of any dealing or plan other than a transfer.
- (b) The Council must, at the Developer's cost, register a withdrawal of any caveat in respect of the Land within five Business Days after the Developer complies with clause 8.2 and must not lodge any other caveats on the titles to any of the Land.

## 9 *Review of this agreement*

- (a) This agreement may be reviewed or modified. Any review or modification of this agreement will be conducted in the circumstances and in the manner determined by the parties.
- (b) No modification or review of this agreement will be of any force or effect unless it is in writing and signed by the parties to this agreement.
- (c) A party is not in breach of this agreement if it does not agree to an amendment to this agreement requested by a party in, or as a consequence of, a review.

## 10 Dispute Resolution

### 10.1 Reference to Dispute

If a dispute arises between the parties in relation to this agreement, the parties must not commence any court proceedings relating to the dispute unless the parties have complied with this clause, except where a party seeks urgent interlocutory relief.

### 10.2 Notice of Dispute

The party wishing to commence the dispute resolution process must give written notice (**Notice of Dispute**) to the other parties of:

- (a) The nature of the dispute,
- (b) The alleged basis of the dispute, and
- (c) The position which the party issuing the Notice of Dispute believes is correct.

### 10.3 Representatives of Parties to Meet

- (a) The representatives of the parties must promptly (and in any event within 20 Business Days of the Notice of Dispute) meet in good faith to attempt to resolve the notified dispute.
- (b) The parties may, without limitation:
  - (i) resolve the dispute during the course of that meeting,
  - (ii) agree that further material or expert advice about a particular issue or consideration is needed to effectively resolve the dispute (in which event the parties will, in good faith, agree to a timetable for resolution); or
  - (iii) agree that the parties are unlikely to resolve the dispute and, in good faith, agree to a form of alternative dispute resolution (including expert determination, arbitration or mediation) which is appropriate for the resolution of the relevant dispute.

### 10.4 Further Notice if Not Settled

If the dispute is not resolved within 10 Business Days after the nominated representatives have met, either party may give to the other a written notice calling for determination of the dispute (**Determination Notice**) by mediation under clause 10.5.

### 10.5 Mediation

If a party gives a Determination Notice calling for the dispute to be mediated:

- (a) The parties must agree to the terms of reference of the mediation within 15 Business Days of the receipt of the Determination Notice (the terms shall include a requirement that the mediation rules of the Institute of Arbitrators and Mediators Australia (NSW Chapter) apply);
- (b) The mediator will be agreed between the parties, or failing agreement within 15 Business Days of receipt of the Determination Notice, either Party may request the President of the Institute of Arbitrators and Mediators Australia (NSW Chapter) to appoint a mediator;

- (c) The mediator appointed pursuant to this clause 10.5 must:
  - (i) Have reasonable qualifications and practical experience in the area of the dispute; and
  - (ii) Have no interest or duty which conflicts or may conflict with his or her function as a mediator he or she being required to fully disclose any such interest or duty before his or her appointment;
- (d) The mediator shall be required to undertake to keep confidential all matters coming to his or her knowledge by reason of his or her appointment and performance of his or her duties;
- (e) The parties must within 15 Business Days of receipt of the Determination Notice notify each other of their representatives who will be involved in the mediation (except if a resolution of the Council is required to appoint a representative, the Council must advise of the representative within 5 Business Days of the resolution);
- (f) The parties agree to be bound by a mediation settlement and may only initiate judicial proceedings in respect of a dispute which is the subject of a mediation settlement for the purpose of enforcing that mediation settlement; and
- (g) In relation to costs and expenses:
  - (i) Each party will bear its own professional and expert costs incurred in connection with the mediation; and
  - (ii) The costs of the mediator will be shared equally by the parties unless the mediator determines that a party has engaged in vexatious or unconscionable behaviour in which case the mediator may require the full costs of the mediation to be borne by that party.

#### 10.6 *Litigation*

If the dispute is not *finally* resolved in accordance with this clause 10, then either party is at liberty to litigate the dispute.

#### 10.7 *No suspension of contractual obligations*

Subject to any interlocutory order obtained under clause 10.1, the referral to or undertaking of a dispute resolution process under this clause 10 does not suspend the parties' obligations under this agreement.

### 11 **Enforcement**

#### 11.1 *Default*

- (a) In the event a party considers another party has failed to perform and fulfil an obligation under this agreement, it may give notice in writing to the other party (**Default Notice**) giving all particulars of the matters in respect of which it considers default has occurred and by such notice require the default to be remedied within a reasonable time not being less than 21 days.
- (b) In determining a reasonable time, regard must be had to both the nature of the default and the work or other action required to remedy it and whether or not the continuation of the default constitutes a public nuisance or raises other circumstances of urgency or emergency.

- (c) If a party disputes the Default Notice it may refer the dispute to dispute resolution under clause 10 of this agreement.

#### 11.2 *Guarantor*

- (a) The Guarantor has agreed to guarantee the performance of the Developer's obligations under this Agreement.
- (b) The Guarantor agrees that it is liable to Council for:
  - (i) the due performance and observance by the Developer of all the provisions in this Agreement; and
  - (ii) the payment of all money which the Developer is obliged to pay to the Council under this Agreement.
- (c) The Guarantor is liable even if:
  - (i) the Developer or any Guarantor dies, or becomes mentally incapable or insolvent;
  - (ii) the Council gives the Developer any time, forbearance or other indulgence;
  - (iii) the Council does not exercise any of its rights under this Agreement, or waives or defers any of those rights;
  - (iv) the Developer or any Guarantor have any actual or alleged set-off, defence, counter-claim or other deductions; and
  - (v) the Council, or any other person does anything or omits to do anything which would, but for this provision, affect or discharge the Guarantor's liability.

#### 11.3 *Restriction on the issue of Certificates*

In accordance with section 6.10 of the Act and any associated regulations (or if the Former Building and Subdivision Provisions apply, section 109H(2) of the Act) the obligations to carry out the Works must be satisfied prior to the issue of an Occupation Certificate for the Development or any part of the Development [containing a residential dwelling](#).

#### 11.4 *General Enforcement*

- (a) Without limiting any other remedies available to the parties, this agreement may be enforced by any party in any Court of competent jurisdiction.
- (b) Nothing in this agreement prevents:
  - (i) a party from bringing proceedings in the Land and Environment Court to enforce any aspect of this agreement or any matter to which this agreement relates; and
  - (ii) the Council from exercising any function under the Act or any other Act or law relating to the enforcement of any aspect of this agreement or any matter to which this agreement relates.

## 12 Assignment and Dealings

### 12.1 Assignment

- (a) A party must not assign or deal with any right under this agreement without the prior written consent of the other parties, which consent shall not be unreasonably withheld.
- (b) Any change of ownership or control (as defined in section 50AA of the *Commonwealth Corporations Act 2001*) of a party (excluding the Council) shall be deemed to be an assignment of this agreement for the purposes of this clause.
- (c) Any purported dealing in breach of this clause is of no effect.

### 12.2 Arrangements with Mortgagee

- (a) The Developer agrees with the Council that if the Developer mortgages the Land after this agreement is entered into it must use all reasonable efforts at that time to arrange a multiple party deed of agreement between the Council, the Developer, and the mortgagee who will be providing finance for the Works so that the mortgagee accepts that the responsibilities set out in this agreement are binding upon the mortgagee in the event that the Developer defaults on the mortgage and the mortgagee takes possession of the Land.
- (b) The terms of the adoption of the obligations of the Developer by the mortgagee shall be as reasonably required by the Council. The agreement shall be prepared at the cost of the Developer.

### 12.3 Transfer of Land

- (a) The Developer may not transfer, assign or dispose of the whole or any part of its right, title or interest in the Land (present or future) or in the Development to another person (**Transferee**) unless before it sells, transfers or disposes of that right, title or interest:
  - (i) The Developer satisfies the Council that the proposed Transferee is financially capable of complying with the Developer obligations under this agreement;
  - (ii) The Developer satisfies the Council that the rights of the Council will not be diminished or fettered in any way;
  - (iii) The Transferee delivers to the Council a novation deed signed by the Transferee in a form and of such substance as is acceptable to the Council containing provisions under which the Transferee agrees to comply with all the outstanding obligations of the Developer under this agreement;
  - (iv) The Transferee delivers to the Council Bank Guarantees as required by this agreement;
  - (v) Any default under any provisions of this agreement has been remedied or waived by the Council, on such conditions as the Council may determine, and
  - (vi) The Developer and the Transferee pay the Council's reasonable costs in relation to the assignment.
- (b) The parties agree that clause 12.3(a) does not apply if the Transferee is acquiring an interest in the Land as a purchaser of one or more lots in a strata scheme,

(whether or not the plan has, at the date of exchange, been registered at the NSW Land Registry Services).

### 13 Approvals and consents

Except as otherwise set out in this agreement, and subject to any statutory obligations, a party may give or withhold an approval or consent to be given under this agreement in that party's absolute discretion and subject to any conditions determined by the party. A party is not obligated to give its reasons for giving or withholding consent or for giving consent subject to conditions.

### 14 No fetter

#### 14.1 Discretion

This agreement is not intended to operate to fetter, in any manner, the exercise of any statutory power or discretion of the Council, including, but not limited to, any statutory power or discretion of the Council relating to the Development Application or any other application for Development Consent (all referred to in this agreement as a "**Discretion**").

#### 14.2 No fetter

No provision of this agreement is intended to constitute any fetter on the exercise of any Discretion. If, contrary to the operation of this clause, any provision of this agreement is held by a court of competent jurisdiction to constitute a fetter on any Discretion, the parties agree:

- (a) They will take all practical steps, including the execution of any further documents, to ensure the objective of this clause is substantially satisfied,
- (b) In the event that (a) cannot be achieved without giving rise to a fetter on the exercise of a Discretion, the relevant provision is to be severed and the remainder of this agreement has full force and effect, and
- (c) To endeavour to satisfy the common objectives of the parties in relation to the provision of this agreement which is to be held to be a fetter on the extent that is possible having regard to the relevant court judgment.

#### 14.3 Planning Certificates

The Developer acknowledges that Council may, at its discretion, include advice on any planning certificate issued under section 10.7 of the Act that this agreement affects the Land.

### 15 Notices

#### 15.1 Notices

Any notice given under or in connection with this agreement (**Notice**):

- (a) must be in writing and signed by a person duly authorised by the sender;
- (b) must be addressed as follows and delivered to the intended recipient by hand, by prepaid post or by email or fax at the address or fax number below, or at the

address or fax number last notified by the intended recipient to the sender after the date of this agreement:

- (i) to City of Parramatta Council: PO Box 32, Parramatta, NSW 2124  
Fax: 02 9806 5917  
Email: council@cityofparramatta.nsw.gov.au  
Attention: Manager, Land Use Planning
  - (ii) to Karimbla Properties (No. 61) Pty Ltd: Level 11, 528 Kent Street, Sydney NSW 2000  
Fax: (02) 9287 2777  
Email: generalcounsel@meriton.com.au  
Attention: Director
  - (iii) to Meriton Properties Pty Ltd: Level 11, 528 Kent Street, Sydney NSW 2000  
Fax: (02) 9287 2777  
Email: generalcounsel@meriton.com.au  
Attention: Director
- (c) is taken to be given or made:
- (i) in the case of hand delivery, when delivered;
  - (ii) in the case of delivery by post, three Business Days after the date of posting (if posted to an address in the same country) or seven Business Days after the date of posting (if posted to an address in another country); and
  - (iii) in the case of a fax, on production of a transmission report by the machine from which the fax was sent that indicates the fax was sent in its entirety to the recipient's fax number; and
- (d) if under clause (c) a Notice would be taken to be given or made on a day that is not a Business Day in the place to which the Notice is sent, or later than 4.00 pm (local time), it is taken to have been given or made at the start of business on the next Business Day in that place.

#### 15.2 Notices sent by email:

- (a) A party may serve a Notice by email if the Notice:
  - (i) includes a signature block specifying:
    - (A) the name of the person sending the Notice; and
    - (B) the sender's position within the relevant party;
  - (ii) states in the body of the message or the subject field that it is sent as a Notice under this agreement;
  - (iii) contains an express statement that the person sending the Notice has the authority to serve a Notice under this agreement;



- (iv) is sent to the email address below or the email address last notified by the intended recipient to the sender:
  - (A) to City of Parramatta Council: Attention: Manager, Land Use Planning  
council@cityofparramatta.nsw.gov.au
  - (B) to Karimbla Properties (No. 61) Pty Ltd: Attention: Executive Manager – Planning and Government  
generalcounsel@meriton.com.au
  - (C) to Meriton Properties Pty Ltd: Attention: Executive Manager – Planning and Government  
generalcounsel@meriton.com.au
- (b) The recipient of a Notice served under this clause 15.2 must:
  - (i) promptly acknowledge receipt of the Notice; and
  - (ii) keep an electronic copy of the Notice,
- (c) Failure to comply with clause 15.2 does not invalidate service of a Notice under this clause.

### 15.3 *Receipt of Notices sent by email*

- (a) A Notice sent under clause 15.2 is taken to be given or made:
  - (i) when the sender receives an email acknowledgement from the recipient's information system showing the Notice has been delivered to the email address stated above;
  - (ii) when the Notice enters an information system controlled by the recipient; or
  - (iii) when the Notice is first opened or read by the recipient,
 whichever occurs first.
- (b) If under clause 15.3 a Notice would be taken to be given or made on a day that is not a Business Day in the place to which the Notice is sent, or later than 4.00 pm (local time), it will be taken to have been given or made at the start of business on the next Business Day in that place.

## 16 General

### 16.1 *Relationship between parties*

- (a) Nothing in this agreement:
  - (i) constitutes a partnership between the parties; or
  - (ii) except as expressly provided, makes a party an agent of another party for any purpose.
- (b) A party cannot in any way or for any purpose:
  - (i) bind another party; or
  - (ii) contract in the name of another party.

- (c) If a party must fulfil an obligation and that party is dependent on another party, then that other party must do each thing reasonably within its power to assist the other in the performance of that obligation.

#### **16.2 Time for doing acts**

- (a) If the time for doing any act or thing required to be done or a notice period specified in this agreement expires on a day other than a Business Day, the time for doing that act or thing or the expiration of that notice period is extended until the following Business Day.
- (b) If any act or thing required to be done is done after 5.00 pm on the specified day, it is taken to have been done on the following Business Day.

#### **16.3 Further assurances**

Each party must promptly execute all documents and do all other things reasonably necessary or desirable to give effect to the arrangements recorded in this agreement.

#### **16.4 Joint and individual liability and benefits**

Except as otherwise set out in this agreement, any agreement, covenant, representation or warranty under this agreement by two or more persons binds them jointly and each of them individually, and any benefit in favour of two or more persons is for the benefit of them jointly and each of them individually.

#### **16.5 Variations and Amendments**

A provision of this agreement can only be varied by a later written document executed by or on behalf of all parties and in accordance with the provisions of the Act.

#### **16.6 Counterparts**

This agreement may be executed in any number of counterparts. All counterparts taken together constitute one instrument.

#### **16.7 Legal expenses and stamp duty**

- (a) The Developer must pay the Council's reasonable legal costs and disbursements in connection with the negotiation, preparation, execution, carrying into effect, enforcement and release and discharge of this agreement, including the reasonable costs of obtaining any legal advice in connection with this agreement, no later than 10 Business Days after receiving a demand from the Council to pay such costs.
- (b) The Developer agrees to pay or reimburse the costs and expenses incurred by Council in connection with the advertising and exhibition of this agreement in accordance with the Act.

#### **16.8 Entire agreement**

The contents of this agreement constitute the entire agreement between the parties and supersede any prior negotiations, representations, understandings or arrangements made between the parties regarding the subject matter of this agreement, whether orally or in writing.

**16.9 Representations and warranties**

The parties represent and warrant that they have the power and authority to enter into this agreement and comply with their obligations under the agreement and that entry into this agreement will not result in the breach of any law.

**16.10 Severability**

If a clause or part of a clause of this agreement can be read in a way that makes it illegal, unenforceable or invalid, but can also be read in a way that makes it legal, enforceable and valid, it must be read in the latter way. If any clause or part of a clause is illegal, unenforceable or invalid, that clause or part is to be treated as removed from this agreement, but the rest of this agreement is not affected.

**16.11 Invalidity**

- (a) A word or provision must be read down if:
  - (i) this agreement is void, voidable, or unenforceable if it is not read down;
  - (ii) this agreement will not be void, voidable or unenforceable if it is read down; and
  - (iii) the provision is capable of being read down.
- (b) A word or provision must be severed if:
  - (i) despite the operation of clause (a), the provision is void, voidable or unenforceable if it is not severed; and
  - (ii) this agreement will be void, voidable or unenforceable if it is not severed.
- (c) The remainder of this agreement has full effect even if clause 16.11(b) applies.

**16.12 Waiver**

- (a) A right or remedy created by this agreement cannot be waived except in writing signed by the party entitled to that right. Delay by a party in exercising a right or remedy does not constitute a waiver of that right or remedy, nor does a waiver (either wholly or in part) by a party of a right operate as a subsequent waiver of the same right or of any other right of that party.
- (b) The fact that a party fails to do, or delays in doing, something the party is entitled to do under this agreement, does not amount to a waiver of any obligation of, or breach of obligation by, another party. A waiver by a party is only effective if it is in writing. A written waiver by a party is only effective in relation to the particular obligation or breach in respect of which it is given. It is not to be taken as an implied waiver of any other obligation or breach or as an implied waiver of that obligation or breach in relation to any other occasion.

**16.13 GST**

- (a) Words and expressions which are not defined in this agreement but which have a defined meaning in GST Law have the same meaning as in the GST Law.
- (b) Unless otherwise expressly stated, all prices or other sums payable or consideration to be provided under this agreement are exclusive of GST.
- (c) If GST is imposed on any supply made under or in accordance with this agreement, the Developer must pay the GST or pay to the Council an amount

equal to the GST payable on or for the taxable supply, whichever is appropriate in the circumstances.

- (d) If the Council is obliged to pay any GST on any supply made under or in accordance with this agreement, the Developer indemnifies the Council for the amount of any such payment is required to make.

***16.14 Governing law and jurisdiction***

- (a) The laws applicable in New South Wales govern this agreement.
- (b) The parties submit to the non-exclusive jurisdiction of the courts of New South Wales and any courts competent to hear appeals from those courts.

## Schedule 1                      Scope of works

Deliver a shared pedestrian/cycle path on the Works Land from Shirley Street through the Shirley Street Reserve to form part of the existing Active Transport Link connecting to the Carlingford Light Rail Station. Refer to the plans showing the Works at Annexure B. The Works must be completed prior to the issue of an Occupation Certificate for the Development or any part of the Development which contains ~~the Additional Permitted Uses~~ [a residential dwelling](#). The Works at a minimum must include:

- A.        Raised Pedestrian Crossing with cycle lane over Shirley Street.
- B.        Rectification works to the existing footpath within Shirley Street that connects to the raised pedestrian crossing (approximately 16m<sup>2</sup>)
- C.        2.0m wide footpath from Shirley Street through Shirley Street reserve
- D.        Provision of 1.0m wide landscaping strip associated within the Shared Bike Path/ Pedestrian Path
- E.        Provision of 3.0m wide Bike Path within Shirley Street Reserve
- F.        Allowance for relocation of existing utilities and provision of new pits and pipes for utilities in the Road Reserve.
- G.        Rectification of disturbed areas within the vicinity of the Works
- H.        Lighting for the shared bike path/ pedestrian paths in accordance with Council's specifications
- I.        Lighting for the pedestrian crossing

## Schedule 2 Construction Terms

### 1 Interpretation

For the purposes of this Schedule 2, the defined terms in clause 1 of this agreement and the Interpretation principles in clause 2 of this agreement will apply and, unless context indicates a contrary intention:

**Builder** means any entity contracted under the Construction Contract to carry out the Works.

**Construction Contract** means the contract to carry out the Works (whether or not that is a contract for the Works only or forms part of a contract for the building of other components of the Development).

**Defects Liability Period** means in respect of each item of building works which together comprise the Works the period of 12 months from the date on which the Certificate of Practical Completion is issued for the Works.

**Detailed Design** means the final specifications and finishes for the Works prepared in accordance with clause 5.2 of this Schedule 2 and will include the design of the Works, the location for the Works, installation specifications and estimated costs of construction and/or installation.

**Services** means all electricity, telecommunications and other services which are reasonably necessary or required for the construction or operation of the Works.

**Superintendent** means the Superintendent appointed under any Construction Contract (if applicable).

**Works** means the works set out in Schedule 1 on the Works Land.

### 2 Requirements of Authorities and Approvals

2.1 These Construction Terms must be read and construed subject to:

- (a) any requirements or conditions of any Development Consent;
- (b) the requirements of and conditions imposed by all relevant Authorities and all Laws relating to the Development and the construction of the Development.

2.2 If the Developer requires any Approvals in order to carry out the obligations under this agreement, then the Developer will acquire all Approvals necessary to carry out the Works at its own cost.

2.3 The Developer must ensure that the Works carried out under this agreement are carried out:

- (a) in accordance with the relevant Development Consent or other relevant approvals for the Works and all Approvals and the requirements of all Laws, including without limitation, work health and safety legislation; and
- (b) in a good and workmanlike manner and so that they are diligently progressed until completion;

AND it is acknowledged that to the extent that there is any inconsistency between this agreement and any Approval the terms of the Approval shall take precedence.

### 3 Costs of Works

All costs of the Works must be borne by the Developer.

**4 Project Management and Contractor Engagement**

- 4.1 The Developer will be responsible for managing the Works.
- 4.2 The Developer will ensure that any contractor it engages to carry out the Works agrees to:
- (a) carry out the Developer's obligations in these Construction Terms as part of any Construction Contract; and
  - (b) request a Council representative to be present at each on-site meeting attended by the Superintendent and to ensure the Council representative is present at the meeting.

**5 Design Development and Approvals****5.1 Concept Design**

Council and the Developer have worked in consultation with each other to prepare and agree the concept plans for the Works at Annexure B.

**5.2 Detailed Design**

- (a) Prior to Works commencing the Developer must provide a copy of the draft Detailed Design to the Council for approval.
  - (b) Within 10 Business Days of receiving the Detailed Design, Council will (acting reasonably) respond to the Developer with any suggested amendments to the Detailed Design. If Council does not respond within the 10 Business Days, then the submitted Detailed Design is deemed to be approval under this Agreement.
  - (c) Council and the Developer must work in consultation with each other to prepare and agree the Detailed Design and must both act reasonably and with due expedition in their consultations with each other.
  - (d) If the Detailed Design is not completed and agreed within 10 Business Days of Council providing its suggested amendments in accordance with clause 5.2(b) of this Schedule 2, to avoid possible delays to the issue of a Certificate of Practical Completion, the Council will, in its sole discretion, be entitled to decide on any outstanding or undecided matter or item relating to areas that are to be accessible to the public, provided that any decision made by Council under this clause:
    - (i) is consistent with the obligation to carry out the Works under this agreement; and
    - (ii) is consistent with the Development Consent; and
    - (iii) does not materially and adversely affect the Development; and
- 5.3 (iv) is not unreasonable. Any acceptance by the Council of the Detailed Design under this clause 5 of Schedule 2 is to be taken as approval of or to any Construction Certificate for the Works.

**5.4 Good faith**

The parties must act promptly and in good faith to consult in relation to the Detailed Design.

**6 Carrying out of Works**



**6.1 Communication**

The Developer must keep Council reasonably informed of progress of the Works and provide to Council such information about the Works as Council reasonably requests.

**6.2 Standard of Works**

- (a) Unless otherwise provided, the Developer shall, and must cause the Builder to, use suitable new materials and proper and tradesmanlike workmanship when carrying out the Works.
- (b) The qualitative standard of the design and finishes for the Works must be no less than those described in the following documents:
  - (i) Any relevant Australian Standard;
  - (ii) Any relevant design standards or guidelines and any other requirements or policies applied by the Council from time to time in assessing the adequacy of any works or improvements proposed for the public domain or to be accessible to the public in accordance with this agreement.
- (c) The Developer will obtain any relevant standards (including design standards), specifications, or guidelines and any other requirements or policies referred to in clause 6.2(b)(ii) of this Schedule 2 from Council if the Council fails to deliver them to the Developer.
- (d) The Developer may but is not obliged to reinstate any Works where damage or destruction is as a result of:
  - (i) Any act or omission of the Council or its employees, consultants or agents relating to any part of the Works under this agreement; or
  - (ii) The use or occupation by the Council or its employees, consultants or agents, Council's representatives or other contractor of the Council of any part of the Works; or
  - (iii) malicious damage and graffiti to any part of the Works by persons not associated with the Developer, Builder or Superintendent.

**6.3 Damage to people, property & utilities**

- (a) The Developer is to ensure to the fullest extent reasonably practicable that, in performing its obligations under this agreement:
  - (i) all necessary measures are taken to protect people and property;
  - (ii) unnecessary interference with the passage of people and vehicles is avoided; and
  - (iii) nuisances and unreasonable noise and disturbances are prevented.
- (b) Without limiting clause 6.3(a) of this Schedule, the Developer is not to obstruct, interfere with, impair or damage any Public Road, public footpath, public cycleway or other public thoroughfare, or any pipe, conduit, drain, watercourse or other public utility or service on any land except as authorised in writing by the Council or any relevant Authority.

**7 Inspection**

- (a) On completion of the Detailed Design, the Council will provide a schedule of inspections to be undertaken by Council (**Inspection Schedule**) to occur at specified stages of the construction of the Works (**Inspection Stage**). If the Council does not provide the Inspection Schedule, the Developer must request the Inspection Schedule from the Council prior to the Works commencing.
- (b) Five Business Days prior to reaching an Inspection Stage as set out in the Inspection Schedule, the Developer must notify the Council of the proposed inspection date (**Inspection Date**).
- (c) On the Inspection Date, or other agreed date, the Developer must ensure that any employees, contractors, agents or representatives of Council have access to and may enter the Land to inspect the Works.
- (d) In addition to carrying out inspections in accordance with the Inspection Schedule, the Council may enter the Land or any part of the Land on which the Works are located to inspect the progress of the Works, subject to:
  - (i) the terms of the Construction Contract (save for any clause of the Construction Contract which prevents the Council from accessing the Land);
  - (ii) giving reasonable notice to the Developer;
  - (iii) complying with all reasonable directions of the Developer; and
  - (iv) being accompanied by the Developer or a nominee, or as otherwise agreed.
- (e) The Council may, acting reasonably, within 5 Business Days of carrying out an inspection (either under clause 7(c) or 7(d) of this Schedule 2), notify the Developer of any defect or non-compliance in the Works and direct the Developer to carry out work to rectify that defect or non-compliance within a reasonable period of time. Such work may include, but is not limited to:
  - (i) removal of defective or non-complying material;
  - (ii) demolishing defective or non-complying work;
  - (iii) reconstructing, replacing or correcting any defective or non-complying work; and
  - (iv) not delivering any defective or non-complying material to the site of the Works.
- (f) If the Developer is issued a direction to carry out further work under clause 7(e) of this Schedule 2, the Developer must, at its cost, rectify the defect or non-compliance specified in the Notice within the time period specified in the Notice, provided that it is reasonable having regard to the nature of the works.
- (g) If the Developer fails to comply with a direction to carry out work given under 7(e) of this Schedule 2, the Council will be entitled to refuse to accept that the Works (or the relevant part of the Works) meet the Council's standards and specifications and may refuse to issue a Certificate of Practical Completion, until the required Works have been completed to the Council's satisfaction, acting reasonably.

- (h) For the avoidance of doubt, the acceptance by the Council that the Developer has rectified a particular defect or non-compliance identified in a notice issued under 7(e) of this Schedule 2 does not constitute:
  - (i) acceptance by the Council that the Works comply with all Approvals and Laws; or
  - (ii) an Approval by the Council in respect of the Works; or
  - (iii) an agreement or acknowledgment by the Council that the Works or the relevant part of the Works are complete and may be delivered to the Council in accordance with this agreement.

## **8 Completion**

### **8.1 Practical Completion**

- (a) When the Developer considers that the Works, or any part of the Works, are complete, the Developer must send a Notice to the Council accompanied by complete works as executed plans, any relevant certificates or consents of any public utility authority and a request for written certification from the Council that the Works are complete.
- (b) Within 5 Business Days of receipt of the notice under clause 8.1(a) of this Schedule 2, the Council will carry out an inspection of the Works and will, acting reasonably, either:
  - (i) provide written certification to the Developer that the Works have been completed; or
  - (ii) notify the Developer of any additional information required or matters which must be addressed by the Developer prior to the certification being issued.
- (c) If the Developer is required to provide additional information or address any matters under clause 8.1(b)(ii) of this Schedule 2, the Developer will provide that information to Council or address those matters within 5 Business Days of receiving the notice or within a reasonable period of time and make a further request under clause 8.1(a) of this Schedule 2 for written certification that the Works have been completed.
- (d) Practical completion will be achieved in relation to the Works or any part of the Works when a Certificate of Practical Completion has been issued for those Works.

### **8.2 Delivery of documents**

- (a) The Developer must as soon as practicable, and no later than 20 Business Days after the date on which the Certificate of Practical Completion is issued in respect of the Works or any part of the Works deliver to the Council, complete and legible copies of:
  - (i) all "as built" reasonably sized drawings, specifications and relevant operation and service manuals;
  - (ii) all necessary certificates including the certificates of any consultants of the Developer that the Council may reasonably require, and Approvals of any public utility authority (where relevant); and
  - (iii) copies of all Approvals required for use of the land subject to the Works.

- (b) The Developer must as soon as practicable, and no later than 20 Business Days after the date on which the Certificate of Practical Completion is issued in respect of the Works or any part of the Works, provide the Council with a tour of the land subject to the Works and provide reasonable instructions on the operation and use of the Services on that land.

#### 8.3 Assignment of Warranties and Causes of Action

- (a) The Developer must assign (as beneficial owner) or cause to be assigned to Council the benefit of any warranties and guarantees obtained by the Developer and the Builder (and capable of assignment) with respect to any material or goods incorporated in or forming part of the Works.
- (b) To the extent that any such warranties or guarantees cannot be assigned, the Developer must at the request of Council do anything reasonably required by Council to enforce such warranties or guarantees for the benefit of Council.

#### 8.4 Defects Liability Period

- (a) During the Defects Liability Period, the Council (acting reasonably) may give to the Developer a notice (**Rectification Notice**) in writing that identifies a defect in the Works and specifies:
  - (i) action required to be undertaken by the Developer to rectify that defect (**Rectification Works**); and
  - (ii) the date on which the defect must be rectified (**Rectification Date**).
- (b) The Developer must comply with the Rectification Notice by:
  - (i) procuring the performance of the Rectification Works by the Rectification Date, or such other date as agreed between the parties;
  - (ii) keeping the Council reasonably informed of the action to be taken to rectify the defect; and
  - (iii) carrying out the Rectification Works.
- (c) The Council must give the Developer and its contractors any access required to carry out the Rectification Works.
- (d) When the Developer considers that the Rectification Works are complete, either the Developer must notify the Council and provide documentation, plans or invoices which establish that the Rectification Works were carried out.
- (e) The Council may inspect the Rectification Works within 15 Business Days of receiving a Notice from the Developer under clause 8.4(d) of this Schedule 2 and, acting reasonably:
  - (i) issue a further Rectification Notice if it is not reasonably satisfied that the Rectification Works are complete; or
  - (ii) notify the Developer in writing that it is satisfied the Rectification Works are complete.
- (f) The Developer must meet all costs of and incidental to rectification of defects under this clause 8.4.
- (g) If the Developer fail to comply with a Rectification Notice, then the Council may do such things or take such action as is necessary to carry out the Rectification

Works, including accessing and occupying any part of the Land without further notice to the Developer, and may:

- (i) call upon the Bank Guarantee provided to the Council under clause **Error! Reference source not found.** of this Schedule 2 to meet its costs of carrying out Rectification Works; and
  - (ii) recover as a debt due to the Council by the Developer in a court of competent jurisdiction, any difference between the amount of the security deposit and the costs incurred by the Council in carrying out Rectification Works.
- (h) The Developer must request that Council inspect the Works 28 days prior to the end of the Defects Liability Period. The Council must inspect the Works at any time after receiving the request from the Developer and before to the end of the Defects Liability Period.
- (i) If, prior to the end of the Defects Liability Period:
- (i) the Developer fails to request the inspection, or
  - (ii) the Council does not carry out the inspection,
- the Council may extend the Defects Liability Period so that the inspection may be carried out.
- (j) During the Defects Liability Period, the Developer is not obliged to reinstate any Works where damage or destruction is as a result of:
- (i) any act or omission of the Council or its employees, consultants or agents relating to any part of the Works under this agreement; or
  - (ii) the use or occupation by the Council or its employees, consultants or agents, Council's representatives or other contractor of the Council of any part of the Works; or
  - (iii) malicious damage and graffiti to any part of the Works by persons not associated with the Developer, Builder or Superintendent

#### 8.5 Guarantor

Clause 11.2 of this agreement shall apply during the Defects Liability Period.

#### 9 Risk

The Developer undertakes the Works entirely at its own risk.

#### 10 Insurance

- (a) Prior to the commencement of the construction of any of the Works, the Developer must ensure the Builder effects and the Developer must produce evidence to the Council of the following insurances issued by an insurer approved by the Council (acting reasonably) in a form approved by the Council (acting reasonably):
- (i) construction works insurance for the value of the Works;
  - (ii) public risk insurance for at least \$20 million;
  - (iii) workers compensation insurance as required by Law.

- (b) The Developer must provide evidence of currency of insurance required by clause 10(a) of this Schedule 2 upon request by the Council, acting reasonably, throughout the term of this agreement.

**11 Indemnities**

The Developer indemnifies the Council, its employees, officers, agents and contractors from and against all Claims in connection with the carrying out by the Developer of the Works except to the extent such Claim arises either directly or indirectly as a result of the Council or its employees, officers, agents, contractors or workmen's negligence, default, act or omission.

**12 Intellectual Property Rights**

The Council acknowledges that the Developer or its contractors hold all rights to copyright and any intellectual property which may exist in the Works. To the extent the Developer has or receives intellectual property rights for the Works, the Developer shall assign those intellectual property rights to Council or permit use thereof.

**13 Plans**

The parties acknowledge and agree that further detail and refinement of plans and documents in connection with this agreement may be necessary having regard to the following matters:

- (a) matters affecting Works not capable of identification on or before the date of this agreement; or
- (b) by agreement between the parties.

## Schedule 3 Summary of requirements (section 7.4)

Subject and subsection of the Act	Planning Agreement
<b>Planning instrument and/or Development Application – Section 7.4(1)</b>  The Developer has: <ul style="list-style-type: none"> <li>(a) Sought a change to an environmental planning instrument <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</li> <li>(b) Made, or propose to make a Development Application <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</li> <li>(c) Entered into an agreement with, or are otherwise associated with, a person to whom paragraph (a) or (b) applies <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</li> </ul>	
<b>Description of the land to which the planning Agreement applies – Section 7.4(3)(a)</b>	See the definition of Land in clause 1
<b>Description of the application – Section 7.4(3)(b)</b>	Proposed amendment to the <i>Parramatta (former The Hills) Local Environmental Plan 2012 (Instrument)</i> to insert an additional clause into Schedule 1 to the Instrument to enable development for the additional purposes of the shops, food and drink premises, business premises and recreation facilities (indoor), up to a maximum of 2,000 square metres in aggregate total Gross Floor Area (as defined in the Instrument), to be carried out with development consent on the above Land.
<b>The scope, timing and manner of delivery of contribution required by the Planning Agreement – Section 7.4(3)(c)</b>	See Clause 6
<b>Applicability of section 7.11 of the Act – Section 7.4(3)(d)</b>	See Clause 7
<b>Applicability of section 7.12 of the Act – Section 7.4(3)(d)</b>	See Clause 7
<b>Applicability of section 7.24 of the Act – Section 7.4(3)(d)</b>	See Clause 7
<b>Mechanism for dispute resolution – Section 7.4(3)(f)</b>	See Clause 10



<b>Enforcement of the Planning Agreement –</b> Section 7.4(3)(g)	See Clause 11
<b>Registration of the Planning Agreement –</b> Section 7.6	See Clause 8
<b>No obligation to grant consent or exercise functions –</b> Section 7.4(9)	See Clause 14 (no fetter)

## Executed as an agreement

Signed on behalf of **City of Parramatta Council** (ABN 49 907 174 773) by its authorised delegate pursuant to section 377 of the *Local Government Act 1993* in the presence of:

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Signature of witness

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Signature of authorised delegate

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Name of witness

---

Name of authorised delegate

---

Address of witness

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Position of authorised delegate

Signed on behalf of **Karimbla Properties  
(No. 61) Pty Ltd ACN 622 383 733** in  
accordance with section 127(1) of the  
Corporations Act (Cth) 2001 by:

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Signature of Authorised Officer

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Signature of Authorised Officer

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Name of Authorised Officer

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Name of Authorised Officer

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Position of Authorised Officer

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Position of Authorised Officer

Signed on behalf of **Meriton Properties  
Pty Ltd ACN 000 698 626** in accordance  
with section 127(1) of the Corporations Act  
(Cth) 2001 by:

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Signature of Authorised Officer

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Signature of Authorised Officer

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Name of Authorised Officer

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Name of Authorised Officer

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Position of Authorised Officer

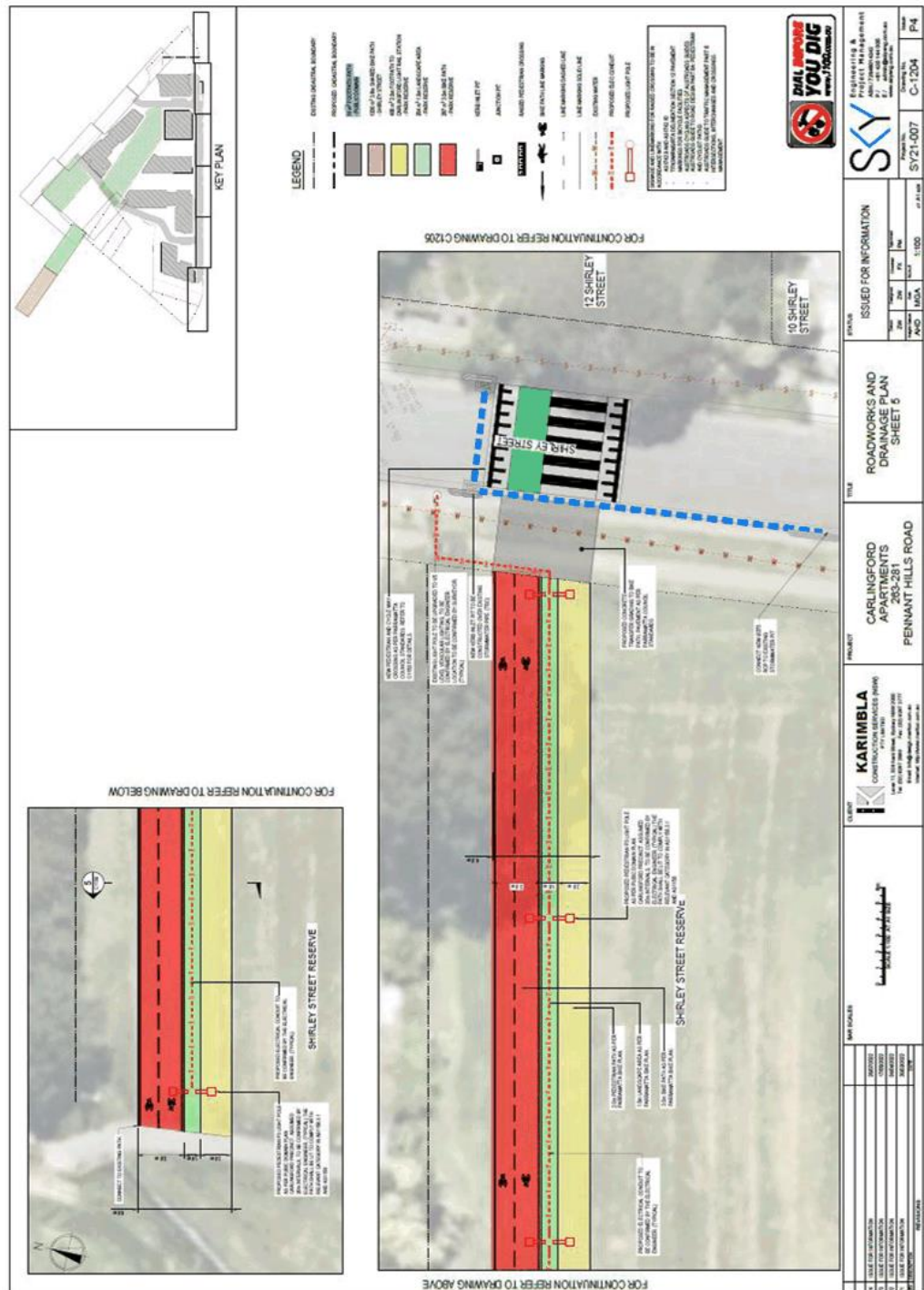
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Position of Authorised Officer

## Annexure A Plan showing Land and Location of Works



## Annexure B Plans showing Works



**DETERMINATION**

(a) **That**, the Parramatta Local Planning Panel support the variation to Clause 4.3 of *Hornsby Local Environmental Plan 2013* under the provisions of Clause 4.6 for the following reasons:

1. That compliance with the development standard for height is considered unnecessary given the unique context and scale of the site and natural constraints present and,
2. The proposed non-compliance will result in negligible visual impact to adjoining properties and the streetscape and,
3. The non-compliance is minor and restricted to a small area of the roof.

(b) Parramatta Local Planning Panel, exercising the function of the consent authority, **approves** development consent to DA/127/2022 for the alteration and additions to the existing dwelling on land at 30 Stanley Road, Epping, subject to the conditions of consent in **Attachment 1**, of the Council planning report.

1. The development is permissible in the R2 Low Density Residential zone pursuant to the Hornsby Local Environmental plan 2013 and substantially satisfies the requirements of all applicable planning standards and controls.
2. The development is compatible with the existing and emerging and planned future character of the area.
3. For the reasons given above, the site is suitable for the proposed development, and approval of the application is in the public interest.

(c) **Further, that** submitters be advised of the Panel's decision.

The Panel decision was UNANIMOUS.

**REPORTS - PLANNING PROPOSALS**

6.1       SUBJECT       Post Exhibition: Planning Proposal and Draft Planning Agreement for 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford.

REFERENCE   RZ/4/2021 – D08734127

APPLICANT/S   Karimbla Construction Services (NSW) Pty Ltd

OWNERS       Karimbla Properties (No. 61) Pty Ltd

REPORT OF    Project Officer Land Use

The Panel considered the matter listed at Item 6.1 and attachments to Item 6.1.

#### PUBLIC FORUM

1. Matthew Lennartz from Meriton spoke in favour of the report recommendation to approve and answered questions from the Panel in relation to the development application.

#### DETERMINATION

The Local Planning Panel supports the following Council Officer recommendation in its advice to Council with minor additional advice:

- (a) **That** Council receive and note the submissions (summarised in this report) made during the public exhibition of the Planning Proposal and draft Planning Agreement for 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford.
- (b) **That** Council approve the Planning Proposal (**Attachment 1**) for land at 263 - 273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford for finalisation that seeks to amend the Parramatta (former The Hills) Local Environmental Plan 2012 as follows:
  - i. Amend Schedule 1 to permit 'shops' and 'food and drink premises', 'business premises' and 'recreational facility (indoor)' up to a combined total GFA of 2,000sqm on the R4 High Density Residential zoned part of the site.
  - ii. Addition of the R4 High Density Residential zoned part of the site to the Additional Permitted Uses Map to facilitate retail floor space, neighbourhood supermarket along with specialty retail, business, and recreational uses.
- (c) **That** Council approve the Planning Agreement at **Attachment 2** and the Chief Executive Officer be delegated authority to sign and execute the Planning Agreement on behalf of Council which will deliver:
  - i. A shared walking/cycling pathway through Council owned Shirley Street Reserve which forms part of the connection to the Carlingford Light Rail stop,
  - ii. A raised pedestrian crossing accommodating both cyclists and pedestrians on Shirley Street and, in addition,
  - iii. In addition, the above items i and ii be delivered prior to the occupation of any of the dwellings on the site.
- (d) **That** Council delegate authority to the Chief Executive Officer to exercise the plan making delegations as granted by the Gateway Determination for this Planning Proposal.



- (e) **Further, that** Council delegate authority to the Chief Executive Officer to make any minor amendments and corrections of a non-policy and administrative nature that may arise during the plan amendment process relating to the Planning Proposal and finalisation of the Planning Agreement.

The Panel decision was UNANIMOUS.

**Note:**

1. **As previously noted, Mary-Lynne Taylor, declared a conflict of interest in Item 5.1 –1 Windsor Road, North Rocks, NSW, 2151. She retired from the meeting prior to discussion and voting on the matter.**
2. **Deb Sutherland assumed the role of temporary Chairperson.**

5.1        SUBJECT        OUTSIDE PUBLIC MEETING: 1 Windsor Road, NORTH ROCKS, NSW, 2151 (Lot 61 DP 1264730)

DESCRIPTION Construction of a commercial retail development comprising of a Woolworths supermarket, BWS liquor store, Direct to Boot distribution centre, gymnasium, and three (3) retail premises and associated car parking, landscaping, and business identification signage. The building is identified as a local heritage item A23 pursuant to THLEP 2012. The proposal is Integrated Development under Water Management Act 2000.

REFERENCE    DA/318/2022 - D08693308

APPLICANT/S    Fabcot Pty Ltd

OWNERS        J L Dunrose Pty Ltd; Newtown Dyers & Bleachers

REPORT OF     Group Manager Development and Traffic Services

The Panel considered the matter listed at Item 5.1 and attachments to Item 5.1.

**PUBLIC FORUM**

1. Sophie Perry from Planning Ingenuity answered questions from the Panel in relation to the development application.
2. Nathan Dundovic from Woolworths answered questions from the Panel in relation to the development application.
3. Gregory Malempre from LocationIQ was available to answer questions raised by the Panel.
4. David Puleo from Nettletontribe Architects was available to answer questions raised by the Panel.

**DETERMINATION**



Local Planning Panel 20 December 2022

Item 6.1

## PLANNING PROPOSAL

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<b>ITEM NUMBER</b>	6.1
<b>SUBJECT</b>	Post Exhibition: Planning Proposal and Draft Planning Agreement for 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford.
<b>REFERENCE</b>	RZ/4/2021 -
<b>APPLICANT/S</b>	Karimbla Construction Services (NSW) Pty Ltd
<b>OWNERS</b>	Karimbla Properties (No. 61) Pty Ltd
<b>REPORT OF</b>	Project Officer Land Use

## DEVELOPMENT APPLICATIONS CONSIDERED BY SYDNEY CENTRAL CITY PLANNING PANEL

Deferred Commencement Development Consent No.1103/2011/JP issued by the Joint Regional Planning Panel for demolition of existing structures and associated construction of five apartment buildings 9-11 storeys containing 450 units and basement parking for 662 cars (active consent granted 21 July 2015).

Development Application 53/2022 for construction of seven 10-13 storey buildings comprising 620 residential units, child care centre for 110 children, 1,735sqm of 17 neighbourhood retail shops and 864 basement car parking spaces; publicly accessible open spaces and through site links; roads; landscaping; and tree removal. The application was refused at 1 December 2022 Sydney Central City Planning Panel considered the report.

## PURPOSE

To seek the Local Planning Panel's advice to Council on the outcome of the public exhibition of the Planning Proposal and draft Planning Agreement for land at 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford.

## RECOMMENDATION

That the Local Planning Panel support the following Council Officer recommendation in its advice to Council:

- (a) **That** Council receive and note the submissions (summarised in this report) made during the public exhibition of the Planning Proposal and draft Planning Agreement for 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford.
- (b) **That** Council approve the Planning Proposal (**Attachment 1**) for land at 263 - 273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford for finalisation that seeks to amend the Parramatta (former The Hills) Local Environmental Plan 2012 as follows:
  - i. Amend Schedule 1 to permit 'shops' and 'food and drink premises', 'business premises' and 'recreational facility (indoor)' up to a combined total GFA of 2,000sqm on the R4 High Density Residential zoned part of the site.

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- ii. Addition of the R4 High Density Residential zoned part of the site to the Additional Permitted Uses Map to facilitate retail floor space, neighbourhood supermarket along with specialty retail, business, and recreational uses.
- (c) **That** Council approve the Planning Agreement at **Attachment 2** and the Chief Executive Officer be delegated authority to sign and execute the Planning Agreement on behalf of Council which will deliver:
  - i. A shared walking/cycling pathway through Council owned Shirley Street Reserve which forms part of the connection to the Carlingford Light Rail stop; and
  - ii. A raised pedestrian crossing accommodating both cyclists and pedestrians on Shirley Street.
- (d) **That** Council delegate authority to the Chief Executive Officer to exercise the plan making delegations as granted by the Gateway Determination for this Planning Proposal.
- (e) **Further, that** Council delegate authority to the Chief Executive Officer to make any minor amendments and corrections of a non-policy and administrative nature that may arise during the plan amendment process relating to the Planning Proposal and finalisation of the Planning Agreement.

## SUMMARY

1. This report seeks the advice of the Local Planning Panel (LPP) on the outcomes of the public exhibition of a Planning Proposal and draft Planning Agreement for 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford for Council consideration.
2. The Planning Proposal seeks to amend the Parramatta (formerly The Hills) Local Environmental Plan (LEP) 2012 to amend Schedule 1 and amend the Additional Permitted Uses Map to facilitate shops, food and drink premises, business premises and recreational facility (indoor) on the R4 High Density Residential part of site.
3. The Planning Proposal, draft DCP and Planning Agreement were placed on public exhibition from 12 October 2022 to 9 November 2022, with four (4) submissions received comprising of three (3) from the community and one (1) agency submission from Transport for NSW (TfNSW). A summary of the key issues raised in the submissions is provided in this report. Overall, one (1) of the resident submissions supported the proposal, one (1) partially supported the proposal and one (1) objected to the proposal. The agency submission from TfNSW neither stated objection or support.

## BACKGROUND

4. In 2007 the then Baulkham Hills Shire Council (now The Hills Shire Council) rezoned the Carlingford Precinct to facilitate further growth in the Carlingford Precinct. The subject site (**Figures 1 & 2**) is located within the Carlingford Precinct.

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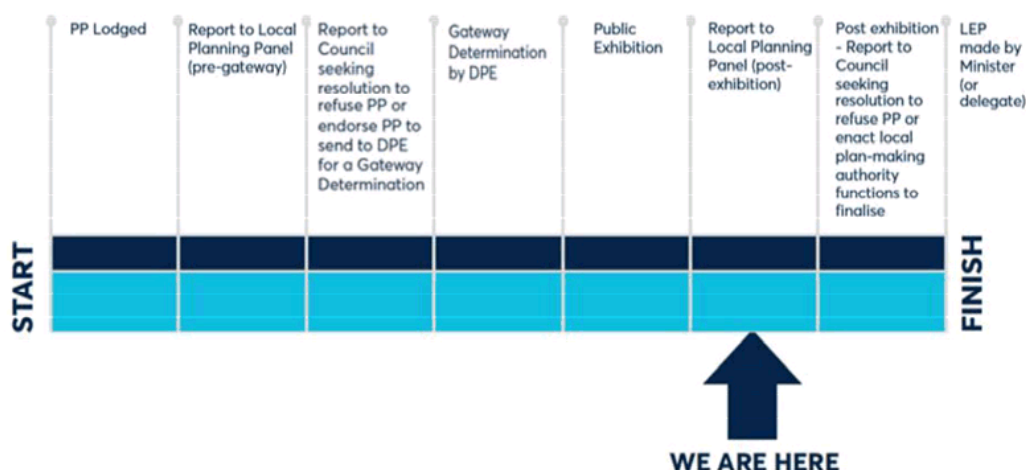
5. The Joint Regional Planning Panel granted development approval (DA1103/2011/JP) in April 2012 for the construction of five apartment buildings (9-11 storeys) containing 450 units and 662 basement parking spaces at 18 Shirley Street, Carlingford which is part of the planning proposal subject site. The application was subsequently activated by demolition and other early site works. Subsequent to this approval, a further six properties at 263-273 Pennant Hills Road were acquired by Karimbla Properties (No. 61) Pty Ltd.
6. Part of the subject site (18 Shirley Street and 279R Pennant Hills Road) was previously owned by Dyldam and was purchased in December 2020 by Karimbla Properties (No. 61) Pty Ltd (part of the Meriton Group). It is noted that the site is already subject to a Planning Agreement relating to the dedication of land zoned RE1 Public Recreation to Council. This is further detailed in the Planning Agreement section of this report.
7. On 22 November 2021, the applicant, Karimbla Construction Services (NSW) Pty Ltd, on behalf of the landowner, Karimbla Properties (No. 61) Pty Ltd, lodged a Planning Proposal with the City of Parramatta Council for land at 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford. The objective of the subject Planning Proposal is to facilitate additional permitted uses of up to 2,000sqm of 'shops' and 'food and drink premises' along with 'business premises' and 'recreational facility (indoor)' on the R4 High Density Residential part of the site.
8. In December 2021 the applicant lodged a development application (DA/53/2022) for the construction of six buildings up to 12 storeys in height, containing 629 residential apartments, a childcare facility and neighbourhood shops on the larger set of properties acquired by the current owner. It is noted that the additional land uses sought under the subject Planning Proposal are not included within the current development application. The development application was considered by the Sydney Central City Planning Panel on 1 December 2022. The decision of the Panel was to refuse the application.
9. On 17 May 2022, the Local Planning Panel provided advice to Council recommending it endorse this Planning Proposal for the purpose of requesting a Gateway Determination to amend Schedule 1 and amend the Additional Permitted Uses Map to facilitate shops, food and drink premises, business premises and recreational facility (indoor) on the site up to 2,000sqm on the R4 High Density Residential Part of the site.
10. At its meeting on 14 June 2022, Council resolved to endorse the Planning Proposal for the purpose of requesting a Gateway Determination and to amend Schedule 1 and amend the Additional Permitted Uses Map consistent with the recommendation of the Local Planning Panel. Council also resolved to prepare a draft Planning Agreement to be exhibited with the Planning Proposal. A more detailed summary of the Planning Proposal is provided later in this report.
11. On 29 July 2022, the Department of Planning and Environment issued a Gateway determination (**Attachment 5**) with an expiry date of 31 May 2023 which allowed the Planning Proposal to proceed to public exhibition.

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12. The Planning Proposal and draft Planning Agreement were publicly exhibited from 12 October 2022 to 9 November 2022. This report addresses the outcomes of that exhibition and makes recommendations for progressing the matter.

### PLANNING PROPOSAL TIMELINE



### SITE DESCRIPTION

13. The subject site is known as at 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford and comprises of 8 lots which are legally described as follows in Table 1:

**Table 1** – Property address, Lots and DPs

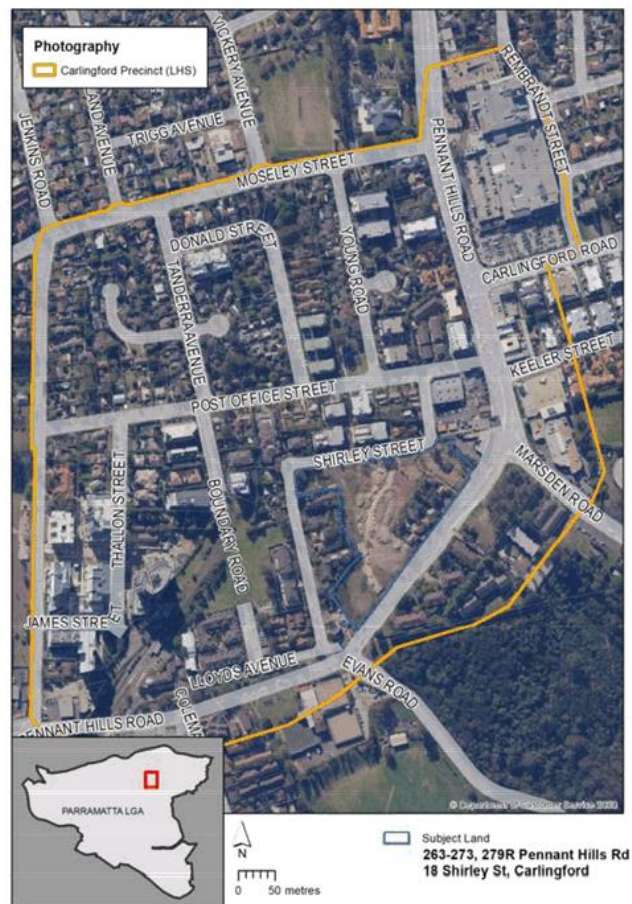
Property Address	Lot & DP
263 Pennant Hills Road	Lot 22, DP 21386
265 Pennant Hills Road	Lot 2, DP 9614
267 Pennant Hills Road	Lot 3, DP 9614
269 Pennant Hills Road	Lot 4, DP 9614
271 Pennant Hills Road	Lot 62, DP 819136
273 Pennant Hills Road	Lot 61, DP 819163
279R Pennant Hills Road	Lot 1, DP 531044
18 Shirley Street	Lot 1, DP 1219291

14. The site has a total area of approximately 27,985sqm (**Figure 2**).
15. The site is located on the eastern side of Pennant Hills Road (classified road) and the northern and western sides of Shirley Street (local road). The site is predominately undeveloped and cleared of vegetation however there are five detached two-storey dwellings fronting Pennant Hills Road.
16. A pedestrian pathway runs along Pennant Hills Road, with connections into Lloyds Avenue to the south and Carlingford Town Centre to the north. The site is located approximately 400 metres east from of the Carlingford Light Rail stop (under construction).



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**Figure 1 – Location of subject site within the Carlingford Precinct**



**Figure 2 – Subject Site in proximity to light rail stop**

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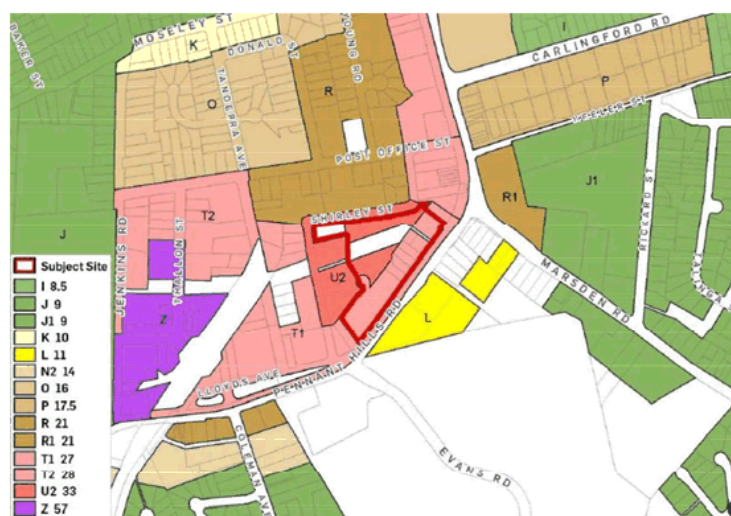
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**CURRENT PLANNING CONTROLS**

17. The subject site is zoned part R4 High Density Residential, part RE1 Public Recreation and Part SP2 Infrastructure under the provisions of the Parramatta (former The Hills) Local Environmental Plan as shown in **Figure 3**. This Planning Proposal only amends the controls for the land zoned R4 High Density Residential. The current zoning is to be maintained.

**Figure 3 – Current Zoning**

18. The site currently has a height limit of 27 metres (6 storeys) fronting Pennant Hills Road and 33 metres (9 storeys) fronting Shirley Street under the Height of Buildings (HOB) map (refer to **Figure 4**). The current height is to be maintained.

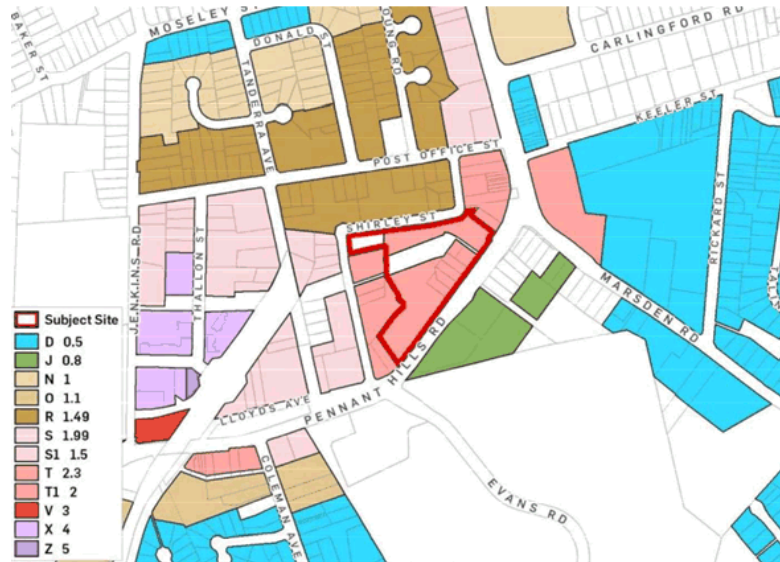
**Figure 4 – Current Height of Buildings**



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19. The site currently has a floor space ratio of 2.3:1 under the Floor Space Ratio (FSR) map (refer to **Figure 5**). The RE1 Public Recreation zoned land has no nominated FSR. The current floor space ratio is to be maintained.



**Figure 5 – Current Floor Space Ratio**

20. The site is not currently on the Additional Permitted Uses Map (refer to **Figure 6**).



**Figure 6 – Existing Additional Permitted Uses Map**

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**PLANNING PROPOSAL**

21. The objective of this Planning Proposal is to facilitate the permissibility of 'shops' and 'food and drink premises' along with 'business premises' and 'recreational facility (indoor)' up to a combined total GFA of 2,000sqm on the R4 High Density Zoned areas of the site.
22. Specifically, the Planning Proposal seeks to amend the Parramatta (former The Hills) Local Environmental Plan 2012 as follows:
  - a. Amend Schedule 1 to permit 'shops' and 'food and drink premises', 'business premises' and 'recreational facility (indoor)' up to a combined total GFA of 2,000sqm on the R4 High Density Residential zoned part of the site.
  - b. Addition of the R4 High Density Residential zoned part of the site to the Additional Permitted Uses Map to facilitate retail floor space, neighbourhood supermarket along with specialty retail, business, and recreational uses.
23. A copy of the Planning Proposal is included at **Attachment 1**.
24. The site is zoned R4 High Density Residential which allows a range of non-residential (and commercial) uses including childcare and minor neighbourhood shops, but not land uses which the Planning Proposal intends to permit. Table 2 outlines the current non-residential uses permitted within the R4 High Density Residential zone under the Parramatta (former The Hills) LEP 2012 on the site and what is sought under the Planning Proposal.

**Table 2 – Current and Proposed Permitted Non-Residential Land Uses on the subject site**

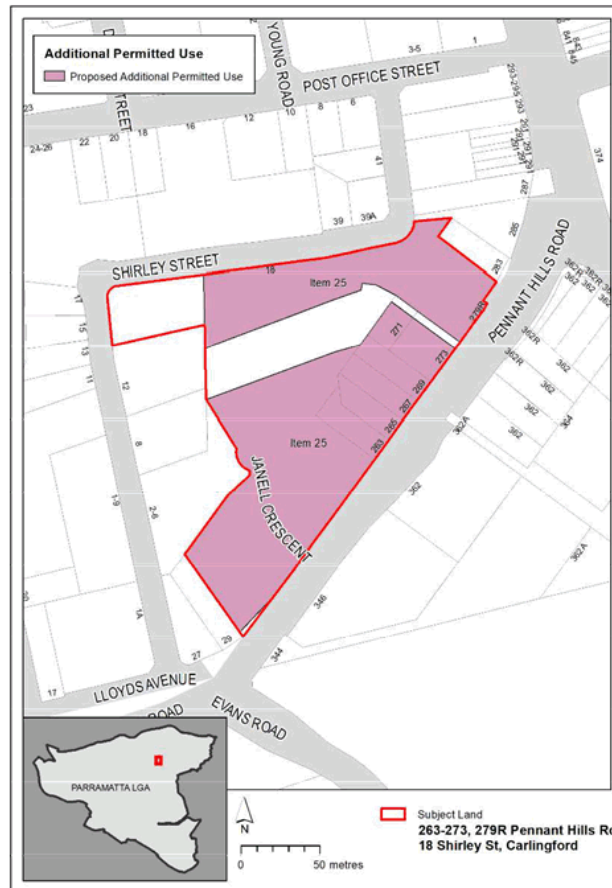
<b>Currently permitted non-residential land uses within the R4 High Density Residential zone</b>	<b>Proposed additional permitted non-residential uses for the subject site under Planning Proposal</b>
<p>The Parramatta (former The Hills) LEP 2012 currently permits (with development consent) centre-based and home-based child care facilities; community facilities; neighbourhood shops; places of public worship.</p> <p>Specifically, 'neighbourhood shops' are defined under the Parramatta (former The Hills) LEP 2012 as "premises used for the purposes of selling general merchandise such as foodstuffs, personal care products, newspapers and the like to provide for the day-to-day needs of people who live or work in the local area, but does not include</p>	<p>Shops (smaller metro style supermarket), food and drink premises, business premises and recreational facility (indoor) up to a maximum combined gross floor area of 2,000sqm on the site.</p> <p>The Parramatta (former The Hills) LEP 2012 defines that "<i>Shops</i>" are <i>premises that sell merchandise such as groceries, personal care products, clothing, music, homewares, stationery, electrical goods or the like or that hire any such merchandise and includes a neighbourhood shop and neighbourhood supermarket.</i></p>



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neighbourhood supermarkets or restricted premises." Under Clause 5.4 (7) of the LEP, the retail floor area of neighbourhood shops must not exceed 100 square metres.



**Figure 7 - Proposed amendment to the Additional Permitted Use Map**

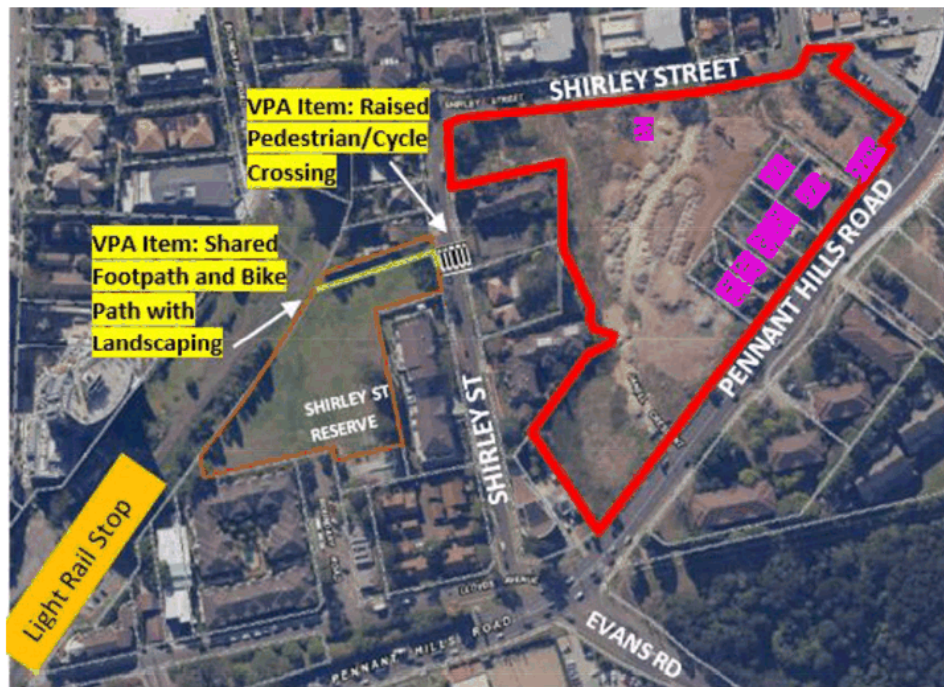
### PLANNING AGREEMENT

25. The Planning Proposal is accompanied by a draft Planning Agreement (**Attachment 2**) which proposes to deliver the following public benefits:
  - i. A shared walking/cycling pathway through Council owned Shirley Street Reserve which forms part of the connection to the Carlingford Light Rail stop; and
  - ii. A raised pedestrian crossing on Shirley Street accommodating cyclists and pedestrians.
26. It is noted that the Department of Planning and Environment (DPE) Planning Agreements Practice Note (February 2021) seeks to move away from value capture (as referred to in Council's Planning Agreements Policy 2018) towards an infrastructure needs approach to negotiating planning agreements.

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27. The purpose of the draft Planning Agreement is to provide for local infrastructure works required to be delivered as a result of the proposed redevelopment of the site and therefore is consistent with the objectives of the Practice Note.
28. The draft Planning Agreement offers a pedestrian link from the subject site to deliver a part of the planned cycle/pedestrian network on public land adjacent to the site which will improve connectivity and access to the Parramatta Light Rail for the wider Carlingford precinct and surrounding neighbourhood, and a pedestrian crossing on Shirley Street (see **Figure 8**).



**Figure 8 – Subject Site and Planning Agreement Items**

29. The draft Planning Agreement has been identified as an appropriate mechanism to ensure the increase in demand for infrastructure due to the Planning Proposal is satisfactorily addressed. The additional land uses sought by the Planning Proposal will increase the land value as they will allow for a supermarket facilitating higher rental value for the site (within a residential zone) and further ongoing revenue as it will bring more pedestrian traffic to the site. The shared path and crossing from the site to the light rail noted in the draft Planning Agreement relate to the provision of community infrastructure that will directly benefit and service future development at the site given the likely increase in demand for services and infrastructure arising from the Planning Proposal.
30. It is noted that the site is already subject to an existing Planning Agreement. That Planning Agreement was entered into in April 2015 between The Hills Shire Council and the then owners. The land subject to the Planning Agreement originally comprised of various lots previously known as 14-30 Shirley Street and 2-10 Janell Crescent, Carlingford, which have since been

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consolidated as 18 Shirley Street, Carlingford. In summary, this Planning Agreement provided for the following to be provided to The Hills Shire Council:

- Dedication of land for public open space.
  - Works in kind (including embellishment of public open space) – estimated value \$742,108.
  - Monetary contribution (to be spent in Carlingford Precinct) – estimated value \$920,984 (subject to CPI increases).
31. The Planning Agreement was transferred from The Hills Shire Council to City of Parramatta Council on 12 May 2016, when the land subject to this Planning Agreement moved into the City of Parramatta local government area.
32. On 7 December 2020, Dylam (and its subsidiaries) exchanged contracts for sale with Karimbla Properties (No. 61) Pty Limited (a subsidiary of Meriton Group). The Deed of Novation included a contractual obligation that the purchaser must re-execute the Planning Agreement with Council. This was undertaken in 2021 once settlement of the land transfer had occurred. The land, works and monetary contribution subject to the existing planning agreement have not yet been delivered but will be required as part of approved development application.

#### **SITE SPECIFIC DEVELOPMENT CONTROL PLAN**

33. It is noted that the Planning Proposal is only seeking to include additional permitted uses within Schedule 1 of the Parramatta (former The Hills) Local Environmental Plan 2012. It is therefore not necessary to include a site-specific DCP to support the proposal in this instance. The existing provisions within The Hills Shire DCP 2012 are considered sufficient to manage the assessment of any development application on the site should the proposal proceed.

#### **PUBLIC EXHIBITION AND CONSULTATION**

34. The Planning Proposal, draft Planning Agreement and supporting documentation were publicly exhibited for 28 days from 12 October 2022 to 9 November 2022 as required by the Gateway Determination. Notification methods used in the exhibition included:
- Letters to surrounding landowners, including letters translated to Simplified Chinese.
  - Dedicated exhibition page on Council's Participate Parramatta website.
  - Advertisement on Council's website.
  - Advertisement in the Parra News.
  - Exhibition folders in Council's customer service centre and Carlingford Library.

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35. Public agencies were also notified in writing of the public exhibition in accordance with the Gateway determination, with the following agencies consulted:
- Transport for NSW
  - Transport for NSW (Parramatta Light Rail team).
36. A total of four (4) submissions were received comprising three (3) from the community, with the remaining one (1) agency submission from Transport for NSW (breakdown provided in **Table 3**). Overall, one submission supported the proposal and the draft Planning Agreement in full, one objected in full, and one partially supported the Proposal. The agency submission from TfNSW neither stated objection or support.

**Table 3 - Breakdown of submissions received**

	Number	Breakdown
Community/landowners	3	various landowners
Public Agencies	1	Transport for NSW
Total	4	

**COUNCIL OFFICER RESPONSE TO KEY ISSUES RAISED IN SUBMISSIONS**

37. Table 4 summarises the key issues raised in the community submissions including a Council officer's response.

**Table 4 - Summary of issues raised by the community during public exhibition period**

Submission Number	Submission Summary	Council Officer Response
1	<p><b>Object</b></p> <ul style="list-style-type: none"> <li>• Submitter considers that the addition of a supermarket is not needed.</li> <li>• Submitter considers that the supermarket will generate additional traffic.</li> </ul>	<p>The proposed supermarket will assist in addressing the substantial undersupply of supermarket floorspace within the Carlingford area. The Retail Impact Assessment (<b>Attachment 3</b>) notes there is sufficient supermarket floorspace demand over the short to long term to justify the proposed development on the subject site</p> <p>As a result of the proposal, the expected additional trips on the main road network would be limited to around 47 to 113 vehicles per hour (vph) during the weekday AM peak period and around 92 to 152 vph in the PM peak periods, which is equivalent to one to three additional vehicles per minute, which is considered minor in the surrounding context.</p>

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		<p>The traffic and parking assessment (<b>Attachment 4</b>) notes if there is no retail component within this precinct, then trips to retail developments beyond the site by the approved residential component would generate external trips to the road network to access other local retail centers.</p> <p>The site would accommodate a small neighbourhood supermarket which will provide limited day to day items and groceries so it will not necessarily require or encourage access by cars unlike larger format supermarkets.</p>
2	<p><b>Support</b></p> <ul style="list-style-type: none"> <li>• The submitter queries if the traffic assessment includes delivery vehicle trips and that delivery vehicles would require different roadway specifications to passenger vehicles.</li> <li>• The submitter notes the proposal provides good local access to food supplies.</li> </ul>	<p>The traffic and parking assessment does not specifically note delivery vehicle trips however given the limited nature of the retail component they would be less than passenger vehicle trips which are considered to be minor in the surrounding context and are deemed acceptable by Council Officers.</p> <p>Roadway specifications for both passenger and delivery vehicles will be assessed in detail at development application stage.</p> <p>Noted.</p>
3	<ul style="list-style-type: none"> <li>• The submitter noted that infrastructure in Carlingford is over stretched with road issues and there are existing potholes.</li> </ul>	<p>Additional infrastructure is being provided within the proposed planning agreement which will facilitate a raised pedestrian/cycle crossing over Shirley Street and a shared pedestrian/cycle path through Shirley Street Reserve.</p> <p>Rectification works to potholes cannot be delivered as a part</p>

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	<ul style="list-style-type: none"> <li>The submitter considers the above issues need rectifying before adding additional density to the site.</li> </ul>	<p>of this Planning Proposal. Council's customer service centre can be contacted to report potholes or other damage to the local road network.</p> <p>The Planning Proposal only introduces additional permitted uses of shops, food and drink premises, business premises and recreational facility (indoor) to the site. The proposal will not facilitate any residential development and will not result in an increase in residential density on the site.</p>
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## AGENCY SUBMISSIONS

### Transport for NSW

38. The planning proposal was referred to TfNSW for comment. TfNSW do not object to the Planning Proposal but raise matters for consideration.
39. **Table 5** below summarises the key issues including a Council officer's response.

**Table 5** - Summary of Issues raised by TfNSW during public exhibition period

Consultation Issues	Council Officer Response
The subject site is partly over land owned by Transport for NSW (Road), being Lot 1 DP531044. This land is yet to be dedicated as public road. Should landowners' consent be required for any future proposed works over TfNSW owned land, the proponent would be required to contact the Regional Land Information & Corridors.	Noted. This matter will be considered as part of any future development application on the site and TfNSW and Regional Land Information & Corridors will be consulted.
The subject site is also affected by a road proposal.	Noted. This matter will be considered as part of any future development application on the site and TfNSW will be consulted.
A sizable portion of traffic generated by the proposal will utilise the Pennant Hills Road / Evans Road / Shirley Street / Lloyds Avenue intersection in the future, thus adding additional delay to vehicles safely turning onto Pennant Hills Road.	Council officers agree that the piece of land noted by TfNSW ( <b>Figure 9</b> ) will be required for a future road upgrade. The land is currently zoned SP2 Infrastructure and identified for acquisition by TfNSW. The issue has been discussed with the Applicant which opposes the inclusion of the clause proposed by TfNSW. Council
TfNSW currently does not have any committed / funded upgrades at this	



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<p>intersection, it is likely that any potential future upgrade of this intersection will require the land identified in pink (<b>Figure 9</b>). As a minimum (to facilitate any possible upgrade of this intersection in the future) the proponent should dedicate the land identified in pink (located within Lot 1 DP1219291) as road at no cost to TfNSW.</p> <p>To address the comments above, TfNSW requires the use of the Department of Planning and Environment's (DPE) Secretary's Concurrence Clause to ensure that this will occur at the subsequent Development Application stage. Therefore, this shall require a new clause within <i>Parramatta (former The Hills) Local Environmental Plan 2012</i> under <i>Part 7 – Additional Local Provisions</i> which would be applicable to 263-273 &amp; 279R Pennant Hills Road and 18 Shirley Street, Carlingford, which would state the following:</p> <ol style="list-style-type: none"> <li>1. <i>This clause applies to (insert land description here – address / lot and DP).</i></li> <li>2. <i>Development consent must not be granted to development on land to which this clause applies unless the consent authority has obtained the concurrence of the Planning Secretary.</i></li> <li>3. <i>In deciding whether to grant concurrence, the Planning Secretary must consider the potential effects of the development on existing and proposed transport infrastructure in the locality.</i></li> <li>4. <i>The Planning Secretary must notify the consent authority of the Planning Secretary's decision within 21 days of receiving the request for concurrence.</i></li> </ol>	<p>officers do not consider it necessary to include the additional LEP clause sought to achieve the outcome sought, as a process for the acquisition of the land by TfNSW is already in place. The matter can be dealt with at the development application stage.</p>
<p>Comment on the proposed shared path in Shirley Street reserve being aligned with any future entrance to the proposed supermarket/ground floor retail on Shirley Street.</p>	<p>This will be considered as part of any future development application.</p>
<p>Figure 6 of the Carlingford Precinct DCP shows that the shared path is potentially on the southern end of</p>	<p>The exact location of the shared path will be determined at development</p>



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<p>Shirley Park. However, the draft VPA shows the proposed shared path on the Northern end of the park. can this please be clarified with regards to the location to ensure that the pedestrians have a direct connection</p>	<p>application stage and will be subject to detailed design and assessment.</p>
<p>The concept drawings within the draft VPA do not show the proposed shared path connecting to the shared path that connects Carlingford Light Rail stop to Boundary Road.</p>	<p>Council Officers have approached TfNSW and Greater River City Light Rail (GRCLR) to discuss the connecting link between the proposed share pathway in the draft planning agreement and the Parramatta Light Rail and Active Transport Link (ATL) and are waiting for TfNSW and GRCLR to review the proposal with the aim to meet and discuss further.</p>
<p>The supporting Traffic and Parking Assessment did not conduct any detailed traffic modelling to clearly identify the traffic impacts of the Planning Proposal on surrounding intersections as the report was prepared at the time when covid restrictions were starting to be relaxed. Subject to the approval of this Planning Proposal, the proponent must ensure that appropriate traffic survey collection and detailed traffic modelling (in accordance with TfNSW requirements) is undertaken as part of a future Traffic and Transport Assessment Report supporting the subsequent Development Application on this site.</p>	<p>Noted. Traffic survey collection and detailed traffic modelling (in accordance with TfNSW requirements) will be undertaken as part of a future Traffic and Transport Assessment Report supporting the subsequent Development Application on this site.</p>



**Figure 9** – Pink section of Lot 1 DP 1219291 is land required for future intersection upgrade at noted by TfNSW

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**FINANCIAL IMPLICATIONS FOR COUNCIL**

40. If Council resolves to approve this report in accordance with the recommendation, the draft Planning Agreement is for the following works to be conducted by the developer, with an approximate value of \$431,388.45 (subject to CPI):
- i. A shared walking/cycling pathway through Council owned Shirley Street Reserve which forms part of the connection to the Carlingford Light Rail stop; and
  - ii. A raised pedestrian crossing accommodating both cyclists and pedestrians on Shirley Street.
41. It is noted that land identified as part of the future shared path and the pedestrian crossing is on Council land and will be subject to ongoing maintenance costs. However, it is acknowledged that these items will have a public benefit by facilitating an improved part of the connection to the Carlingford Light Rail stop with the boarder cycle/pedestrian network. Council Officers have approached TfNSW and Greater River City Light Rail (GRCLR) to discuss the connecting link between the proposed share pathway in the planning agreement and the Parramatta Light Rail and Active Transport Link (ATL) and are waiting for TfNSW and GRCLR to review the proposal with the aim to meet and discuss further.
42. It is proposed that the works would be completed prior to an Occupation Certificate being issued for the Additional Permitted Use on the site.
43. The costs associated with the preparation, exhibition and finalisation of the draft Planning Agreement involve internal resources and legal costs. The developer has/will reimburse any legal costs relating to the negotiation and execution of the Planning Agreement, which will then result in nil cost to Council for this item.

**CONCLUSION AND NEXT STEPS**

44. It is recommended that the Local Planning Panel supports the Council officer recommendation for Council to approve for finalisation the exhibited Planning Proposal for 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford and exercise its plan-making delegations as granted by the Gateway Determination. The LEP amendment will then be signed by the CEO before being notified on the NSW Legislation website.
45. It is recommended that the Local Planning Panel supports the Council officer recommendation for Council to execute the draft Planning Agreement for 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford.
46. Following Local Planning Panel consideration of the recommendations of this report, the outcomes of the exhibition period for the Planning Proposal and draft Planning Agreement will be reported to an upcoming Council meeting along with the Panel's advice.

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Rafael Morrissey  
**Project Officer Land Use**

Belinda Borg  
**Team Leader Land Use Planning**

David Birds  
**Group Manager, Major Projects and Precincts**

Jennifer Concato  
**Executive Director City Planning and Design**

**ATTACHMENTS:**

- |   |   |                                |          |
|---|---|--------------------------------|----------|
| 1 |  | Planning Proposal              | 34 Pages |
| 2 |  | Draft Planning Agreement       | 36 Pages |
| 3 |  | Retail Impact Assessment       | 28 Pages |
| 4 |  | Traffic and Parking Assessment | 10 Pages |
| 5 |  | Gateway Determination          | 2 Pages  |

**REFERENCE MATERIAL**

**Link to full Local Planning Panel Report**

Follow the link to the 20 December 2022 Business Paper to view the full LPP report including attachments:

- 1: Planning Proposal
- 2: Draft Planning Agreement
- 3: Retail Impact Assessment
- 4: Traffic and Parking Assessment
- 5: Gateway Determination

See Item 6.1 at page 518:

[https://businesspapers.parracity.nsw.gov.au/Open/2022/12/LPP\\_20122022\\_AGN\\_719\\_AT.PDF](https://businesspapers.parracity.nsw.gov.au/Open/2022/12/LPP_20122022_AGN_719_AT.PDF)



Department of Planning and Environment

## Gateway Determination

**Planning proposal (Department Ref: PP-2021-6314):** To allow additional permitted uses at 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford.

I, the Acting Director, Central (GPOP) at the Department of Planning and Environment, as delegate of the Minister for Planning and Homes, have determined under section 3.34(2) of the *Environmental Planning and Assessment Act 1979* (the Act) that an amendment to the Parramatta (former The Hills) Local Environmental Plan 2012 to allow additional permitted uses 263-273 & 279R Pennant Hills Road and 18 Shirley Street, Carlingford at should proceed subject to the following conditions:

The Council as planning proposal authority planning proposal authority is authorised to exercise the functions of the local plan-making authority under section 3.36(2) of the EP&A Act subject to the following:

- (a) the planning proposal authority has satisfied all the conditions of the gateway determination;
- (b) the planning proposal is consistent with applicable directions of the Minister under section 9.1 of the EP&A Act or the Secretary has agreed that any inconsistencies are justified; and
- (c) there are no outstanding written objections from public authorities.

The LEP should be completed on or before 31 May 2023.

### Gateway Conditions

1. If the Parramatta Harmonisation amendment (PP-2020-3106) is finalised prior to the public exhibition of this planning proposal, references to the Parramatta (former The Hills) LEP 2012 will need to be removed and replaced with the new Parramatta LEP.
2. The planning proposal is to be updated to, prior to community consultation to:
  - a) update the proposed Additional Permitted Uses map to only apply to the R4 High Density Residential portion of the site;
  - b) include a response to demonstrate consistency to Section 9.1 Direction 1.7 Implementation of Greater Parramatta Priority Growth Area Interim Land Use and Infrastructure Implementation Plan;
  - c) update the response to address section 9.1 Direction 1.4 Site Specific Provisions, given the proposal contains additional site specific land uses with a gross floor area cap; and
  - d) update the project timeline to reflect the requirements of the Gateway determination.
3. Public exhibition is required under section 3.34(2)(c) and clause 4 of Schedule 1 to the Act as follows:
  - (a) the planning proposal is categorised as standard as described in the *Local Environmental Plan Making Guidelines* (Department of Planning and Environment, 2021) and must be made publicly available for a minimum of 20 days; and

- (b) the planning proposal authority must comply with the notice requirements for public exhibition of planning proposals and the specifications for material that must be made publicly available along with planning proposals as identified in *Local Environmental Plan Making Guidelines* (Department of Planning and Environment, 2021).

Exhibition must commence within 3 months following the date of the gateway determination.

Consultation is required with the following public authorities and government agencies under section 3.34(2)(d) of the Act and/or to comply with the requirements of applicable directions of the Minister under section 9 of the EP&A Act:

- Transport for NSW
- Transport for NSW (Parramatta light rail team).

Each public authority is to be provided with a copy of the planning proposal and any relevant supporting material via the NSW Planning Portal and given at least 30 days to comment on the proposal.

4. The planning proposal must be reported to council for a final recommendation 8 months from the date of the Gateway determination.
5. A public hearing is not required to be held into the matter by any person or body under section 3.34(2)(e) of the EP&A Act. This does not discharge Council from any obligation it may otherwise have to conduct a public hearing (for example, in response to a submission or if reclassifying land).

Dated 29<sup>th</sup> day of July 2022.



**Jazmin van Veen**  
**Acting Director, Central (GPOP)**  
**Metro Central and North**  
**Department of Planning and Environment**

**Delegate of the Minister for Planning and Homes**

PP-2021-6314 (IRF22/2398)

## REPORTS TO COUNCIL - FOR COUNCIL DECISION

<b>ITEM NUMBER</b>	13.3
<b>SUBJECT</b>	Post Exhibition - Finalisation of the Riverside Theatre Planning Proposal following consideration of submissions received during the Public Exhibition Period
<b>REFERENCE</b>	F2022/00105 - D08826680
<b>REPORT OF</b>	Senior Project Officer

**CSP THEME:** Innovative

### PURPOSE:

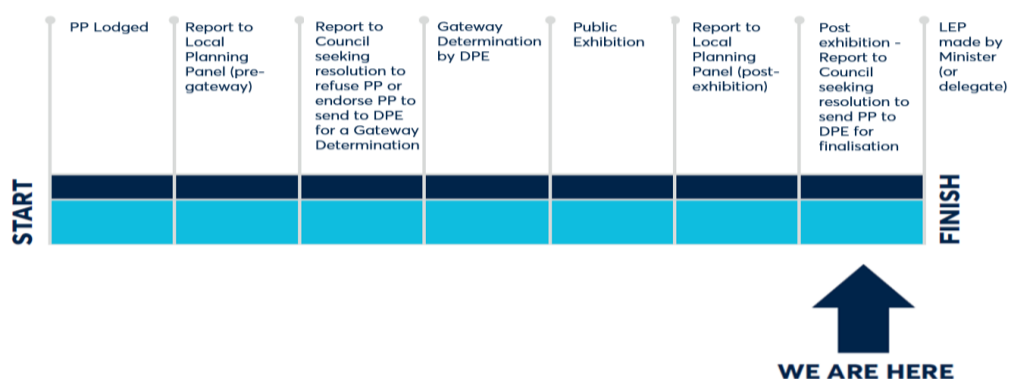
The purpose of this report is to enable Council to consider the outcomes of the public exhibition of the Planning Proposal for land at 353A-353C Church Street and part of 351 Church Street, Parramatta (the Riverside Theatre Site) and to seek Council's endorsement of the Planning Proposal to be forwarded to the Department of Planning and Environment (DPE) for finalisation.

### RECOMMENDATION

- (a) **That** Council note that a total number of 31 submissions were made in response to the public exhibition of the Planning Proposal which are summarised at **Attachment 1**.
- (b) **That** Council approve the Planning Proposal at **Attachment 2** for the purposes of it being forwarded to the Department of Planning and Environment (DPE) for finalisation.
- (c) **That** Council note the LPP advice relating to the outcome of the public exhibition of the Planning Proposal from its meeting of 15 February 2023 is provided to Council in a supplementary report.
- (d) **That** Council delegate authority to the Chief Executive Officer to correct any minor anomalies of a non-policy and administrative nature that may arise during the plan finalisation process, relating to the Planning Proposal.

### PLANNING PROPOSAL TIMELINE

The timeline below identifies the Riverside Theatre Planning Proposal has now progressed to the finalisation stage.





## BACKGROUND

1. The redevelopment of the Riverside Theatre has been a key cultural project under consideration by Council since 2018. Council recently approved the Riverside Theatre redevelopment strategic business case and allocated funding to secure the next phase of the project at its meeting of 12 December 2022. A copy of the Council resolution is provided at **Attachment 3**.
2. This Planning Proposal was prepared to implement the necessary planning controls to allow the timely progression and redevelopment of the Riverside Theatre in line with Council's vision and policy. A concept design for the redevelopment of theatre is provided in the Planning Proposal at **Attachment 2**.
3. On 18 August 2022, the LPP considered the Planning Proposal and supported Council Officer's recommendation to progress the Planning Proposal to a Gateway Determination. Further details of the report and advice are available at **Attachment 4**.
4. At its meeting of 26 September 2022, Council adopted the Planning Proposal and resolved to forward it to DPE for a Gateway Determination. A Gateway Determination was issued by DPE on 16 November 2022 indicated that the Planning Proposal should proceed subject to conditions which included a public exhibition for 20 days and minor updates to the Planning Proposal. A copy of the Gateway Determination is provided at **Attachment 5**.
5. The Planning Proposal was updated to respond to the Gateway conditions prior to the public exhibition. The Planning Proposal reflects the intended Design Excellence bonus for the site under the Council endorsed Parramatta CBD Planning Proposal (CBD PP) and includes refined details on flooding from the flood analysis prepared as part of the CBD PP. Further information of the intended design excellence bonus and flooding analysis can be found at Part 3 of the Planning Proposal at **Attachment 2** and within the LPP report from 15 February 2023 contained in **Attachment 6**.
6. The Planning Proposal was publicly exhibited from 14 December 2022 to 2 February 2023. During the exhibition, Council received a total number of 31 submissions. Of which, 30 submissions were from local residents/visitors and 1 was from public agency. A summary of the exhibition process and engagement activities is provided at the beginning of **Attachment 1**.

## SITE DESCRIPTION

7. The Planning Proposal applies to the land at 353A-353C Church Street (Lot 2 DP 740382) and part of 351 Church Street, Parramatta (Lot 1 DP 740382) (the site). The site has an approximate area of 7,000sqm (see **Figure 1**). The site is the location of the Riverside Theatre, which is owned and operated by the City of Parramatta Council (Council). Further information on the site context is available in the Planning Proposal contained in **Attachment 2**.

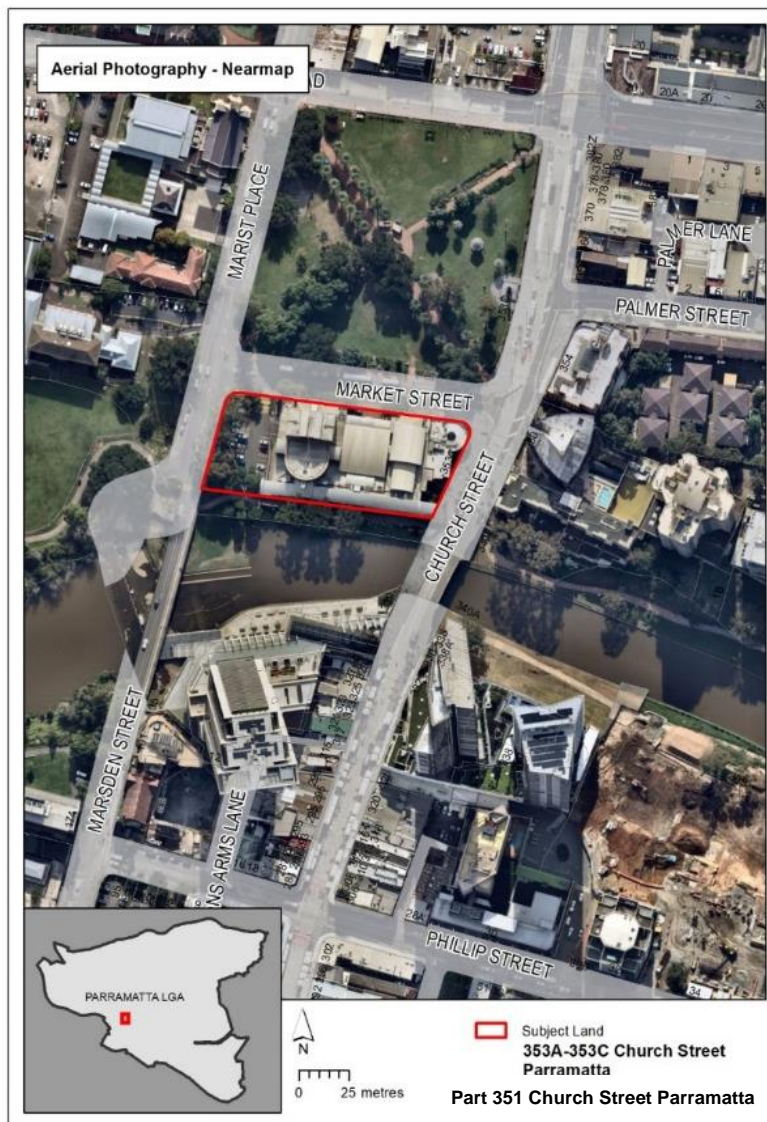


Figure 1 – Site subject of the Planning Proposal

## DESCRIPTION OF PLANNING PROPOSAL

8. The Planning Proposal seeks the following amendments to the Parramatta Local Environmental Plan 2011 (PLEP):
  - a. Increase the Maximum Height of Building (HOB) from 15m to 28m.
  - b. Introduce a Site-Specific Clause that:
    - i. prevents new development generating any additional overshadowing to the southern side of the Parramatta River Foreshore between 12pm and 2pm;
    - ii. requires active street frontages;
    - iii. specifies a maximum Design Excellence bonus of 15% (included as a result of the Gateway Determination conditions).
9. No changes are proposed to the land use zoning or FSR controls.
10. **Table 1** compares the existing planning controls, proposed controls under the CBD PP, proposed controls within the subject Planning Proposal and the existing building for reference. Further details on the site's context and strategic positioning within the Parramatta CBD are contained within the Planning Proposal found in **Attachment 2**.

Control	Existing Controls	Council adopted CBD PP	Proposed Controls	Existing building
<b>Zoning</b>	B4 Mixed Use	B4 Mixed Use	B4 Mixed Use	B4 Mixed Use
<b>Height</b>	15m	Height not nominated – solar access control would allow heights of 50-60m on parts of the site.	28m	25m
<b>FSR</b>	3:1	3:1	3:1	Unknown
<b>Design Excellence bonus</b>	25%	15%	15%	n/a

Table 1 – Comparison of existing and proposed controls

## PUBLIC EXHIBITION OF THE PLANNING PROPOSAL

11. The Planning Proposal was exhibited from 14 December 2022 to 2 February 2023. Council received 31 submissions including thirty (30) community submissions and one (1) submission from Public Agency. A summary of the exhibition process and engagement activities is provided at the beginning of **Attachment 1**.
12. While all submissions supported the intended outcome to redevelop the Riverside Theatre site, some submissions raised planning related concerns. **Table 2** outlines a summary of key concerns and Council Officer's responses. A more detailed response to the key concerns and submissions are available at **Attachment 1** and in the LPP report at **Attachment 6**.

Key concerns	Council Officer's Response
Insufficient car parking for future theatre visitors.	<p>The Planning Proposal will not result in greater development yield than what is already permitted on the subject site (i.e. no change to the existing FSR of 3:1). The site is well serviced by existing public transport infrastructure. As such detailed parking consideration is not required as part of this Planning Proposal.</p> <p>Detailed car park design will be prepared as part of future design and State Significant Development Application process. Any proposed parking provision will need to comply with relevant controls for the CBD contained within the Parramatta LEP and Development Control Plan.</p>
Lack of detailed flood protection measures for the site.	The Planning Proposal will not generate greater flood risk compared to the current level of flood risk on the subject site under the existing planning controls. The Planning Proposal has been assessed against the Planning Ministerial Direction and is consistent with its flooding requirements. The Planning Proposal is not intensifying development yield and strictly addressing urban design considerations through the alteration of building height from 15m to 28m - no changes to FSR are proposed.
Protection of view corridors for residents living in the Lennox building.	<p>The Lennox building is located directly opposite to the Riverside Theatre on the southern bank of Parramatta River and is the tallest building in the surrounding built environment with a building height of 157m.</p> <p>The Planning Proposal seeks to increase the building height from 15m to 28m which is considered to have inconsequential impacts on the view corridor, given the existing building has the height elements at 25m and the eastern side of the Church Street has the height of building control at 36m. In addition, the theatre concept design indicates that the proposed 28m is the highest building element which slowly descends towards the western side of the subject site.</p>

Overshadowing of the Parramatta River and its foreshore area.	<p>The Planning Proposal seeks to protect solar access to the southern side of the Parramatta River foreshore by introducing a site-specific clause requiring new development to not generate any additional overshadowing to the southern side of the river foreshore between the hours of 12:00pm and 2:00pm (noting that the northern side of the river is already overshadowed by the existing building).</p> <p>These hours of solar protection are consistent with the Council adopted policy position relating to additional overshadowing in the CBD PP.</p> <p>It is also important to note that the proposed concept design to be delivered by the Planning Proposal exceeds the solar access protection to the Parramatta River and its foreshore area by an additional three hours compared to the CBD PP. This further demonstrates the low impact the intended outcome of the Planning Proposal will have on overshadowing to the Parramatta River and its foreshore area.</p>
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**Table 2 - Summary of Key Submissions and Council Officer's responses**

13. It is noted that a number of submissions commented on the detailed theatre design consultation on the design and programming (i.e. theatre capacity design, show types and 24/7 hours theatre etc) which are considered out of scope of the Planning Proposal. Consultation on the design has already occurred and will continue with the Riverside Advisory Committee and the Community will also be consulted as part of the future State Significant Development approval process once details of the design are more fully resolved.
14. Council Officers reviewed the submissions and planning matters listed in Table 2 and determined the submissions do not warrant any changes to the Planning Proposal. Further details of the submissions received and Council Officers' response is available at **Attachment 1**.

### **Local Planning Panel Meeting Post Exhibition**

15. Consistent with the recommendation of this Council report, Council officers recommended to the LPP that the Planning Proposal progress to finalisation without any amendments resulting from the public exhibition process.
16. To allow the timely progression of the Riverside Theatre redevelopment, the LPP planning advice is provided to Council in the supplementary report as the LPP meeting is to be held after the finalisation of this Council Business Paper on 10 February 2023.

### **PLANNING PROPOSAL ASSESSMENT**

17. The Planning Proposal has been assessed against relevant State and local strategic planning policies. A copy of detailed assessment is available in the Planning Proposal at **Attachment 2**. It is noted the Planning Proposal is reflective of the requirements and conditions of the Gateway Determination.
18. It is considered that the Planning Proposal has demonstrated both strategic and site - specific planning merits and should proceed to finalisation for the following reasons:
  - a. The Planning Proposal seeks to ensure the necessary planning controls in place allow for the timely progression and redevelopment of the

Riverside Theatre that is consistent with Council's Cultural Plan and the business case endorsed by Council on 12 December 2022;

- b. The proposed building height increase from 15m to 28m is considered to have an inconsequential impact on amenity, flooding, overshadowing, and overall bulk and scale (noting that the existing building has a building component at 25m despite the current 15m height controls); and
  - c. The proposed site - specific provisions are consistent with the objectives and intent of the solar access protection, design excellence bonus and active street frontage provisions within the Council endorsed CBD Planning Proposal.
19. Council Officers have reviewed the submissions received and proposed to progress the Planning Proposal (refer to **Attachment 2**) with no further amendments.

## PLAN MAKING DLEGATIONS

20. Council is not the plan making authority as specified in the Gateway Determination (See **Attachment 5**). Subject to Council endorsement, the Planning Proposal will be forwarded to DPE for finalisation. Council Officers will work with DPE to finalise the Planning Proposal.

## FINANCIAL IMPLICATIONS FOR COUNCIL

21. The decision being made to endorse this Planning Proposal will have no direct impacts on the budget. Any cost of processing this Planning Proposal will be funded from the existing City Planning and Design budget.
22. Council has allocated funding for the Riverside Theatre redevelopment through a separate project. The finalisation of this Planning Proposal will allow timely progress of the redevelopment project.

## CONCLUSION AND NEXT STEPS

23. This report has summarised and considered the submissions received as part of the public exhibition process for the Planning Proposal. As outlined in this report, the submissions do not warrant any amendment to the Planning Proposal. It is proposed to progress the Planning Proposal with no further amendments.
24. It is recommended that Council forward the Planning Proposal at **Attachment 2** to the Department of Planning and Environment for finalisation to ensure necessary planning controls are in place to allow the timely progression and redevelopment of the Riverside Theatre.
25. A notification will be sent to all submitters advising the outcome of the LPP and Council meetings.

Joyce Jiang  
**Senior Project Officer**

Sonia Jacenko  
**Team Leader Strategic Land Use Planning**

Robert Cologna  
**Group Manager, Strategic Land Use Planning**

John Angilley  
**Chief Financial and Information Officer**

Bryan Hynes  
**Acting Chief Executive Officer**

**ATTACHMENTS:**

<a href="#"> 1</a> <a href="#">↓</a>	Submission Response Table - Riverside Theatre Planning Proposal	17 Pages
<a href="#"> 2</a> <a href="#">↓</a>	Planning Proposal Riverside Theatre Site	328 Pages
<a href="#"> 3</a> <a href="#">↓</a>	Council Meeting Minute - 12 December 2022 -Business Case Riverside Theatre	2 Pages
<a href="#"> 4</a> <a href="#">↓</a>	Local Planning Panel Report and Advice 16 August 2022	26 Pages
<a href="#"> 5</a> <a href="#">↓</a>	Gateway Determination 15 November 2022	4 Pages
<a href="#"> 6</a> <a href="#">↓</a>	Local Planning Panel Report 15 February 2023	11 Pages

**REFERENCE MATERIAL**

**Submissions Summary Table**

1. The public exhibition process for the planning proposal follows Council's Engagement Strategy. Key engagement activities include:
- Notification Letters to adjoining landowners
  - Participate Parramatta webpage with summary information and Frequently Asked Questions
    - When preparing a submission via Participate Parramatta webpage, submitters were provided with three options to indicate their support to the Planning Proposal: 'Yes', 'No' or 'Yes, to an extent'.
  - Advertisement within Parra News - 20 Dec 2022
  - Hard copy exhibition material located at PHIVE
  - Social Media
  - Electronic news through Council electronic mailing lists

This document summarises submissions received during the exhibition of the Riverside Theatre Planning Proposal. Each submission is summarised and provided Council Officer's response as below.

No	Respondent	Summary of Submissions	Council Officer Responses
1	Resident of Wentworthville	<p>Submitter supports the Planning Proposal.</p> <p>Submitter comments that Council should work with State Government to streamline the planning approval pathway for the redevelopment of the Riverside Theatre.</p>	<p>Noted.</p> <p>Noted.</p> <p>As outlined in the Planning Proposal and its supporting document, this proposal was prepared to streamline the planning approval process for the Riverside Theatre redevelopment prior to the completion of future review of the land north of Parramatta River.</p> <p>Council Officers have been working closely with the Department of Planning and Environment (DPE) to progress this Planning Proposal, including discussion of key issues raised during the planning process and providing updates to DPE on key milestones.</p>



			On 16 November 2022, DPE issued the Gateway Determination supporting the progress of the Planning Proposal subject to detailed conditions, including a public exhibition of minimum 20 days.
		The proposed building height (including bonus) is not considered out of character, given the imminent build environment already contains much taller buildings such as the Lennox which is located opposite to the theatre on the other side of the Parramatta River.	Agreed.
		Submitter is of the view that the planning discussion of utilising the 15% height bonus for the site is unnecessary and would potentially delay the planning process.	<p>As outlined in the Planning Proposal and the Council report, the site was removed from the finalisation of the Parramatta CBD Planning Proposal (CBD PP) by DPE. The CBD PP included a 15% Design Excellence bonus for the site, while the current planning controls allow for a Design Excellence bonus of up to 25%. Clarifying the bonus as 15% is necessary to ensure compliance with the policy position of the CBD PP.</p> <p>In addition, a Gateway condition issued by DPE requested Council clarify the Design Excellence bonus for the subject site and Council is required to comply with this condition in order to progress the Planning Proposal.</p> <p>Whilst the planning framework can award a 15% Design Excellence bonus, the utilisation will be determined as part of the future design competition process. However, as shown in the concept reference design within the Planning Proposal and Council Report, the concept design currently does not require the 15% bonus to achieve the current building envelope for the site. The inclusion of the bonus as a site-specific clause is required and necessary to reinstate the intent to keep consistent with the policy framework as envisaged in the CBD PP.</p>
		Submitter suggests that the Riverside Theatre should be programmed to cater for innovation and be able to provide top class show.	Comments in relation to the detailed theatre design and programming are <b>out of scope</b> of this Planning Proposal.

		<p>The design for the theatre could also provide showcases in relation to the innovation and initiatives prepared for the Parramatta North Precinct.</p> <p>Submitter suggests making the Riverside Theatre a 24/7 operating theatre supported by a range of land uses complementing night - time economies.</p> <p>Submitter suggests Roxy Theatre should not provide same functions of Riverside Theatre to avoid duplication and competition, and it should focus on providing live music, DJs bands and other late night live performance shows.</p> <p>Submitter recommends the theatre program design should take into account of other existing suburban and regional theatre shows to avoid unnecessary competition.</p>	<p>The Planning Proposal intends to provide the necessary planning controls (i.e. Height of Building) to allow the timely progression and redevelopment of the Riverside Theatre, and intends to implement the intent of the Parramatta CBD Planning Proposal.</p> <p>Detailed building design and articulation will be prepared and assessed as part of the future design and State Significant Development (SSD) Application process which also required further community consultation.</p> <p>In addition to the future SSD community consultation process, it is important to note that Council has been working with the Riverside Advisory Committee (the Committee) on key areas of the Riverside Theatre redevelopment project.</p> <p>The Committee has been regularly consulted through the Concept Development phase and will continue to provide input across the key stages of the design and planning process with a specially convened Design Reference Group (the Group) as part of the redevelopment project.</p> <p>The Group consists of various industry, community, and Councillor representatives who will continue to work with Council and provide community engagement and feedback in relation to the future theatre development's functional and SSD Design Brief processes.</p>
2	Resident of Cherrybrook	<p>Submitter supports the Planning Proposal and agrees a modernised theatre will complement the surrounding building environment.</p> <p>Submitter is of the view that Market Street is suitable to provide direct access to the future theatre. And the theatre should expand its footprint</p>	<p>Noted.</p> <p>Detailed building design including access to the theatre is <b>out of scope</b> of the Planning Proposal and will be explored at future design and SSD application process.</p>

	towards the Market Street and/or Church Street direction.	<p>Further community consultation will be undertaken as part of the SSD application process.</p> <p><i>See response to Submission No.1 for further discussion on additional community consultation.</i></p>
	Submitter suggests that underground parking and/or off-street parking should be considered for the theatre visitors.	<p>The Planning Proposal will not result in greater development yield than what is already permitted on the subject site under the provisions of the current PLEP 2011 (i.e. no change to the existing FSR 3:1).</p> <p>The site is well serviced by existing public transport infrastructure including the western train line, bus network and ferry service. These services are currently utilised by theatre patrons. In addition, the site is within walking distance to the future Parramatta Light Rail stop located at Prince Alfred Square, which is expected to open in 2023, prior to the redevelopment of the Riverside Theatre. The completion of this infrastructure in advance of the new theatre opening will result in the site being more accessible to visitors across Greater Parramatta and assists in providing active and public transport options.</p> <p>As such a detailed parking consideration is not required as part of this Planning Proposal. Any proposed parking provision will need to comply with relevant controls for the CBD contained within the Parramatta CBD LEP and Development Control Plan 2011.</p> <p>Detailed building design will be prepared and assessed at future design and State Significant Development (SSD) Application stage.</p> <p>Further community consultation will be undertaken as part of the SSD application process..</p>

3	Resident of Parramatta	Submitter supports the Planning Proposal to an extent	Noted.
		Submitter comments that the redevelopment of Riverside Theatre should not compromise the solar access to the Parramatta River and its foreshore area.	<p>Agreed. The Planning Proposal seeks to introduce a site-specific clause requiring new development should not generate additional overshadowing to the southern side of the Parramatta River Foreshore between the hours of 12:00pm and 2:00pm. Noting that the northern side of the river will not be protected because almost any building on this site will overshadow the northern side.</p> <p>These hours are consistent with the Council adopted policy position relating to additional overshadowing to the southern side of the river foreshore in the Council endorsed CBD PP.</p> <p>It is also important to acknowledge that the concept design to be delivered via the Planning Proposal exceeds the solar access protection requirements of the CBD PP by protecting solar access to the southern side of the river foreshore by an additional three hours compared to the Council adopted CBD PP. The concept design will not cause any additional overshadowing between the hours of 10:00am and 3:00pm.</p>
4	Resident of Harris Park	Submitter supports the Planning Proposal.	Noted.
		Submitter is in the view of the car park and Market St area contains highly sensitive archaeological value and the subject site contains extensive aboriginal, colonial and post-colonial history. It is recommended that future new development retain and potentially display the archaeological area.	<p>The Riverside Theatre site is neither a heritage listed item nor known as a potential archaeological site. The Planning Proposal has taken into consideration the heritage studies prepared as part of the Parramatta CBD PP (including the theatre site) which concluded that the proposed planning controls in the CBD PP will not generate significant heritage impacts within the study area. Further discussion of heritage impacts can be found in the Planning Proposal document.</p> <p>As the concept design proposed in the Planning Proposal has responded to the proposed planning controls in the CBD PP, the heritage assessment undertaken as part of the CBD PP is</p>

			<p>considered applicable and transferable for this Planning Proposal.</p> <p>A detailed archaeology study for the site is not required at Planning Proposal stage, as the site is not currently listed as an archaeological site under the Parramatta Local Environmental Plan 2011 (PLEP) and not known as a potential archaeological site.</p> <p>Whilst the Planning Proposal is considered acceptable from a heritage and archaeology perspective as outlined above, further consideration of any potential archaeological implications will be considered at SSD application stage if and where required.</p>
5	Resident of Northmead	Submitter supports the Planning Proposal and makes no further comments.	Noted.
6	Resident of Northmead	<p>Submitter supports the Planning Proposal.</p> <p>Questions raised in relation to the detailed flooding protection measurements for the site, particularly given the historical flooding events around the Lennox Bridge area.</p>	<p>Noted.</p> <p>The subject site like most of the Parramatta CBD is flood affected. The entire site is located within the Probable Maximum Flood area for the Upper Parramatta River, and the western side of the site is affected by the 100 year flood event.</p> <p>The Planning Proposal has been assessed against the Planning Ministerial Direction and is consistent with the 4.1 Flooding requirements. As the Planning Proposal is not intensifying development yield, and strictly addressing urban design considerations through the alteration of building height from 15m to 28m – no changes to FSR are proposed. Therefore, it is considered the Planning Proposal will not generate greater flooding risks than what is currently allowed on the subject site.</p> <p>In addition, the Design Excellence process will need to respond to the flood affectation of the site. Detailed flooding protection is required for future development and will be assessed at the SSD Application stage. Any future development will need to comply</p>

			<p>with the Flood Risk Development Manual and relevant controls contained within the PLEP 2011.</p> <p>As a result of the above assessment, changes to the Planning Proposal in response to this submission are not necessary.</p>
7	Resident of North Parramatta	<p>Submitter supports the Planning Proposal.</p> <p>Submitter comments that the public amenity of the redevelopment project should not be compromised by the considerations of existing amenity (i.e. public open space) within the Lennox building on the southern side of the river.</p>	<p>Noted.</p> <p>The concept design for the Riverside Theatre redevelopment has been prepared in compliance with the solar access provisions designed to protect the southern side of the Parramatta River foreshore area from additional overshadowing. As such, this would prevent any additional overshadowing to the Lennox building public space referred to by the submitter. This policy position was informed by the adopted Council policy position relating to additional overshadowing contained within the CBD PP.</p> <p>Whilst the submitter suggests that the public space within the Lennox building should not hinder on the development potential of the Riverside Theatre redevelopment, the concept design and planning controls contained within the Planning Proposal align with the amenity objectives and policy position of the CBD PP. Therefore, anything in excess of the current Planning Proposal would be inconsistent with this existing policy.</p> <p>In summary, the presence of a public space at the Lennox building has not impacted the size and scale of the Riverside Theatre redevelopment – there is an existing policy position to retain solar access to the southern side of the river that this Planning Proposal complies with.</p> <p><i>See response to Submission No.3 for further discussion on solar access protection to the southern side of the Parramatta River.</i></p> <p>Further community consultation will be undertaken as part of the SSD application process.</p>

		Submitter suggests including a hotel for the theatre to provide funding stream to the theatre and subsidise the ongoing operational cost.	<p>The delivery of a hotel is not included as part of the concept design for the theatre redevelopment. The current building envelope of the concept design contains the floorspace needed to deliver an expanded cultural facility to respond to current and future demand. <i>See response to Submission No.14 for details on theatre capacity.</i></p> <p>The inclusion of any additional floorspace for commercial purposes (such as a hotel) would be likely to require a larger building envelope with a greater building height. If this larger building envelope exceeded the solar access protection requirements for the southern side of the river it would be inconsistent with the Council endorsed position within the CBD PP regarding additional overshadowing (<i>see response to Submission No.3 for further discussion on solar access protection to the southern side of the Parramatta River</i>).</p> <p>In addition, funding sources, including the cultural fund and monies from the sale of the Powerhouse Parramatta site, have been reserved to support the redevelopment of the theatre in line with the concept design as adopted by Council. The option of including other potential income generating uses was considered as part of previous feasibility testing for the project and it was determined this was not viable given the size and other limitations of the site.</p>
8	Resident of North Parramatta	<p>Submitter supports the Planning Proposal to an extent</p> <p>Concerns raised that the Planning Proposal does not include lack of discussion relating to on achieving environmental sustainability goal for the proposed theatre redevelopment, (such as recycling water and solar panels) etc.</p>	<p>Noted.</p> <p>The Business Case for the redevelopment project includes a key aspiration for the new theatre to include an environmentally responsive design. The Riverside Theatre facilities will be designed to achieve high standards to energy efficiency and water conservation, life cycle analysis for a selection of materials, waste minimisation, low greenhouse gas emissions</p>



			<p>and an operational plan to maintain the standards for the life of the building.</p> <p>This will be further explored as part of the SSD process under the consideration of environmentally sustainable design (ESD).</p> <p>The next step in the redevelopment process for the theatre site includes a design excellence competition. It is generally accepted that design competitions achieve better design excellence outcomes and more environmentally efficient buildings, with this process further responding to the aspiration to deliver an environmentally responsive design. This is also assessed as part of the SSD process to ensure significant development is responsive to this planning consideration.</p> <p>In light of the above, detailed consideration of sustainability (i.e. recycling water and solar panels) is not required at Planning Proposal stage as it will be dealt with as part of the Design Excellence and SSD processes that will respond to the Business Case environmental aspirations.</p>
		<p>Considerations should be given to temporary sites being used as a 'pop up theatre' to continue the performances during the construction phase of the theatre.</p>	<p>This comment is <b>out of scope</b> of this Planning Proposal project.</p> <p>Interim alternative operating sites, including assessment of temporary 'pop-up theatre' options, will be considered under a separate business case later in the project's design and development phase. Any temporary venue leaseholds or pop-up venues/sites will be approved under a separate commercial and development approval process.</p>
9	Organisation Endeavour Energy	<p>Endeavour Energy raises no objection to the Planning Proposal.</p> <p>Endeavour Energy noted that future development on the site within close proximity of the existing and/or required electricity infrastructure need to comply with relevant guideline and policy.</p>	<p>Noted.</p> <p>The relevant service providers will be consulted as part of the SSD Application process in the future to ensure service provision.</p>

10	Resident of Parramatta	Submitter supports the planning proposal	Noted.
		Submitter comments that Planning Proposal needs to ensure no significant impacts on the view corridor of residents living in the Lennox building.	<p>The Lennox building is located directly opposite to the Riverside Theatre on the southern bank of Parramatta River and is the tallest building in the surrounding built environment with a building height of 157m.</p> <p>The Planning Proposal seeks to increase building height from 15m to 28m and is considered to have inconsequential impacts on the view corridor, given the existing building has the height elements at 25m and the eastern side of the Church Street has the height of building control at 36m. In addition, the theatre concept design indicates that the proposed 28m is the highest building element which slowly descends towards the western side of the subject site.</p> <p>As such, the Planning Proposal will not generate significant impacts on the view corridor of surrounding developments.</p>
11	Resident of Parramatta	Submitter supports the planning proposal and makes no further comments	Noted.
12	Resident of Toongabbie East	Submitters supports the Planning Proposal to an extent	Noted.
		Concerns raised inadequate parking proposed for the theatre visitors.	<i>See response to parking contained in Submission No.2.</i>
13	Resident of Dundas Valley	Submitter supports the planning proposal and makes no further comments	Noted.
14	Resident of Northmead	Submitter supports the Planning Proposal	Noted.
		Submitter is of the view that the future theatre should be expanded to 1500 capacity or more to compete with other theatres in Sydney and attract international productions.	<p>While this comments in relation to the design and programming details for the theatre are <b>out of scope</b> of this Planning Proposal, the concept reference design adopted by Council on 9 May 2022 indicated the redevelopment of the Riverside Theatre intends to deliver a 1350-1400 seat design for the main theatre, supported by three smaller venues at 760, 430 and 1000 seat respectively.</p>

			<p>Detailed theatre design will be prepared and assessed at SSD process.</p> <p>Further community consultation will be undertaken as part of the SSD application process.</p> <p><i>See response to Submission No.1 for further discussion on additional community consultation.</i></p>
15	Resident of Guildford	Submitter supports the Planning Proposal to an extent	Noted.
		Submitter concerns that there is not sufficient parking for the theatre visitors.	<i>See response to parking contained in Submission No.2.</i>
16	Resident of Northmead	Submitter supports the Planning Proposal to an extent	Noted.
		Submitter suggests expanding the theatre capacity to cater for larger capacity is needed to compete with other existing theatres in Sydney.	<p>Comments in relation to the design and programming details for the theatre are <b>out of scope</b> of this Planning Proposal.</p> <p>Detailed theatre design will be prepared by a separate project team and assessed at the SSD Application stage.</p> <p>Further community consultation will be undertaken as part of the SSD application process.</p> <p><i>See response to Submission No.1 for further discussion on additional community consultation.</i></p>
17	Resident of North rocks	Submitter supports the Planning Proposal	Noted.
		Submitter suggests that the theatre design could incorporate other user experience such as restaurants, boats riding and riverside walk.	While this comment is <b>not within the scope</b> of this Planning Proposal project, the concept design to be delivered by the Planning Proposal seeks to introduce a site - specific clause requiring active frontages to ensure the ground floor of the future development engages with the surrounding streets and public domain. This control would assist to promote the user experience from planning control perspective.

			<p>The concept design also seeks to improve the design for foyer, food and beverage and artist to support the amenities that further enhance the user experience.</p> <p>In addition, the existing riverside walkway on the southern side of the site will be retained to continue provide amenity for the theatre visitors.</p> <p>Whilst not the subject of the Planning Proposal, boat rides are unlikely to be practical in the future along this section of the Parramatta River due to the configuration of the riverbank and weirs.</p> <p>Further community consultation will be undertaken as part of the SSD application process.</p> <p><i>See response to Submission No.1 for further discussion on additional community consultation.</i></p>
18	Resident of Prospect	Submitter supports the Planning Proposal to an extent	Noted.
		Submitter concerns that there is not sufficient parking for the theatre visitors.	<i>See response to parking contained in Submission No.2.</i>
		Submitter is not sure who is the developer and operator for the future theatre and how redevelopment of the theatre will be funded.	As outlined in the Planning Proposal and its supporting documents, Council is the owner and operator for the riverside theatre site. The Cultural Fund and sales of the Powerhouse Parramatta site are reserved to support the redevelopment of the theatre, combined with proposed additional funding from State and/or Federal Government contributions, philanthropy and corporate sponsorship.
19	Resident of Eastwood	Submitter supports the Planning Proposal to an extent	Noted.
		Submitter comments that the Planning Proposal does not include details on the operational use and customer experience of the theatre.	Comments in relation to the design and programming details for the theatre are <b>out of scope</b> of this Planning Proposal project.

		Submitter indicates the location and design of the loading dock area is important and need to be improved.	<p>Detailed theatre design will be responded as part of future design process prepared by a separate project team and assessed at SSD Application stage.</p> <p>Further community consultation will be undertaken as part of the SSD application process.</p> <p><i>See response to Submission No.1 for further discussion on additional community consultation.</i></p>
20	Resident of Northmead	Submitter supports the Planning Proposal to an extent	Noted
		Concerns raised that redevelopment of the theatre will lose some of the existing public open area that provides space for visitors to meet up and socialise before the show.	<p>While this comment in relation to the design and programming details for the theatre is <b>out of scope</b> of this Planning Proposal, the intent of the redevelopment is to expand and redevelop the theatre to be a world class cultural assets for the community.</p> <p>The design and configuration of ancillary spaces (including open areas for visitors to socialise before and after performances) within the new theatre design will be considered as part of the Design Excellence process.</p> <p>Further community consultation will be undertaken as part of the SSD application process.</p> <p><i>See response to Submission No.1 for further discussion on additional community consultation.</i></p>
		Submitter concerns that expanding the riverside theatre will exclude smaller gatherings for niche and unserved community.	The concept reference design adopted by Council on 9 May 2022 indicated the redevelopment of the Riverside Theatre intends to deliver a 1350-1400 seat design for the main theatre, supported by three smaller venues at 760, 430 and 1000 seat respectively to cater for different group's needs.
21	Resident of Northmead	Submitter supports the Planning Proposal	Noted.
		Submitter indicates the theatre design should consider the needs for small music groups for performance and rehearsals.	While this comment in relation to the design and programming details for the theatre is <b>out of scope</b> of this Planning Proposal, the concept reference design adopted by Council on 9 May 2022

			<p>indicated the redevelopment of the Riverside Theatre intends to deliver a 1350-1400 seat design for the main theatre, supported by three smaller venues at 760, 430 and 1000 seat respectively to cater for different group's needs.</p> <p>Further details of the theatre design will be prepared and assessed at SSD Application stage.</p> <p>Further community consultation will be undertaken as part of the SSD application process.</p> <p><i>See response to Submission No.1 for further discussion on additional community consultation.</i></p>
22	Resident of Northmead	Submitter supports the Planning Proposal	Noted.
23	Resident of Northmead	Submitter supports the Planning Proposal to an extent and agrees with the proposed clause to prevent overshadowing to the Parramatta River foreshore.	Noted.
		Submitter indicates the design sketch included in the Proposal does not include details for comments.	<p>As outlined in the Proposal, the concept design sketch is provided for reference and will be used as a basis for the future design process.</p> <p>Detailed design process for the theatre will be prepared and assessed at SSD Application stage.</p> <p>Further community consultation will be undertaken as part of the SSD application process.</p> <p><i>See response to Submission No.1 for further discussion on additional community consultation.</i></p>
24	Resident of Toongabbie	Submitter supports the Planning Proposal	Noted.
		Needs to ensure sufficient parking for theatre visitors and integrate open space with the future theatre.	<i>See response to parking contained in Submission No.2.</i>

25	Resident of Parramatta	Submitter supports the Planning Proposal and makes no further comments	Noted.
26	Resident of North Rocks	Submitter supports the Planning Proposal and makes no further comments	Noted.
27	Resident of Blaxland	Submitter supports the Planning Proposal and makes no further comments	Noted.
28	Resident of Terrigal	Submitter supports the Planning Proposal and makes no further comments	Noted.
29	Resident of Granville	Submitter supports the Planning Proposal	Noted.
		Submitter comments the Planning Proposal and accompanying FAQs are unclear about the next steps of the redevelopment of the Riverside Theatre.	<p>The Planning Proposal and its supporting document indicated that the next step of the redevelopment project involves a Design Excellence competition process to explore the detailed building design and articulation. The proposal falls under the definition of State Significant Development and so Council will need to lodge an application with the State government for approval. This process will include the Design Excellence process.</p> <p>Details of redevelopment project plan and management is <b>out of scope</b> of this Planning Proposal. Further community consultation will be undertaken as part of the SSD application process.</p> <p><i>See response to Submission No.1 for further discussion on additional community consultation.</i></p>
		Submitter comments that the Planning Proposal does not include detailed design of the future theatre.	<p>As outlined above, detailed building design of the future theatre is not within the scope of the Planning Proposal.</p> <p>The Planning Proposal made reference to the concept design for the redevelopment of theatre, which was endorsed by Council on 9 May 2022. The concept design addressed the core elements of the 'Reimagining Riverside' visioning document and explored the building envelope needed to deliver the redevelopment of the Riverside Theatre in response to the draft</p>



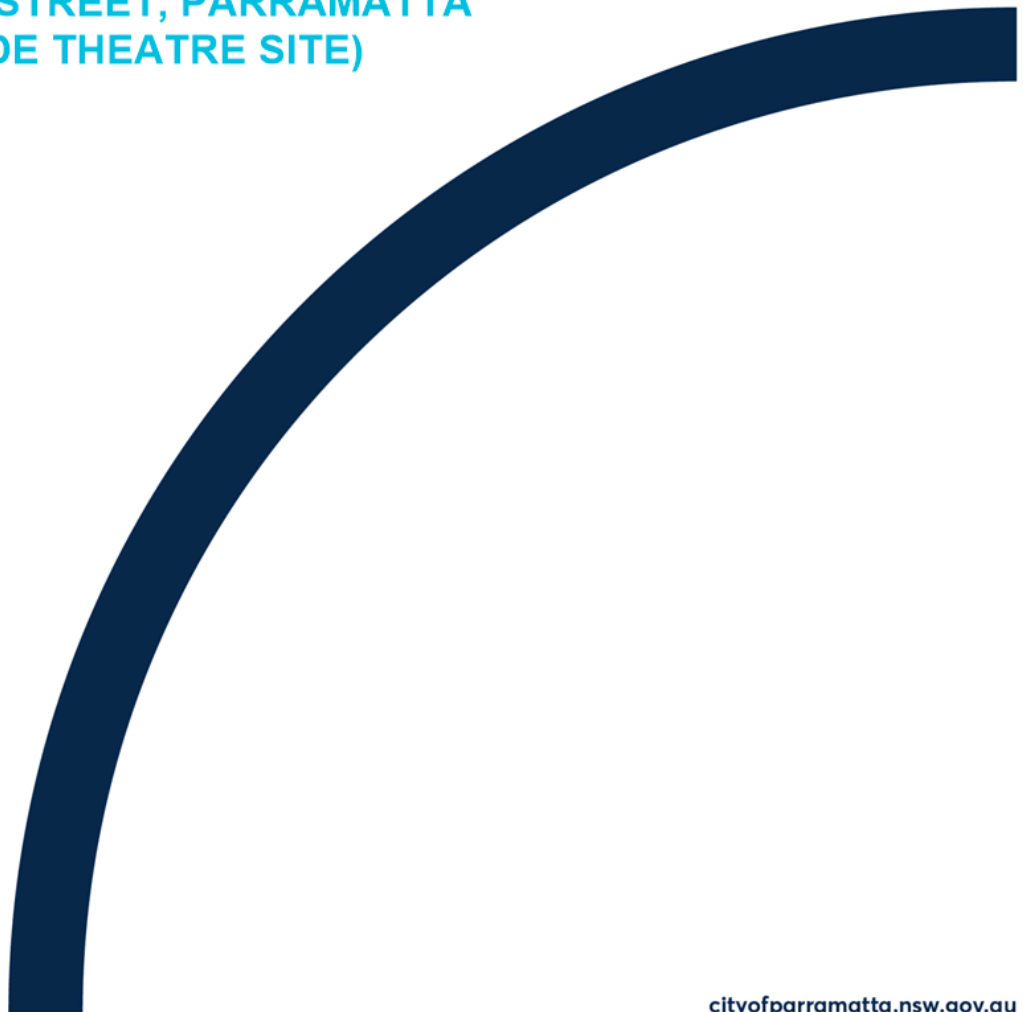
			<p>planning controls contained within the Council endorsed Parramatta CBD Planning Proposal.</p> <p>Detailed theatre design will be undertaken as part of a future design process and assessed at SSD Application stage.</p> <p>Further community consultation will be undertaken as part of the SSD application process.</p> <p><i>See response to Submission No.1 for further discussion on additional community consultation.</i></p>
		<p>Submitter also comments that the Riverside Theatre redevelopment business case adopted by Council in a closed session on 12 December 2022 did not include any community considerations and the estimated capital shortfall (stated in the Meeting minute) will generate substantial financial risks to ratepayers.</p> <p>Submitter seeks further details in relation to the budget plan and financial risk assessment undertaken for the redevelopment project.</p>	<p>The business case for the Riverside Theatre redevelopment was considered in a confidential report in accordance with the section 10A (2) (d) of the Local Government Act 1993. The report contained commercial information (i.e. budget plan and financial estimates) of a confidential nature that was considered to potentially have impacts on the commercial bidding process required as part of the next stage of the redevelopment project. Disclosing this financial information could compromise the competitive tender process for the project and result in bids being influenced by those involved in the tender.</p> <p>In addition, at its meeting of 12 December 2022, prior to moving into Closed Session, the Lord Mayor invited members of the public gallery to make representations as to why any item had been included in Closed Session. No member of the gallery wished to make representations in relation to the Riverside theatre redevelopment business case.</p> <p>Whilst a response has been provided above, comments regarding the financial costings / capital expenditure are out of scope of the Planning Proposal.</p> <p>Council approved the detailed business case and project plan for the redevelopment of the Riverside Theatre, but a separate</p>

			process (i.e. Planning Proposal) is needed to ensure the necessary planning controls are implemented within the Parramatta LEP 2011 to allow for the redevelopment project for the Riverside Theatre to progress.
		Submitter requests that, after finalisation of the Planning Proposal, further approval of the redevelopment project to be informed by extensive community consultation, particularly in relation to design options and project specifications.	<p>The redevelopment of the Riverside Theatre falls under the definition of State Significant Development. As such, following the finalisation of the Planning Proposal, Council will need to lodge an application with the State government for approval. The SSD process will be managed and determined by the State Government. Further community consultation is required and will be undertaken as part of the SSD process prior to the determination of the application.</p> <p>In addition to the SSD community consultation process, Council has been working with the Riverside Advisory Committee (the Committee) on key areas of the Riverside Theatre redevelopment project.</p> <p><i>See response to Submission No.1 for further discussion on additional community consultation.</i></p>
30	Resident of Parramatta	Submitter supports the Planning Proposal and makes no further comments.	Noted.
31	Resident of Parramatta	Submitter supports the Planning Proposal to an extent.	Noted.
		Submitter comments that the design excellence competition for the theatre should allow for equal competition amongst all architecture practices and not limited to selective major architecture firms.	The design excellence competition process for the redevelopment of the theatre will be managed by a separate project team. While this comment is out of scope of the Planning Proposal, this submission will be forwarded to the relevant project team managing the design competition process for information.



# PLANNING PROPOSAL

LAND AT 353A-353C CHURCH STREET AND PART OF 351  
CHURCH STREET, PARRAMATTA  
(RIVERSIDE THEATRE SITE)



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## PLANNING PROPOSAL –Riverside Theatre

## Planning Proposal Drafts

No.	Author	Version
1.	City of Parramatta	<b>August 2022:</b> Version attached to Local Planning Panel Meeting dated 16 August 2022 seeking advice to Council
2.	City of Parramatta	<b>October 2022:</b> Updated Planning Proposal following Council Meeting dated 26 September 2022
3	City of Parramatta	<b>November 2022:</b> Updated Planning Proposal for Public Exhibition following Gateway Determination dated 21 November 2022

# INTRODUCTION

This Planning Proposal explains the intended effect of, and justification for, the proposed amendment to Parramatta Local Environmental Plan 2011 relating to the land at 353A-353C Church Street and part of 351 Church Street, Parramatta (Riverside Theatre site).

The Planning Proposal has been prepared in accordance with Section 3.33 of the Environmental Planning and Assessment Act 1979 and the Department of Planning and Environment (DPE) guidelines, 'Local Plan Making Guideline (December 2021).

## Background

The Parramatta CBD is a hub of economic activity, essential services, natural assets, history, culture, and creativity. Constructed in 1988, the Riverside Theatre has served the community of Parramatta and Greater Sydney as a critical anchor performing arts facility for the last three decades. However, the current Riverside Theatre building is not fit for purpose in catering to the needs of the growing population.

The redevelopment of the Riverside Theatre to deliver a modernised and expanded performance space is an important infrastructure priority reflected in the City of Parramatta Council's cultural infrastructure plan titled 'A Cultural Plan for Parramatta's CBD 2017-2022'. Council has progressed with the preparation of a visioning document, concept reference design, and committed funding to redevelop the theatre. The redevelopment will give effect to the 'Reimagined Riverside Theatres' which is leveraging off considerable investments to increase the vibrancy of the CBD and boost the tourism offering along the Parramatta River foreshore.

The Parramatta CBD Planning Proposal (CBD PP) sought to establish the height controls needed to redevelop the theatre in line with the vision of Council. The concept design was prepared in response to the planning controls within the CBD PP. However, the DPE deferred the area north of the river from the CBD PP during its finalisation and retained the current height control for this site. The current height control does not enable the redevelopment of the site consistent with the concept reference design.

As a result, a Planning Proposal is needed to implement the necessary height and building envelope controls to allow for the concept design and redevelopment project to progress; and deliver a significant cultural asset within the Parramatta CBD.

## Land affected by this Planning Proposal

The Planning Proposal applies to the land at 353A-353C Church Street (Lot 2 DP 740382) and part of 351 Church Street, Parramatta (Lot 1 DP 740382) (the Site). The site is bound by Marsden Street to the west; Market Street to the north; Church Street to the east; and the Parramatta River Foreshore to the south (see **Figure 1**). The site has an approximate area of 7,000sqm.

The existing building is located on the eastern side of the site, with a frontage to Church Street and the river foreshore. The building contains three separate theatres and event spaces that attract more than 180,000 patrons to up to 1000 performances and events every year. Above-ground parking is located on the western side of the site on the corner of Market and Marsden Street.

Prince Alfred Park is located to the north of the site and plays an important contribution to open space within the Parramatta CBD. The Old King's Parade Ground is located to the west and contributes to Parramatta's unique heritage and river setting. The land to the east of the site on Church Street is developed with approximately 5-6 storey mixed use developments. Land to the



## PLANNING PROPOSAL – Riverside Theatre

south of the site along the southern edge of the river foreshore has undergone significant renewal. Specifically, the land directly opposite the site at 2 Phillip Street is being redeveloped for a 192m mixed use tower (i.e. 'The Lennox' development).

The site is shown in **Figure 1** below.



**Figure 1** – Site subject to the Riverside Theatre Planning Proposal

PLANNING PROPOSAL –Riverside Theatre

### **Current Planning Controls**

Under the provisions of the Parramatta Local Environmental Plan 2011, the following planning controls apply:

- B4 Mixed Use zone;
- Maximum Height of Building control of 15 metres; and
- Maximum Floor Space Ratio (FSR) of 3:1.

The site itself is not heritage listed; however, it is adjacent to the following heritage items projected under Schedule 5 of the PLEP 2011:

- Lennox Bridge (State Heritage Item I00750)
- Alfred Square (and potential archaeological site) (Local Heritage Item I686)
- Marsden Rehabilitation Centre (and potential archaeological site) (State Heritage Items I00826 and I00771)

Other controls relating to flooding and Acid Sulphate Soils are described and mapped in Part 4 of the Planning Proposal.



PLANNING PROPOSAL –Riverside Theatre

# PART 1 – OBJECTIVES OR INTENDED OUTCOMES

## Objective

To amend the Parramatta LEP 2011 to implement the necessary height and building envelope controls to:

- allow for the concept design and redevelopment project for the Riverside Theatre to progress following the site's removal from the Parramatta CBD Planning Proposal at finalisation.
- enable the timely delivery of a critical piece of cultural, social, and community infrastructure to meet the needs of the current and future population of the City of Parramatta and Greater Sydney.
- Fulfill the actions of Council's cultural infrastructure plan titled 'A Cultural Plan for Parramatta's CBD 2017-2022'

## Intended outcomes

To deliver a hybrid Riverside Theatre redevelopment scheme that has heights varying from approximately 13m along the riverfront and 28m towards Market Street; and includes the retention and upgrade of a portion of the existing theatre facility (primarily the 700-seat riverside space) and demolishes the remainder of the existing site to construct a new state-of-the-art multi venue arts centre that fully integrates with the retained and upgraded theatre elements.

The redevelopment compliments the Commbank Stadium, the imminent delivery of Powerhouse Parramatta, and the revitalised Eat Street Dining destination as the performing arts element of a major cultural, entertainment and dining precinct that serves Greater Sydney and leverages the significant investment in new transport infrastructure and links.

## PART 2 – EXPLANATION OF PROVISIONS

In order to achieve the desired objectives and outcomes detailed in Part 1, the following amendments to the Parramatta LEP 2011 (PLEP 2011) need to be made:

1. Amend the Maximum Height of Buildings Map (Sheet HOB\_009) to show a maximum building height of 28m from 15m (Refer to **Figure 12** in Part 4 of this Planning Proposal).
2. Amend the Key Sites Map to include the site and introduce a Site-Specific Clause within 'Part 7 Additional local provisions – Parramatta City Centre' that prevents new development generating any additional overshadowing to the southern side of the Parramatta River Foreshore between 12pm and 2pm; requires active street frontages; and specifies a maximum Design Excellence bonus of 15% (Refer to Part 4 for draft wording).

The increase in HOB from 15m to 28m is considered a modest increase (particularly given the current theatre has building elements at 25m); and no change is sought to the existing FSR control.

The concurrent application of the height control and site-specific clause is the simplest way to update the Parramatta LEP 2011 to implement the intent of the CBD PP, and provide the framework needed for the Riverside redevelopment to progress.

All other planning controls applying to the site will remain unchanged.

### Notes

As the site was removed from the finalisation of the CBD PP, the existing Parramatta LEP 2011 would allow for a Design Excellence bonus of up to 25% for a development that is all non-residential in the B4 zone. The site-specific clause is to reinstate the CBD PP bonus of 15%, and should it be awarded, could bring the maximum permitted height from 28m to 32m (i.e. 28m + 15%) and maximum FSR from 3:1 to 3.45:1 (i.e. 3:1 + 15%).

It is important to note that the concept design has been prepared at 28m and therefore a bonus is not relied upon to deliver on the initial concept design. Whilst the planning framework can award a 15% bonus under this site-specific clause, the utilisation will be determined as part of the competition process; and ultimately the final height and building envelope is subject to compliance to the Site-Specific Clause requiring no additional overshadowing to the southern side of the river foreshore

## PART 3 – JUSTIFICATION

This part describes the reasons for the proposed outcomes and development standards in the Planning Proposal.

### 3.1 Section A - Need for the Planning Proposal

This section establishes the need for a Planning Proposal in achieving the key outcome and objectives. The set questions address the strategic origins of the proposal and whether amending the LEP is the best mechanism to achieve the aims of the proposal.

In its current form, the building does not support the Riverside Theatre's ambition to grow its capacity, change, and adapt to new performance types and opportunities nor does it respond to the City's vision to reconnect with its river foreshore and public spaces. This Planning Proposal is critical to the progression and timely delivery of the Riverside Theatres redevelopment project.

#### 3.1.1 Is the Planning Proposal a result of an endorsed LSPS, strategic study or report?

Yes

Whilst the Planning Proposal is the direct result of the Department of Planning and Environment's (DPE) policy changes to the Parramatta CBD Planning Proposal (CBD PP) at finalisation, the Planning Proposal, and the intended outcome to deliver a new fit for purpose theatre, is to support the implementation of Council's endorsed LSPS and other state and local strategies.

The Planning Proposal will result in the delivery of critical cultural infrastructure needed to service the current and future population of both Parramatta and Greater Sydney. The LSPS emphasises the importance of cultural and social infrastructure in supporting growth and access to the arts for the LGA and district, and the Planning Proposal will deliver on the LSPS's objective to match growth with infrastructure to make Parramatta a liveable, sustainable, and productive city. More detail with the alignment of the Planning Proposal with the local and state planning framework is contained in Section 3.2.1.

#### 3.1.2 Is the Planning Proposal the best means of achieving the objectives or intended outcomes, or is there a better way?

Yes

The Planning Proposal is needed to implement the necessary height control to allow for the concept reference design and redevelopment project for the Riverside Theatre to progress in line with the vision of Council.

The Planning Proposal is a consequence of the Department of Planning and Environment's (DPE) finalisation of the Parramatta CBD Planning Proposal (CBD PP). The CBD PP established the height control needed to redevelop the theatre in line with the vision of Council. The concept design was prepared in response to the planning controls within the CBD PP. However, the DPE deferred the area north of the river from the CBD PP during its finalisation and retained the current height control for this site. The current height control does not enable the redevelopment of the site consistent with the concept reference design.

## PLANNING PROPOSAL –Riverside Theatre

Waiting for a future review of the land north of the Parramatta River (which is anticipated to commence in 2023 and would take two to three years to complete) would cause delays to the progression of the Council prepared concept design for the Riverside Theatre. Therefore, a Planning Proposal is the most effective way of providing certainty to Council and the local community; and allows for the orderly and economic development of the land.

### 3.2 Section B – Relationship to strategic planning framework

This section assesses the relevance of the Planning Proposal to the directions outlined in key strategic planning policy documents. Questions in this section consider state and local government plans including the NSW Government's Plan for Growing Sydney and subregional strategy, State Environmental Planning Policies, local strategic and community plans and applicable Ministerial Directions.

#### 3.2.1 Will the Planning Proposal give effect to the objectives and actions of the applicable regional, or district plan or strategy (including any exhibited draft plans or strategies)?

The Planning Proposal has strategic merit with both state and local planning frameworks. The redevelopment of the Riverside Theatre to modernise and increase its capacity supports Parramatta's growth as the Central River City and aligns with the overarching policy position to deliver cities that are productive, liveable, and sustainable. The growing population of the City of Parramatta and Greater Sydney emphasise the necessity of the redevelopment to ensure the venue is 'fit for purpose'. The Planning Proposal will enable the efficient redevelopment of critical cultural infrastructure that services the local and broader communities.

Strategies relevant to this Planning Proposal are discussed below.

#### A Metropolis of Three Cities

The *Greater Sydney Region Plan: A Metropolis of Three Cities* (the GRSP) released by the State Government in March 2018 promotes the transformation of Sydney into a city of cities where people can access their place of work, education, and recreation within 30 minutes of their home.

The three cities framework includes: the Eastern Harbour City, the Central River City and the Western Parkland City. The Parramatta CBD is identified as the metropolitan centre for the Central River City, and the Parramatta LGA is one of four LGA's making up the Central City District (along with The Hills Shire, Cumberland, and Blacktown).

In addition to the '30-minute city' initiative, among other policies, the GRSP provides a clear directive to:

- Grow Greater Parramatta as the Central River City core, building on its increasingly strong economic function;
- Enhance arts and cultural spaces in the Parramatta CBD, making the CBD a centre of cultural life; and
- Improve the environment to support better liveability and environmental services.

The redevelopment of the Riverside Theatre, as facilitated by this Planning Proposal, aligns with the objectives of the Greater Sydney Region Plan in delivering a '30 minute city' where people can live, work, and recreate within 30 minutes of their home. The redevelopment and expansion of the theatre will reinforce the theatre's role as an anchor venue in Parramatta; attract a large network of performers; house larger audiences; and offer more



## PLANNING PROPOSAL –Riverside Theatre

productions. This expanded and diversified cultural offering will support the Parramatta CBD as a destination for entertainment, will help reduce the need for travel to the Sydney CBD, the eastern harbor city. This aligns with the key policy framework of the GSRP.

The GSRP is structured under four themes: Infrastructure and Collaboration, Liveability, Productivity and Sustainability. Within these themes are 10 directions which each contain a Potential Indicator and, generally, a suite of objective/s with each objective supported by a Strategy or Strategies. This Planning Proposal is consistent with the vision and directions of the GSRP.

### Infrastructure and Collaboration

An assessment of the Planning Proposal's consistency with the GSRP's relevant Infrastructure and Collaboration objectives is provided in Table 3a.

**Table 3a** – Consistency of Planning Proposal with relevant GSRP Actions – Infrastructure and Collaboration

Infrastructure and Collaboration Direction	Relevant Objective	Comment
<b>A city supported by infrastructure</b>	<b>O1:</b> Infrastructure supports the three cities <b>O3:</b> Infrastructure adapts to meet future need <b>O4:</b> infrastructure use is optimised	<p>This Planning Proposal contributes to the delivery of critical cultural infrastructure that is needed to support Greater Sydney's growth as a city of three cities. The redevelopment of the theatre supports the '30-minute city' by providing cultural infrastructure to the population of the Central River City area (and Greater Sydney more broadly). This removes the need to travel to the Eastern Harbour City for cultural and social experiences. The Planning Proposal supports both O1 and O3 in providing expanded and 'fit for the future' critical infrastructure. It also plays an important contribution to the cultural infrastructure precinct formed by the new Museum of Applied Arts and Sciences (MAAS) being delivered on the southern side of the Parramatta River. The co-location of the two cultural institutions optimises visitation and the likely patronage of both facilities.</p> <p>The Planning Proposal also responds to O4 by supporting and increasing patronage on State Government infrastructure investment in the way of Parramatta Light Rail (PLR) Stage 1 (currently under construction and is expected to open in 2023) and the future Sydney Metro West.</p> <p>The Planning Proposal will facilitate the revitalisation of significant cultural infrastructure on a site that is within 350m from the Parramatta Light Rail stop at Prince Alfred Park. This gives future users optimum access to Light Rail and bus services, consistent with the direction and objective.</p>

### Liveability

An assessment of the Planning Proposal's consistency with the GSRP's relevant Liveability objectives is provided in Table 3b, below.

## PLANNING PROPOSAL – Riverside Theatre

**Table 3b – Consistency of Planning Proposal with relevant GSRP Actions – Liveability**

Liveability Direction	Relevant Objective	Comment
<b>A city for people</b>	<b>O6:</b> Services and infrastructure meet communities' changing needs	This Planning Proposal supports the unprecedented growth planned under the Parramatta CBD Planning Proposal; key strategic precincts across Greater Parramatta; and more broadly, Greater Sydney.
	<b>O7:</b> Communities are healthy, resilient and socially connected	The Planning Proposal will enable the delivery of an iconic cultural venue and provide an opportunity for residents and visitors to connect and access an expanded Riverside Theatre.
	<b>O8:</b> Greater Sydney's communities are culturally rich with diverse neighbourhoods	State Government investment in Bankwest Stadium and the Museum of Applied Arts and Sciences (MAAS) will also support Parramatta CBD as an active, innovative and creative hub as will local investment such as the Civic Link and Parramatta Square redevelopment.
	<b>O9:</b> Greater Sydney celebrates the arts and supports creative industries and innovation	In addition, Council's cultural infrastructure plan titled 'A Cultural Plan for Parramatta's CBD 2017-2022' (Cultural Plan) recognises and emphasises the important contribution the Riverside Theatre plays in Parramatta's cultural identity, and the need to ensure it continues to offer a diverse range of social and cultural infrastructure and experiences to support its growth as the Central River City.
<b>A city of great places</b>	<b>O12:</b> Great places that bring people together	The Planning Proposal will showcase our cultural identity and asset with world-class facilities, creating an opportunity to bring people together, consistent with the direction and objective.  This will also create opportunities to boost the Night Time Economy.

**Productivity**

An assessment of the Planning Proposal's consistency with the GSRP's relevant Productivity objectives is provided in Table 3c, below.

**Table 3c – Consistency of Planning Proposal with relevant GSRP Actions – Productivity**

Productivity Direction	Relevant Objective	Comment
<b>A well-connected city</b>	<b>O14:</b> The plan integrates land use and transport creates walkable and 30 minute cities	The Planning Proposal will facilitate the redevelopment of the Riverside Theatre and support the '30-minute city' by providing cultural infrastructure to the population of Greater Parramatta (and Greater Sydney more broadly). This removes the need to travel to the Eastern Harbour City for cultural and social experiences.  The Planning Proposal will facilitate an increase in cultural and entertainment space

## PLANNING PROPOSAL –Riverside Theatre

		within the Parramatta CBD, and connects the CBD's workers, residents, and visitors to an expanded cultural facility. The location of the site near a light rail stop at Prince Alfred Square, and other bus routes, integrates land use and transport consistent with this direction and objective.
	<b>O15:</b> The Eastern, GOP and Western Economic Corridors are better connected and more competitive	The Planning Proposal would deliver an expanded cultural facility and help drive further investment in the arts by providing a 'fit for purpose' theatre space that is flexible, inclusive and suitable for exhibitions and performances. The co-location of the theatre to the MAAS and other retail offerings of the Parramatta CBD will support the competitiveness of the economy and the city.  The Planning Proposal would also contribute to the strength of the Parramatta CBD by providing additional employment opportunities in a manner that supports the recently finalised Parramatta CBD Planning Proposal.
<b>Jobs and skills for the city</b>	<b>O19:</b> Greater Parramatta is stronger and better connected	The Planning Proposal will contribute to the role of Greater Parramatta as a metropolitan centre; and support the significant infrastructure investments led by local and state government designed to improve connectivity to Greater Parramatta from other strategic centres including Parramatta Light Rail (Stage 1 and 2) and Sydney Metro West. The redeveloped theatre will attract further investment in the performing arts, form an extension of the cultural precinct formed by the MAAS, and encourage visitation to the Parramatta CBD by both Greater Parramatta and Greater Sydney.  The Planning Proposal is consistent with this direction and objectives, and will assist in strengthening the local economy, job creation, and long term investment in the performing arts.
	<b>O22:</b> Investment and business activity in centres	

**Implementation**

An assessment of the Planning Proposal's consistency with the GSRP's relevant Implementation objectives is provided in Table 3d, below.

**Table 3d – Consistency of Planning Proposal with relevant GSRP Actions – Implementation**

Implementation Direction	Relevant Objective	Comment
<b>Implementation</b>	<b>O39:</b> A collaborative approach to city planning	This Planning Proposal aims to promote orderly development that aligns with local, district and regional planning frameworks. The Planning Proposal will help address the historical imbalance of cultural investment across Greater Sydney, which currently presents a challenge for Parramatta to achieve rounded growth and fulfill

## PLANNING PROPOSAL –Riverside Theatre

		<p>its role as the Central River City and deliver on the State Government's '30 minute city' policy within the GSRP.</p> <p>The provision and expansion of cultural infrastructure is critical in delivering Parramatta as a liveable, sustainable, and productive place for the current and future populations of both the City of Parramatta and the Greater Sydney Region.</p> <p>The Planning Proposal will support the implementation of elements of the Parramatta CBD strategic planning work completed by Council. The Planning Proposal also supports State led initiatives that integrate land use planning with cultural infrastructure planning.</p>
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**Central City District Plan**

The *Central City District Plan* (CCDP) is a 20-year plan to guide the implementation of the *Greater Sydney Region Plan - A Metropolis of Three Cities* at a district level and is a bridge between regional and local planning. The Central City District comprises of The Hills, Blacktown, Cumberland and Parramatta local government areas.

Taking its lead from the GSRP, the CCDP is also structured in four themes relating to Infrastructure and Collaboration, Liveability, Productivity and Sustainability. Within these themes are Planning Priorities which are each supported Action. Those Planning Priorities and Actions relevant to this Planning Proposal are discussed below.

**Infrastructure and Collaboration**

An assessment of the Planning Proposal's consistency with the CCDP's relevant Infrastructure and Collaboration Priorities and Actions is provided in Table 4a, below.

**Table 4a – Consistency of Planning Proposal with relevant CCDP Actions – Infrastructure and Collaboration**

Infrastructure and Collaboration Direction	Planning Priority/Action	Comment
<p><b>A city supported by infrastructure</b></p> <p><b>O1:</b> Infrastructure supports the three cities</p> <p><b>O2:</b> Infrastructure aligns with forecast growth – growth infrastructure compact</p> <p><b>O3:</b> Infrastructure adapts to meet future need</p> <p><b>O4:</b> Infrastructure use is optimised</p>	<p><b>PP C1: Planning for a city supported by infrastructure</b></p> <ul style="list-style-type: none"> <li><b>A1:</b> Prioritise infrastructure investments to support the vision of <i>A metropolis of three cities</i></li> <li><b>A3:</b> Align forecast growth with infrastructure</li> <li><b>A4:</b> Sequence infrastructure provision using a place based approach</li> <li><b>A5:</b> Consider the adaptability of infrastructure and its potential shared use when preparing infrastructure strategies and plans</li> <li><b>A6:</b> Maximise the utility of existing infrastructure assets and consider strategies to influence behaviour changes to reduce the demand for new infrastructure, supporting the development of adaptive and</li> </ul>	<p>The Planning Proposal would enable the delivery of an expanded Riverside Theatre within an area well serviced by existing public transport infrastructure in the way of trains along the Western Line, an extensive bus network, and a ferry service up and down the Parramatta River. These services are currently utilised by theatre patrons.</p> <p>However, importantly, the site is within walking distance to the future Parramatta Light Rail stop located at Prince Alfred Square, which is currently under construction as part of Stage 1 of the project and is expected to open in 2023.</p> <p>Parramatta Light Rail is one of the NSW Government's major infrastructure projects that will connect Westmead to Carlingford via the Parramatta CBD and Camellia with a two-way track spanning 12</p>



## PLANNING PROPOSAL –Riverside Theatre

	flexible regulations to allow decentralised utilities	<p>kilometres. The route will link Parramatta's CBD and train station to the Westmead Health Precinct, Cumberland Hospital Precinct, CommBank Stadium, the Camellia Town Centre, the MAAS site, Telopea, Rosehill Gardens Racecourse, and three Western Sydney University campuses.</p> <p>Parramatta Light Rail Stage 1 will be completed in 2023, prior to the redevelopment of the Riverside Theatre. The completion of this infrastructure in advance of the new theatre opening will result in the site being more accessible to visitors across Greater Parramatta, and assists in providing active and public transport options.</p> <p>The utilisation of existing and future transport infrastructure; timeline for development; and support for current and future growth align with the Planning Priority and Actions.</p>
<b>O5:</b> Benefits of growth realized by collaboration of governments, community and business	<p><b>PP C2:</b> Working through collaboration</p> <ul style="list-style-type: none"> <li>• <b>A7:</b> Identify prioritise and delivery collaboration areas</li> </ul>	<p>State and local planning has identified the need to deliver additional and expanded cultural infrastructure within Parramatta as the Central River City to support the '30-minute city' and provide anchor facilities for world class performing arts. The distribution of cultural infrastructure is well recognised across state and local planning frameworks and would deliver on previous commitments to support the arts within Greater Sydney.</p> <p>This Planning Proposal delivers on this priority and the delivery of a new cultural facility will also generate positive benefits to the local economy through increased retail trade, visitation, and jobs. These are all deliverables captured within the CCDP and align with the Planning Priority and Actions.</p>

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**Liveability**

An assessment of the Planning Proposal's consistency with the CCDP's relevant Liveability Priorities and Actions is provided in Table 4b, below.

**Table 4b – Consistency of Planning Proposal with relevant CCDP Actions – Liveability**

Liveability Direction	Planning Priority/Action	Comment
<b>A city for people</b> <b>O6:</b> Services and infrastructure meet communities' changing needs	<b>PP C3: Provide services and social infrastructure to meet people's changing needs</b> <ul style="list-style-type: none"> <li>• <b>A8:</b> Deliver social infrastructure that reflects the need of the community now and in the future</li> <li>• <b>A9:</b> Optimise the use of available public land for social infrastructure</li> </ul>	<p>The Planning Proposal addresses Council's cultural infrastructure plan titled 'A Cultural Plan for Parramatta's CBD 2017-2022' (Cultural Plan) that recognises and emphasises the important contribution the Riverside Theatre plays in Parramatta's cultural identity, and the need to ensure it continues to offer a diverse range of social and cultural infrastructure and experiences to support its growth as the Central River City.</p> <p>The Planning Proposal also responds to the cultural and social infrastructure needs identified within the Parramatta Community Infrastructure Strategy 2020, which outlines the social infrastructure required to meet the needs of Parramatta's current and future community.</p> <p>The provision and expansion of cultural infrastructure is critical in delivering Parramatta as a liveable, sustainable, and productive place for the current and future populations of both the City of Parramatta and the Greater Sydney Region. This meets the Planning Priority and Actions of the CCDP.</p>
<b>O7:</b> Communities are healthy, resilient and socially connected <b>O8:</b> Greater Sydney's communities are culturally rich with diverse neighbourhoods <b>O9:</b> Greater Sydney celebrates the arts and supports creative industries and innovation	<b>PP C4: Working through collaboration</b> <ul style="list-style-type: none"> <li>• <b>A10:</b> Deliver healthy, safe and inclusive places for people of all ages and abilities that support active, resilient and socially connected communities by (a-d).</li> <li>• <b>A11:</b> Incorporate cultural and linguistic diversity in strategic planning and engagement.</li> <li>• <b>A14:</b> Facilitate opportunities for creative and artistic expression and participation, wherever feasible with a minimum regulatory burden including (a-c).</li> <li>• <b>A15:</b> Strengthen social connections within and between communities through better understanding of the nature of social networks and supporting infrastructure in local places</li> </ul>	<p>The growing population of Parramatta, as well as the population from the surrounding district will create a demand for arts and cultural services and facilities within the Parramatta CBD as advocated in the City's Cultural Plan. Therefore the Planning Proposal is consistent with the vision for a well-connected city and will respond to the growing demand for new cultural facilities.</p> <p>As stated above, the Planning Proposal is consistent with the objectives outlined in Culture and Our City: A Cultural Plan for Parramatta's CBD 2017-2022.</p>

## PLANNING PROPOSAL –Riverside Theatre

**Productivity**

An assessment of the Planning Proposal's consistency with the CCDP's relevant Productivity Priorities and Actions is provided in Table 4c, below.

**Table 4c – Consistency of Planning Proposal with relevant CCDP Actions – Productivity**

Productivity Direction	Planning Priority/Action	Comment
<b>A well-connected city</b> <b>O19:</b> Greater Parramatta is stronger and better connected	<b>PP C7: Growing a stronger and more competitive Greater Parramatta</b> <ul style="list-style-type: none"> <li><b>A23:</b> Strengthen the economic competitiveness of Greater Parramatta and grow its vibrancy [abridged]</li> <li><b>A26:</b> Prioritise infrastructure investment [abridged]</li> </ul>	<p>Consistent with this Planning Priority, the Planning Proposal would strengthen Parramatta's position as the metropolitan centre of the Central River City by creating opportunities to support the delivery of infrastructure investments.</p> <p>The Planning Proposal will also contribute to the night-time economy of Greater Parramatta and attract visitors, strengthening the economic competitiveness of Parramatta.</p> <p><i>See response above to O14 of the GRSP.</i></p>
<b>Jobs and skills for the city</b> <b>O15:</b> The Eastern, GPOP and Western Economic Corridors are better connected and more competitive	<b>PP C8: Delivering a more connected and competitive GPOP Economic Corridor</b> <ul style="list-style-type: none"> <li><b>A29:</b> Prioritise public transport investment to deliver the 30-minute city objective for strategic centres along the GPOP Economic Corridor</li> <li><b>A30:</b> Prioritise transport investments that enhance access to the GPOP between centres within GPOP</li> </ul>	<p>The Planning Proposal will deliver upgraded cultural infrastructure in close proximity to existing and future public transport infrastructure. This will allow the communities within the GPOP Economic Corridor to access cultural infrastructure within 30 minutes of their homes, reducing the reliance on the Eastern Harbour City.</p> <p>The upgraded Riverside Theatre will deliver a high quality cultural venue that will improve access to, and grow, the creative industry of the GPOP corridor. This will support the needs of the growing population and creative sector, and have a positive economic impact.</p> <p>The Riverside Theatre's location on the Parramatta Light Rail network, and other existing and future public transport, will result in the population of the GPOP corridor being well connected to resulting job and economic opportunities.</p> <p>These include:</p> <ul style="list-style-type: none"> <li>Patron visitations growth forecast to reach 200,000 in 2026/27, growing to over 350,000 by 2035.</li> <li>Minimum \$20m direct positive impact to City of Parramatta's local and night-time economy from box office, dining and ancillary visitor spend annually.</li> <li>Over 6,900 visitor room nights booked annually, growing to &gt;10,000 by 2035</li> </ul>

## PLANNING PROPOSAL –Riverside Theatre

		<ul style="list-style-type: none"> <li>Over 600 jobs created in the construction, theatre operations and creative arts industries over the next 5 years</li> <li>Over 100 jobs created annually ongoing</li> </ul> <p>See response above to O15 of the GRSP.</p>
O14: The plan integrates land use and transport creates walkable and 30 minute cities	<p><b>PP C9: Delivering integrated land use and transport planning and a 30-minute city</b></p> <ul style="list-style-type: none"> <li><b>A32:</b> Integrate land use and transport plans to deliver a 30-minute city</li> </ul>	<p>The Planning Proposal will facilitate an increase in cultural and entertainment space and provide opportunities for additional jobs within walking distance to the Prince Alfred Light Rail stop, integrating land use and transport, consistent with this direction and objective.</p> <p>See response above to O19 and O22 of the GRSP.</p>

### 3.2.2 Is the Planning Proposal consistent with the local council's LSPS that has been endorsed by the Planning Secretary or GSC, or another endorsed local strategy or strategic plan?

This Planning Proposal is consistent with Council's strategic planning framework and other endorsed local strategies. The following local strategic planning documents are relevant to the Planning Proposal.

#### Parramatta 2038 Community Strategic Plan

Parramatta 2038 is a long term Community Strategic Plan for the City of Parramatta and it links to the long-term future of Sydney. The plan formalises several big and transformational ideas for the City and the region, including the following:

- the development of Parramatta CBD, Westmead, Camellia and Rydalmere;
- a Light Rail network and Local and Regional Ring Roads;
- the Parramatta River entertainment precinct; and
- a connected series of parks and recreation spaces.

The Planning Proposal is considered to meet the strategies and key objectives identified in the plan including to help build the City as a centre of high, value-adding employment and a driving force behind a generation of prosperity for Western Sydney.

#### Parramatta Local Strategic Planning Statement 2020

The City of Parramatta's Local Strategic Planning Statement (LSPS) 'City Plan 2036' came into effect on 31 March 2020. The LSPS sets a 20-year land use planning vision for the City. It balances the need for housing and economic growth, while also protecting and enhancing housing diversity, heritage, local character and the City's environmental assets as well as improve the health and liveability of the City.

This Planning Proposal meets the planning priorities and policy directions in the LSPS. One of the Local Planning Priorities in the LSPS is to provide strategic direction on expanding Parramatta's economic role as the Central City of Greater Sydney. The proposed redevelopment of the Riverside Theatre represents one of many cultural infrastructure projects that are needed to enable Parramatta to thrive as the Central City.



## PLANNING PROPOSAL –Riverside Theatre

This Planning Proposal is fundamental to improving the social and cultural offering of the City to residents, visitors and workers. The proposed redevelopment responds to the provision of community infrastructure and recreation opportunities within the City of Parramatta, one of the Local Planning Priorities in the LSPS. The site will provide an enhanced community asset that benefits from convenient access to key transport nodes, including the Parramatta Light Rail, bus stop interchanges and public spaces. Therefore, this Planning Proposal is consistent with the priorities and supports the delivery of the strategic vision for Parramatta.

A copy of the LSPS as endorsed by Council and assured by the GSC in March 2020 can be accessed via <https://www.cityofparramatta.nsw.gov.au/lsp>.

**Community Infrastructure Strategy 2020**

The City of Parramatta's Community Infrastructure Strategy (CIS) was approved by Council on 13 July 2020. The CIS outlines the City's long term direction for community infrastructure provision across the City of Parramatta. It aims to support the City of Parramatta's fast-paced growth by identifying priorities for future community infrastructure; and will be used to inform planning, funding, delivering and negotiating for community infrastructure.

The CIS identifies five key considerations for community infrastructure planning in the Parramatta CBD:

1. Meeting demand from a growing community
2. Supporting a diverse community
3. Providing local and metropolitan level community infrastructure
4. Meeting the needs of residents living in high density
5. Fostering equity

The Planning Proposal responds to the cultural and social infrastructure needs and considerations identified within the CIS. The provision and expansion of cultural infrastructure is critical in delivering Parramatta as a liveable, sustainable, and productive place for the current and future populations of both the City of Parramatta and the Greater Sydney Region. The expanded theatre will contribute to cultural investment within the Central River City and deliver greater access to the performing arts for the population of Greater Sydney.

A copy of the CIS can be accessed via <https://www.cityofparramatta.nsw.gov.au/cis>

**Parramatta Cultural Plan and Our City: A Cultural Plan for Parramatta's CBD 2017-2022**

'Cultural Plan for Parramatta's CBD 2017-2022' (Cultural Plan) sets a long-term vision for the City of Parramatta to support the role of Parramatta as Sydney's Central City. The Cultural Plan includes directions, goals and actions for cultural activation and a creative community, identifying that 'Diversity is our strength and everyone is welcome' as a key goal for culture in the city.

The Cultural Plan recognises the important contribution the Riverside Theatre plays in Parramatta's cultural identity and identifies the redevelopment of the theatre as a leading community priority.

The current Riverside Theatre building and facilities:

- do not satisfactorily meet current or expected future demand;

## PLANNING PROPOSAL –Riverside Theatre

- do not have a positive and interactive relationship with Church Street, the new Parramatta Light Rail, or the eastern view of the river towards the MAAS development site;
- space restrictions which limit what populist and commercially viable events can be attracted; and overall
- does not support Parramatta's transformation into a City enriched by its culture and creativity.

This Planning Proposal is required to enable the redevelopment of the Riverside Theatres by providing the planning controls needed to achieve the concept design for the redevelopment project. The concept design (as described in Part 2 intended outcomes) will meet future demand for high quality, diverse performance from Australia and the world, as well as providing an outlet for local professional and community performance activity and content. This will deliver on the objectives of the Cultural Plan.

### **Reimagining Riverside Theatres: Vision, Priorities, Design 2018**

Expanding on the objectives of the Cultural Plan, Council developed the 'Reimagining Riverside Theatres; Vision, Priorities, Design' visionary document. This was endorsed by Council on 26 November 2018 and sets out the vision and priorities for the new theatre and provides principles to guide design towards a compelling performing arts centre fit for the Central City. The case for redevelopment is supported by project initiatives related to the Museum of Applied Arts and Sciences, which collectively, form anchor venues in the Parramatta CBD located outside the Eastern City.

This Planning Proposal gives effect to the strategic intent of the Reimagining Riverside Theatres and aligns with the needs of the City and future growth.

### **Parramatta City River Strategy 2015**

Endorsed by Council in 2015, the Parramatta City River Strategy (City River Strategy) is a comprehensive plan to transform the City River Foreshore into a vibrant public space that connects to the city, celebrates the history and culture of the Parramatta River, and is resilient to flooding.

The City River Plan as outlined in the City River Strategy proposes a world class public domain and high quality of new buildings that connect active spaces around the Parramatta River Foreshore (City River Corridor). Further, the City River Strategy provides a framework for public domain works along the river foreshore. The revitalisation of Parramatta Quay is being realised through several landmark projects, including the Parramatta Ferry Wharf Upgrade (completed), the Escarpment Boardwalk (construction 2020), and the Charles Street Square Upgrade (design 2020).

The Riverside Theatre is identified as part of the Cultural Quarter of the series of distinctive river quarters in the City River Strategy. This Planning Proposal is consistent with the City River Strategy in that the increased height of building controls will enable the delivery of a new Riverside Theatre, and contribute to the realisation of the City River Strategy and overall vision for the river foreshore.

### **Parramatta CBD Local Infrastructure Contributions Plan 2021**

As part of the Parramatta CBD Planning Proposal framework, Council prepared the Parramatta CBD Local Infrastructure Contributions Plan 2021 (Contributions Plan). This Contributions Plan includes a program of cultural facility projects which includes the knock down and rebuild of the existing Riverside Theatres (\$200 million).

## PLANNING PROPOSAL –Riverside Theatre

The Planning Proposal is needed to deliver on the program of works relating to the Riverside Theatre within the Contributions Plan, and provide the necessary infrastructure needed to support the anticipated growth from the Parramatta CBD PP and Greater Sydney. The works and estimated costs relevant to the Riverside are included in **Table 5** below. These have been informed by Council's Community Infrastructure Strategy and Cultural Plan.

**Table 5** - Summary of schedule of works relevant to Planning Proposal as listed in CBD Local Infrastructure Contributions Plan 2021

Community Facilities Strategy			
Performing Arts Facilities			
Item/description	Location	Estimated Cost	Timing
Item 8. Anchor Facility: Knock down and rebuild of the existing Riverside Theatres to deliver modernised facility that includes rehearsal, presentation, and production spaces.	Existing site on river foreshore (Riverside Theatre site)	\$200,000,000	Short (1-5 years)
Item 9. Riverside Performing Arts Rehearsal and Training Studio (1,000sqm)	Close to public transport is essential; ideally in City Centre	\$1,720,520	Short (1-5 years)
Item 10. Performing Arts Rehearsal and Training Space with capacity to accommodate First Nations Dance and ballet (1,000sqm)	Close to public transport is essential; ideally in City Centre	\$1,720,520	Short (1-5 years)
Open Space and recreation Works			
Parramatta River Foreshore Parcel upgrades			
Item/description	Location	Estimated Cost	Timing
Item 8. Riverside Theatre foreshore upgrade to support the Riverside Theatre and provide a terrace along the river corridor to support a range of outdoor cultural events.	North Bank between Bernie Banton and Lennox Bridge	\$17,974,000	Short (1-5 years)

(Source: Endorsed CBD Local Infrastructure Contributions Plan 2021)

The Planning Proposal is needed to ensure the necessary planning controls to redevelop the theatre and deliver on the work items within the Contributions Plan.

#### Parramatta Night City Framework 2020-2024

The Parramatta Night City Framework sets out the strategic plan for the development of a night city that supports the economy, the social and cultural offering of the City, and environment. The Night City Framework is key to guiding Council as it transitions to becoming a 24-hour city centred on the Parramatta CBD, supported by strategic and local centres, to cement Parramatta as the Central City of Greater Sydney.

The Night City Framework identifies the redevelopment of the Riverside Theatres as a central component to the realisation of a night city in Parramatta that celebrates arts, culture and performance at its core.

The Planning Proposal will support the delivery and achievement of the Night City Framework and deliver a critical anchor performing arts facility that will active the river foreshore, attract visitors, supplement retail along Eat Street, and continue to build on the 30- year legacy of the existing theatre.



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**Parramatta CBD Planning Proposal*****Background***

Initiated in 2013, the Parramatta CBD Planning Proposal (CBD PP) was a Council led planning proposal to support Parramatta's transform as Sydney's Central City.

The CBD PP proposed changes to the land use mix and built form controls within the PLEP 2011 to deliver 46,000 new jobs and 15,000 new dwellings over the next 40 years. New controls to support this growth and protect key elements that make a city liveable, sustainable, and productive were also proposed. The CBD PP was to enable and support the significant growth planned for the CBD, with the planning proposal being recognised as priorities in the GSRP and CCDP.

***Parramatta CBD Planning Proposal (as endorsed by Council on 15 June 2021)***

On 15 June 2021, Council endorsed the CBD PP to be submitted to the Department of Planning and Environment (DPE) for finalisation following the public exhibition process held from 21 September to 2 November 2020. The Council endorsed CBD PP included the land north of the river (i.e. North Parramatta)

The CBD PP proposed changes to the built form controls across the North Parramatta precinct (including the Riverside Theatre site). These changes were informed by specialist studies pertaining to urban design and heritage to help deliver appropriate built form outcomes that allow for new development whilst limiting additional overshadowing to key public spaces (including the Parramatta River Foreshore) and that achieved a suitable transition to sensitive areas such as Heritage Conservation Areas and Prince Alfred Park.

***Parramatta CBD Planning Proposal (as finalised by DPE on 6 May 2022)***

On 6 May 2022, DPE finalised the CBD PP via the making of Amendment No 56 to the Parramatta Local Environmental Plan 2011. The new provisions are not due to take effect until 14 October 2022 to allow for the draft Parramatta CBD Local Infrastructure Contributions Plan to be finalised.

As part of the finalisation process, DPE made some key policy changes to the CBD PP as adopted by Council on 15 June 2021. The policy change most relevant to the Riverside Theatre site was the removal of the land north of the Parramatta River (i.e. North Parramatta) from the CBD PP with the existing land use and built form controls to be retained.

The redevelopment of the Riverside Theatre as per Council's concept design was contingent on the Council endorsed version of CBD PP being finalised. The Council adopted CBD PP established the height control needed to redevelop the theatre in line with the vision of Council - the removal of North Parramatta from the CBD PP by DPE puts the development timetable at risk.

Council considered its position on the changes made to the Council endorsed CBD Planning Proposal when the Minister finalised the plan at its meeting of 25 July 2022. The portion of the Council resolution relevant to North Parramatta and the subject site reads:

***"North Paramatta***

***(d) That Council write to the Minister for Planning and the Department:***

***(1) Seeking funding for a Study for North Parramatta that incorporates urban design, heritage and economic analysis and additional temporary staff to manage the project (estimated at up to \$500,000).***

## PLANNING PROPOSAL – Riverside Theatre

(2) Advising that Council will not commence the Study until confirmation of funding and in-kind support has been provided.

(3) Seeking advice on how Council manage any new SSPPs lodged for sites north of the river prior to completion of the Study and associated plan amendment.

**EXCEPTIONS**

(e) Further, that Council note that new SSPPs for sites within any part of the CBD that do not:

1 seek any increase in FSR, or

2 seek to amend other planning controls that are being considered in the SEPP process(es) described in (c) above

will be processed by Council (examples include proposals for minor changes in height with no increase in FSR or changes to parking rates or acquisitions)."

This Planning Proposal meets the criteria to be considered as an exception. Proceeding with this Planning Proposal ahead of the work proposed to review the controls for North Parramatta is consistent with Council's 25 July 2022 resolution.

In addition, waiting for a future review of the land north of the Parramatta River (which is subject to funding being provided by the State Government, and is anticipated to commence in 2023 and which would take two to three years to complete) would cause delays to the progression of the Council prepared concept design for the Riverside Theatre.

This Planning Proposal is considered necessary to enable the timely progression of the redevelopment of the Riverside Theatre, and to deliver integrated and coordinated land use and infrastructure delivery.

### **3.2.3 Is the Planning Proposal consistent with any other applicable State and Regional studies or Strategies?**

Yes.

This Planning Proposal is consistent with State and Regional strategic planning framework. These are further addressed below.

#### **A City Supported by Infrastructure – A Place-based Infrastructure Compact (PIC) Pilot**

The former Greater Sydney Commission (GSC) prepared the 'A City Supported by Infrastructure' – A Place-based Infrastructure Compact' (PIC) Pilot for the Greater Parramatta and Olympic Peninsula (GPOP) area. The GPOP PIC was exhibited by the GSC from 7 November to 18 December 2019 who then released their final recommendations on the GPOP PIC to the NSW Government.

The GPOP PIC is a strategic planning model that seeks to better align growth of jobs and housing with the provision of infrastructure and services centred around transport; housing diversity; job creation and enterprise; culture, leisure, tourism, sport and recreation assets; education, health and research; and open spaces, waterways and natural assets and amenities. The GPOP area is at the core of the Central City, and the centre of Greater Sydney. The GPOP PIC outlines GPOP's role as a major generator of new jobs and housing and identifies the requirement for sequencing of growth and supporting infrastructure projects in a logical way to ensure that the area becomes more liveable, productive and sustainable as it grows.

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The Planning Proposal is consistent with the GPOP PIC vision as it aims to strengthen the Parramatta CBD's role in the GPOP corridor as a connected and competitive CBD for Greater Sydney. This Planning Proposal aligns the timely delivery of cultural infrastructure with already committed infrastructure projects, including the Parramatta Light Rail which connects Westmead to Carlingford via Parramatta CBD (Stage 1). The Riverside Theatre's location on the Parramatta Light Rail network, and other existing and future public transport, will result in the population of the GPOP corridor being well connected to resulting job and economic opportunities.

The upgraded Riverside Theatre will deliver a high-quality cultural venue that will improve access to, and grow, the creative industry of the GPOP corridor. This will support the needs of the growing population and creative sector and have a positive economic impact on the region.

### NSW Cultural Infrastructure Plan 2025

The Cultural Infrastructure Plan 2025+ (The NSW Cultural Plan) is the NSW Government's guide for the planning and delivery of cultural infrastructure that will support a thriving and dynamic cultural sector. Cultural infrastructure for a collaborative and thriving cultural sector is one of the key strategic priorities identified in the NSW Cultural Plan.

The NSW Cultural Plan builds on Infrastructure NSW's Advice in the *NSW Cultural Infrastructure Strategy: Advice to the NSW Government* (2016) where it was identified that Parramatta Riverside Theatre is part of the strategic vision for a vibrant Parramatta Cultural Precinct. The Parramatta Cultural Precinct includes the MAAS Powerhouse Museum site along the Parramatta River Foreshore.

The NSW Cultural Plan echoed the need for redevelopment of the Riverside Theatre as it was recognised in the Cultural Infrastructure Strategy that the Riverside Theatre is nearing the end of its asset life. This Planning Proposal is consistent with the strategic cultural infrastructure priorities in the NSW Cultural Plan.

### 3.2.4 Is the Planning Proposal consistent with the applicable State Environmental Planning Policies?

Yes

The following State Environmental Planning Policies (SEPPs) are of relevance to the site, refer to **Table 6** below.

**Table 6** – Consistency of Planning Proposal with relevant SEPPs

State Environmental Planning Policies (SEPPs)	Consistency: Yes = ✓ No = x N/A = Not applicable	Comment
SEPP No 1 Development Standards	✓	Consistent.  This Planning Proposal does not contain provisions that contradict or would hinder the application of these SEPPs.
SEPP 4 – Development Without Consent and Miscellaneous Exempt and Complying Development		

## PLANNING PROPOSAL – Riverside Theatre

SEPP (BASIX) 2004		
SEPP (Exempt and Complying Development Codes) 2008		
SEPP 60 – Exempt and Complying Development		
SEPP No 65 Design Quality of Residential Flat Development	N/A	This Planning Proposal seeks to facilitate the development of a theatre and is not proposing residential uses. Therefore, this SEPP is not relevant to proposed amendment.
SEPP (Planning Systems) 2021	✓	Consistent. This Planning Proposal does not contain provisions that contradict or hinder the application of this SEPP. The intended theatre development to result from the Planning Proposal will be assessed as a State Significant Development under Schedule 1 Clause 13 (1) (c) entertainment facility under the SEPP as it has a capital investment value of more than \$30 million. Compliance with the SEPP will be demonstrated at the time of making a development application for the site facilitated by this Planning Proposal.
SEPP (Housing) 2021	N/A	This Planning Proposal seeks to facilitate the development of a theatre and is not proposing residential uses. Therefore, this SEPP is not relevant to proposed amendment.
SEPP (Resilience and Hazards) 2021	✓	Consistent. This Planning Proposal does not contain provisions that contradict or would hinder the application of this SEPP. As part of the CBD PP, Council engaged JBS&G to prepare a preliminary (desktop) investigation of the area within the Planning Proposal boundary, and also a site-specific contamination study for Auto Alley. The findings from both studies were that no issues were identified that will preclude additional density (by way of increased height and FSR controls) and rezoning (including to more sensitive land uses including residential). Based on this advice, and given the Planning Proposal is not increasing density or rezoning the land, Council does not consider the Planning Proposal to generate any risk in relation to site contamination. As such the Planning Proposal is consistent.
SEPP (Transport and Infrastructure) 2021	✓	Consistent. This Planning Proposal does not contain provisions that contradict or would hinder the application of this SEPP. In addition, this Planning Proposal is not increasing density or rezoning the land.



## PLANNING PROPOSAL – Riverside Theatre

SEPP (Biodiversity and Conservation) 2021	✓	Consistent.  This Planning Proposal does not contain provisions that contradict or would hinder the application of this SEPP.  Any potential impacts as a result of future development on the site, such as stormwater runoff, will be considered and addressed appropriately at DA stage.
SEPP (Industry and Employment) 2021	✓	Consistent.  This Planning Proposal does not contain provisions that contradict or would hinder the application of this SEPP.
SEPP (Precincts – Central River City) 2021	N/A	Not relevant to proposed amendment as the site is not contained in one of the precincts of the SEPP.

### 3.2.5 Is the Planning Proposal consistent with applicable Ministerial Directions (s.9.1 directions)

Yes. In accordance with Clause 9.1 of the *EP&A Act 1979* the Minister issues directions for the relevant planning authorities to follow when preparing Planning Proposals for new LEPs. The directions are listed under the following categories:

1. Planning Systems and Planning Systems – Place Based
2. Design and Place (This Focus Area was blank when the Directions were made)
3. Biodiversity and Conservation
4. Resilience and Hazards
5. Transport and Infrastructure
6. Housing
7. Industry and Employment
8. Resources and Energy
9. Primary production

The following directions are considered relevant to the subject Planning Proposal.

The following State Environmental Planning Policies (SEPPs) are of relevance to the site, refer to **Table 7** below.

**Table 7** – Consistency of Planning Proposal with relevant Section 9.1 Directions

Relevant Direction	Comment	Compliance
<b>1. Planning Systems and Planning Systems – Place Based</b>		
<b>Direction 1.1 – Implementation of Regional Plans</b> The objective of this direction is to give legal effect to the vision, land use strategy, goals, directions and actions contained in Regional Plans.	The Planning Proposal applies to land within Sydney's Central City. The Planning Proposal is consistent with the goals, directions and actions contained in the Greater Sydney Region Plan as discussed in Section 3.2.1 and 3.2.2 of this Planning Proposal.	Yes

## PLANNING PROPOSAL –Riverside Theatre

<b>Direction 1.3 – Approval and Referral Requirements</b> The objective of this direction is to ensure that LEP provisions encourage the efficient and appropriate assessment of development.	The Planning Proposal does not introduce any provisions that require any additional concurrence, consultation or referral.	Yes
<b>Direction 1.4 – Site Specific Provisions</b> The objective of this direction is to discourage unnecessarily restrictive site specific planning controls.	This Planning Proposal introduces a site specific clause that prevents new development generating any additional overshadowing to the Parramatta River Foreshore between the hours of 12pm and 2pm; and that requires active street and river frontages.  These policies were incorporated as part of the CBD PP and would have been introduced via controls applicable across the CBD. However, due to the changes introduced to the CBD PP via the DPE as explained in Section 3.2.2, a site specific clause is needed to implement the intent of the CBD PP due to the site's exclusion from the CBD wide LEP changes.  The site specific clause will ensure the policy intent of the CBD PP is applied on the site as per the previous resolution of Council.	Yes
<b>Direction 1.7 – Implementation of Greater Parramatta Priority Growth Area Interim Land Use and Infrastructure Implementation Plan</b> The objective of this direction is to ensure development within the Greater Parramatta Priority Growth Area is consistent with the Greater Parramatta Priority Growth Area Interim Land Use and Infrastructure Implementation Plan dated July 2017 (the Interim Plan).	The Planning Proposal achieves the overall intent of the Plan and does not undermine the achievement of its objectives, planning principles and priorities for the Greater Parramatta Priority Growth Area. The Planning Proposal introduces critical infrastructure to support the growth of Greater Parramatta.	Yes
<b>2. Design and Place</b>		
<i>This Focus Area was blank at the time the Directions were made.</i>	<i>This Direction was blank when made.</i>	
<b>3. Biodiversity and Conservation</b>		
<b>Direction 3.1 – Conservation Zones</b> The objective of this direction is to protect and conserve environmentally sensitive areas.	The Planning Proposal is consistent with this direction, in that it does not apply to environmentally sensitive areas or alter provisions for land in a conservation zone.	Yes

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<b>Direction 3.2 – Heritage Conservation</b> The objective of this direction is to protect and conserve environmentally sensitive areas.	The site is not within a Heritage Conservation Area and is not listed as a Heritage Item. The site is adjacent to a Heritage item, known as Prince Alfred Park. The Planning Proposal does not conflict with the directions.	Yes
<b>Direction 3.5 – Recreation Vehicle Areas</b> The objective of this direction is to protect sensitive land or land with significant conservation values from adverse impacts from recreation vehicles.	The Planning Proposal is consistent with this direction, in that it is not proposing to enable land to be developed for the purpose of a recreation vehicle area.	Yes
<b>4. Resilience and Hazards</b>		
<b>Direction 4.1 – Flooding</b> The objectives of this direction are to: <ul style="list-style-type: none"> <li>(a) Ensure that development of flood prone land is consistent with the NSW Government's Flood Prone Land Policy and the principles of the Floodplain Development Manual 2005, and</li> <li>(b) Ensure that the provisions of an LEP that apply to flood prone land are commensurate with flood behaviour and includes consideration of the potential flood impacts both on and off the subject land.</li> </ul>	<p>The site is adjacent to the Parramatta River and, like most of the Parramatta CBD, is flood affected.</p> <p>The site is located within the Probable Maximum Flood for the Upper Parramatta River, and the western side of the site is affected by the 100-year flood event.</p> <p>As detailed in this Planning Proposal, the intent of the Planning Proposal is to progress the planned redevelopment of the theatre in line with the proposed controls in the CBD PP endorsed by Council in 2021.</p> <p>Whilst this Planning Proposal is not intensifying development yield (and retaining the existing 3:1 FSR permitted under the existing Parramatta LEP 2011), the update to the Floodplain Risk Management Plan that was prepared as part of the CBD PP (that includes the Riverside Theatre site) is attached to this Planning Proposal for reference and to explain the flood context of the site.</p> <p>A copy of the update to the Floodplain Risk Management Plan is provided as Appendix B to this Planning Proposal.</p> <p>As the Planning Proposal is not intensifying development yield, and strictly addressing urban design considerations through the alteration of building height, Council officers consider this Planning Proposal to not be intensifying flood risk.</p> <p>Any potential flooding impacts as a result of development on the site (including stormwater runoff) will be considered and addressed appropriately at DA stage. This will also include any design detail required to ensure compliance with the Flood Risk Development Manual, relevant evacuation strategies, and Council's water management controls within the PLEP 2011 and Parramatta DCP 2011.</p> <p>As such, the Planning Proposal is consistent with this Direction.</p>	Yes



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<p><b>Direction 4.3 Planning for Bushfire Protection</b></p> <p>The objectives of this direction are to:</p> <ul style="list-style-type: none"> <li>(a) Protect life, property and the environment from bush fire hazards, by discouraging the establishment of incompatible land uses in bush fire prone areas, and</li> <li>(b) Encourage sound management of bush fire prone areas.</li> </ul>	<p>The land is not identified as bush fire prone land under Section 10.3 of the Environmental Planning and Assessment Act.</p>	<p>Yes</p>
<p><b>Direction 4.4 – Remediation of Contaminated Land</b></p> <p>The objective of this direction is to reduce the risk of harm to human health and the environment by ensuring that contamination and remediation are considered by planning proposal authorities.</p>	<p>The land is not within an investigation area within the meaning of the Contaminated Land Management Act 1997 and has not been subject to development as described in Table 1 of the contaminated land planning guidelines.</p>	<p>Yes</p>
<p><b>Direction 4.5 Acid Sulfate Soils</b></p> <p>The objective of this direction is to avoid significant adverse environmental impacts from the use of land that has a probability of containing acid sulfate soils.</p>	<p>As shown in <b>Figure 5</b>, the majority of the site is mapped as Class 5 on the Acid Sulphate Soils Map in the PLEP 2011. The south-eastern corner near the river foreshore is mapped as Class 1.</p> <p>Acid sulfate soils are generally not found in Class 5 areas however this will be addressed further at the development application stage. Clause 6.1 of the PLEP 2011 will be applied to appropriately respond to acid sulfate soils.</p> <p>In addition to the above, the Planning Proposal is not rezoning or intensifying development yield on the site. Therefore, the Planning Proposal is not considered to generate any additional environmental impact in the event acid sulphate soils are present. As a result, the Planning Proposal is consistent with this Direction.</p>	<p>Yes</p>
<p><b>5. Transport and Infrastructure</b></p>		
<p><b>Direction 5.1 – Integrating Land Use and Transport</b></p> <p>The objective of this direction is to ensure that development reduces dependence on cars, increases the choice of available transport and improves access to housing, jobs and services by walking, cycling and public transport.</p>	<p>The Planning Proposal is delivering critical cultural infrastructure adjacent to existing and future public transport infrastructure. Parramatta Light Rail Stage 1 route travels adjacent to the site, with the closes stop being at Prince Alfred Park. The light rail network is nearing completion and will provide greater connectivity across Greater Parramatta and will form an attractive transport option for visitors to the site. Parramatta Light Rail Stage 2 and Sydney Metro West will also increase public transport options and the redevelopment of the theatre will be accessible to the GPOP area and Greater Parramatta. The Planning Proposal is considered consistent with this Direction as it delivered integrated land use and transport delivery.</p>	<p>Yes</p>

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<b>6. Housing</b>		
<b>Direction 6.1 Residential Zones</b> The objectives of this direction are to encourage a variety and choice of housing types, make efficient use of existing infrastructure and services and minimise the impact of residential development.	This Planning Proposal seeks to facilitate the development of a theatre and is not proposing residential uses. However, the Planning Proposal will enable the delivery of critical cultural infrastructure close to housing within the Parramatta CBD and will contribute to the liveability of residential development and zones.	Yes
<b>7. Industry and Employment</b>		
<b>Direction 7.1 – Business and Industrial Zones</b> The objectives of this direction are to: <ul style="list-style-type: none"> <li>(a) Encourage employment growth in suitable locations,</li> <li>(b) Protect employment land in business and industrial zones; and</li> <li>(c) Support the viability of identified centres.</li> </ul>	The Planning Proposal is not rezoning the site and the B4 Mixed Use land use is being retained. The redevelopment of the Riverside Theatre to result from this Planning Proposal will retain, and provide additional, jobs within the performing arts sector; encourage world class performers to the Parramatta CBD; and provide additional facilities to encourage and promote local performers. The delivery of this cultural infrastructure supports the Parramatta CBD and assists in delivering balanced growth that provides for the social and cultural needs of the community within the Parramatta CBD and Greater Sydney. This anchor facility will attract greater visitation to the Parramatta CBD, support the Eat Street precinct, and the viability of retailers within the centre. It will also bring greater activation to North Parramatta and support the cultural precinct formed by the MAAS development.  As a result, the Planning Proposal is consistent with the Direction, and is considered to deliver a vital contribution to the Parramatta CBD.	Yes
<b>8. Resources and Energy – not applicable</b>		
<b>9. Primary Production – not applicable</b>		

### 3.3 Section C – Environmental, social and economic impact

This section considers the potential environmental, social and economic impacts which may result from the Planning Proposal.

#### 3.3.1 Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected as a result of the proposal?

**NO**

The site is located within a highly urbanised environment, and it is unlikely to contain critical habitat or threatened species, populations or ecological communities or their habitats. The site is unlikely to impact on any threatened flora or fauna species or threatened species habitat.

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**3.3.2 Are there any other likely environmental effects as a result of the Planning Proposal and how are they proposed to be managed?**

This section addresses the following environmental elements:

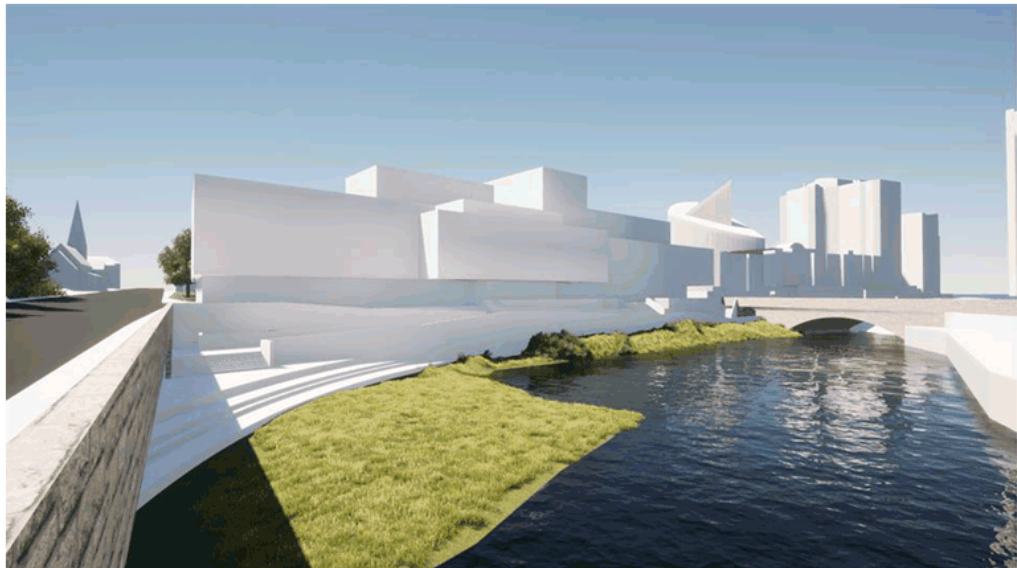
- Urban Design and Built Form
- Overshadowing
- Heritage impacts
- Flooding

**Urban Design and Built Form**

The Planning Proposal seeks an increase in height to provide a more flexible and appropriate building envelope that will enable the design concept for a modernised theatre, fit for purpose and demand, to be achieved. No changes are sought to the FSR control, therefore, the change will not result in greater yield than what is already permitted on the subject site.

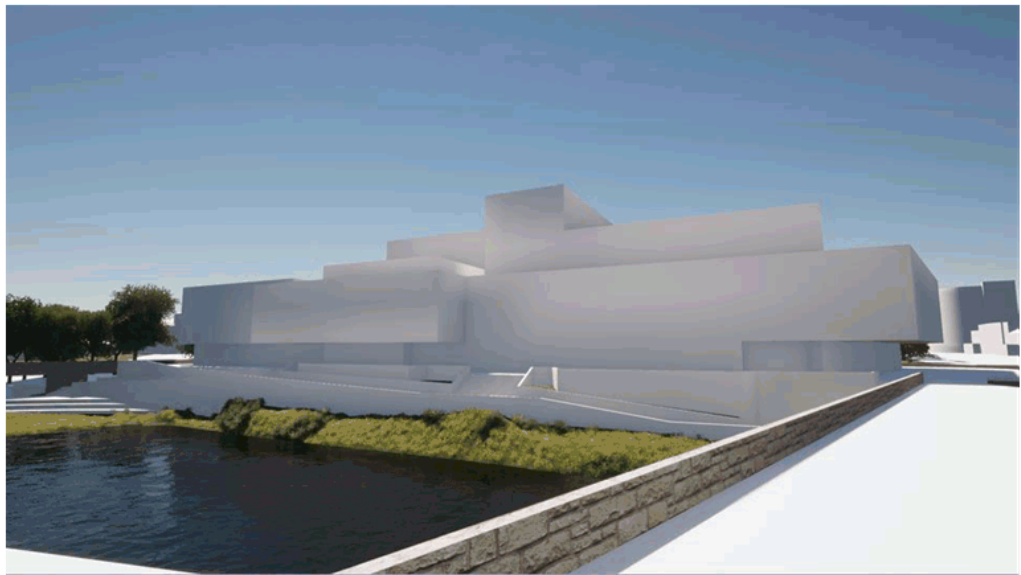
The increase in height from 15m to 28m is considered a suitable increase in context of the current permitted height of 36m on the eastern side of Church Street. The increase in 28m would result in a gradual stepping down of heights moving west and is a modest increase considering the site has existing building elements at 25m.

Figures 2 - 5 below show the intended building envelope of the concept design the Planning Proposal from multiple perspectives. The concept design is for a building with taller and shorter elements across the site. In essence, the future built form will not result in a consistent 28m height across the site. The variation in height expression further demonstrates the low impact of the height increase.



**Figure 2** – Concept design render looking north-east from Marsden Street bridge, Parramatta (noting this is at a maximum height of 28m and excludes any Design Excellence bonus)

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**Figure 3** – Concept design render looking north-west from Lennox bridge, Parramatta (noting this is at a maximum height of 28m and excludes any Design Excellence bonus)



**Figure 4** – Concept design render looking south-west from corner of Church Street and Market Street, Parramatta (noting this is at a maximum height of 28m and excludes any Design Excellence bonus)



## PLANNING PROPOSAL –Riverside Theatre

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**Figure 5** – Concept design render looking southeast from corner of Marsden Street and Market Street, Parramatta (noting this is at a maximum height of 28m and excludes any Design Excellence bonus)

The concept design will be used as the basis of the future design process. A Design Excellence Competition will be facilitated to guide the detailed reference design process for the site. This next phase of the redevelopment project will further embellish design features, building articulation, and integration with the public domain along the river foreshore. For consistency with the Council endorsed CBD PP, a site-specific clause is proposed that allows for a 15% Design Excellence Height and/or FSR bonus to the winning design scheme following the completion of a design excellence competition.

As the site was removed from the finalisation of the CBD PP, the existing LEP would allow for a Design Excellence bonus of up to 25% for a development that is all non-residential in the B4 zone. The site-specific clause is to reinstate the CBD PP bonus of 15%, and should it be awarded, could bring the maximum permitted height from 28m to 32m (i.e. 28m + 15%). **This is still well below the height that could have been achieved if the CBD PP was finalised as adopted by Council.**

It is important to note that the concept design has been prepared at 28m and therefore a bonus is not relied upon to deliver on the initial concept design. Whilst the planning framework can award a 15% bonus under this site-specific clause, the utilisation will be determined as part of the competition process; and ultimately the final height and building envelope is subject to compliance to the Site-Specific Clause requiring no additional overshadowing to the southern side of the Parramatta River Foreshore.

The Planning Proposal will also result in active frontages around the site to attract pedestrian traffic and ensure the ground floor of the future development engages with the surrounding streets and public domain. This will also need to be responded to as part of a future Design Excellence process.

The modest height increase and requirements for design excellence and active frontages support the delivery of an expanded theatre with minimal impact (particularly in comparison to the existing and surrounding development).

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**Overshadowing**

The increase in HOB to 28m is considered a modest increase (particularly given the current theatre has building elements at 25m); and would deliver a height less than what would have been permitted under the CBD PP as the Council endorsed CBD PP included changes to the building height control for the Riverside Theatre site.

Whilst the existing LEP control contains a maximum building height in metres (i.e. 15m), the CBD PP proposed that a sun access protection clause be applied to govern the distribution of height across the site. This was supported by a draft clause in the within the CBD PP (i.e. Clause 7.4 'Sun access protection' and the associated Sun Access Protection Map). This clause required any new development on the site to be designed to prevent additional overshadowing to the southern side of the Parramatta River Foreshore between the hours of 12:00pm and 2pm.

The use of such a control would allow for the architectural design process to determine the future building height with the objective of protecting open space from additional overshadowing leading the process versus a prescribed control in metres (i.e. outcome driven design versus numerical control driven design).

Preliminary analysis indicated that heights between 19m Relative Level (RL) at the riverfront and 60-70m (RL) at the Market St frontage could be achieved under the Sun Access Protection surface control. When the height of the sloping terrain (which approximately ranges between 4m (RL) at the riverfront and 8m (RL) at the Market St frontage) is subtracted from the RL heights an approximate measurement above ground level (existing) can be calculated. Based on the RLs above, a 15m height at ground level at the riverfront and 52-62m height at the Market Street frontage can be approximated.

The concept design included in **Figures 2-5** reflect a height of approximately 13m along the riverfront and a height of 28m towards Market Street. Using the calculations above to get an approximate measure above ground level (existing), the concept design at 28m sits comfortably underneath the solar access protection plane (including any bonus from a Design Excellence competition process).

The Planning Proposal seeks to introduce a 28m height control on the site in conjunction with a Site-Specific Clause requiring no additional overshadowing to the southern side of the Parramatta River Foreshore between the hours of 12:00pm and 2:00pm. These hours are consistent with the Council adopted policy position relating to additional overshadowing to the southern side of the river foreshore in the Council endorsed CBD PP.

However, it is important to acknowledge that the concept design to be delivered via the Planning Proposal exceeds the solar access protection requirements of the CBD PP by protecting solar access to the southern side of the river foreshore by an additional three hours compared to the Council adopted CBD PP. The concept design will not cause any additional overshadowing between the hours of 10:00am and 3:00pm as shown in the shadow diagrams in **Appendix A**.

Whilst the Planning Proposal will deliver greater solar access protection to the southern side of the river foreshore, for consistency with the CBD PP, the Planning Proposal seeks to retain what Council previously adopted with the draft wording for the Site-Specific Clause seeking to protect the foreshore from additional overshadowing from 12:00pm to 2:00pm. Draft wording for the Site-Specific Clause is included within Part 4 of the Planning Proposal.

In summary, the CBD PP would have allowed for greater heights across the site (i.e. between 15m and 52-62m) and allowed for a substantially taller building envelope compared to the building envelope of the proposed concept design (where the tallest element is 28m) as

## PLANNING PROPOSAL – Riverside Theatre

shown in **Figures 2-5**. As a result, this Planning Proposal will have less of an impact on overshadowing compared to the CBD PP and maintain sun access for more hours (as demonstrate in **Appendix A**).

**Heritage**

The site itself is not heritage listed; however, it is adjacent to the following heritage items projected under Schedule 5 of the PLEP 2011:

- Lennox Bridge (State Heritage Item I00750)
- Alfred Square (and potential archaeological site) (Local Heritage Item I686)
- Marsden Rehabilitation Centre (and potential archaeological site) (State Heritage Items I00826 and I00771)

These items were carefully considered as part of the specialist heritage studies completed as part of the preparation of the CBD PP. These studies were carried out to help inform a suite of planning controls to allow renewal and some intensification of development, whilst still achieving a suitable transition to sensitive areas such as Heritage Conservation Areas and Prince Alfred Park and limiting additional overshadowing to key public spaces (including the Parramatta River Foreshore).

Specifically, the Hector Abraham heritage study of the interface areas for North Parramatta and the riverbank did not raise objection, or recommend any changes, to the application of the Solar Access Protection control and the likely resulting heights for the Riverside site when assessing the impact of the proposed controls on heritage values. This work formed part of the CBD PP package sent to the DPE for finalisation in July 2021.

As the concept reference design has responded to the Solar Access Protection control of the CBD PP, the heritage assessment undertaken as part of the CBD PP is considered applicable and transferrable for this Planning Proposal.

As the concept design would deliver a height less than what the CBD PP could have delivered, the Planning Proposal is considered to have even less of an impact on the surrounding area and heritage context. As discussed above 'Urban Design and Built Form', the proposed height of 28m presents a modest increase given there are existing building elements at 25m, further limiting the heritage implications of the planning proposal.

Whilst the Planning Proposal is considered acceptable from a heritage perspective, the Design Excellence process will need to respond to the unique heritage and archaeological context of North Parramatta and Old Government House to ensure the heritage values of the city continue to be celebrated and protected.

**Flooding**

As discussed above under Ministerial Direction 4.1: Flooding, like the majority of the Parramatta CBD, the site is flood affected. The entire site is located within the Probable Maximum Flood for the Upper Parramatta River, and the western side of the site is affected by the 100 year flood event.

The intent of the Planning Proposal is to progress the planned redevelopment of the theatre in line with the proposed controls in the CBD PP endorsed by Council in 2021. An updated Floodplain Risk Management Plan was prepared to inform the CBD PP which included the site. Further information about the flooding impacts can be found in the updated Floodplain Risk Management Plan for the CBD PP that has been included as Appendix B of this Planning Proposal for reference and flooding context.



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As detailed in this Planning Proposal, there is no change proposed to the FSR control (therefore, the Planning Proposal will not result in greater yield than what is already permitted on the subject site).

As the Planning Proposal is not intensifying development yield, and strictly addressing urban design considerations through the alteration of building height, the resulting development is not considered to intensify flooding risks. Any future development on the site will need to respond to the Flood Risk Development Manual and the relevant controls contained within the PLEP 2011 and the Parramatta Development Control Plan 2011.

### 3.3.3 How has the Planning Proposal adequately addressed any social and economic effects?

This Planning Proposal will deliver an expanded Riverside Theatre that will be fit for the future and attract world class performances. The redevelopment will contribute to the critical cultural infrastructure needed to support the growing community of Greater Parramatta, the Central City District, and Greater Sydney. This will also stimulate a number of economic benefits including:

- Increased economic activity;
- Increase permanent and temporary jobs;
- Increased capacity to facilitate cultural and entertainment activities at the Riverside Theatre;
- Increased opportunities to boost night-time activities and further support the Eat Street Precinct along Church Street;
- Delivery of anchor performing arts centre to attract world class acts and also increase tourism along the Parramatta River foreshore;
- Utilisation and patronage of major infrastructure projects such as the Parramatta Light Rail;
- Provision of improved and expanded cultural facilities in the Central City, reducing the need for travel to the Eastern Harbour City.
- Delivery on the '30 minute city' policy of the GSRP.

The timely delivery of the Planning Proposal will support the Parramatta CBD grow into a sustainable, liveable and productive CBD as it is expected to have the following positive social and economic impacts:

## 3.4 Section D – State and Commonwealth Interests

### 3.4.1 Is there adequate public infrastructure for the Planning Proposal?

#### Public transport

##### Existing or soon to be completed infrastructure

The site is well serviced by existing public transport infrastructure in the way of trains along the Western Line, an extensive bus network, and a ferry service up and down the Parramatta River. These services are currently utilised by theatre patrons.

However, importantly, the site is within walking distance to the future Parramatta Light Rail stop located at Prince Alfred Square, which is currently under construction as part of Stage 1 of the project. and is expected to open in 2023.

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Parramatta Light Rail is one of the NSW Government's major infrastructure projects that will connect Westmead to Carlingford via the Parramatta CBD and Camellia with a two-way track spanning 12 kilometres. The route will link Parramatta's CBD and train station to the Westmead Health Precinct, Cumberland Hospital Precinct, CommBank Stadium, the Camellia Town Centre, the MAAS site, Telopea, Rosehill Gardens Racecourse, and three Western Sydney University campuses.

Parramatta Light Rail Stage 1 will be completed in 2023, prior to the redevelopment of the Riverside Theatre. The completion of this infrastructure in advance of the new theatre opening will result in the site being more accessible to visitors across Greater Parramatta, and assists in providing active and public transport options.

#### Future planned infrastructure

Planning work is underway for Parramatta Light Rail Stage 2, which will connect Stage 1 and Parramatta's CBD to Sydney Olympic Park via Camellia, Ermington, Melrose Park and Wentworth Point.

Construction also started for Sydney Metro West in 2020, which is a new 24km underground railway that will connect Greater Parramatta and the Sydney CBD with stations confirmed at Westmead, Parramatta, Sydney Olympic Park, North Strathfield, Burwood North, Five Dock, The Bays, Pyrmont and Hunter Street in the Sydney CBD.

Both projects will further increase the site's accessibility via public transport to the wider community of Parramatta and Greater Sydney.

#### **Utilities**

The full range of utility services including electricity, telecommunications, water, sewer and stormwater are all currently available across the site.

The Planning Proposal is not seeking to increase density on the site, and as indicated by the concept design, the intended outcome is to deliver an upgrade theatre. Whilst permitted under the B4 Mixed Use zone, no residential uses are proposed. As such, the intended outcome for the site facilitated by this Planning Proposal would pose less demand on utility infrastructure compared to if the site was redeveloped for a combination of residential and non-residential uses as permitted under the existing Parramatta LEP 2011.

As such, the Planning Proposal will have a modest increase on demand for utilities and any adjustments that may be needed to accommodate the new theatre design will be addressed as part of any future Development Application process.

#### **Other**

In addition, Section 7.12 contributions would be levied at the Development Application stage to support the delivery of necessary local infrastructure within the Parramatta CBD.

#### **3.4.2 What are the views of State and Commonwealth public authorities consulted in accordance with the gateway determination?**

Consultation with the State and Commonwealth public authorities has not been undertaken for this Planning Proposal. However, as explained throughout this Planning Proposal document, the Planning Proposal is a consequence of the finalisation of the CBD PP.

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As the CBD PP undertook extensive consultation with public authorities as part of its preparation and progression, consultation on changes to the planning controls (more broadly) on the subject site have occurred as part of the CBD PP, with the following:

- Office of Environment and Heritage – Heritage Division
- Transport for NSW
- Roads and Maritime Services
- NSW Heritage Office
- NSW State Emergency Services
- Government Architect NSW
- Civil Aviation Safety Authority
- Federal Department of Infrastructure, Regional Development and Cities.
- Department of Industry – Trade and Investment
- Department of Education
- Department of Family and Community Services
- Fire and Rescue NSW
- Department of Health
- NSW Police Force
- Sydney Water
- Adjoining Local Government Area Councils
- Federal Department of the Environment and Energy
- National Trust of Australia
- Department of Defence
- Deerubbin Aboriginal Land Council
- Western Sydney Local Health District
- Greater Sydney Local Land Services
- NSW Aboriginal Land Council
- Relevant Services Providers
- Urban Growth NSW.

Feedback received was not specific to the Riverside Theatre site and was general in relation to North Parramatta and impact of new development on heritage. Heritage NSW made comment about the need to retain solar access to Prince Alfred Square; and the National Trust of Australia (NSW Branch and Parramatta Branch) raised issues and objected to the incentive Height of Building (HOB) controls proposed for North Parramatta, particularly regarding the impact on existing heritage items and HCAs.

The National Trust recommended a 24m HOB control for land north of the Parramatta River to which Council responded as part of the post-exhibition report process that the relevant supporting heritage studies for the CBD PP did not raise concern to the controls proposed and that appropriate management will be via Clause 7.6K and detailed DCP controls.

Whilst the site is included within the land north of the Parramatta River, as demonstrated within this Planning Proposal in Section 3.3.2, this Planning Proposal is increasing the height from 15m to 28m which is considered a suitable increase in context of the current permitted height of 36m on the eastern side of Church Street. The increase in 28m would result in a gradual stepping down of heights moving west and is a modest increase considering the site has existing building elements at 25m. In addition, the concept design shown in **Figures 2-5** is for a building with taller and shorter elements across the site. In essence, the future built form will not result in a consistent 28m height across the site. The variation in height expression further demonstrates the low impact of the height increase and the suitability of the Planning Proposal in achieving the intended outcomes.

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## PART 4 – MAPPING

This section contains the mapping for this Planning Proposal in accordance with the DPE's guidelines on LEPs and Planning Proposals.

### 4.1 Existing controls

This section illustrates the current *PLEP 2011* controls which apply to the site. The following maps are provided:

- Land Use Zoning Map
- Floor Space Ratio Map
- Height of Buildings Map
- Heritage Map
- Acid Sulfate Soils Map
- Flooding

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Figure 6 illustrates the existing B4 Mixed Use zone over the site.



Figure 6 – Existing zoning extracted from Parramatta LEP 2011 Land Zoning Map



## PLANNING PROPOSAL – Riverside Theatre

Figure 7 illustrates the existing 3:1 FSR over the site.

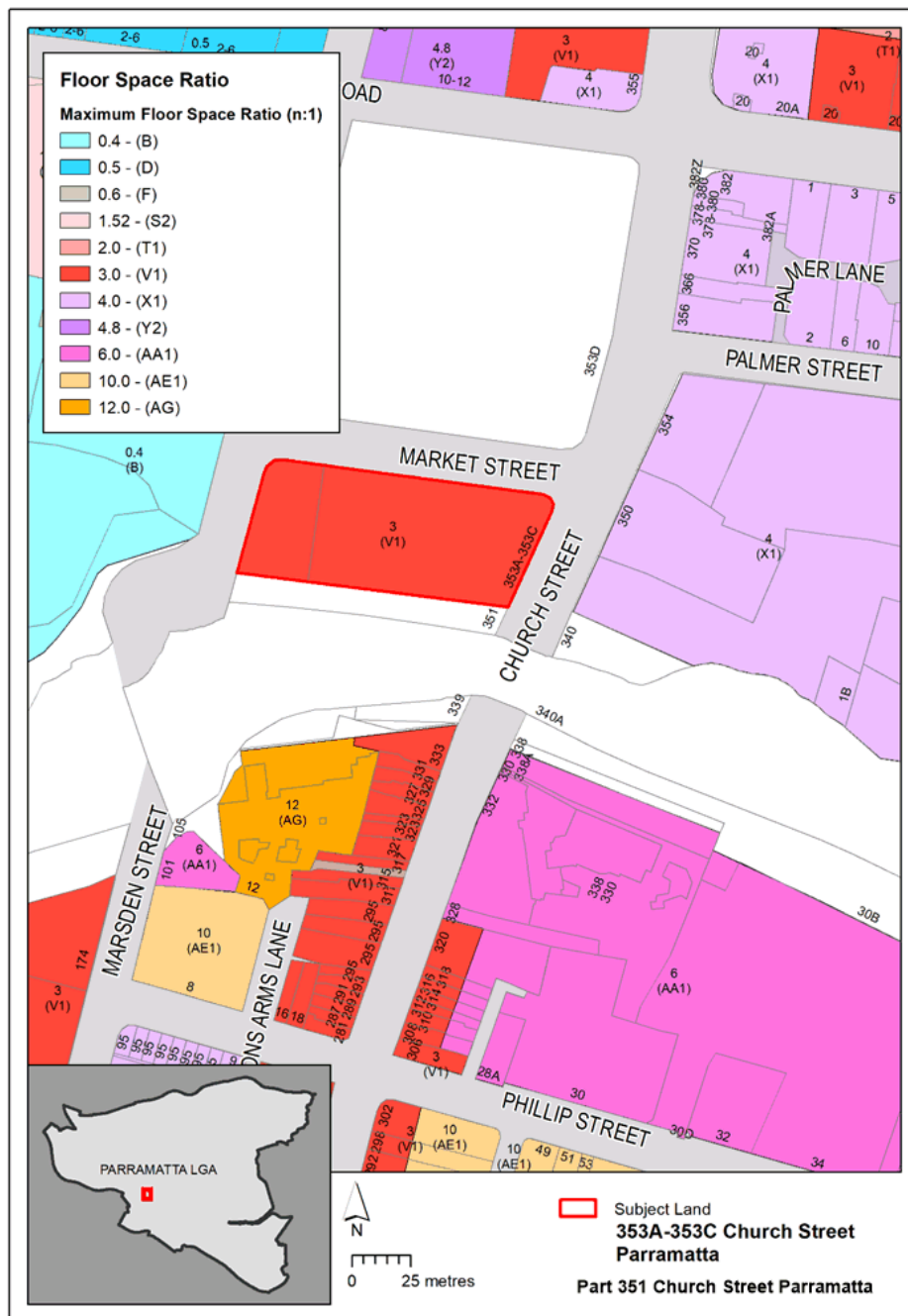
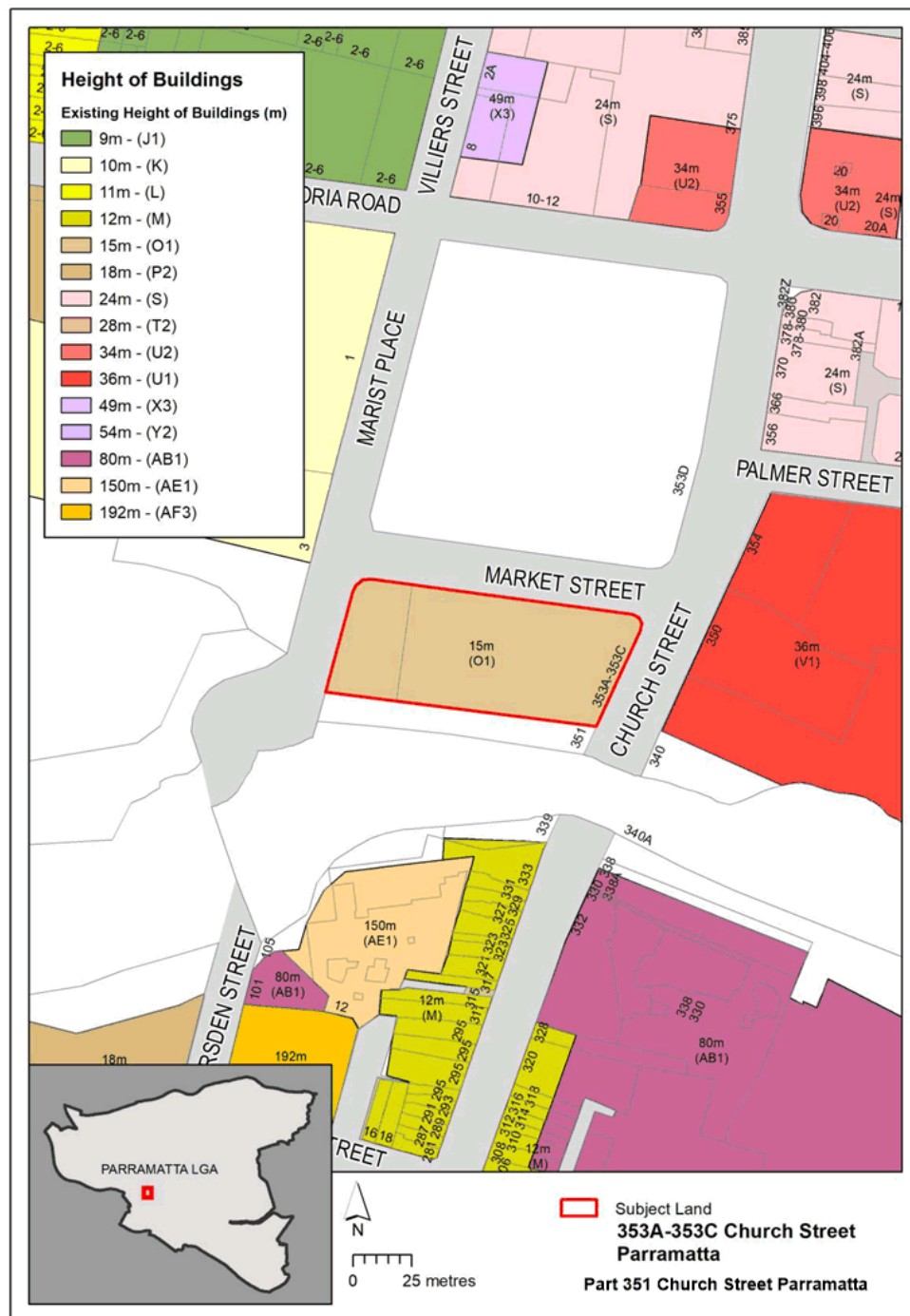


Figure 7 – Existing Floor Space Ratio extracted from Parramatta LEP 2011 Floor Space Ratio Map.

Figure 8 illustrates the existing 15 m height of buildings control over the site.

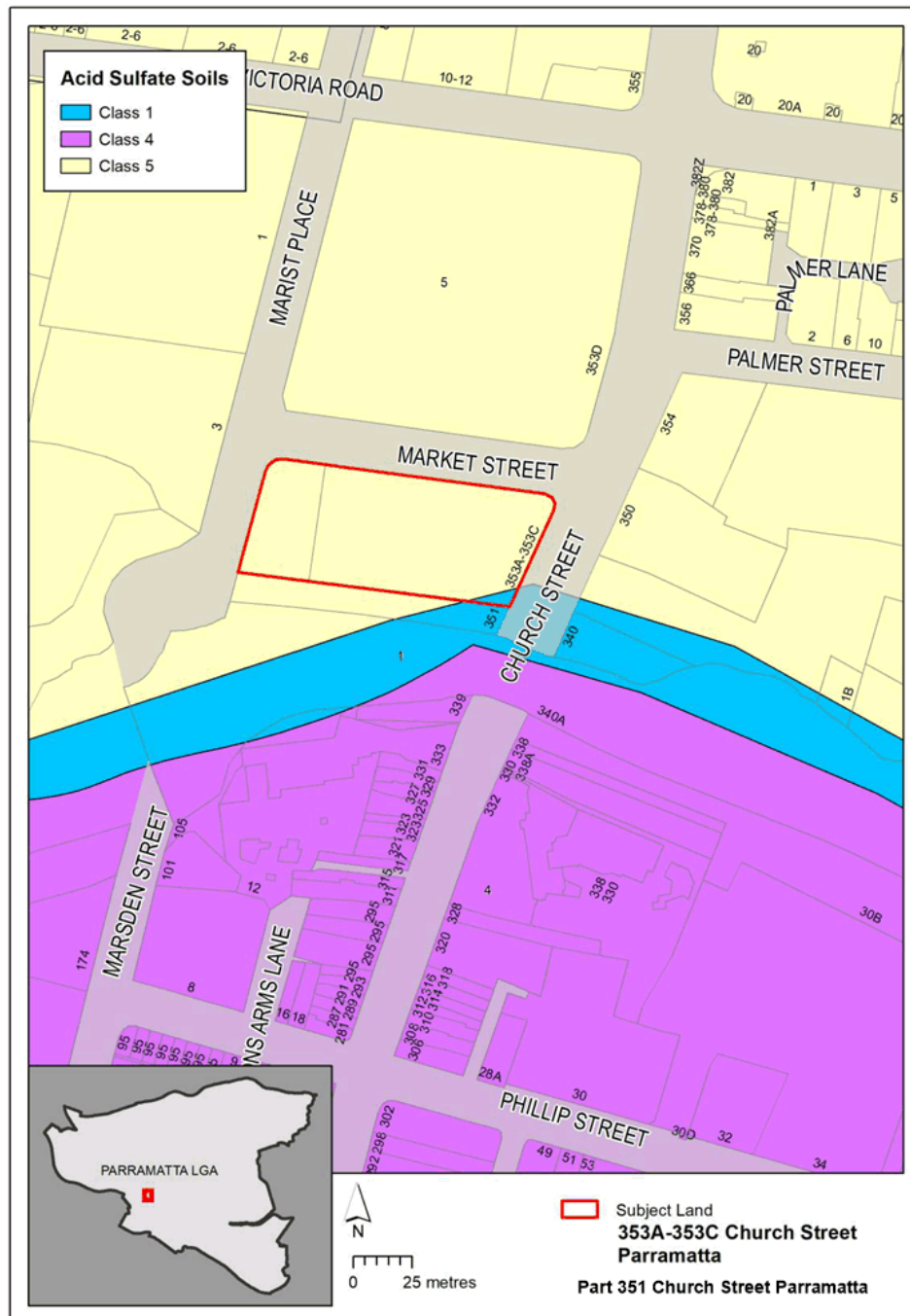


**Figure 8 – Existing building heights extracted from the *Parramatta LEP 2011* Height of Buildings Map.**



## PLANNING PROPOSAL –Riverside Theatre

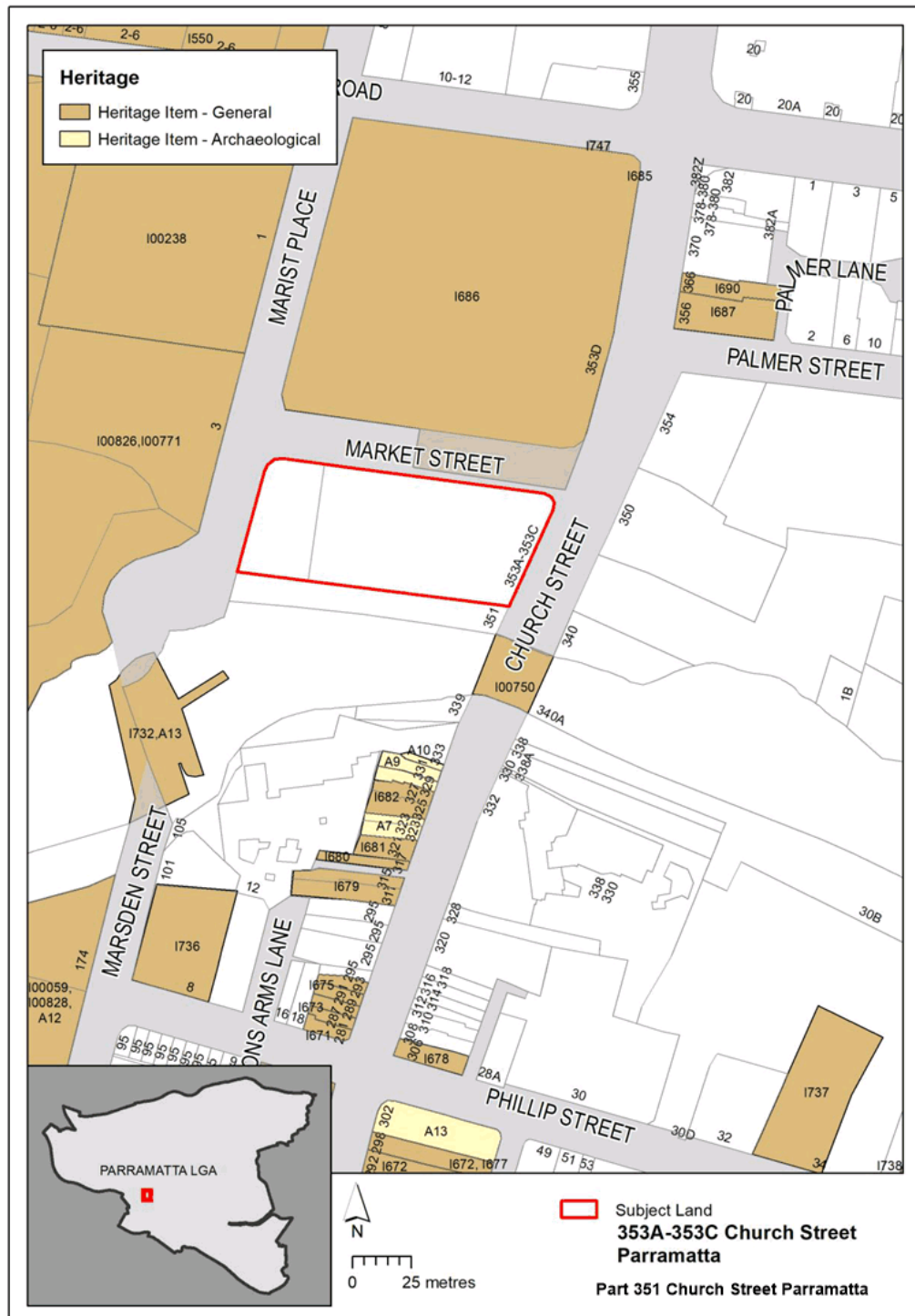
Figure 9 illustrates the class of acid sulfate soils over the site.



**Figure 9** – Existing Acid sulfate Soils extracted from the *Parramatta LEP 2011 Acid Sulfate Soils Map*.

## PLANNING PROPOSAL – Riverside Theatre

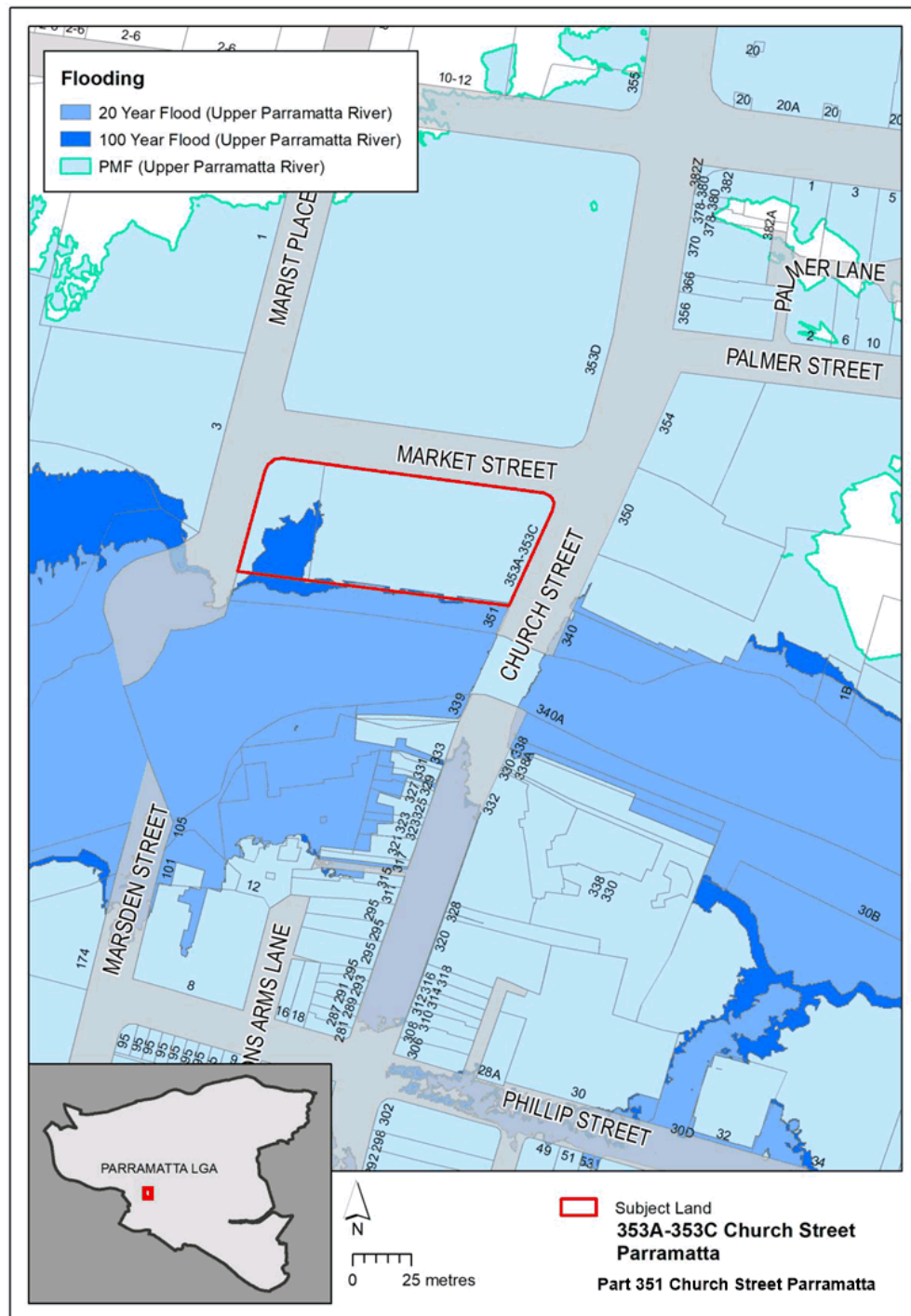
Figure 10 illustrates the heritage areas within the vicinity of the site.



**Figure 10** – Existing Heritage Map from the from the *Parramatta LEP 2011* Heritage Map.

## PLANNING PROPOSAL – Riverside Theatre

Figure 11 above illustrates the flooding extent in the vicinity of the site.



**Figure 11** – Existing flooding extent extracted from the *Parramatta LEP 2011* Flooding Map.

## PLANNING PROPOSAL – Riverside Theatre

## 4.2 Proposed controls

The Planning Proposal seeks to introduce a 28m height control on the site in conjunction with a Site-Specific Clause requiring no additional shadowing to the southern side of the Parramatta River Foreshore between the hours of 12:00pm and 2pm, and active street frontages.

## Maximum Height of Building Map

Figure 12 shows the proposed building height of 28m.

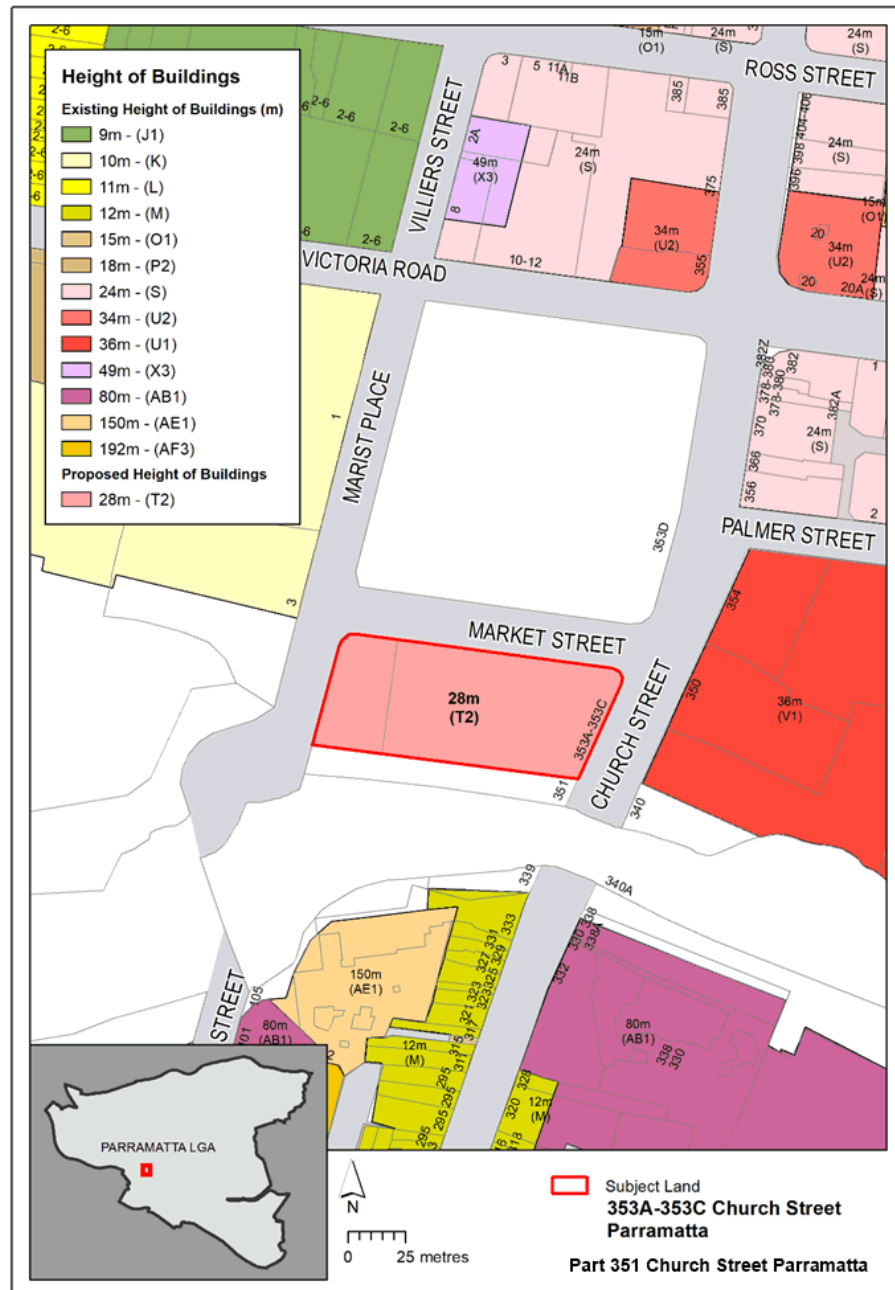


Figure 12 – Proposed amendment to the Parramatta LEP 2011 Height of Building Map



### Site Specific Clause

Draft wording for the site-specific clause is included below and has been drafted in alignment with the draft wording included in the Council endorsed Parramatta CBD Planning Proposal so that the clause is delivering on the intent of the CBD PP:

#### **Part 7 Additional local provisions – Parramatta City Centre**

*7.26 Development on land at 353A-353C Church Street and part of 351 Church Street, Parramatta (Riverside Theatre site)*

*(1) The objectives of this clause are as follows -*

*(a) to protect the public open space along the Parramatta River Foreshore from overshadowing*

*(b) to promote uses that attract pedestrian traffic along the ground floor street, public space and river foreshore frontages.*

*(c) to specify the Design Excellence bonus that may be granted to a development that is the winner of a competitive design process.*

*(2) This clause applies to land identifies as Area X on the Key Sites Map Special Provisions Area Map*

*(3) Notwithstanding the maximum Height of Building control shown on the Height of Buildings Map, development consent must not be granted to development on land to which this clause applies that results in any part of a building causing additional overshadowing, on 21 June in any year, on the Parramatta River Foreshore (Lot 102 DP 1259228, Lot A DP 333263, Lot 1 DP 788637, and Lot 1 DP 1247122) between 12.00 and 14.00.*

*(4) A building resulting from development is taken to create additional overshadowing if the amount of overshadowing on the land after the development is carried out, during the period specified in subclause (3) as the case requires, will be greater than the amount of overshadowing on the land immediately before the commencement of this clause.*

*(5) Development consent must not be granted to the erection of a building, or the change of use of a building, on land to which this clause applies unless the consent authority is satisfied the building will have an active frontage for the part of the ground floor of the building facing the street, river or a public space.*

*(6) An active frontage is not required for the part of a building used for one or more of the following -*

*(a) entrances and lobbies, including as part of mixed use development,*

*(b) access for fire services,*

*(c) electrical services,*

*(d) vehicular access.*

*(7) Notwithstanding the Design Excellence bonus specified in Clause 7.13 (3), a building resulting from the development that is the winner of a competitive design process may exceed the following by up to 15%—*

*(a) the maximum permissible HOB for the land,*

*(b) the maximum permissible FSR for the land.*

## PLANNING PROPOSAL – Riverside Theatre

Figure 13 shows the proposed key sites map

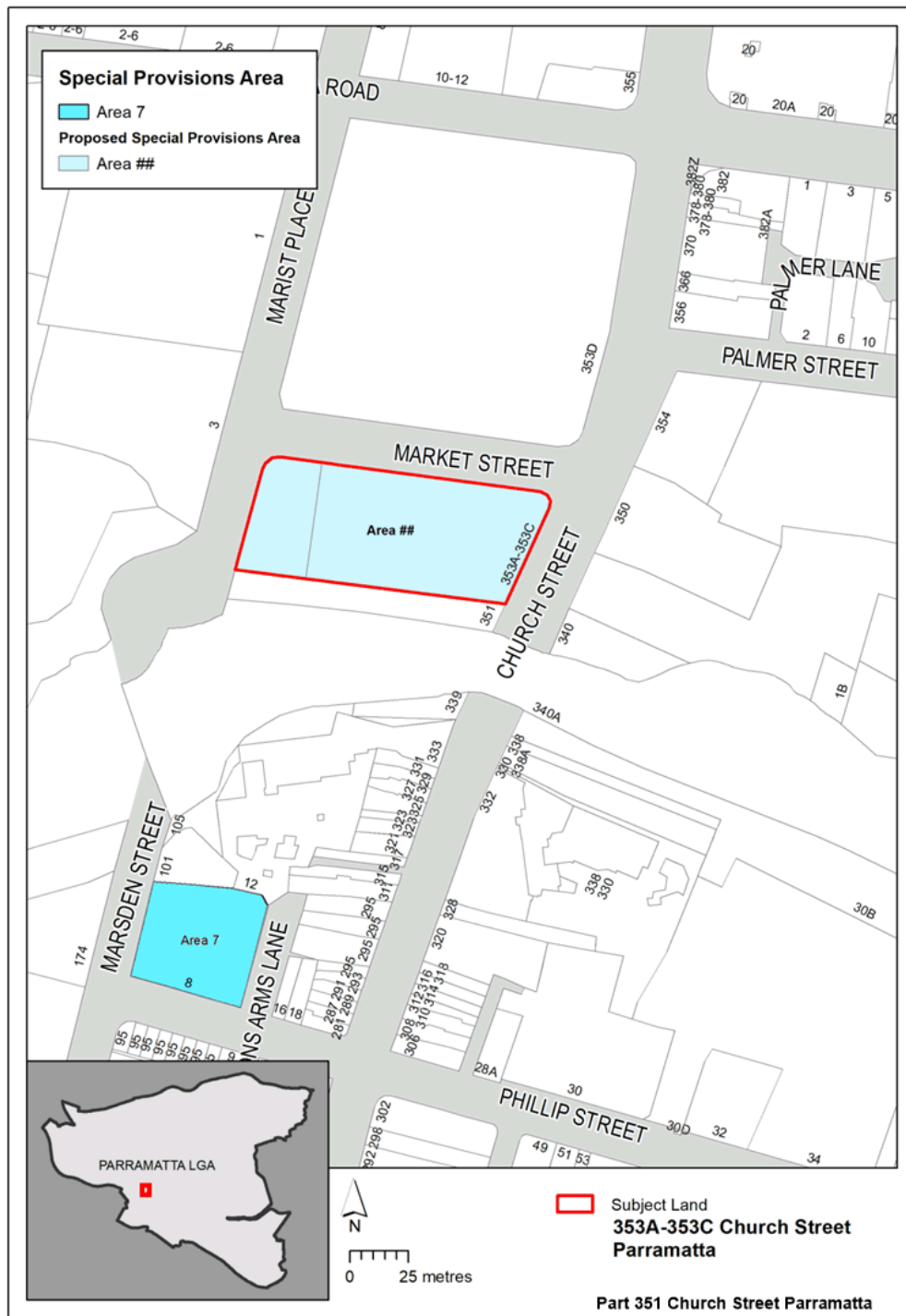


Figure 13 – Proposed amendment to the Parramatta LEP 2011 Key Sites Map

PLANNING PROPOSAL –Riverside Theatre

## PART 5 – COMMUNITY CONSULTATION

The Planning Proposal will be publicly available for community consultation as per the requirements of any future Gateway Determination.

The Gateway Determination will specify the level of public consultation that must be undertaken in relation to the Planning Proposal including those with government agencies.

Public exhibition is likely to include:

- written notification to adjoining landowners,
- written notification to government agencies, and
- notice and display on Council's website.

Consistent with sections 3.34(4) and 3.34(8) of the *EP&A Act 1979*, where community consultation is required, an instrument cannot be made unless the community has been given an opportunity to make submissions and the submissions have been considered.



## PART 6 – PROJECT TIMELINE

Once the Planning Proposal has been referred to the Minister for review of the Gateway Determination and received a Gateway determination, the anticipated project timeline will be further refined. It will also be further refined at each major milestone throughout the Planning Proposal's process.

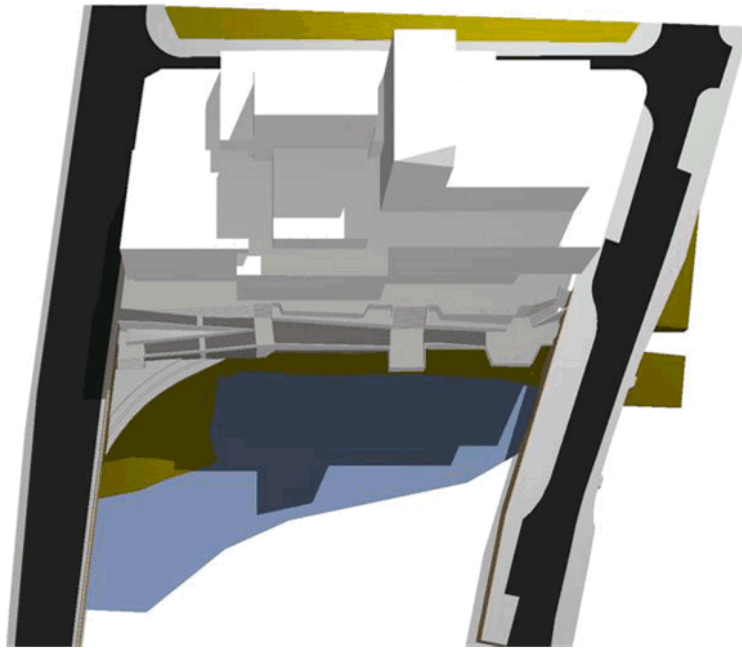
**Table 8** below outlines the anticipated timeframe for the completion of the Planning Proposal.

**Table 8** – Anticipated delivery of the Planning Proposal

Milestone	Anticipated Timeframe
Report to Local Planning Panel on the assessment of the PP	August 2022
Report to Council on the assessment of the Planning Proposal	September 2022
Referral to Minister for review of Gateway determination	October 2022
Receipt of Gateway Determination	November 2022
Public exhibition as per Gateway Determination	December 2022- February 2023
Consideration of submissions	February 2023
Report to Council post-exhibition of the Planning Proposal	March 2023
Parliamentary Counsel drafting of LEP amendment	March 2023
Gazettal of LEP amendment	April 2023

PLANNING PROPOSAL –Riverside Theatre

## APPENDIX A – SHADOW DIAGRAMS

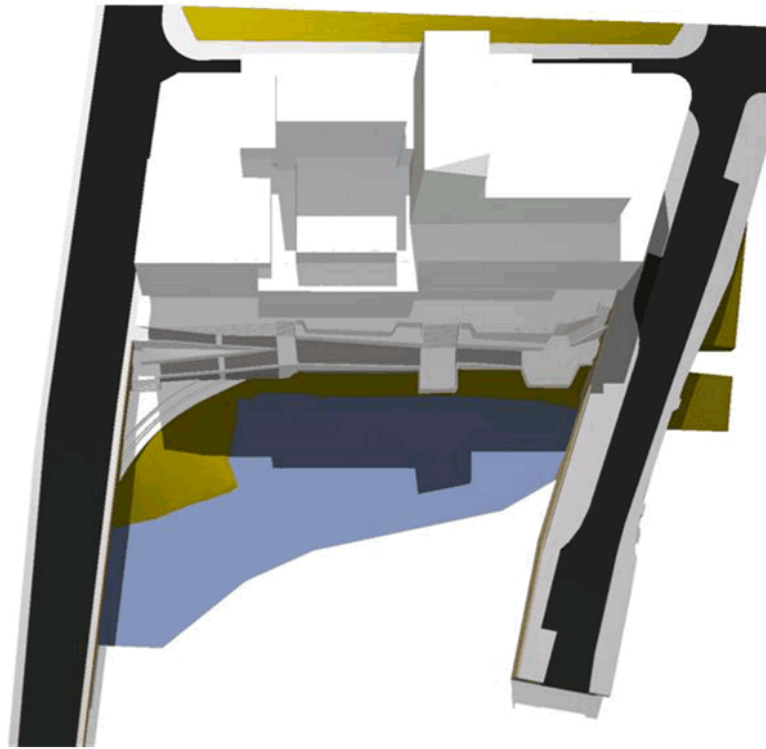


Shadow cast at 10:00am 21 June

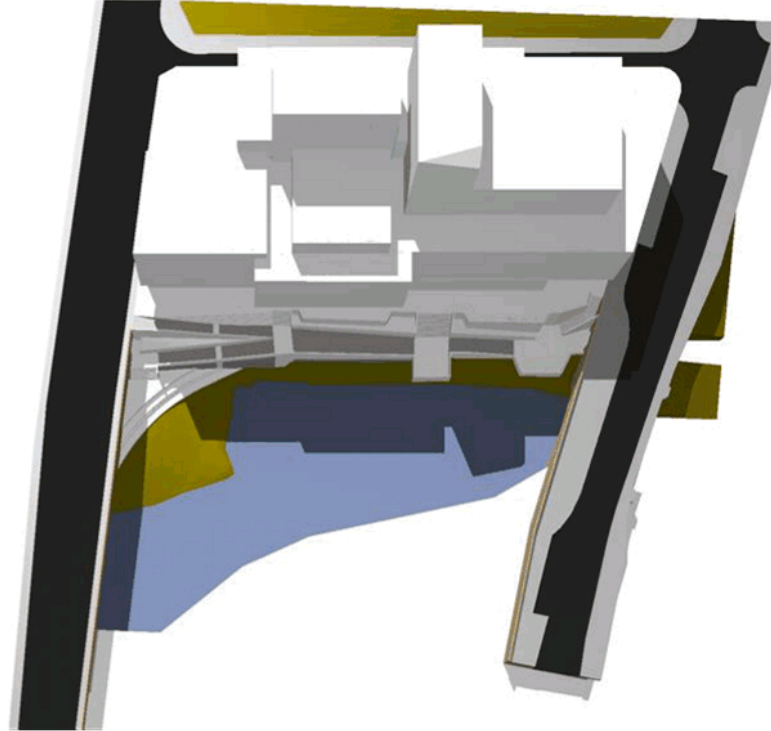


Shadow cast at 11:00am 21 June

PLANNING PROPOSAL –Riverside Theatre

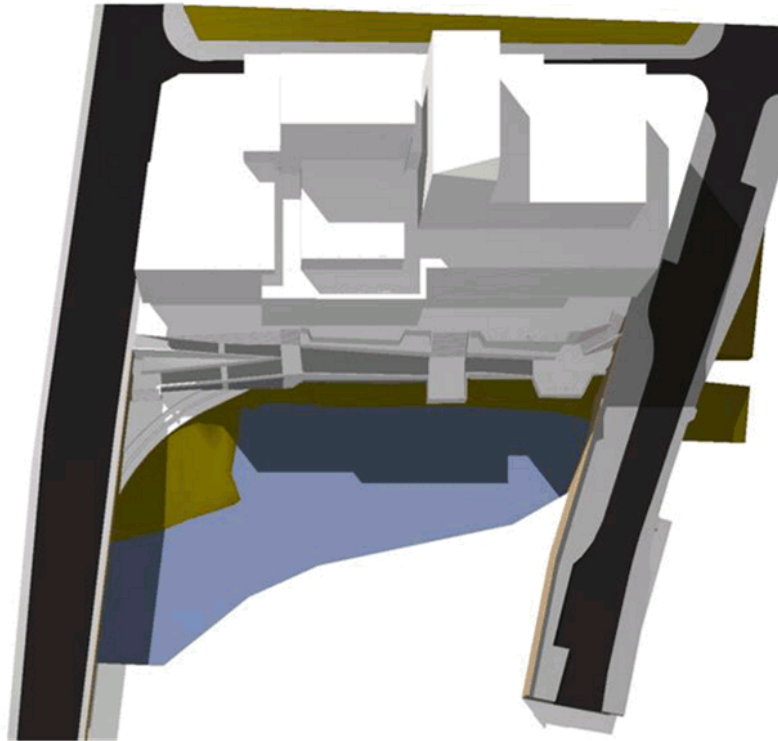


Shadow cast at 12:00pm 21 June

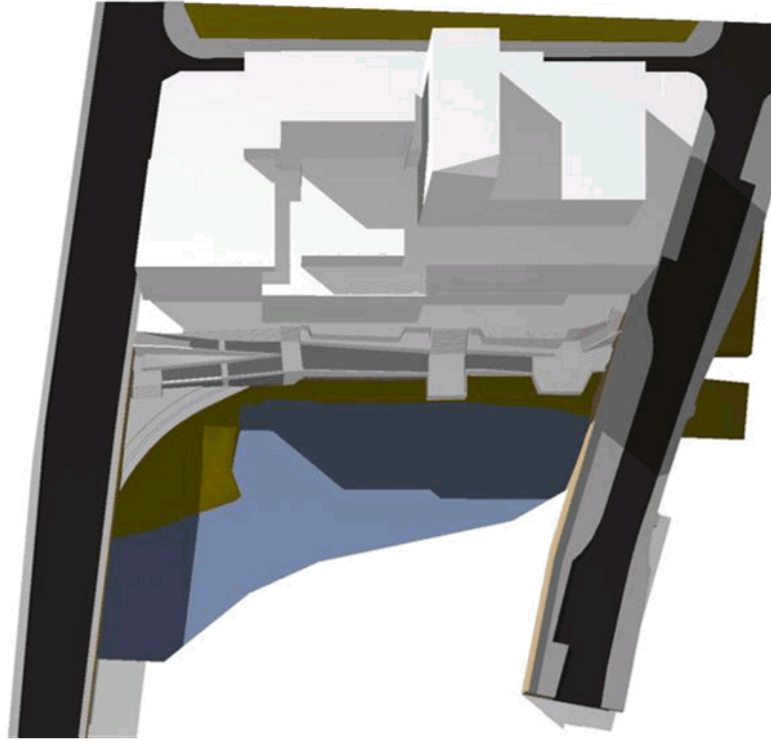


Shadow cast at 1:00pm 21 June

PLANNING PROPOSAL –Riverside Theatre



Shadow cast at 2:00pm 21 June



Shadow cast at 3:00pm 21 June

PLANNING PROPOSAL –Riverside Theatre

## **APPENDIX B – PARRAMATTA CITY CENTRE PLANNING PROPOSAL UPDATED FLOOD RISK MANAGEMENT PLANS 2019**

(see separate attachment)

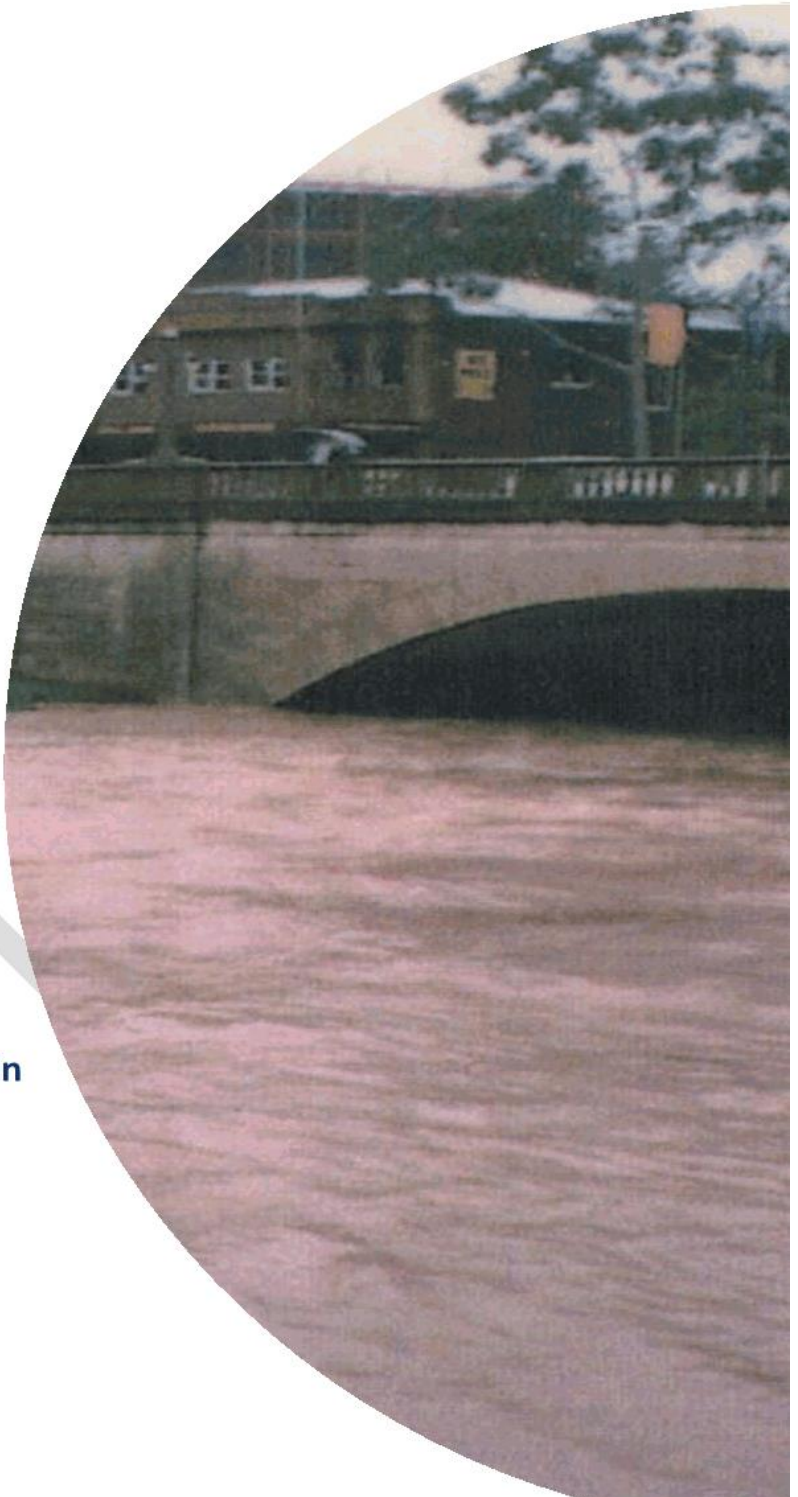


**MOLINO STEWART**  
ENVIRONMENT & NATURAL HAZARDS



**Update of Parramatta Floodplain  
Risk Management Plans**

*Draft*







## Update of Parramatta Floodplain Risk Management Plans

DRAFT

for

City of Parramatta Council

by

Molino Stewart Pty Ltd  
ACN 067 774 332

OCTOBER 2019

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<b>Document Reference</b>	0715 Updated Parramatta FRMP draft v7
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<b>Document Type</b>	Draft
<b>Author</b>	Tim Morrison

## REVISION HISTORY

Date	Version	Name	Comments
29/09/2015	1	Tim Morrison	Draft report for internal review
12/10/2015	2	Steven Molino	Draft report for client review
20/11/2015	3	Steven Molino	Second draft for client review in response to client feedback
25/02/2016	4	Steven Molino	<i>New Section amalgamating similar flood risk categories</i>
26/02/2016	5	Steven Molino	Incorporating client comments
27/08/2019	6	Jenni Kremer/ Steven Molino	Updates to reflect changes external to the report since 2016
23/09/2019	7	Steven Molino	Incorporating client comments

## DOCUMENT APPROVAL

<b>For Molino Stewart</b>	
<b>Name</b>	Steven Molino
<b>Position</b>	Principal
<b>For City of Parramatta Council</b>	
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## EXECUTIVE SUMMARY

Parramatta is located geographically and demographically in the centre of Sydney and is often referred to, both officially and unofficially, as Sydney's second central business district (CBD). The NSW Government and City of Parramatta Council have identified Parramatta CBD as a key growth centre for commercial and residential development.

One of the constraints for development within the Parramatta CBD is that a significant proportion of the area is within the floodplain of the Parramatta River and its tributaries.

As part of its vision for growing the Parramatta CBD, the City of Parramatta Council has prepared the Parramatta CBD Planning Strategy, which is a road map to expanding the CBD through amending a number of planning controls, such as floor space ratios and also expanding the CBD boundaries. As part of the Parramatta CBD Planning Strategy, Council is required to submit a Planning Proposal to the Department of Planning, Industry and Environment to make alterations to the current Parramatta Local Environment Plan (LEP) 2011.

The *Environmental Planning and Assessment Act* 1979 sets out a number of requirements that must be met for planning proposals to be approved. One is Section 9.1 Direction 4.3 which deals with development on floodplains. A requirement of the direction is that a planning proposal must not permit a significant increase in development in that area unless it has been prepared in accordance with the NSW Floodplain Development Manual (2005).

Accordingly, Council has engaged Molino Stewart to review the two Floodplain Risk Management Plans that cover the Parramatta CBD area and prepare an updated Floodplain Risk Management Plan. The review and preparation involved the following steps:

- The existing plans were reviewed to determine which measures in those plans were still to be implemented
- Council officers were interviewed and field inspections of the CBD undertaken to identify practical challenges and risks to life and property which have arisen from existing development in the CBD floodplains
- The draft planning proposal was reviewed to identify opportunities which it provides to address existing flood problems and what new risks it presents
- A comprehensive flood risk assessment was completed with particular emphasis on risk to life to determine whether development intensification in the CBD is appropriate and whether it needs to be controlled to manage flood risk
- A detailed evacuation analysis was undertaken to assess the feasibility of various evacuation options and evacuation infrastructure upgrades
- Flood risk management measures were identified in consultation with the Parramatta Floodplain Management Committee
- A draft Parramatta CBD Floodplain Risk Management Plan was prepared.

This report concludes that the intensification of development in the Parramatta CBD represents a tolerable risk to life and property providing that amendments are made to the Parramatta LEP 2011 and Parramatta Development Control Plan (DCP) 2011 to better manage some of the risks of flooding to life. The review has also identified opportunities for DCP amendments to be made which could result in less development restrictions in parts of the floodplain and improved building design outcomes.



The draft plan proposes:

- An application to the Minister for Planning and Open Spaces for exceptional circumstances to impose controls above the Flood Planning Level for development within the Parramatta CBD affected by the Probable Maximum Flood (PMF)
- The development of four (4) risk to life categories for determining the different types of mitigation and response measures required
- The provision of shelter above the PMF level and a building access at or above the 1% AEP flood level within the LEP rather than just in the DCP to ensure that these minimum life safety measures are applied to all developments
- A total of 14 amendments to Parramatta DCP 2011
- A review of policy in relation to fencing and screening within floodways
- Better communication of the detailed flood information available through Section 10.7 certificates
- Encouraging NSW State Emergency Service to complete the update of the Parramatta Local Flood Sub Plan
- Investigation of Section 7.11 contributions to fund flood mitigation projects
- Improved communication and public education regarding flood risk, preparedness, response and recover
- Further development of the flood early warning system for the Parramatta River
- Encouraging Sydney Water to review its channel maintenance programs
- The preparation of a Flood Emergency Response Plan including plans for evacuation for the CBD

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# 1 INTRODUCTION

## 1.1 BACKGROUND

Parramatta CBD is currently undergoing significant growth and redevelopment. One of the potentially limiting factors to this growth is the availability of floor space for commercial and residential use. Currently Parramatta CBD has a shortage of prime commercial office space, with vacancy rates far lower than other major centres in Sydney and the Australian average.

The importance of a successful and growing Parramatta CBD is recognised by the NSW State Government, labelling Parramatta as a "CBD of metropolitan significance" (NSW Department of Planning and Environment, 2014). As such, the government considers the growth of Parramatta CBD to be crucial to the growth of Sydney as a whole. It subsequently released the Greater Sydney Region Plan (Greater Sydney Commission, 2018a) and the Central City District Plan (Greater Sydney Commission, 2018b) which further reinforced Parramatta's strategic role for the entire metropolitan region and the importance of future growth in Parramatta.

In response, City of Parramatta Council developed the Parramatta CBD Planning Strategy (the CBD Strategy), which was adopted on 27<sup>th</sup> April 2015. Key features of the strategy are:

- Expand the boundaries of the Parramatta CBD
- Increase the floor space ratio controls in certain areas
- Alter solar access controls
- Alter building height restrictions
- Expand the commercial core of the CBD

An implementation strategy for the CBD Strategy has been developed, which includes the development of a planning proposal to modify the Parramatta LEP 2011. In order for the planning proposal to be approved, a number of statutory obligations need to be met. This includes the Section 9.1 Direction 4.3 – Flood Prone Land of the *Environmental*

*Planning and Assessment Act 1979* (the direction). Clause 3 of the direction "When this direction applies" states:

*"This direction applies when a relevant planning authority prepares a planning proposal that creates, removes or alters a zone or a provision that affects flood prone land"*

The direction goes on to state what the planning authority must do when the direction applies. These requirements are generally in line with the NSW Flood Prone Land Policy and the Floodplain Development Manual (DIPNR, 2005).

One of these requirements is that a planning proposal should not permit a significant increase in development within flood prone land. The direction allows inconsistency with the requirements if the planning proposal is incorporated into a Floodplain Risk Management Plan that has been created in accordance with the principles and guidelines of the Floodplain Development Manual (2005).

Significant areas within Parramatta CBD are flood prone. Floodplain risk management of these flood prone areas is generally undertaken under two existing floodplain risk management plans (the original plans), these are:

- The Floodplain Risk Management Plan for the Upper Parramatta River Catchment, Bewsher Consulting for the Upper Parramatta River Catchment Trust (April 2003)
- The Lower Parramatta Floodplain Risk Management Plan, SKM for City of Parramatta Council (August 2005).

In order to meet the requirements of the direction, Parramatta Council is updating the two original plans in light of the changes that have been made to both the land use and regulatory and planning frameworks as well as the future land use changes proposed by the CBD Strategy.



## 1.2 OBJECTIVES

The primary objectives of this project are to:

- Update the two original plans in light of the land use and regulatory changes that have occurred since the plans were adopted as well as incorporate the implementation of the plans that has occurred to date.
- Ensure that the planning proposal as part of the CBD Strategy is consistent with Section 9.1 Direction 4.3 of the *Environmental Planning and Assessment Act 1979*.

It relies mostly on data, such as model results, that have been gathered as part of the development of the original plans. The focus of this project is to update the floodplain risk management plan utilising the existing flood data and to apply it in light of:

- Changes to the regulatory framework since the original plans were developed
- Land use changes that have occurred since the original plans were developed and changes that will occur in the future through the planning proposal.
- Changes to the planning environment that has occurred since the development of the Original Plans.

## 1.3 STUDY AREA

The study area covered by this project is the planning proposal extent. This area is a subset of the area of the two existing plans, which cover a much larger part of the Parramatta LGA. Some elements of the existing plan review cover areas outside of the planning proposal extent, however, these are not the focus of the study.

Figure 1 shows the extent of the planning proposal area. It also shows the lots that have been identified through preliminary analysis that are likely to be subject to redevelopment as a result of the planning proposal.

The planning proposal area is the subject of the risk assessment that has been undertaken to determine whether the planning proposal meets the requirements of the direction.

At the time of writing, Council was in the process of finalising a new flood study to cover the Upper and Lower Parramatta River floodplains within the LGA.

It is understood that this new Flood Study will produce significantly more detailed and accurate data for the assessment of flood risks within the LGA. However, it is currently anticipated to be completed in 2020, with an updated floodplain risk management study and plan likely to be completed following that. Therefore this plan update was required to bring the original Plans in line with the new regulatory framework, land use and planning instruments in the interim. It is recommended that this study is reviewed once the new data from this Flood Study has been received.

A draft of this report was forwarded to the then Department of Planning and Environment in support of a request for a Gateway determination on the Draft Parramatta CBD Planning Proposal 2017. That draft of this report recommended that the (then) City of Parramatta Council request that "exceptional circumstances" be granted for the CBD under Section 9.1 Direction 4.3 Flood Prone Land. The Department requested that further investigations be carried out in relation to flood evacuation options to support that request. That report was submitted (Molino Stewart, 2017).

## 1.4 SCOPE OF THE UPDATE

The Floodplain Development Manual (2005) recommends a floodplain management process which involves data collection followed by a flood study then a floodplain risk management study followed by a floodplain risk management plan. This process should be revisited periodically using updated information.

This report is an update of the two existing floodplain risk management plans without new data collection or an update to the flood study or floodplain risk management study.





Figure 1: Planning Proposal Extent and potential redevelopment lots



In December 2018, the Department issued a conditional Gateway determination to allow the planning proposal to be updated and consolidated. This included several conditions to seek further clarification or evidence to support the planning proposal.

One of those conditions was that Council:

*“update the planning proposal and maps to provide a consolidated explanation of provisions and assessment of the intended outcomes as amended by this Gateway determination, and review the studies that have been prepared to support the planning proposal and update if required.”*

It also granted exceptional circumstances to enable further agency consultation on the planning controls that will apply to land impacted by the PMF.

To comply with the condition above, the Flood Evacuation Report was updated to incorporate new information which had become available since it was first prepared and this report has been updated to take into account the findings of the Flood Evacuation Report and to incorporate other changes which have occurred since this report was first drafted.

- Chapter 7 is the conclusions and recommendations
- Chapter 8 is the recommended Updated Floodplain Risk Management Plan
- Chapter 9 is a list of reference documents used in the project.

## 1.5 REPORT FORMAT

This report has been structured in the following way:

- Chapter 2 places the project in the context of the various planning documents and instruments
- Chapter 3 is a review of the existing plan measures, and focuses on whether they have been implemented and which, if any, of those measures need to be carried through or amended in the updated plan
- Chapter 4 describes the planning proposal and outlines its practical implications with regard to flooding
- Chapter 5 is a flood risk assessment which describes the flood risk assessment procedure undertaken on the planning proposal
- Chapter 6 presents the potential Management options arising from the flood risk assessment



## 2 PLANNING CONTEXT

This chapter sets out the relevant planning documents that have been taken into account when undertaking this project.

### 2.1 EXISTING FLOODPLAIN MANAGEMENT PLANS

Improvements to floodplain risk management within the study area are currently undertaken according to the two original floodplain risk management plans.

These plans provide a clear set of suggested measures to be undertaken by Council and other authorities in order to reduce the flood risk in the study area. These measures generally fall under three categories:

- **Flood Modification Measures:** These modify the behaviour of the flood itself by reducing flood levels or velocities
- **Property Modification Measures:** These modify either the existing buildings (voluntary house purchase/raising) or future development (through development controls) within the floodplain
- **Response Modification Measures:** These actions modify the response of the population to the flood threat, generally through community education or improvements to emergency management.

Further investigation of potential options may also be measures within a plan.

The original plans have a number of proposed actions that fall into each of these categories. However, since the development of the original plans, a number of these measures have been made redundant, particularly where:

- The regulatory framework has changed such that the suggested measure would no longer be viable (e.g. repeal of REP 28 - Parramatta)
- Further investigations have shown that the suggested measure is not effective or feasible

### 2.2 STRATEGIC PLANS

The NSW State Government and City of Parramatta have prepared a number of strategies and plans that outline the future growth of Parramatta. These include:

- **Greater Sydney Region Plan A Metropolis of Three Cities – connecting people** (Greater Sydney Commission 2018a) outlines vision for the Greater Sydney Region, focuses on three cities (Western Parkland, Central River and Eastern Harbour) within the Greater Sydney Region and is based on the expectation that the population will be 8 million residents in 2058. The population in the 'Central River City' is expected to increase from 1.3 million to 1.7 million by 2038.
- **Our Greater Sydney 2056 Central City District Plan – connecting communities** (GSC 2018b) is a 20 year plan working towards the 40 year vision outlined in the Greater Sydney Region Plan. Parramatta is at the Centre of the Central City District. As part of this strategy an increase of 55,000 to 70,000 jobs throughout Greater Parramatta is planned, to be supported by new development,
- **The Economic Development Plan 2017-2021** (City of Parramatta Council 2017) aims to increase the number of jobs in the Parramatta LGA by 20,000 by 2021, 9,500 of which are expected to be in the CBD. This will be supported by the investment and development currently taking place in the CBD, as well as a range of strategies from council.
- **The Community Strategic Plan 2018-2038** (City of Parramatta Council, 2018) puts strategies in place to manage the elements of growth that the City can influence, leading to an improved quality of life for all.

In the 2016 Census 137,329 people listed Parramatta as their "Place of Work" with the Economic Development Plan suggesting 47,000 of those were in the Parramatta CBD.

While a significant number of the projected new jobs will be located in various precincts with Parramatta LGA, it is likely that the majority of the growth will occur inside the CBD.

The CBD Strategy has been developed by Council over a number of years as a response to the planned jobs growth and is aimed at amending the planning controls within the CBD. The vision of the strategy is:

"Parramatta will be Australia's next great city, defined by landmark buildings and high quality public spaces with strong connections to regional transport. It will respect its heritage, be an exemplar in design excellence, facilitate job growth and ensure its streets are well activated"

In order to achieve the vision, the CBD strategy proposes to:

- Expand the boundaries of the Parramatta CBD into the neighbouring area.
- Amend planning controls to encourage re-development to create larger buildings. This is achieved through increasing the allowable floor space ratios and removing building height restrictions (where this is not constrained by other factors such as solar access).

## 2.3 STATE FLOOD PLANNING DOCUMENTS

### 2.3.1 Environmental Planning and Assessment Act 1979 Section 9.1 Directions

Section 9.1 of the EP&A Act permits the Minister for Planning to issue a direction in relation to the making of local environmental plans. Several of these have been issued including Direction 4.3 which related to flood prone land.

The objectives of the direction are to ensure that the development on flood prone land is consistent with the Flood Prone Land Policy and the Floodplain Development Manual (2005) and also to ensure that the planning proposal considers flood hazard and the flood impacts on and off the subject land.

The requirements of the direction are:

- The planning proposal must be consistent with the NSW Flood Prone Land Policy and Floodplain Development Manual (FDM)

- The planning proposal must not rezone land within the flood planning areas from Special Use, Special Purpose, Recreation, Rural or Environmental Protection Zones to a Residential, Business, Industrial, Special Use or Special Purpose Zone

- The planning proposal must not contain provisions that apply to the planning areas which:

- permit development in floodway areas
- permit development that will result in significant flood impacts to other properties
- permit a significant increase in the development of that land
- are likely to result in a substantially increased requirement for government spending on flood mitigation measures, infrastructure or services
- permit development to be carried out without consent except for the purposes of agriculture, roads or exempt development

- The planning proposal must not impose flood related development controls above the residential flood planning level for resident development on land, unless adequately justified

- The planning proposal must not determine a flood planning level that is inconsistent with the FDM

The direction also includes an allowance for inconsistencies. A planning proposal may be inconsistent with the direction if it can satisfy the Department of Planning that:

- The planning proposal is in accordance with a floodplain risk management plan prepared in accordance with the principles and guidelines of the Floodplain Development Manual (2005)

Or

- The provisions of the planning proposal that are inconsistent are of minor significance

As discussed in previous sections of this report, the aim of the planning proposal is to

essentially permit a significant increase in development within the existing and expanded CBD. Because much of the planning area is floodplain, the planning proposal has the potential to "permit a significant increase in the development of" the floodplain. As such, the planning proposal is not consistent with the direction.

In order to satisfy the requirements of the direction, an updated floodplain risk management plan prepared in accordance with the NSW Floodplain Development Manual, is required.

### 2.3.2 NSW Flood Prone Land Policy

The NSW Flood Prone Land Policy (2005) outlines the approach taken by the NSW Government to development on floodplains.

The primary objective of the policy is to reduce the impact of flooding and flood liability on individual owners and occupiers of flood prone property, and to reduce private and public losses resulting from floods, utilising ecologically positive methods where possible.

The policy sets out the roles and responsibilities of those involved in planning and controlling floodplain development. These are:

- Councils are primarily responsible for the management of flood prone land. Their role is to establish planning controls and measures to reduce flood risk by utilising the methods set out in the FDM
- The NSW Government, through the Office of Environment and Heritage, provides financial and technical support to councils to ensure that the approach is applied consistently across the state
- Floodplain Risk Management Committees, community based committees established by Council, are responsible for reviewing the floodplain development process and communicating their aspirations concerning the management of flood prone land.

Some other key sections of the policy include:

- Recognition that flood prone land is a valuable resource and should not be sterilised by unnecessarily precluding its development

- Promotion of a flexible merit based approach to be followed by Council and recognition that if strict criteria are applied then some appropriate proposals may be unreasonably disallowed and alternatively some inappropriate proposals may be approved
- Protection for Council and other public authorities against claims for damages, provided they have acted in accordance with the Policy and the FDM (as per Section 733 of the *Local Government Act, 1993*)

### 2.3.3 NSW Floodplain Development Manual

The FDM sets out the methodology in which floodplain management is undertaken in NSW. It builds upon the approach set out in the NSW Flood Prone Land Policy and provides guidance on how to enact the principles of the policy.

The manual is built upon a risk management approach. It promotes quantification of the probability (how often will floods occur?) and the consequences (what people and assets are exposed, what is the hazard of the water, what are the tangible and intangible damages) to determine the risk. The manual promotes management measures to reduce the risk, either by decreasing the probability, the consequence or both.

The core of the manual is the Floodplain Risk Management Process which sets out an iterative approach to mitigate the risk, then review and determine if the residual risk can be mitigated. The process generally follows:

- Formation of the Floodplain Risk Management Committee
- Data Collection
- Flood Study
- Floodplain Risk Management Study
- Floodplain Risk Management Plan
- Plan Implementation

Figure 2 concisely outlines the floodplain development process. The floodplain development manual is essentially followed for all floodplain management within NSW.



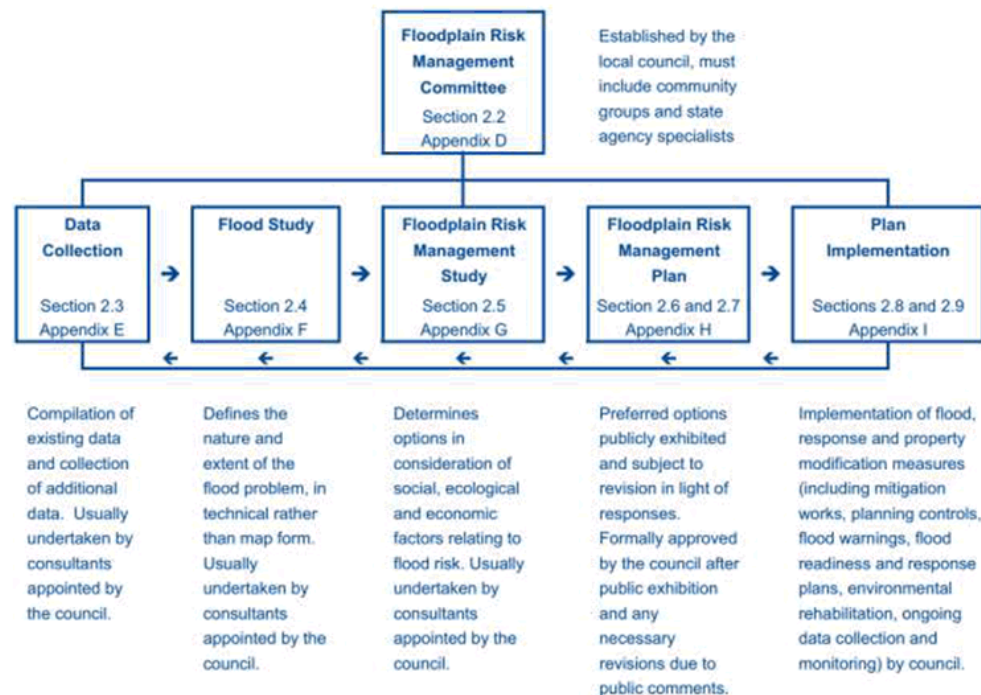


Figure 2: Floodplain Development Process (From DIPNR 2005)

## 2.4 LOCAL PLANNING INSTRUMENTS

### 2.4.1 Parramatta Local Environment Plan (LEP) 2011

The Parramatta LEP 2011 applies to the whole area covered by the FRMP. This LEP is a standard instrument LEP and as such the wording and structure are generally set out by the NSW Department of Planning, Industry and Environment. With respect to flood planning, the LEP has a number of conditions that the development must satisfy rather than a number of potential impacts that the consent authority must consider in its determination.

The main conditions for approval are that the development:

- Is compatible with the flood hazard of the land
- Is not likely to significantly adversely affect flood behaviour resulting in increases in the flood affectation of other properties

- Incorporates appropriate measures to manage risk to life from flood
- Is not likely to significantly adversely affect the environment or cause erosion, siltation, destruction of vegetation etc.

The Standard Instrument LEP also sets the flood planning level as the 100 year average recurrence interval (ARI) event plus 0.5 m of freeboard.

### 2.4.2 Parramatta Development Control Plan (DCP) 2011

The Parramatta DCP 2011 (Included as Appendix B) sets out the development controls with regard to flooding for the Parramatta LEP 2011. One of the aims of the DCP is to assist development in conforming to the requirements of the LEP. Where the LEP lists a requirement for a certain potential impact to be considered, the DCP has been written such that if it is followed, that impact is likely to be minimised.

The DCP uses a matrix of controls depending on the Flood Risk Precinct (Low, Medium or



High) and Land Use Type (Residential, Commercial, Critical Uses & Facilities etc.) and categorises the development controls against a number of aspects, including:

- Floor level
- Building Components
- Structural Soundness
- Flood Affection
- Car Parking and Driveway Access
- Evacuation
- Management and Design

This approach is consistent with many other Councils within the Sydney Region and is generally considered best practice. However, the Land Use definitions and controls tend to vary between Councils. For example, the Parramatta DCP Matrix would classify a hospital as a "Sensitive Use" while the Fairfield City Wide DCP 2013 and the Bankstown DCP 2015 have classified a hospital as a "Critical Use". The outcome, in terms of planning controls for all three DCPs, is the same for hospitals.

For this project critical controls were compared across the Parramatta, Fairfield and Bankstown DCPs. the controls examined included the floor levels, evacuation and car parking and driveway access controls for the Low and Medium Flood Risk Precincts for Residential and Commercial Development. It was found that the Parramatta DCP was fairly similar to the Fairfield and Bankstown DCPs, with minor variations such as the level of basement car parking (Parramatta uses the 1% AEP plus 0.5 m freeboard, Fairfield the 1% AEP and Bankstown the 1% AEP plus 0.1 m freeboard).

At the time of writing the Parramatta DCP was under review by Council.

The controls set out in the DCP are in line with the objectives of the Floodplain Development Manual 2005.

## 2.5 PARRAMATTA FLOOD POLICY

Molino Stewart previously reviewed the Parramatta Flood Policy as part of the development of Council's City River Strategy. Council is updating the currently adopted Flood Policy taking into consideration that review.

Four principles influence the current flood policy:

- Flood prone land is a valuable resource that should be managed and developed, subject to a merit approach that provides due consideration to social, economic and environmental criteria, as well as any flooding criteria, as identified in flood studies, independent assessments or strategically developed floodplain risk management studies and plans
- Both mainstream and overland flooding are to be considered when assessing flood risk
- Flood prone land should not be sterilised by unnecessarily precluding development through the application of rigid and prescriptive criteria, however inappropriate proposals should not be accepted
- Measures to increase resilience across the LGA should be encouraged so as to reduce the long term effects of flooding when it occurs.

The Policy is being implemented through the following over-arching processes:

- Preparing co-ordinated development controls
- Establishing a development application process
- Where appropriate and feasible, encouraging the conversion of "High Risk Hazard Zones" or "Floodways" to natural waterway corridors
- Establishing a rolling program of reviews of floodplain risk management studies and plans to ensure flood data is as up-to-date as possible, especially in Council's priority and growth areas
- Establishing an access portal on Council's website to display relevant flood studies, plans and maps adopted by Council



- Implementing a community engagement program, designed to ensure the community in general, and specifically any proponents of development, are aware of the potential flood hazard and consequent risk and liability associated with the use and development of flood liable land.

## 2.6 FLOOD RESPONSIBILITIES

Table 1 shows the range of organisations involved in floodplain management activities and their diverse responsibilities.

Table 1: Floodplain Management Responsibilities

Floodplain Management Actions		Organisation and its responsibility					
		FMC	Council	DPIE <sup>1</sup>	NSW SES	Sydney Water Corporation <sup>2</sup>	BoM
Flood Modification	Detention Basins and modifications to drainage infrastructure	Recommend	Approve, Fund, Design, Construct, Maintain	Approve, Co-Fund		Approve, Fund, Design, Construct, Maintain	
	Levees	Recommend	Approve, Fund, Design, Construct, Maintain	Approve, Co-Fund			
	Cleaning Drains	Recommend	Fund and implement			Fund and implement	
Property Modification	Voluntary House Purchase, Voluntary House Raising	Recommend	Approve, Co-Fund	Approve, Co-Fund			
	Planning Controls	Recommend	Draft, Regulate	Approve			
Response Modification	Community Education	Recommend	Approve, Fund, Undertake		Approve, Fund, Undertake		
	Emergency Planning	Recommend	Approve, Fund, Undertake		Approve, Fund, Undertake		
	Flood Warning Systems	Recommend	Approve, Fund, Design, Construct, Operate, Maintain	Approve, Co-Fund	Advise, use		Advise, use

1. DPIE may co-fund some flood mitigation measure using State Government funds or State and Federal Government funds.

2. only has responsibility where drainage assets (principally concrete lined stormwater drains) are SWC assets.

### 3 EXISTING MANAGEMENT PLAN

#### 3.1 STATUS REVIEW

As part of the update to the Parramatta Floodplain Risk Management Plans, a review of the existing plans was undertaken. The focus of the review was to determine to what extent the existing plan measures have been implemented by Council.

Across the two plan areas there were 39 major recommendations, covering:

- Revisions to planning controls
- Property modifications (voluntary house purchase and house raising)
- Response modifications
- Flood modifications.

A qualitative assessment of the implementation status of the original recommendations follows.

##### 3.1.1 Revisions to Planning Controls

In general, the revisions to planning controls had been completed, or the proposed revisions have become redundant because of changes to planning instruments driven by other considerations.

Some of the issues which have not been fully resolved include:

- changes to wording within the DCP and S10.7 certificates
- investigations into the potential for S7.11 contributions to contribute to flood mitigation measures
- controls on fencing and screening in high hazard and overland flow areas.

##### 3.1.2 Property Modifications

Council has generally implemented the recommended property modifications or upon further investigation has found that they were not feasible.

A number of properties have been voluntarily acquired or raised.

Council is currently undertaking a new flood study that will likely identify a number of areas where further property modifications can be undertaken to mitigate flood risk.

##### 3.1.3 Response Modification

The response modification measures within the plans generally fall within three categories, these are:

- Flood Emergency Response Planning - Council and the NSW SES are continuing to work on the local flood emergency response plans, and significant hydraulic analysis has been undertaken on other areas within the CBD. However, the updates have not been completed because of resourcing constraints, particularly for the Local Flood Plan
- Flood Warning - There is no specific recommendation in either plan regarding flood warning but Council has installed a flood early warning system for the CBD
- Community Awareness and Education - There are a number of recommendations within both plans with respect to community flood risk awareness and community education. Council has implemented its Floodsmart program in association with its warning system implementation. This makes flood related information available of Council's website and there have been other efforts made to disseminate information about flood risks to the community.

##### 3.1.4 Flood Modifications

The existing plans recommended a number of flood modification works, including detention basins and levees and a number of drainage improvements such as culverts and pipes. It was recommended that some be investigated further to determine feasibility. These measures have generally been implemented or otherwise found not to be feasible.

Some investigations are still underway. Some measures have not been put in place because it was determined that it would be more



efficient to resolve the flood problem through re-development.

Additionally, the plans recommended rubbish and vegetation removal and de-snagging within a number of channels. All trunk drainage channels within the CBD area are owned and maintained by Sydney Water. It is understood based on previous advice from Sydney Water that they have a regular operation and maintenance program. Council also requests Sydney Water to clean and remove debris collected within these channels as and when this becomes known to Council and when residents or the general public inform Council through its Service Request System.

### 3.2 PRACTICAL CHALLENGES

The opportunity was also taken to discuss with Council officers any known practical difficulties or problems which have been identified through implementation of the existing plan.

Discussions with Council officers revealed that the way in which some developments have been built to comply with existing flood planning controls have had unintended consequences or resulted in sub-optimal design outcomes. Issue of main concern are:

#### 3.2.1 Car Parks

If a basement car park is flooded, it will create extremely high hazard waters for anyone that is stuck in the basement or otherwise attempts to access it.

There is a critical difference between basement flooding and over floor flooding. For example, if a normal residence is built at the level of the 1 in 100 Year ARI plus 500 mm freeboard, and a flood level is 0.3 m higher, it will only produce low hazard waters within the dwelling and some property can be protected on tables.

In the same flood, if the flood level is 0.3 m greater than the lip level of a basement car park, it will create an extremely high velocity, high hazard floodway as the floodwaters rush over the lip and into the basement, it will then

progressively fill the basement and create extremely deep pools or high hazard water.

For this reason, the DCP discourages basement car parks but if the site requires one it must have be protected to the level of the PMF. Council officers have indicated this can provide significant design challenges.

#### 3.2.2 Critical Infrastructure

As the 2011 floods in Brisbane highlighted, the placement of critical building infrastructure (electricity transformers, lift motors, water pumps) in basements and ground floors can significantly delay the reopening of a building after flooding. Consideration needs to be given to development controls to ensure that this infrastructure is given an appropriate level of flood protection.

#### 3.2.3 Activate Building Edges

An issue which has emerged as developers design buildings in flood prone areas is the connectivity between the footpath and the floor level of the building, particularly in areas where the 1 in 100 Year ARI plus 500 mm freeboard is significantly higher than ground level. This presents an issue for areas such as the CBD where there is typically retail or restaurant development on the ground floor, and the floor level difference presents a barrier to customers. This issue is shown in Figure 3 and Figure 4 where the shop fronts are set back and raised and out of eye level for pedestrians.



Figure 3: Activated Building Edge Example

### 3.2.4 Fire Exits

There are many examples of recent development in the floodplain where the fire exit door is set at ground level but the minimum building floor level is considerably higher. All fire exits are required to open outwards from the building, however, if the fire door was required to be used during a flood, this door may be impossible to open as it is likely there would be a higher water level outside than inside, and this head (water level) difference would stop the fire exit door from opening. This is highlighted in Figure 4 where the minimum floor level can be seen by the stairs in the blue building, and the fire exit is shown between the two sets of stairs. Figure 5 also shows this where the steel screen on the right is the level of the floodway (these rise during a flood to allow flow underneath) and is shown to be over halfway up the height of the fire exit.



Figure 4: Fire Exit and Ground Level Example 1



Figure 5: Fire Exit at Ground Level Example 2

### 3.2.5 Flow Under Buildings

In some areas through the CBD, particularly along Clay Cliff Creek, a number of buildings have been set above the ground level with a gap beneath the building to allow for flow. This has been required as the buildings are situated over floodways and if there was no flow underneath the building it would have an impact on their neighbours.

The issue arises where the area beneath the building is screened off so that there is no access, and these screens, in many cases, would not allow any flow through, as can be seen in Figure 6. In some cases, as shown in Figure 7, the flow area has been further blocked by fencing or other materials in an attempt to enclose the flow area and use it for storage.



Figure 6: Screening Example 1



Figure 7: Screening Example 2



### 3.2.6 Early Flood Warning

City of Parramatta Council has installed an early flood warning system for the Parramatta River. It has had a slow uptake of subscribers and Council is looking at ways to ensure more people are receiving and understanding flood warning messages as well as improving the accuracy and timeliness of warnings.

### 3.2.7 DCP Wording

Council officers and others have observed that some of the wording in the DCP is ambiguous or misleading. This includes the reference to "flood risk precincts" which are essentially a mapping of flood probability which is only one contributor to flood risk.

### 3.2.8 S10.7 Certificate Wording

Council officers have observed that property inquiries and sales generate the production of Section 10.7 certificates. In Parramatta the Section 10.7(2), which legally must accompany any property sale contract, only makes some general statements about the flood affection of the property. A more detailed Section 10.7(5) certificate can be purchased to obtain the more detailed information about flood affection of the property.

Council officers want to consider ways in which it could be made clear that the S10.7(2) certificates do not contain all flooding information. Recommended that a guide to making the decision of purchasing S10.7(2) or S10.7(5) is included within the application form.

## 3.3 MANAGEMENT OPTIONS

Table 2 shows the potential options to be included in the updated plan. These measures are based on the existing plan review, discussion with council officers and field inspections. Some are updates to measures that were recommended as part of the existing plans.

Table 2: Potential Management Options Arising from the Existing Plan Review

Measure Type	Proposed Measure	Source
Planning Control	Revise the wording of the DCP and S10.7 Certificates	Upper and Lower Parramatta Plan, Council officers
Planning Control	Council to consider ways in which S7.11 contributions could be made towards flood mitigation projects.	Upper and Lower Parramatta Plan, Council officers
Planning Control	Council to develop a policy with respect to fencing and screening within floodways. This policy could result in provision of appropriate staffing levels to allow existing floodways to be inspected to ensure pathways are still clear.	Lower Parramatta Plan, Council officers
Planning Control	Review the requirement for basement car parks to be protected up to the level of the PMF.	Council officers
Planning Control	Consider introducing planning controls for the protection of critical building infrastructure	Council officers
Planning Control	Consider planning controls which enable the activation of building edges at street level	Council officers
Planning Control	Consider planning controls which reduce the risk of fire doors being blocked by floodwaters	Council officers
Response Modification	Council to encourage the NSW SES to finalise development of the Local Flood Sub Plan	Lower Parramatta Plan, Council officers
Response Modification	Council review the availability of flooding data to the public and develop a community awareness and education policy and program for ensuring the population at risk is aware of the flood risks to life and property.	Upper and Lower Parramatta Plan
Response Modification	Council continues developing the Flood Early Warning System for Parramatta CBD and includes a program for review and continuous improvement of the system and means of disseminating more accurate and timely warnings to more people.	Council Officers
Flood Modification	Council to encourage Sydney Water to conduct a review of the maintenance program for the channel including removal of rubbish and excess vegetation	Lower Parramatta Plan

## 4 THE PLANNING PROPOSAL

The planning proposal for the CBD Strategy is to allow for the expansion of the Parramatta CBD boundary as well as amendments to a number of building controls within both the current CBD and the extended CBD area. Primarily these building controls relate to Floor Space Ratios (FSR) and building height restrictions.

The net effect of the planning proposal is to increase the capacity of the CBD both in terms of commercial and residential floor space. This increase in floor space is effectively on top (i.e. higher) than the current development and does not open up any new areas (green fields) for development.

It should be noted that the current controls on the development within and around the CBD allow for reasonably significant redevelopment of the planning proposal area.

In a general sense, the planning proposal would allow the development in the core part of the development for buildings up to around 50 storeys, as opposed to the existing controls which allow buildings up to around 30 storeys, while around the fringes it would allow buildings up to 10 to 30 storeys where buildings of around 5 storeys are currently allowable.

### 4.1.1 Built Form

Given the current and projected demands for space within the Parramatta CBD area, all redevelopment is likely to be for the construction of "high rise" buildings for either commercial office space or for residential apartments. Many of these developments will have retail or hospitality establishments on the ground floor; others may be limited to foyers on the ground floor. Car parking will be located either on basement levels or above the ground floor.

### 4.1.2 Planning Controls

The Parramatta DCP 2011 would classify the land use as either Commercial or Residential

(with respect to flooding). For Residential development, the development could also be considered as within the Concessional Development Land Use category, the controls on concessional development are relatively similar to residential development, with some extra conditions such as maintaining floodways.

The DCP planning considerations for both Residential and Commercial are the same for all flood risk precincts with the exception that in the low flood risk precinct a residential development is required to have reliable pedestrian and vehicle access to an area above the PMF (either on site or off site) whereas for commercial development this is not required.

All new residential and commercial buildings would have to have minimum habitable floor levels above the flood planning level which is 0.5m above the level of the 100 ARI flood.

As all new buildings which are redeveloped as a result of the new CBD Strategy will generally be taller than 10 m, it is expected that the redevelopment would provide areas within each building above the level of the probable maximum flood (PMF).

## 5 FLOOD RISK ASSESSMENT

In accordance with the requirements of the Section 9.1 Direction 4.3A, a flood risk assessment has been undertaken on the CBD Strategy planning proposal. This has been undertaken in accordance with the principles and guidelines of the NSW Floodplain Development Manual and Flood Prone Land Policy. This chapter explains how it was undertaken and the results of the analysis.

### 5.1 FLOOD RISK APPROACH

The approach taken to this flood risk assessment conforms to the principles of the NSW Floodplain Development Manual (2005). Where possible we have quantified the change in flood risk due to the planning proposal and where quantitative analysis was not possible or not appropriate we have made some qualitative assessments.

The approach was to define the existing flood risks to the existing population at risk and then examine how both the flood risks and population at risk will change due to the planning proposal and to determine whether these changes are significant.

### 5.2 DATA USED

#### 5.2.1 Flooding Data

Flooding data was provided by Council covering the two original plan areas. For both areas the data provided was produced by MIKE11 one dimensional models.

For the Lower Parramatta River area, the model was developed over a period of time and updated as part of the Flood Study Review, completed in 2005 by SKM. The model utilised over 600 cross-sections and included detailed representation of the Clay Cliff Creek waterway system.

For the Upper Parramatta River area, the model was first developed by the then Department of Water Resources and the

Upper Parramatta River Catchment Trust in the early 1980's. Significant work has been undertaken over the years since then to refine the model. The Draft 8 Version of the model has been adopted by Council and the data from this version has been provided and used as part of this study.

The flooding data that has been provided for the area includes:

- Flooding extents from the 20 Year, 100 Year Average Recurrence Interval (ARI) and PMF design events from the Upper Parramatta River and Lower Parramatta as well as other studies that have been undertaken.
- The low, medium and high hazard areas as defined by Parramatta Council (see section 5.3.3).
- Results from the two MIKE11 models (Upstream and Downstream extents) for a range of events in the native DHI .res11 format

The flood model data has been developed over a long period of time and integrates a significant amount of data and intelligence that has been gathered over that time. However, since the time of its development, the modelling software and techniques that have been used have become dated and no longer represents best practice in floodplain risk management. Therefore, there are some limitations to, and assumptions that have been made in respect of, the analysis that has been undertaken due to the limitations to the model results provided.

Council is in the process of preparing a new two dimensional flood model which would include the CBD study area but that was not available at the time of writing.

#### 5.2.2 Topographic Data

Contour data was provided by Council at a 1 m contour interval. This has then been processed into a Digital Elevation Model (DEM) with a 1 m grid resolution. While this process requires some data interpolation, the DEM, with an appropriate colour ramp, is easier to interpret than contour information.



The contour data would also miss any topographic variations that are less than a metre in range. However, the data has primarily been used to determine the Flood Emergency Response Classification of Communities (see Section 5.5.3) and in this process it is unlikely that small topographic variations would have an impact.

### 5.2.3 Infrastructure and Administrative Data

Infrastructure and Topographical Data has been provided in GIS vector format for a range of features, including:

- Road Centrelines
- Stormwater Pipe and Pit Network
- Watercourse Lines
- Cadastral Parcels

### 5.2.4 CBD Strategy Planning Proposal Data

The CBD Strategy Planning Proposal data was provided as a GIS layer with features on a lot scale. The layer included floor surface areas (FSA) under the current planning controls (Current Scenario) and for two future scenarios: one where residential development is allowed in the commercial core (FSAR2), and the other where it isn't (FSAR1).

The analysis removed lots where the potential for redevelopment is low, either due to other constraints (e.g. heritage) or if the ownership is too divided (strata titles with greater than 10 owners). Our analysis was only undertaken on the lots that had been provided as part of the floor space analysis.

We took the floor space areas and converted them into a population at risk using the methodology supplied by Council.

For residential FSA we assumed that there will be:

- One dwelling per 100m<sup>2</sup>
- 2.33 people per dwelling

For Commercial FSA (both office space and retail) we assumed that there will be:

- One job per 24m<sup>2</sup>

As a way of simplifying the data, and as a conservative estimate, we rounded all population estimates up to the nearest integer (or person).

Subsequently, Molino Stewart was commissioned to undertake a detailed evacuation analysis and for that a more comprehensive estimate of population at risk was prepared. That used current and future development scenarios based on existing FSAs of buildings which are unlikely to be redeveloped in the next 30 years and FSAs derived from the incentive floor space ratios (FSRs) in the draft CBD planning proposal. The methodology is detailed in the Parramatta CBD Flood Evacuation Assessment Report (Molino Stewart, 2019). Where appropriate, in this report refers to these numbers.

## 5.3 NATURE OF THE FLOODING

### 5.3.1 Flood Mechanism

The primary source of flooding is from the Parramatta River, with the majority of water sourced from upstream of the CBD. The river rises and breaks its banks and expands laterally into the floodplain through the CBD area.

Some areas within the CBD can also be flooded by local overland flow from intense rainfall overwhelming the drainage system without any significant flooding in the River.

Other areas of the CBD are affected by overbank flooding in the Brickfield Creek and Clay Cliff Creek floodplains.

### 5.3.2 Flooding Patterns

The first streets to be inundated south of the river are the main roads O'Connell Street, Marsden Street, Church Street, Smith Street, Phillip Street, George Street, and Macquarie Street. These flood because local runoff overwhelms the underground drainage system, particularly if the river level is high or drainage inlets are blocked by debris.

From these main roads the flooding spreads throughout the CBD, cutting off many evacuation routes and creating low and high flood islands. Because the CBD is relatively flat, this flooding is generally low velocity with depths varying depending on the local topography.

In events larger than the 1% AEP flood the river breaks its banks south of the river and spreads high velocity floodwaters through the CBD streets. The initial breakout point is just upstream of O'Connell Street.

Wilde Avenue is the first area north of the river to be inundated. Other than Wilde Avenue, the areas north of the river are gradually flooded as the water spreads north across the floodplain.

Flooding also occurs as a result of overbank flooding in the Clay Cliff Creek floodplain. This flooding generally follows the path of the creek from Ollie Webb Reserve, through the CBD to Robin Thomas Reserve, and then progresses laterally across the floodplain. The areas first affected are around Lansdowne Street, Church Street, Parkes Street, Wigram Street, and Hassall Street. The one dimensional modelling suggests that the 20 year ARI event would flood a wide swathe along either side of Clay Cliff Creek.

Brickfield Creek flooding enters the CBD area by crossing Victoria Road and then down Wilde Avenue towards the Parramatta River. In larger floods, in conjunction with overbank flows from the Parramatta River, it can spread west and flood the area between Victoria Road and the River up to Marsden St

Council's currently adopted flood extents for the 20 and 100 Year ARI and the PMF are shown in Figure 8 and the council defined flood hazard layers are shown in Figure 9.

### 5.3.3 Flood Depths, Velocities and Hazard

#### a) Depth

Depths are greatest in the areas directly adjacent to the river and on the roads and vary across the floodplain typically decreasing moving laterally from the river. In some areas there are significant depths within the PMF,

where a depth of 3 m would likely inundate the entire bottom floor of a building. Figure 10 shows the distribution of depth through the floodplain for the PMF. It was not possible to produce a similar depth map for other events due to the limitations of the Mike11 outputs.

In areas of shallow flooding the flood extent in Figure 10 does not align exactly with the PMF extent in the other figures because there must be slight differences in the ground level values in the topographic data in the flood model and that which was available for the analysis in this report.

#### b) Velocity

The current modelling uses a "Section Average" velocity, which essentially applies a velocity to the whole channel, so it assumes that the edges of the floodplain are flowing in the same direction and at the same velocity as the primary channel. In reality it is likely that the river portion of the floodplain will be flowing considerably faster than the areas through the CBD and the edge of the floodplain would have minimal velocity.

Due to this modelling assumption it is difficult to ascertain local velocities through the floodplain.

#### c) Hazard

Flood Hazard data has been provided by Council and is shown in Figure 9. This hazard representation closely aligns with the extents of the 20 Year ARI for high hazard, 100 Year ARI for medium hazard and PMF for the low hazard. We have used this as the basis for our representation of hazard to be consistent with Council. However it should be noted that the typical approach to flood hazard mapping is to produce hazard variations within a single event. For example, there are areas within the low hazard area that would have water depths of over 4 m in a PMF. A depth of 4 m would be described as high hazard in most circumstances.

It is likely that the hazard data has been produced in this way (extent based, rather than depth and velocity based) due to the limitations of the model software that has been used to develop this data.



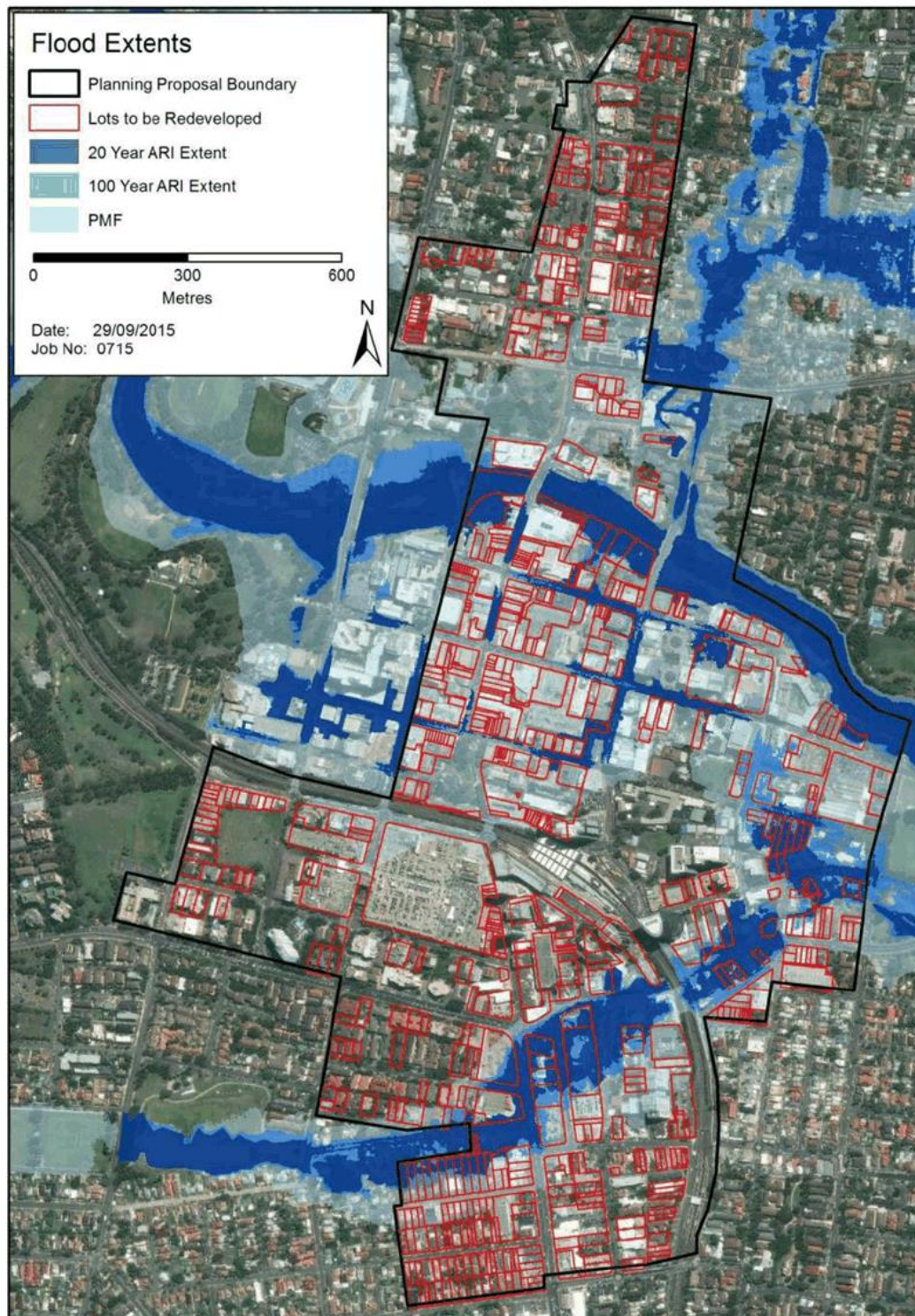


Figure 8: Flood Extents through the study area



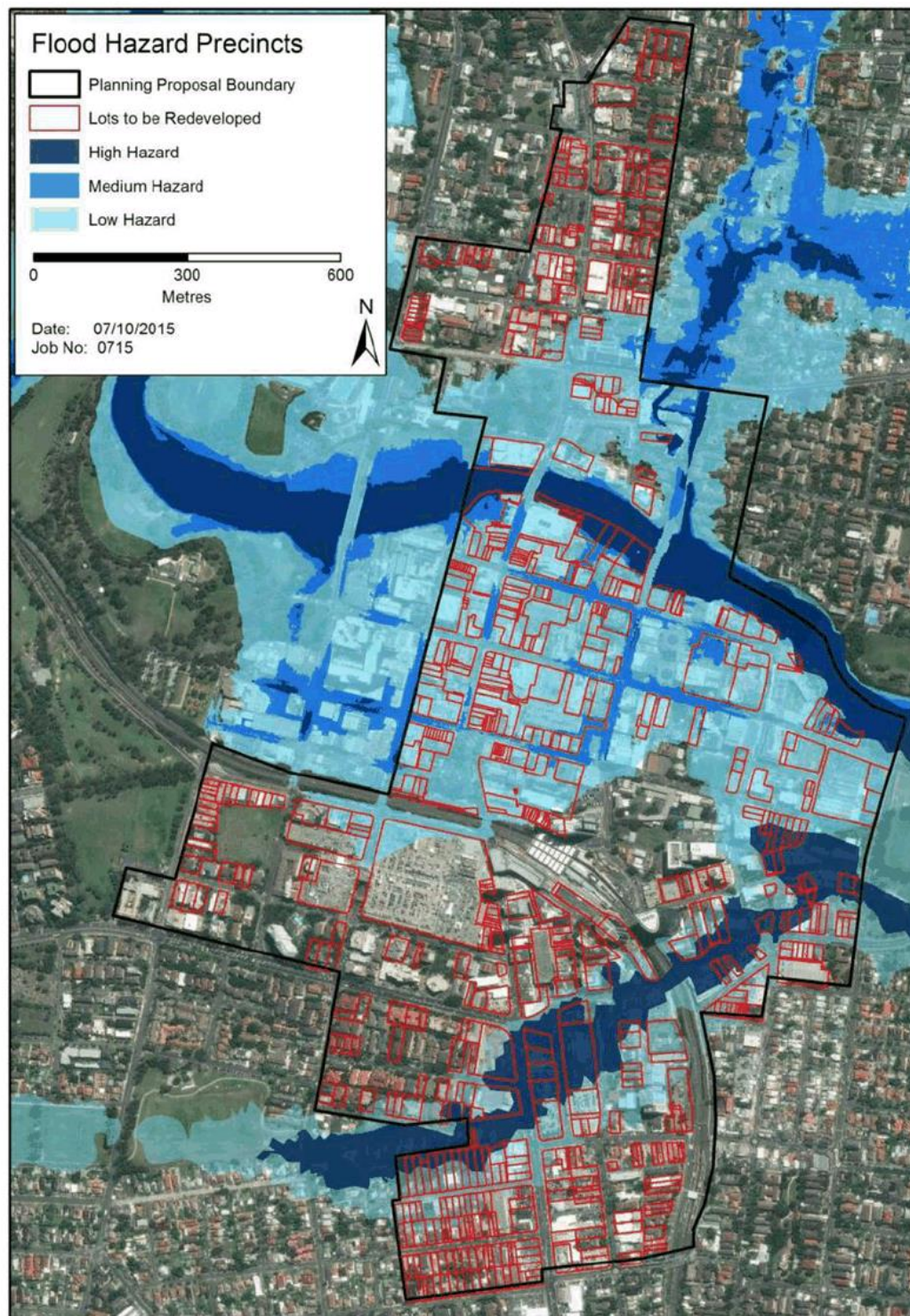


Figure 9: Flood Hazard Precincts



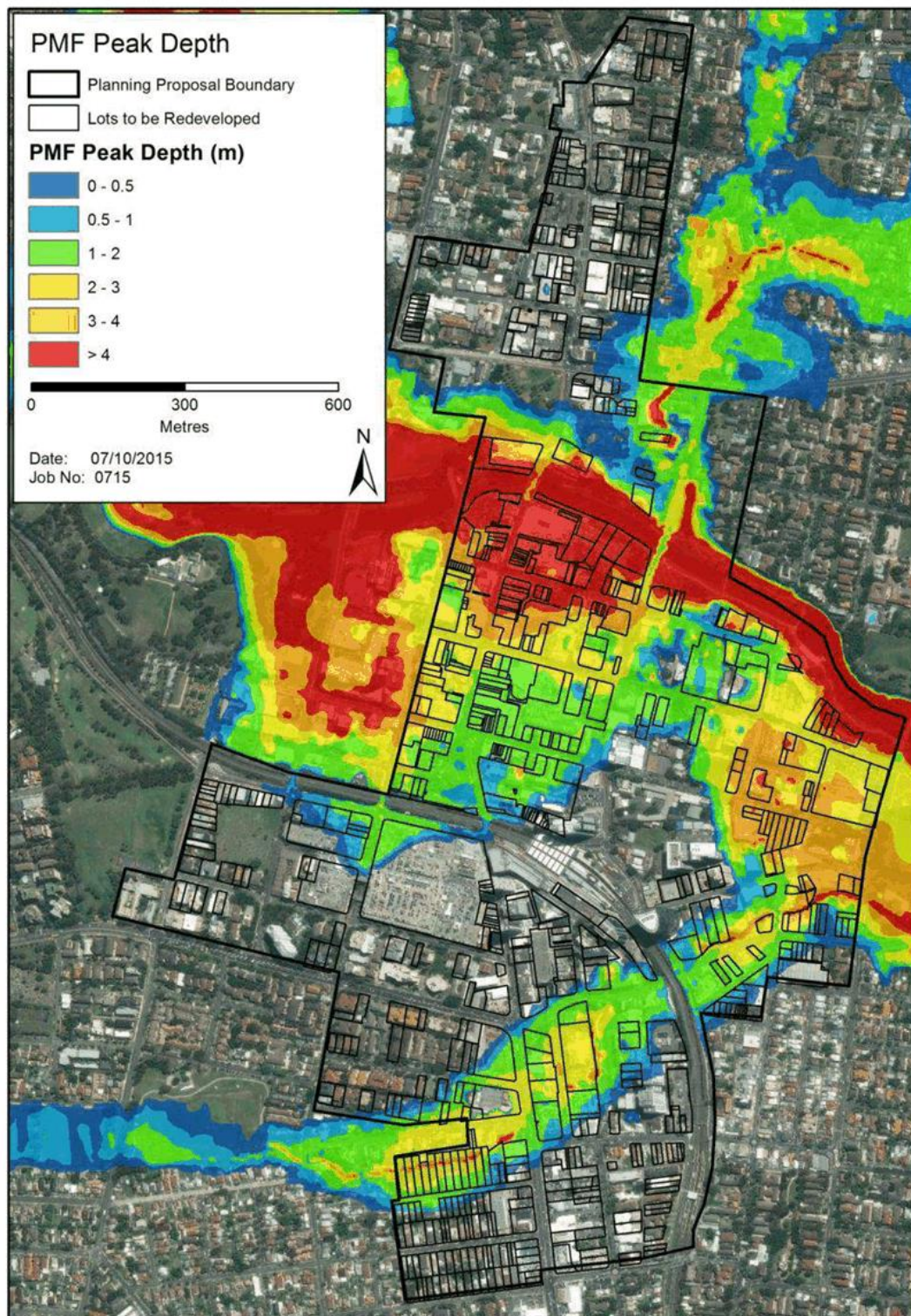


Figure 10: PMF Depth Map

### 5.3.4 Flood Rate of Rise

The flood rate of rise in the Parramatta River is relatively quick, particularly for the PMF. Figure 11 shows the water surface levels for the 100 Year ARI event and the PMF for just upstream of the Marsden St Weir, which is located just upstream of the study area. Figure 12 shows the same water surface levels for the Charles St Weir, which is at the downstream end of the floodplain.

The average flood rate of rise (across both locations) is around 0.4 m per hour for the 100 Year ARI and 1.6 m per hour for the PMF. The PMF rate of rise is extremely rapid with peak flood levels achieved around five hours after the river has started to rise and levels greater than the peak of the 100 Year ARI event are reached two hours after the river begins to rise.

### 5.3.5 Flood Durations

Flood durations are the longest in areas directly adjacent to the Parramatta River. These areas are the first to be inundated when the river breaks its banks and would remain under water even when the flood had receded from other areas.

The parts of the CBD with the longest duration of flooding are on Phillip Street between Marsden Street and Smith Street. Lots in this area would be inundated for up to 9.5 hours in the PMF. Figure 13 shows the spatial distribution of the flooding duration for the PMF and Figure 14 shows a frequency distribution for flood durations.

Another area of longer duration flooding is near the northeast end of Clay Cliff Creek. The areas between George Street, Hassall Street, Charles Street and Harris Street would be flooded for between 5 and 6 hours.

Most other areas in the study area would be flooded for less than 5 hours, with an overall average duration of inundation being 4.5 hours in the PMF and over 83% of lots being inundated for less than 6 hours in the PMF.

In smaller events, such as the 100 Year ARI flood, only around 27% of the PMF affected lots would be inundated and these would be

inundated for a significantly shorter period of time.

### 5.3.6 Summary of Flood Behaviour

Flooding in the Parramatta CBD is typical of flash flood catchments. Flooding arrives quickly and without significant warning time, while at the same time it also recedes quickly with an average flood duration of less than 5 hours for even the most extreme floods.

In most floods, the flooding is confined to a relatively narrow river corridor. The currently adopted modelling suggests the flood depth in the Clay Cliff Creek floodway will be very high, even in smaller floods such as the 20 Year ARI and this area appears to present the greatest risk to existing and future development.

In a PMF, which has an estimated 100,000 Year ARI, there is widespread flooding that is relatively deep through large areas of the floodplain.

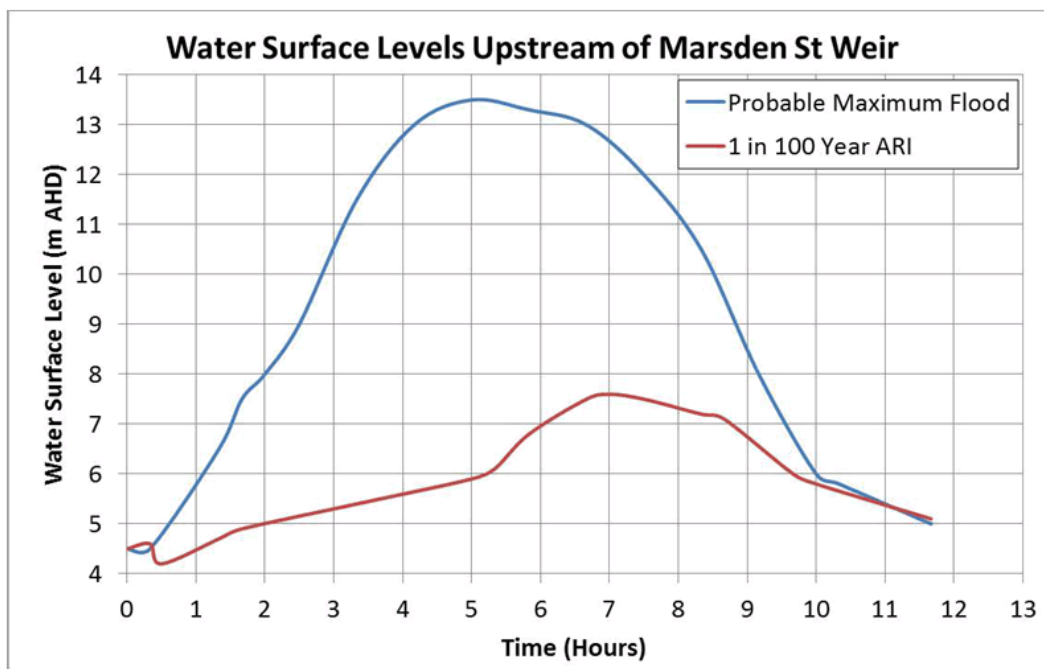


Figure 11: Water Surface Levels Upstream of Marsden St Weir

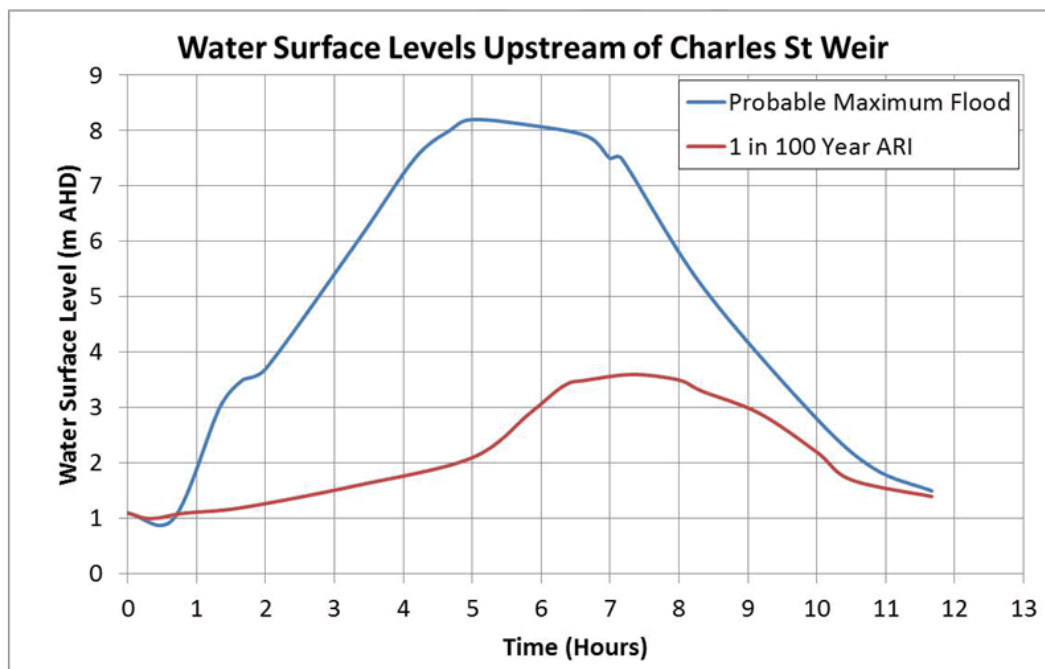


Figure 12: Water Surface Levels Upstream of Charles St Weir



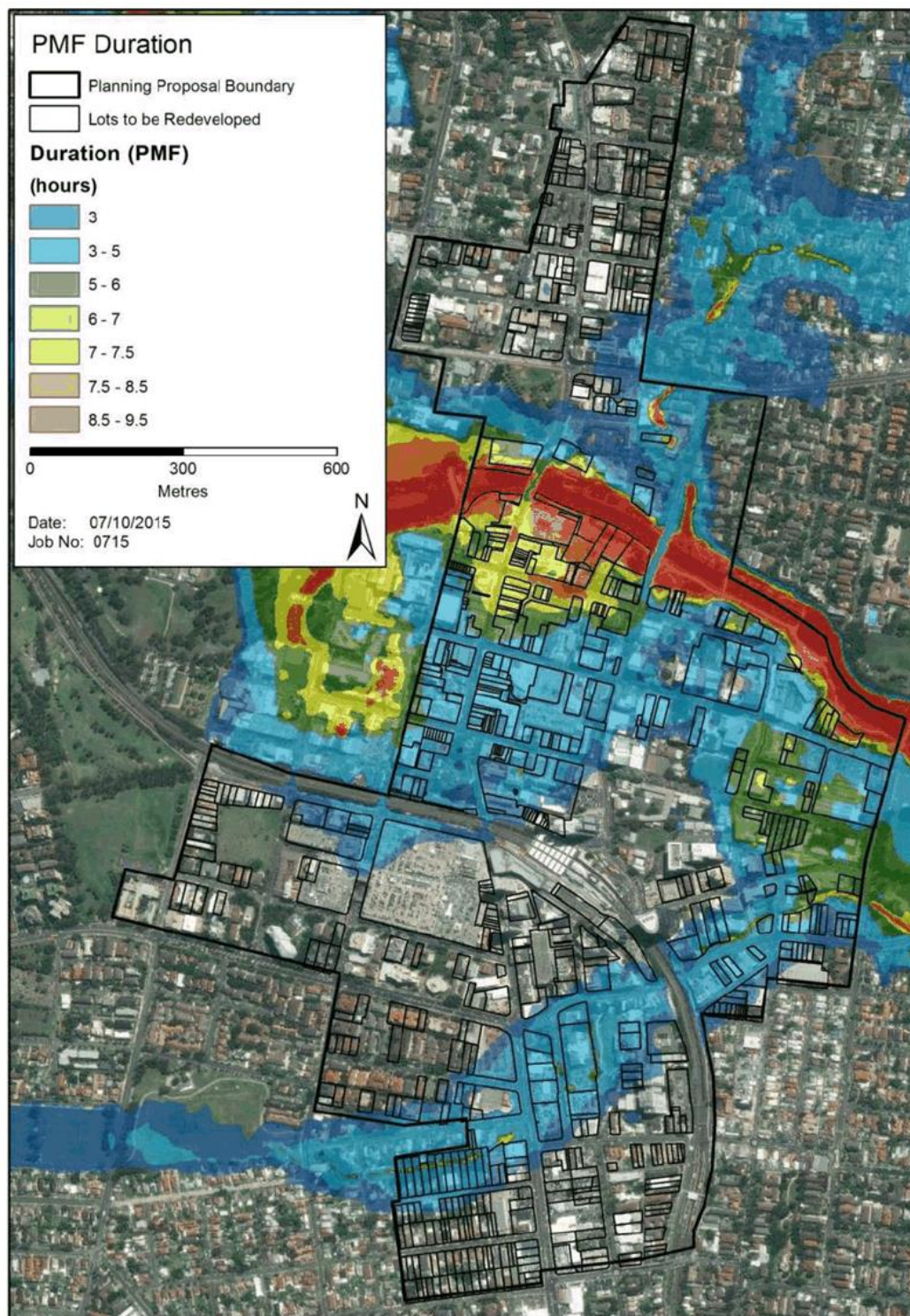


Figure 13: PMF Flood Durations



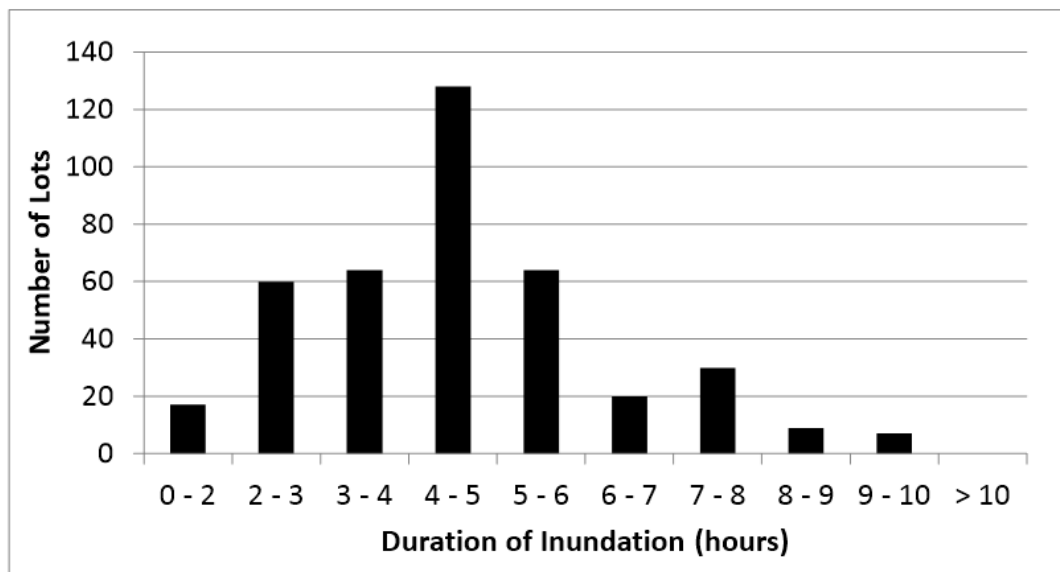


Figure 14: PMF Flood duration distribution

## 5.4 OTHER PLANNING AREAS

The "Planning Investigation Area" located around the fringes of the planning proposal area is currently being examined for potential changes to the planning controls and to be incorporated into the CBD planning area.

Figure 15 shows the extent of the Planning Investigation Area, and also the Parramatta North Urban Renewal Area (a state managed redevelopment precinct).

It can be seen that the Planning Investigation Area is almost completely flood free and would have limited flooding constraints, should these areas be subject to redevelopment. It is suggested that if flooding constraints are too great in the current planning proposal area, then re-development of the planning investigation area may compensate for any loss of floor space yield.

The new flood study that is being undertaken may identify new areas within the Planning Investigation Area that are flood affected; particularly areas that are subject to local overland flows.

The Parramatta Urban Renewal Area on the other hand is almost entirely within the PMF extent and this needs to be taken into

consideration in its planning and the imposition of development controls.

There is also an area of the CBD between Parramatta Park and Marsden Street which is referred to as the "Western Corridor" which is also shown in Figure 15. This area is not included in the Planning Proposal because heritage considerations prevent it from having its building heights increased. Nevertheless, this area would need to evacuate with other parts of the CBD during a flood and accordingly was considered in any CBD evacuation analyses.

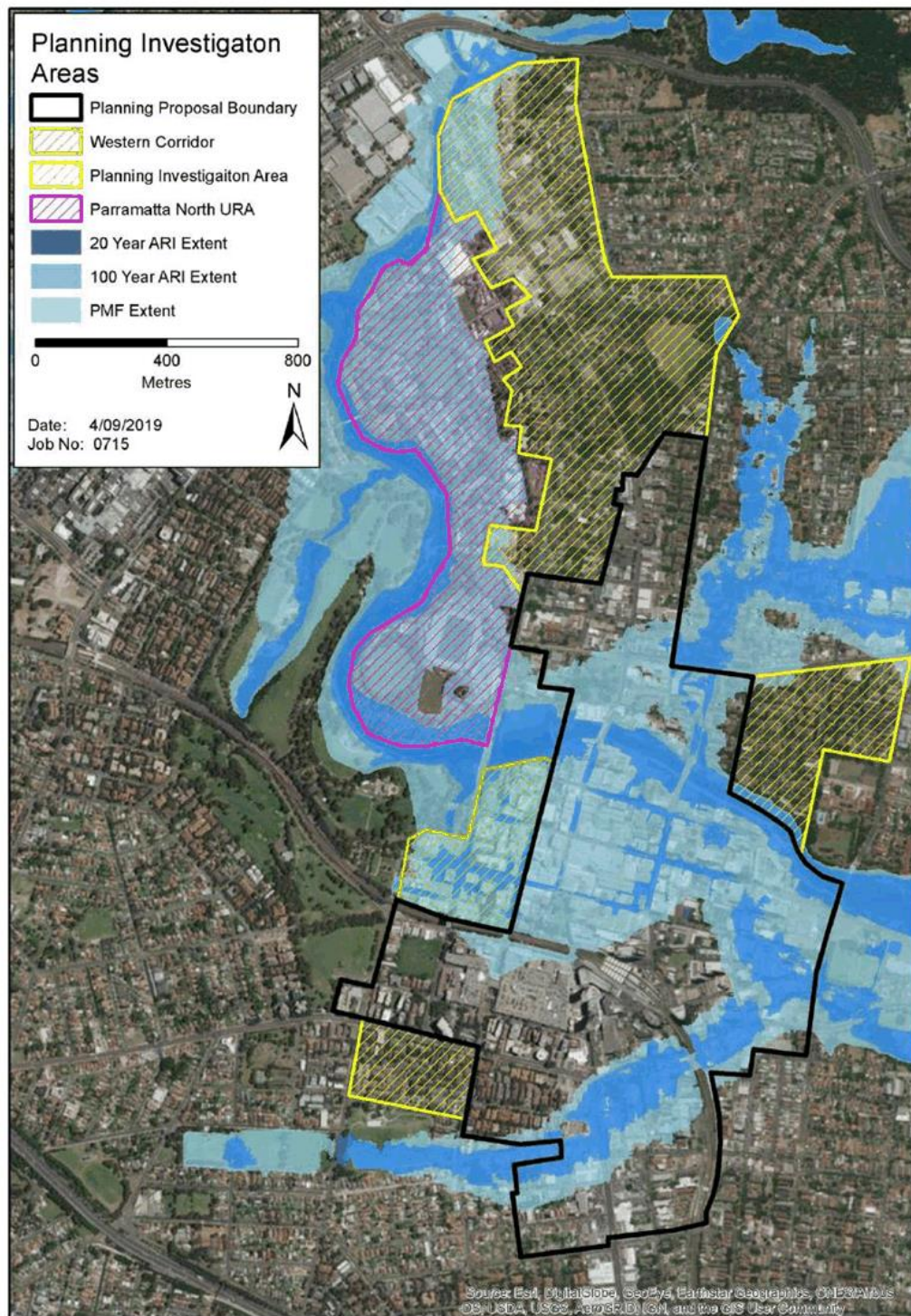


Figure 15: Planning Investigation Areas and Flood Extents



## 5.5 FLOOD RESPONSE

### 5.5.1 Available Warning Time

Flood warnings are generally provided by the Bureau of Meteorology (BoM) for developed catchments such as the Parramatta River. However, due to the small size of the catchment and therefore rapid rise of the Parramatta River there is insufficient time for the BoM to issue a warning prior to a flood occurring. Previous studies have shown that it will take approximately 6 hours to develop peak floods levels around the Parramatta CBD area during a large flood (larger than 20 Year ARI) although as discussed in Section 5.3.4 flooding can occur much faster than this.

For this reason the BoM has not developed any flood classification levels (minor, moderate or major) for the Parramatta River nor does it maintain a gauge in the river for flood warning purposes. The State Flood Emergency Sub Plan states that the only warning available for the catchment is a Severe Thunderstorm or Severe Weather Warning provided by BoM. These warning products do not provide a quantified level or time to the flood occurring.

In most circumstances a severe weather warning will not result in significant flooding and therefore the emergency services will generally not mobilise for mass evacuations based on these warnings.

The tributaries that are within the Planning Proposal area, such as Brickfields Creek and Clay Cliff Creek, are significantly smaller than the Parramatta River and flood waters will rise much faster. BoM gives no quantified warnings for them.

Since the preparation of the original draft of this report, City of Parramatta Council developed an early warning system for the River which would potentially provide some warning time for floods on the river. The service issues minor, major and moderate flood warnings for various sub-catchments of the Upper Parramatta River including the CBD. This system is expected to give about two hours warning but this could be considerably less in the more extreme floods which are

likely to flood the CBD. It only provides warnings for the Parramatta River and Brickfields Creek but not for Clay Cliff Creek.

### 5.5.2 Local Flood Planning

The Parramatta Local Emergency Management Plan (EMPLAN) replaced the Parramatta Local Disaster Plan (DISPLAN) which was in place in 2016. The EMPLAN identifies flooding, amongst other hazards, as posing a medium risk to Parramatta. The EMPLAN cross references to a Local Flood Sub Plan but that had not yet been completed by the NSW SES in September, 2019 when this draft report was prepared.

The NSW SES receives flood warnings from the Parramatta River Flood Warning System which uses forecast rainfall as part of its suite of inputs to flood forecasting. However, with only about two hours warning available, it would be challenging for NSW SES to co-ordinate a response before the flood has peaked.

It is understood that significant developments within the floodplain have been approved provided that there is an adequate flood emergency management response plan in place for that particular development. Similarly, for large development areas (such as the river foreshore), Council has produced evacuation strategies for the river precinct that any future development must comply with (Parramatta City River Strategy, PCC 2015b).

### 5.5.3 Emergency Response Classification

The NSW SES, in conjunction with the former NSW Department of Environment and Climate Change, has developed a topographic classification system known as the "Flood Emergency Response Classification of Communities" (DECC, 2007). The classification indicates the flood risks associated with the topography and assists the NSW SES and other floodplain managers in determining which areas should be given priority for evacuation and what challenges the topography presents to evacuation.

For example, a "low flood island" is where the evacuation route for an area is cut before it is subsequently inundated. These areas are generally high risk because if people fail to evacuate until it looks as though their premises are in immediate danger it will be too late and they will then potentially need to be rescued. A "high flood island" is similarly isolated by flooding, however, the occupants could still escape to an area above the flood waters.

"Areas with rising road access" are of less concern, as the occupants can still evacuate by vehicle or on foot along a formed roadway even if they don't leave their premises until the floodwaters present an imminent danger. Similarly, "Areas with overland escape routes" may not have rising road access but at least they will be able to escape on foot to areas above the level of the PMF.

The lots within the planning proposal area were classified in accordance with this system and the results are shown in Figure 16 for the whole planning proposal area and Figure 17 for those lots that have been marked for potential redevelopment. The classification was undertaken based on ground levels in the dataset provided originally.

It should be recognised that buildings in areas classified as low flood islands are effectively high flood islands if they have internal access to areas above the reach of the PMF. Similarly, apartments and offices above the ground floor in areas classified as having rising road access or overland escape routes effectively become flood islands if they fail to evacuate when the ground floor of the building is threatened by flooding.

#### a) Low Flood Islands

Due to the fact that the roads are some of the first areas to be flooded in the CBD, there are large areas which are classified as low flood islands. The entire area of the CBD between the river to the north, Macquarie Street to the south, Marsden Street to the west and Smith Street to the east is a low flood island. East of here it also extends between the River and George St to Harris St.

North of the river, the lots which would evacuate onto Palmer Street are a low flood island.

#### b) High Flood Islands

There is only one HFI in this study area. A small area around Lamont Street, north of the river would be cut off from evacuation but still be able to reach flood free land.

#### c) Overland Escape Route

Some areas near Parramatta train station would not be able to evacuate by road due to flood waters, but would still be able to evacuate on foot using an overland escape route. These areas are all between Macquarie Street, the rail line, Marsden Street, and Smith Street. People would be able to walk along grass and paved areas near St Johns Anglican Cathedral and Church Street to get to flood free land south of the train line.

#### d) Rising Road Access

Areas with rising road access are those lots which are able to evacuate by road before the route is cut by floodwater.

There are many areas in the floodplain which are classified as having rising road access.

The areas between Macquarie Street and Campbell Street which have not already been classified have rising road access along either Marsden Street or Smith Street.

There are also some lots between George Street and Hassall Street which have rising road access either to the south along Harris Street or west along Macquarie Street.

All lots along Clay Cliff Creek which are affected by flooding have rising road access either to the north or south of the creek.

#### e) Not Affected

All lots in the study area which are not directly affected by flooding are classified as "not affected." These areas are not inundated by floodwaters, do not require evacuation and occupants are theoretically able to come and go at any time during a flood. However, it should be recognised that they may be indirectly impacted by flooding either through loss of utility services or through having some, but not all, of their access routes cut.



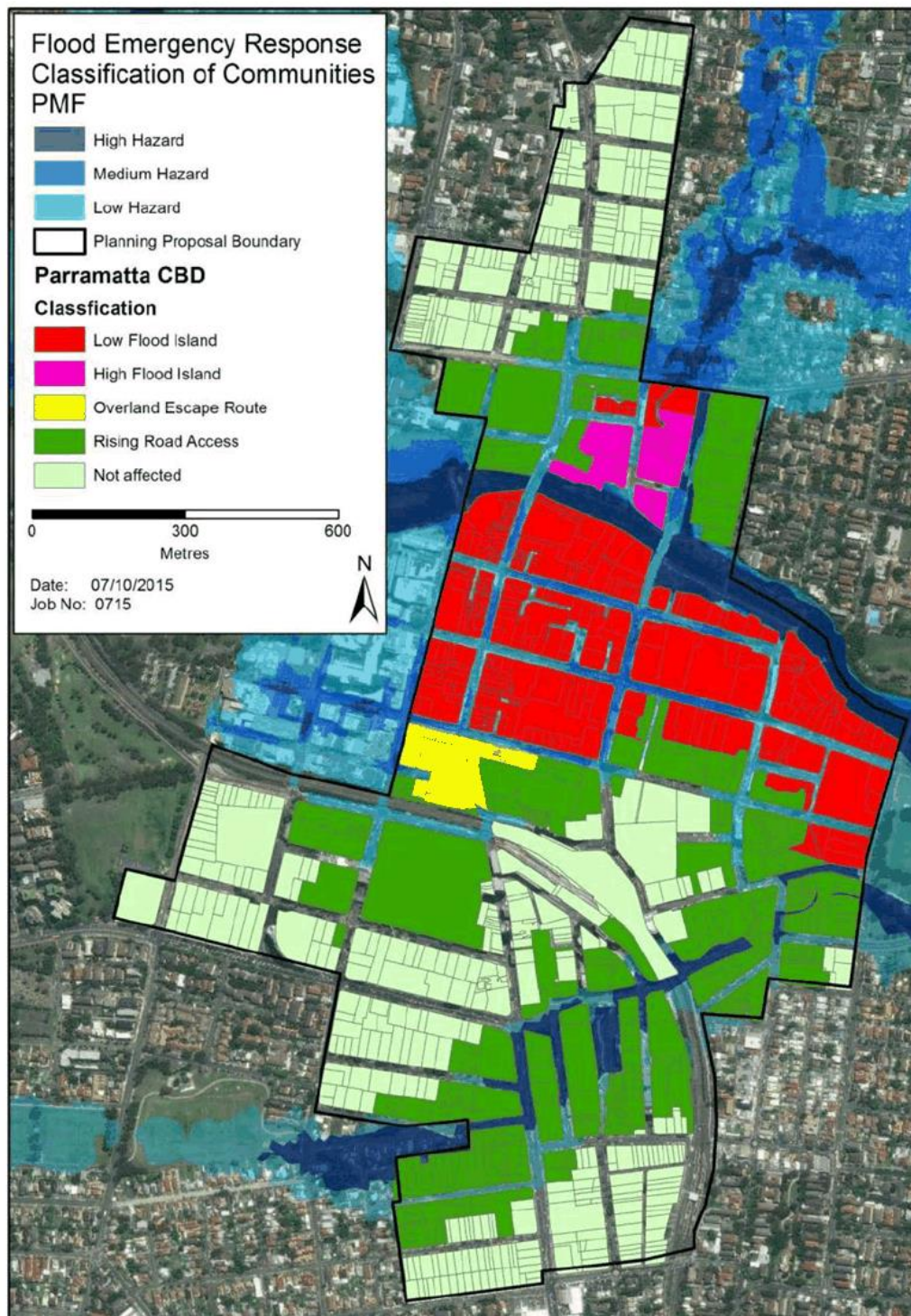


Figure 16: Flood emergency response classification of communities across the CBD



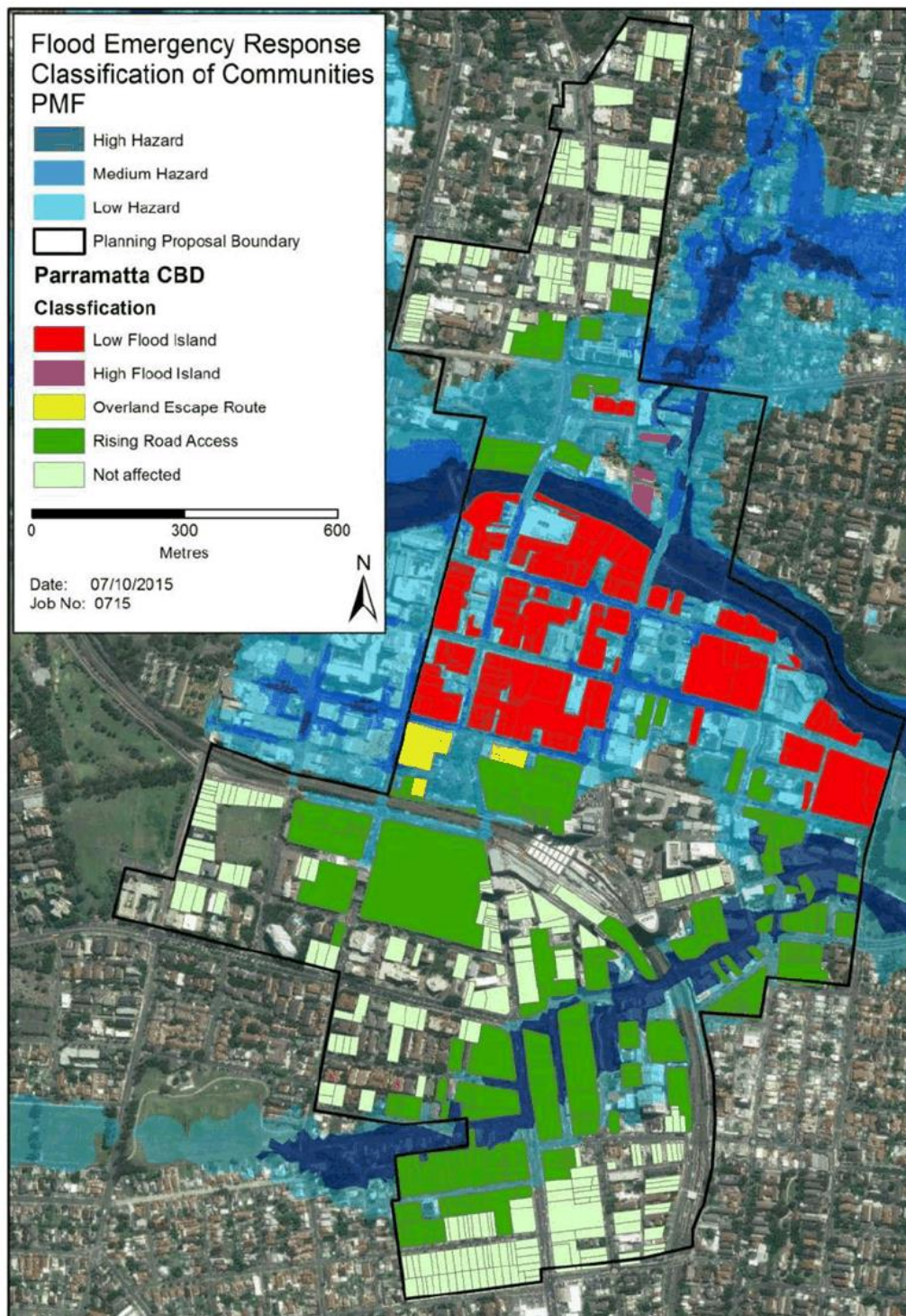


Figure 17: Flood Emergency Response Classification of Communities on developable lots





### 5.5.4 Evacuation

With respect to flooding, there are generally two main forms of response:

- Evacuation outside of the floodplain to a place of refuge that is above the extent of the flooding
- Shelter in place, sometimes referred to as vertical evacuation, to a location within the building which is above the reach of the PMF.

The NSW SES is primarily responsible for the management of flood emergencies and has a long and strongly held policy of using evacuation outside the floodplain as the primary means of reducing risk to life. The NSW SES is not supportive of new development which relies on sheltering in place as the primary means of reducing risk to life.

However, in the specific case of the evacuation of the Parramatta CBD the preferred SES approach would be problematic for a multitude of reasons. Following completion of the original draft of this report, Molino Stewart was engaged to investigate evacuation options for the CBD in detail (Molino Stewart, 2019). The following is a summary of the findings of the Parramatta CBD Flood Evacuation Assessment report.

#### a) Vehicular Evacuation

The analysis found that, under existing development, the most number of vehicles would have to evacuate if an evacuation were called during the day. These would principally be workers and visitors in the CBD rather than residents who live in the CBD.

In a 20 Year ARI flood about 9,500 vehicles may need to evacuate, increasing to about 11,500 in the 100 Year ARI flood and increasing to more than 14,000 in a PMF.

About 85% of these vehicles would need to make their way to the Great Western Highway as their principle evacuation route out of the CBD. The other evacuation traffic would be distributed between evacuation routes along Pennant Hills Road, Victoria Road, Church Street and Harris Street.

It was found that trying to safely evacuate all of these vehicles presents several challenges.

1. There are drainage capacity issues within the CBD which would likely flood the local streets early in a flood and prior to them flooding from floodwaters arriving directly from the river.
2. There are multiple traffic signals and one way roads through the CBD, as shown by Figure 18. From the centre of the CBD, around Church St or the car parking facility in Horwood Place, any evacuation would need to go through at least 4 sets of traffic lights which may be inoperable due to loss of power in the flood. This could create gridlock in the road network and floodwaters could overtake people sitting in their cars.
3. The recently developed Parramatta River Flood Warning System is likely to only provide about two hours warning of CBD flooding and possibly less in large, rare flood events in the River. However, the rapid rate of rise of extreme floods means that many of the roads in the CBD would be too dangerous to use before it is known exactly which areas will need to evacuate.
4. The flash flood nature of the flooding means that there would not be the six hours which the NSW SES generally needs to mobilise its staff and volunteers and other emergency responders under its command to conduct door knocking or traffic control operations.
5. There would certainly be no opportunity for the NSW SES or other emergency responders to have time to door knock each building which is the NSW SES preferred method of ensuring most people are reached by an evacuation order.



Figure 18: Traffic Signalling and One Way Roads in the Study Area

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City of Parramatta Council



6. An evacuation order which has been broadcast by several means (TV, radio, internet, telephone, mobile devices) would have to be relied upon but there is no certainty that all people working in an office environment or sleeping in their apartment would receive the message.
  7. The NSW SES, in its evacuation modelling, assumes that it takes two hours for people to begin evacuating once they have received a warning; one hour to accept that the warning is for them and an additional hour to prepare to evacuate. In those two hours the river could have risen to a level which cuts their evacuation routes.
  8. Given that it could take two hours for people to be ready to leave in their vehicles and in that time the river could have risen above the 100 year ARI level, water could be on the point of flooding a number of basement car parks which have been constructed under the current planning controls. This could potentially expose people to extreme hazard flood waters as water overtops the lip of the carpark and rapidly floods the basement to great depth.
  9. There is no clear and intuitive flood free evacuation route or routes out of the CBD with some roads partially blocked by flooding. Without emergency services directing traffic away from flooding, it is likely that many people in their vehicles will attempt to cross flood waters and become stranded, endangering themselves and blocking the road. However, as pointed out previously, there is unlikely to be sufficient time for emergency service personnel to mobilise.
  10. If all of the evacuation routes remained trafficable, it is likely to take more than 8 hours to evacuate the core of the CBD via the Great Western Highway. This is comparable to the total duration of even the more extreme floods. In other words, by the time the last vehicles have evacuated the flooding would have already subsided.
  11. If evacuation triggers were set at a lower river level to allow sufficient time for evacuation there would be many circumstances where evacuations would be called and then turn out to be unnecessary.
  12. Once vehicles leave the CBD, all of the evacuation routes, other than Pennant Hills Road, require crossing a tributary of the Parramatta River. These are likely to be flooding and therefore vehicles may not be able to get very far past the CBD boundaries
  13. There is limited queuing capacity on the evacuation routes above the reach of floodwaters. Given that they may be blocked by flooding then many vehicles could be queued back into the rising floodwaters.
  14. If there is other through traffic on the roads then the time to evacuate will be longer and the potential for queuing will be greater.
- Despite these many challenges, with effective flood emergency response plans for each development, supported by ongoing community education, it may be possible for vehicular evacuation to occur from some of the fringes of the floodplain where:
- the time to flooding is longer
  - there is rising road access
  - the distance to flood free roads is short
  - the route is unlikely to be blocked by tributary flooding or the vehicle numbers are such that queuing back into the floodwaters is unlikely.
- However, it is clear that there are too many things which could go wrong with vehicular evacuation for it to be able to be relied upon for flood emergency response. In much of the floodplain, particularly in the heart of the CBD, it is too risky to even contemplate.
- It must also be recognised that while thousands of cars enter Parramatta CBD each day, many thousands of people travel to and from the CBD by bus or train. The peak period services span a time frame of less than three hours and in theory have the capacity to



evacuate all of the people who are reliant on these modes of transport. However, the evacuation may need to occur outside of peak service times or public transport services themselves may be disrupted due to the intense rainfall. In fact, the bus services will share routes as the evacuating cars and will face the same challenges.

Furthermore, those areas which are flood islands may be isolated by floodwaters before people can reach the Parramatta Train Station or the Bus Interchange. With no viable alternative way of getting home, these transport hubs may entice people to walk through floodwaters to get to their means of transport.

A similar situation can arise with people who have parked their cars at one of the many parking stations throughout the CBD which may be remote from the building which they occupy. They too may attempt to traverse floodwaters to reach their vehicles.

#### b) Pedestrian Evacuation

Pedestrian evacuation would potentially be available for the areas with rising road access or overland escape routes. However for the low flood islands and high flood islands, their escape route would be cut off prior to them attempting to evacuate, unless an evacuation trigger at a lower level is used. Similarly to vehicular evacuation, an earlier trigger may be impractical as the trigger level required to allow enough time would be so low that it is frequently reached while not going on to flood many premises.

Even those areas which are mapped topographically as having rising road access or an overland escape route may become defacto flood islands by the nature of the development. For example, offices or apartments above the ground floor in buildings would be isolated by floodwaters once the ground level floods. Should occupants fail to leave the building before this occurs then they will be trapped in just the same way as people on flood islands. Whether their office acts like a low or a high flood island will depend on whether the highest accessible part of the building is below or above the PMF level respectively.

The Parramatta CBD Flood Evacuation Assessment report (Molino Stewart, 2019) identified those areas where it may be possible to exit a building onto flood free land with rising pedestrian access even if the lower part of the block may be flooding. It did this for the 20 Year ARI and 100 Year ARI floods and the PMF. For those buildings without flood free access, a potential network of elevated pedestrian walkways was investigated and costed as a means of providing flood free access.

Figure 19 and Figure 20 are taken from that report showing the areas which have street level access in the 20 Year ARI flood and PMF respectively and the directions in which evacuees need to travel.

Results show that pedestrian evacuation using elevated walkways would be faster than vehicular evacuation under existing conditions.

Interestingly, the shortest evacuation time (4.4 hours) is achieved in the PMF. This is because the PMF would require a larger network of elevated walkways (because the flood extent is larger), which would result in the CBD evacuees being distributed across a greater number of egress points. For example, in the PMF there would be eight egress points for evacuees heading towards Westfield, while in the 20 year and 100 year ARI events there would be only 4 and 5 respectively.

The challenges with relying upon pedestrian evacuation were found to be:

- Infrastructure cost would be significant and ranging from \$94.5 to \$324 million
- The elevated walkways would cause major visual impact and overshadowing
- Trees located along the walkway's path may need to be removed and replaced with low-level shrubs
- In events larger than the 20 year ARI, the walkways would need to be directly accessible from the upper levels of each building. This would be difficult to achieve in practice, because floor levels vary between different buildings



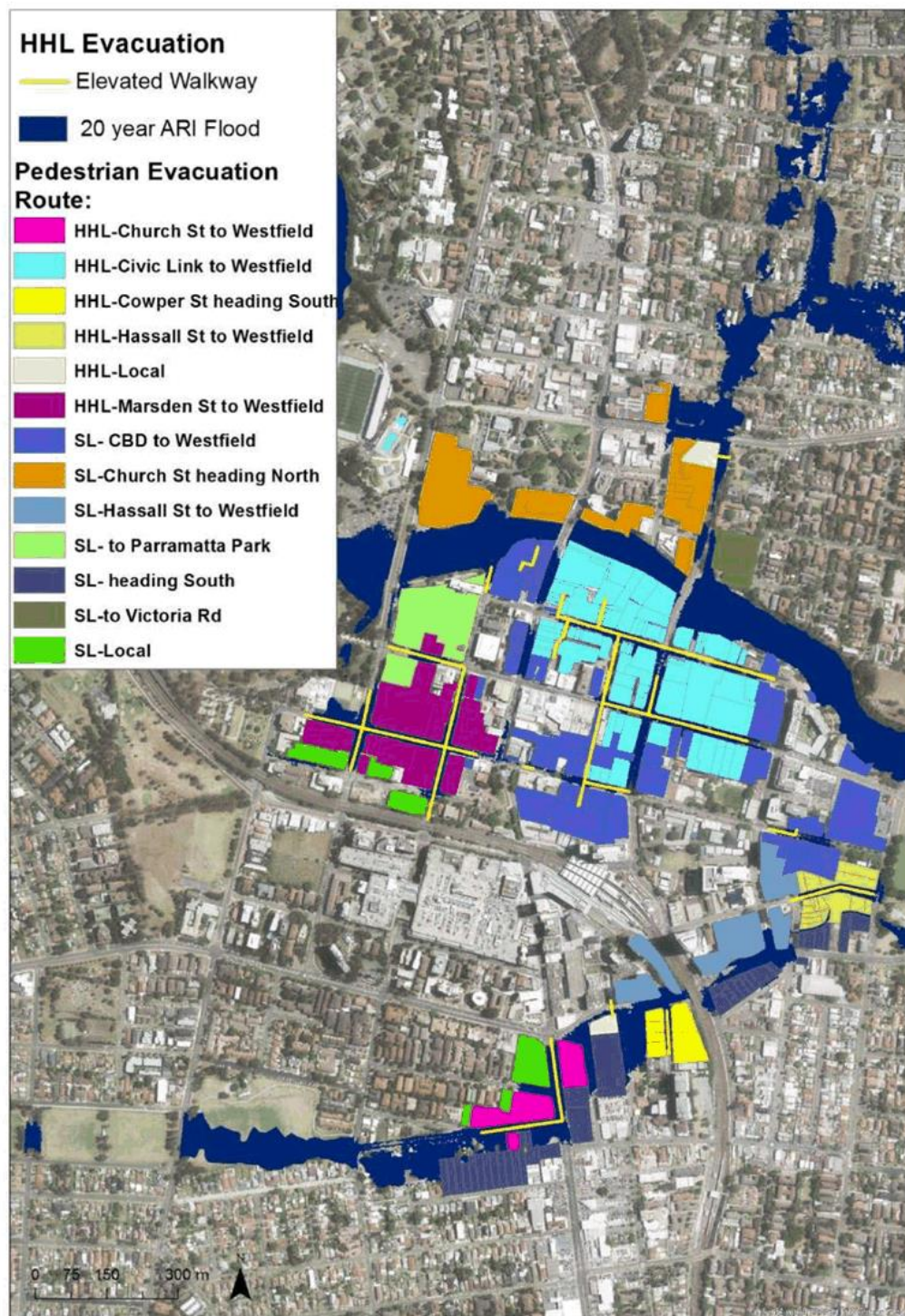


Figure 19: Pedestrian evacuation precincts evacuation routes for buildings affected by the 20 year ARI event.



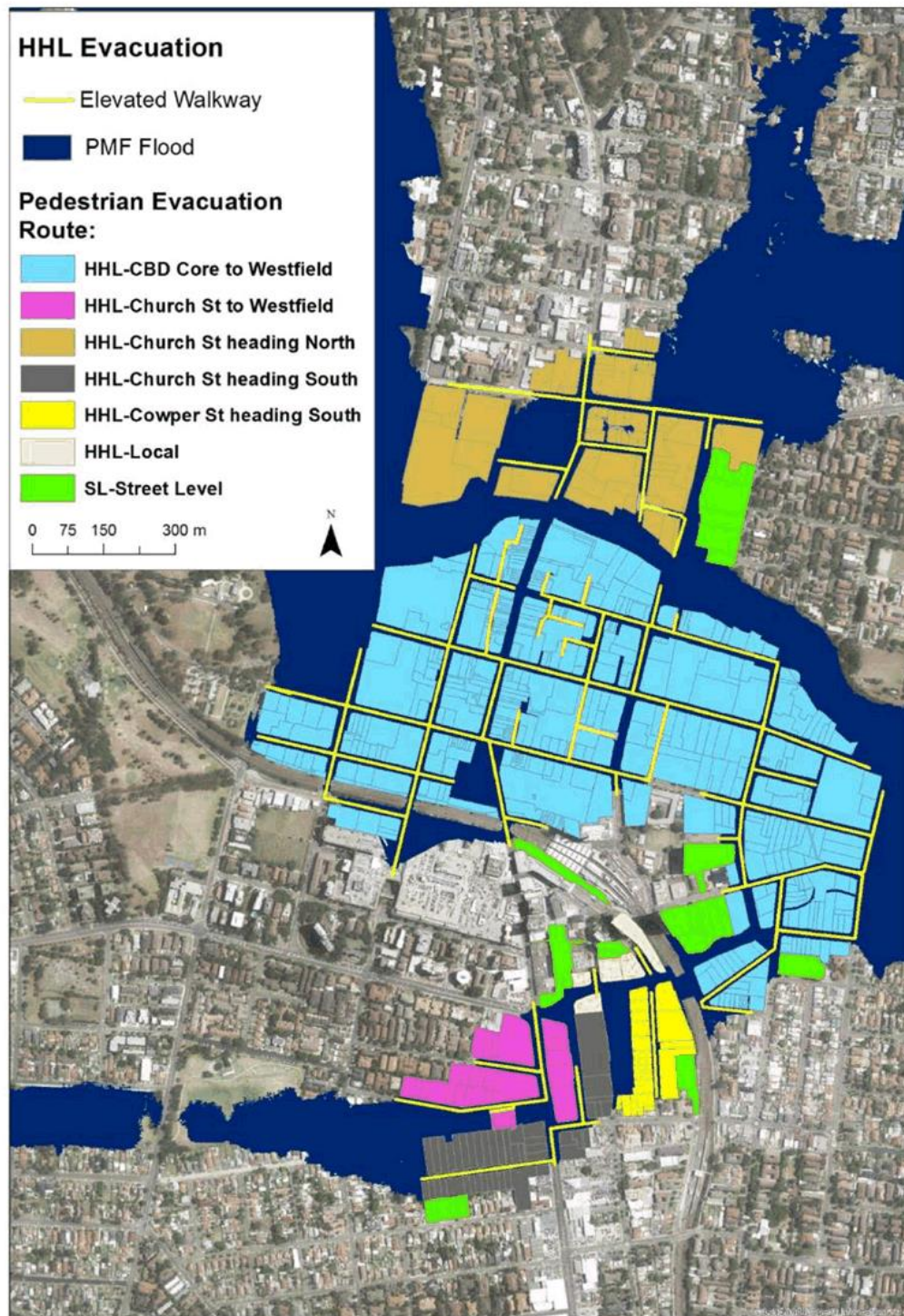


Figure 20: Pedestrian evacuation precincts evacuation routes for buildings affected by the PMF



- Where walkways traverse a road, or a crossroad, large vehicles which are taller than 4.5m would not be able to enter
- It may be a challenge communicating who should use the elevated walkways and who should evacuate at street level
- Pedestrian evacuation times range between 4 to 5 hours and the evacuation process may finish after floodwaters have already receded
- Providing an extensive network of walkways that will not be used on a daily basis, will potentially create issues with informal use and security
- Providing accessibility ramps to the walkways will impact on road layouts within the CBD.
- People will be reluctant to leave a dry building to walk through torrential rain to shelter in another dry building, particularly if they perceive that their building provides shelter above the reach of floodwaters (whether that is true or not);
- Those who arrived by light rail (when it is built) are unlikely to be able to leave by light rail because water across the tracks would stop its operation, many who arrived by bus will not be able to leave by bus because many bus routes will be cut by flooding, those who arrived by train may not be able to leave by train if flooding elsewhere or the inclement weather generally has disrupted rail services. All of these people may be reluctant to leave their buildings if they have no means of leaving Parramatta;
- Residents in particular have demonstrated an unwillingness to evacuate when orders have been given to evacuate in floods throughout Australia in recent years so it may be especially difficult to get people to leave an elevated dwelling in a high rise building on foot in torrential rain.

### c) Shelter in Place

Shelter in Place is where the occupants of the building essentially stay where they are until the flood emergency is over. One of the key requirements for successful shelter in place is that all building occupants have access to an appropriate place of refuge. Typically this will be above the level of the PMF in a part of the building which will remain standing in the forces exerted on it by a PMF. Depending on the duration of the isolation and the needs of the occupants, there may need to be emergency provision of electricity, water, food and medications.

The viability of shelter-in-place will depend upon the depth and duration of the flood waters and also the stability of the building itself to flood waters. Additional risks such as the probability of fire or a medical emergency must also be considered, as well as the vulnerability of building occupants and their likely behaviour during a flash flood.

Typically, workers will want to leave the flood threatened building to be able to get home even if the flood duration is only a couple of hours. On the other hand, residents will tend to remain in their dwellings for several hours or more even if they are without services such as electricity. Residents who are outside of the floodplain when the building isolation occurs are very likely to try to reach their homes, risking travelling through hazardous floodwaters in the process.

The current Parramatta Local Emergency Management Plan (EMPLAN) is silent on either shelter in place or evacuation for floods. It is expected that when the Local Flood Sub Plan is prepared that will have more details about specific emergency response actions.

A number of other documents with respect to floodplain management acknowledge the appropriateness of Shelter in Place for flash flood environments. The Flood Preparedness Manual (Australian Emergency Manual Series, prepared by the Attorney-General's Department 1999) states that evacuation is a suitable strategy only when, by evacuating, people are not exposed to greater risks than they would by remaining where they are.

During discussions with the NSW SES for this project, it was acknowledged that flood

evacuation of Parramatta CBD would be impractical, although at the same time shelter in place was not recommended.

In December 2017 the NSW SES wrote to the then Department of Environment and Planning regarding a planning proposal for 180 George St Parramatta. While the letter was specifically responding to that planning proposal, it includes statements such as:

*"Despite modifying buildings to reduce the risk, research into human behaviour during actual events has shown that in populations surrounded by a hazard there is always the chance that a person will not behave rationally and remain in place but rather place themselves at unnecessary risk."*

*"...where safe evacuation is compromised by a lack of adequate infrastructure and/or warning time, the NSW SES recognises that the situation may result in it being safer for a population at risk to remain in place as long as the building in which the occupants are sheltering is structurally sound and there is sufficient accessible space available above the PMF for all occupants to shelter where adequate services are available and maintained."*

*"Emergency service response will likely be compromised by the hazardous nature of flash flooding in Parramatta CBD. In this area it is likely that emergency services cannot respond to assist those trapped in buildings due to the rapid onset and hazardous nature of fast flowing floodwater and limitations caused by access and transport issues."*

### 5.5.5 Secondary Emergencies

A secondary emergency is where a non-flood related emergency, such as a building fire or medical emergency, occurs during a flood.

In many cases the flood and secondary emergency will be two unrelated events, however there is potential for floodwaters to damage the electrical system and cause fires or for occupants to use improvised lighting (candles), cooking and heating with naked flames that may also cause fires. The flood could also cause elevated stress levels in occupants that could aggravate pre-existing

medical conditions leading to more medical emergencies. At the same time, larger developments are more likely to have emergency sprinkler systems for fire/smoke suppression and designated first aid officers if the building is staffed.

This makes it difficult to quantify the likely chance of a secondary emergency. However, some simple analysis shows that the likelihood is small.

Statistics were unavailable for the chance of building fires locally, however documents produced by the National Fire Protection Association (United States of America) in 2009 suggest that there is approximately a 0.3% chance of a reported (large enough to require assistance) fire in any given household per year (NFPA, 2009). This equals a 1 in 114,000 chance per day that a fire will occur in a household.

Assuming that a flood and fire are independent events, a lot that has a 1 in 100 Year ARI flood probability has roughly a 1 in 4 billion chance that both a flood and a fire would occur in a household on any given day. When the duration of flooding is less than 24 hours then the chance of a fire occurring during a flood is even smaller.

However, as explained above, flooding may increase the probability of a fire. Furthermore, in multiunit buildings a fire in one dwelling is likely to impact on neighbouring dwellings or, in the worst cases, the entire building and even possibly neighbouring buildings.

So while the probability of a fire in a building during a flood is likely to be small, the consequences, should a fire occur, could be significant.

It is also noted that many existing buildings within Parramatta have their fire exits located at ground level and these may not be able to be opened during a flood, as discussed within Section 3.2.4. Redevelopment of these lots would provide potential for this issue to be rectified.

An ambulance emergency is much more likely than a fire. There were on average 2,540 emergency responses per day in NSW during 2013/14 (NSW Ambulance, 2014). At the same time, there were approximately 7.41 million

residents within NSW. This suggests that approximately 1 in 3,000 people will need an ambulance emergency response per day. Given the population of Parramatta is much larger than this, it is likely that there will need to be an emergency response within the CBD during a flood. It should be noted that this data is likely to be significantly skewed by demographic issues, for example, elderly populations are much more likely to require an emergency response, whereas the make-up of Parramatta CBD is likely to be younger. This would particularly be the case during working hours as the vast majority of the working population would be less than 65 years old.

It is noted that the relatively new Westmead Ambulance Station has been built on flood prone land and can be isolated from both Westmead Hospital and Parramatta CBD by flooding in Toongabbie Creek.

While a secondary emergency has a relatively low chance of occurring during a flood, it is important to recognise the potential and manage the risks appropriately with planning controls.

## 5.6 PLANNING PROPOSAL IMPACTS

### 5.6.1 Increase in Population

The aim of the planning proposal is to increase the employment and resident population within the CBD. Using the Council supplied parameters, we have estimated the potential increase in population at risk due to the planning proposal.

Table 3 shows the estimated increases in the CBD population under the current planning controls and in the two FSA scenarios described in Section 5.2.4 if the CBD is fully developed. The current estimate for the number of people employed in the entire Parramatta LGA is around 137,000 (ABS 2016) and the number of people living in the suburb of Parramatta is around 26,000 (ABS 2016). Statistics are not available to determine what proportion of these populations is just within the CBD. What the numbers in Table 3 show is that even the existing controls in the

CBD will still allow a significant increase in the population should it be fully developed..

It should be acknowledged, however, that the entire commercial population and the entire residential population are unlikely to be occupying the CBD at the same time. During business hours most of the residents will not be at home and when most of the residents are at home (late at night) most of the businesses will be closed.

There will also be a third population in the CBD during office hours and they are visitors who are not counted in either the commercial (jobs) or resident populations. Visitors include patrons of commercial premises, people in the CBD to do business and students at pre-schools, schools and colleges.

As part of the Parramatta CBD Flood Evacuation Assessment (Molino Stewart. 2019) the total number of residents, workers and visitors that would need to evacuate were estimated for 2016, 2036 and 2056 (Table 4). The numbers in Table 4 are not directly comparable with those in Table 3 because the former includes buildings in the Western Corridor and the latter includes buildings in the planning proposal area which do not flood.

Year 2036 was obtained by projecting 20 years into the future the number of evacuees that would be achieved under the existing planning controls, plus some site-specific planning proposals that have at least received Council endorsement to be sent for Gateway determination.

Table 3: Estimated Potential Increase in Population in Planning Proposal Area.

	Commercial	Residential
<i>Existing</i>	35,048	19,576
<i>FSAR1</i>	92,253	58,961
<i>FSAR2</i>	76,096	68,000



Table 4: Estimated Potential Population in Flooded Properties in Planning Proposal Area.

	Residents	Workers	Visitors
2016	10,010	34,931	26,245
2036	32,793	63,130	45,214
2056	50,574	81,826	59,340

It has been demonstrated that neither vehicular nor pedestrian evacuation is viable as a primary flood response across most of the CBD with the current road and pedestrian infrastructure. Providing additional infrastructure for evacuation is problematic.

Evacuation would only become more challenging with further development, even for the more modest increases under the current planning rules which are reflected in the 2036 numbers (Table 5).

These times assume that the evacuation routes will remain open for that whole time; which they will not. In the case of pedestrian evacuation it assumes high level walkways will be constructed for flood evacuation.

Table 5: Estimated Vehicular and Pedestrian Evacuation Times.

Year	Event (ARI)	Vehicle (hrs)	Pedestrian (hrs)
2016	20 Year	8.1	4.5
	100 Year	9.0	5.2
	PMF	10.7	4.4
2036	20 Year	8.7	7.3
	100 Year	9.4	8.9
	PMF	10.8	6.8
2056	20 Year	8.9	9.1
	100 Year	9.6	11.2
	PMF	11	7.9

## 5.6.2 Flood Response Categorisation

The flood emergency response classification of communities, described in Section 5.5.3, has been developed assuming that the occupants are at the ground floor. As described in Section 4.1.1, the planning proposal built form will be high rise buildings where the majority of occupants will be well above the ground level. When taking this into account, essentially all of the new buildings should be considered High Flood Islands.

The reason for this is that the occupants could potentially be unaware of the flooding until they attempt to leave the building, or at least the first sign they will have of flooding is that the ground floor is inundated and their escape route will more than likely be cut off. At the same time, there would be ample opportunity for those occupants to retreat up their stairs to a floor that is above the level of the PMF.

The effect of this change in categorisation depends on the original categorisation, for example:

- If the area was already a high flood island there is essentially no change to the categorisation
- If there was already a building with access to areas above the PMF the building was already a high flood island and the categorisation has not changed
- If the area was previously a low flood island with a building without areas above the PMF, it becomes a high flood island
- If the area was previously a low flood island with a building with areas above the PMF it was effectively a high flood island and that does not change.
- If the area previously had rising road access, or an overland escape route, from a building with areas above the PMF then it was effectively a high flood island and will remain so.
- If the area previously had rising road access, or an overland escape route, from a single storey building then it will effectively become a high flood island.

It should be noted that under the current planning controls, the same type of building (high rise) would be developed in the majority

of these areas, so the planning proposal will not effectively change the flood categorisation of the land or the buildings.

### 5.6.3 Population at Risk

The planning proposal would increase the potential population at risk within those areas that can flood. When the discussion in Section 5.6.2 is considered, it means that where there was a population on a low flood island that population will be increased but the building will convert the island to a high flood island. This means the population at risk will increase but the risk to each individual in the population at that site will decrease.

In all other areas the population at risk will increase but the risk to individuals in the population will either remain the same or will increase depending on whether it was already a high flood island or previously was low rise with rising road access or an overland escape route.

### 5.6.4 Risk Reduction Opportunities

The discussion in Section 5.6.3 is based entirely on the flood emergency response classification and a simplistic consideration of final building design and its implications for the population at risk.

It must be recognised that the flood emergency response classification is only one factor in determining flood risk and other considerations such as flood hazard, flood probability and flood duration are also very important.

For example, a building which is isolated by high hazard floodwaters for several hours in a 20 year ARI flood presents a much higher risk than were the same building to be isolated by low hazard floodwaters for less than an hour in a PMF. The planning proposal provides the opportunity to avoid intensification in areas which place people and property at the greatest risk from flooding.

Another consideration is that while an individual building on an individual block may have a particular flood exposure and flood emergency response classification, if a group of buildings or a collection of lots are

considered as a whole the exposure and classification may be different.

A broad scale redefinition of floor space ratios, building heights and development controls offers the opportunity for redevelopment to be reconsidered at a precinct level rather than one development at a time and it may provide ways and means of decreasing the population in areas with the greatest flood risks or constructing buildings which collectively change their flood emergency response classification.

This is elaborated upon in the following sections.

## 5.7 RISK EVALUATION

### 5.7.1 Risk to Property

The subject area is all currently developed with a mix of residential and commercial development. In most cases, the development would have occurred prior to the current flood planning controls. Application of current planning controls to redevelopment will result in less flood risk to property.

However, as highlighted in Section 3.2, some of the ways in which new developments have complied with existing flood planning requirements have had unintended outcomes. It will be important that the new planning proposal addresses these without increasing the potential flood risk to property.

Council is currently investigating this issue and examining ways in which the issue can be overcome.

Overall it is considered that the planning proposal should be able to be implemented without increasing the flood risk to property.

### 5.7.2 Risk to Life

Evaluating the risk to life arising from the planning proposal is more complex. Considering the CBD as a whole it will result in more people occupying flood prone areas but in such a way that reduces the probability of them coming in contact with floodwaters inside their building.



Flood behaviour and topography varies across the CBD and an approach is needed which takes this variability into consideration. Given the impracticalities of vehicular evacuation and the challenges of pedestrian evacuation, it is our view that shelter-in-place is the most appropriate flood response for most of the buildings in the Parramatta CBD.

Having said that, it is preferable to encourage development which minimises the chance that people will be frequently isolated in buildings for long periods of time because they may:

- try to leave (or enter) the building through hazardous floodwaters despite advice to the contrary
- need medical assistance
- need to evacuate from a fire

#### a) Methodology

For the purposes of this project a methodology was developed which considered how frequently buildings are likely to be isolated by flooding, how long they would be isolated and how hazardous surrounding floodwaters would be to those entering or leaving the building on foot.

Table 6 summarises the methodology and criteria used for evaluating the flood risk to life.

The first criterion used was the probability of flooding. This was based on the available modelled flood extents which were limited to the 20 year ARI (5% AEP), 100 year ARI (1% AEP) and the PMF. Flooding above the 100 year ARI (<1% AEP) was considered to be rare flooding and would require minimal measures to manage risk to life. At the other end of the scale flooding more frequent than the 20 year ARI (>5%) would require the greatest controls to manage risk to life.

While flooding larger than the 1% AEP is rare, there have been several examples of major floods within Australia within the past 12 years that have exceeded the flood levels of the 1% AEP design flood, this includes;

- Flooding in King John Creek in Moreton Bay (QLD) in May 2015, which has an estimated 0.1% AEP

- Flooding in Dungog on the Myall Creek and Patterson River in April 2015, which has an estimated 0.2% AEP
- Widespread flooding in Queensland in 2011, including the Brisbane River, Pine River and Lockyer Valley, which has estimates of between the 1% and 0.1% AEP in various catchments
- Widespread flooding in northern Victoria in 2010 and 2011 which has been estimated at less frequent than the 1% AEP with a number of rivers recording 0.5% events
- The "Pasha Bulker" storm in June 2007 which flooded large areas of Newcastle, which has been estimated at much less frequent than 1% AEP.
- A localised storm at Broughton Anglican College near Campbelltown, NSW in April 2007 caused a 0.2% flood
- Rainfall in the Flinders Ranges in South Australia in January 2007 was in the order of a 0.1% event over an area the size of the Sydney Metropolitan Area

The second criterion was depth of flooding in the PMF as this represents the worst case scenario in terms of hazard to anyone trying to enter or leave the building. While hazard is traditionally determined from depth and velocity combinations, the lack of velocity information meant that for this project only depth was used. Two depth thresholds were considered and were based on the most recent Australian research in this area (McLuckie et al, 2014).

A 0.6m threshold was used to represent the depth above which it would be difficult for emergency service vehicles to reach buildings. A depth of 1.2m was used as the other threshold which is the limit at which it is difficult for adults to traverse low velocity flood waters.



Table 6: Flood Risk to Life Evaluation Methodology

Category	Probability (AEP)	PMF Depth (m)	[Depth, Duration] Operator	PMF Duration (hrs)	Flood Emergency Response Classification	Suggested Risk to Life Management Measures
1	< 1%	< 0.6		Any	Rising access	Safe to evacuate or shelter in place. No controls required.
2	< 1%	0.6 < x < 1.2	AND	< 3	Rising access	Safe to evacuate early or shelter in place in accordance with a flood emergency response plan for the building.
3	< 1%	> 1.2	OR	> 3	Rising access	Shelter in place above the PMF in accordance with FERP. Ensure space above PMF for all building occupants to shelter. Provide building fire management system to meet ABCB requirements for high rise building.
4	1% < AEP < 5%	Any		Any	Rising access	Prohibit residential development unless there is internal flood free pedestrian access to development in categories 1 or 2. Permit some types of commercial development below 1% flood level if other planning considerations can justify. Commercial areas shelter in place above the PMF in accordance with FERP or access to development in categories 1 or 2. Provide building fire management system to meet ABCB requirements for high rise building
5	< 1%	< 0.6	AND	< 3	Flood island	Shelter in place in accordance with FERP
6	< 1%	> 0.6	AND	> 3	Flood island	Shelter in place above the PMF in accordance with FERP. Have residential habitable floors above PMF level. Have access to emergency power and water. Provide building fire management system to meet ABCB requirements for high rise building. OR provide internal flood free pedestrian access to development in categories 1 or 2.
7	< 5%	> 0.6	AND	> 8	Flood island	Prohibit residential development unless it has internal flood free pedestrian access to development in categories 1 or 2. OR provide internal flood free pedestrian access to development in categories 5 or 6 AND Shelter in place above the PMF in accordance with FERP. Have residential habitable floors above PMF level. Have access to emergency power and water. Provide building fire management system to meet ABCB requirements for high rise building. Permit some types of commercial development below 1% flood level if other planning considerations can justify providing there is warning system for early evacuation and closure OR flood free pedestrian access to development in categories 1 or 2.
8	> 5%	any	OR	any	Rising access	Prohibit development in these areas unless there is internal flood free pedestrian access to development in categories 1 or 2. No habitable commercial or residential development below 1% flood. Provide building fire management system to meet ABCB requirements for high rise building.
9	> 5%	Any		Any	Flood island	Prohibit development in these areas

The third criterion was duration of PMF flooding as this will determine how long the building and its occupants are likely to be isolated. The available data only allowed us to estimate durations of three hours or less and then hourly increments above that. Given that the NSW SES assumes that it takes two hours for people to be ready to evacuate when ordered to, a threshold of three hours was used to represent a time period in which few people would try and enter or leave the building were it flooded by PMF floodwaters. It would be flooded for less time in small floods.

The next criterion was the emergency response classification with those with either rising road access or an overland escape route considered to be at less risk than those isolated on a flood island.

In combination these criteria produced nine different flood risk categories which need different types of mitigation and response measures.

This flood risk map compares to the three "flood risk" precincts which are currently used for floodplain management in the CBD.

By using all nine categories it enables a gradation of measures to manage risk to life to be used to facilitate intensification of development within the CBD and development in locations which a more simplistic categorisation of the floodplain would prohibit. It would be possible, as part of the planning process, to consolidate some of these categories based on preferred planning controls.

## b) Results

Figure 21 maps the results of the nine different combinations of criteria through the planning proposal area and a discussion on recommended measures to manage risk to life in each follows.

### Category 1.

It was considered that there would be negligible risk to life in areas with rising access which cannot be flooded to greater than 0.6m depth in a PMF and have less than a 1% chance of being flooded at all. This is because they have a low chance of flooding, they can evacuate on foot ahead of the floodwaters

reaching the building, emergency service vehicles could reach the building through floodwaters if needed and people could walk through floodwaters to enter or leave the building if absolutely necessary.

### Category 2

Were areas with rising road access to have less than a 1% chance of being flooded but could be flooded to a depth of between 0.6m and 1.2m in a PMF and be flooded for less than three hours these were assessed to have a very low flood risk. This is because they also have a low chance of flooding but might not be able to be reached by emergency vehicles at the peak of a rare flood and if people were to try and walk through the floodwaters they may be at some risk. However, the three hour maximum duration means that there is a low chance of an emergency happening in that time and a low chance of people getting impatient and trying to walk through floodwaters. A building specific flood emergency response plan (FERP) could be used to encourage occupants to evacuate early or shelter in place.



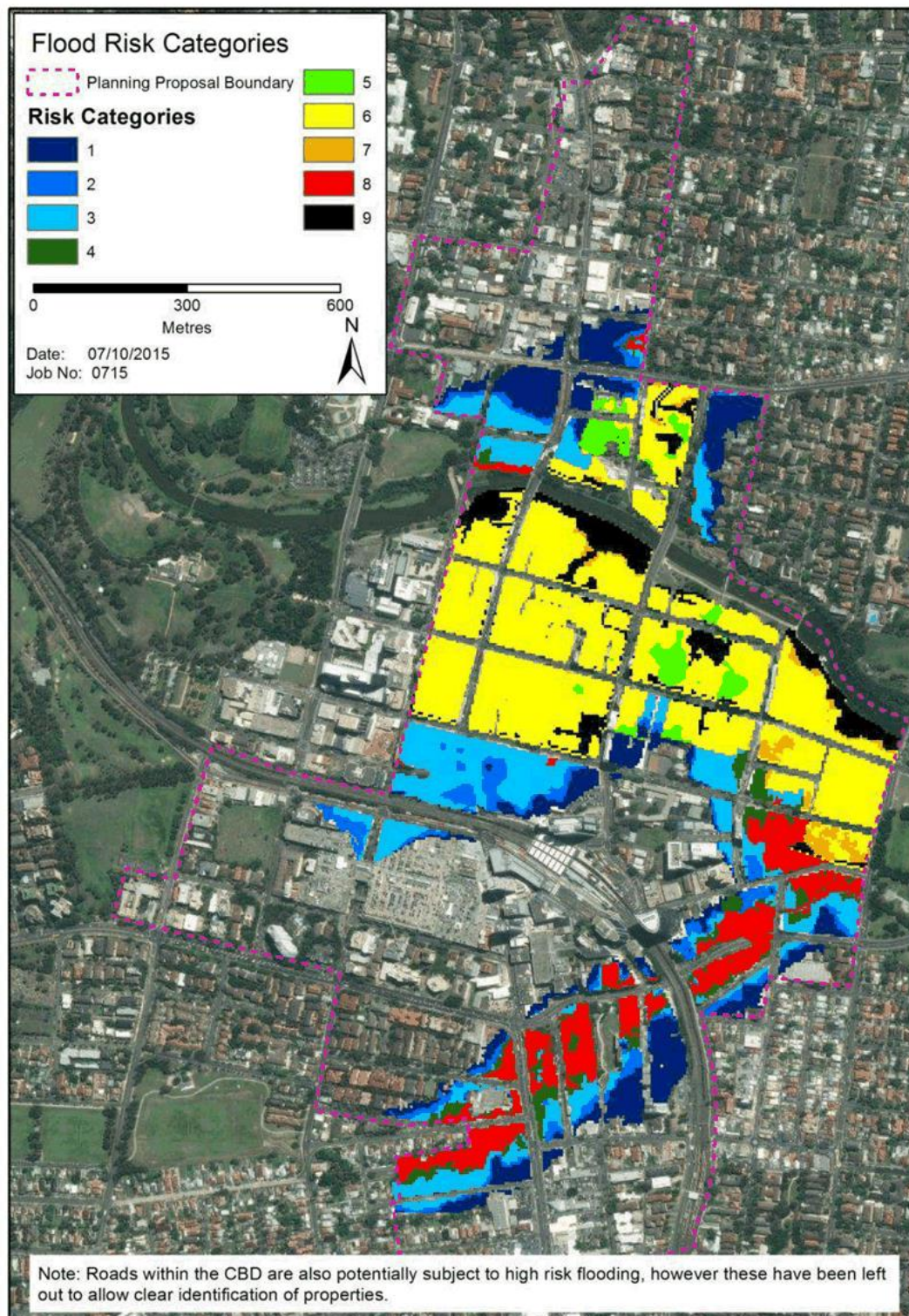


Figure 21: Flood Risk to Life Categorisation of Developable lots

*Category 3.*

Similar areas where the depth could exceed 1.2m or the duration could be longer than three hours were assessed to have a slightly greater risk because there is a greater chance that people may try and traverse hazardous floodwaters or emergency service cannot reach those needing assistance.

In these locations a FERP would advise people to shelter in place and a fire management system which meets Australian Building Code Board (ABCB) requirements for a high rise building could be used to minimise the chance of a fire in the building placing lives at risk. This would apply even if the building would not be defined as a high rise building (over 25 metres in effective height).

It is noted that in early 2019 the National Construction Code (NCC) was updated. The new NCC has extended the provision of fire sprinklers to lower-rise residential buildings, generally 4-8 storeys. However, non-sprinkler protection is still permitted where other fire safety measures meet the deemed minimum acceptable standard.

It would be necessary to ensure there is sufficient space above the PMF level for all building occupants to shelter.

*Category 4*

While areas in this category also have a rising road access, they have a much higher chance of being cut off by floodwaters and they will be flooded to greater depths and for longer durations in more extreme floods.

It is our opinion that these areas may be suitable for some commercial development (which has few occupants) below the 1% AEP flood level but above the 5% AEP flood level if there are other overriding planning considerations such as street activation. This could only be permissible if the building were designed to exclude floodwaters from high value assets within the commercial spaces below the 1% level and the commercial areas have free access to a location above the PMF within the building where occupants can shelter. Alternatively they could have internal flood free pedestrian access to development in categories 1 or 2.

Because occupants of commercial spaces may be trapped in the building for some time it would be necessary for the building to have a fire management system which meets ABCB requirements for a high rise building.

Because of the high probability of isolation it is not recommended that residential development be permitted in these areas unless it has internal flood free pedestrian access to development in categories 1 or 2.

The internal flood free access to areas with lower flood risks would mean that the occupants would be able to enter or exit the building through an entrance which has a much lower chance of being cut off by hazardous floodwaters. This access could be achieved by either a contiguous building which spans the flood risk categories or by a covered, elevated walkway connecting the building to a building in the lower flood risk area.

Access to buildings in Category 3 would not be sufficient to permit development in Category 4 areas as they have too high a probability of isolation by high hazard floodwaters and it would not be practical to provide shelter areas above the PMF in an adjacent building.

*Category 5*

Flood islands create higher risks because there is less of an opportunity to walk to flood free land ahead of floodwaters arriving. With this in mind if these areas have less than a 1% chance of flooding and would have less than 0.6m depth and less than three hours duration of flooding in a PMF they were assessed to have low flood risk because there would not be a significant chance that people would walk through floodwaters to leave or access the building.

However, because there is no opportunity to leave the building and walk ahead of rising flood waters it is recommended that a FERP encourage sheltering in place. No further controls are required.

*Category 6*

Were either the depth or duration to exceed 0.6m or three hours respectively then the area would be assessed to have a higher flood risk because the long duration increases the





chance that someone will walk through floodwaters and the greater depth increases the chance that doing so would be dangerous.

This requires a FERP which encourages sheltering in place but also the building occupants from commercial floors below the PMF must have free access to a location above the PMF within the building where they can shelter.

It is recommended that in these buildings the minimum habitable floor level of any residential dwellings be above the PMF level plus a freeboard. This should be able to be achieved by specifying that ground floor areas be for non-residential purposes and minimum ceiling heights be placed on those non-residential spaces.

There must be emergency power and water available to the building for the duration of a PMF event.

It would also be necessary for the building to have a fire management system which meets ABCB requirements for a high rise building.

Alternatively, if these buildings have internal flood free access to development in categories 1 or 2 then the controls which apply to those categories only are needed.

#### Category 7

Flood islands which are below the 1% flood level but above the 5% AEP flood level were all found to have flood depths greater than 0.6m and durations longer than 8 hours in the PMF and therefore present a high risk to life. However, even in these areas there are measures which can be taken to manage risk to life.

Because of the high probability of isolation it is not recommended that residential development be permitted in these areas unless it has internal flood free pedestrian access to development in categories 1 or 2.

Alternatively they can have access to development in categories 5 or 6 providing that:

- habitable floors in the residential dwellings are all above the PMF

- there is access to emergency power and water which would not be affected by the PMF
- There is a fire management system which meets ABCB requirements for a high rise building

Some commercial development below the 1% flood level but above the 5% AEP flood level may be appropriate if there are other overriding planning considerations such as street activation. This could only be permissible if the building were designed to exclude floodwaters from high value assets within the commercial spaces below the 1% AEP level and:

- There is a warning system and FERP which enables the premises to be evacuated and closed with sufficient time for occupants to reach flood free land; or
- There is internal flood free pedestrian access to development in categories 1 or 2.

#### Category 8

Areas with rising access which are below the 5% AEP flood level and can be flooded to more than 0.6m depth or flooded for longer than three hours were assessed to have a very high flood risk because they would flood relatively frequently and the depth or duration would increase the chance of people trying to traverse hazardous floodwaters.

All development should be prohibited in these areas unless there is internal flood free pedestrian access to development in categories 1 or 2. No habitable commercial or residential development should be permitted below the 1% AEP flood level.

#### Category 9

Flood islands below the 5% AEP flood level represent an extreme risk to life and habitable commercial and residential development should be prohibited in these areas.

### c) Assigning a Category

Figure 21 maps the flood risk categorisation based on the assumption that there is a common access to the building at each location on the map. This will not be the reality. If a single building occupies that lot

then the risk to life which dictates the actual risk to the building occupants will be the one that applies at the entrance of the building which all of the occupants have access to.

Should a building span more than one lot, then it is again the assessed risk at the building common entrance which dictates the risk to life which the development must respond to, an example of where this would potentially be feasible is the Auto Alley area, shown in Figure 22. This provides scope for lot consolidation or building links (e.g. elevated walkways) to reduce the risk to life of a development and reduce the requirements for managing risk to life.

## 5.8 RATIONALISATION OF RISK CATEGORIES

While the rationale for the risk to life categories is sound and the suggested management measures in Table 6 are appropriate, the use of nine separate life risk categories in a planning scheme is not practical.

Furthermore, the fact that most, if not all, of the redevelopment which will take place in the CBD will be multi-storey, there will be little practical distinction between rising road access and flood islands because dwellings above the ground floor in an area with rising road access will effectively be on a flood island.

Finally, it was recognised that many of the suggested management measures were common across categories with additional measures required as the flood risk to life increased.

In light of these considerations, an alternative flood risk categorisation was developed and a more concise presentation of suggested life risk management measures proposed. These are summarised in Table 7 and an explanation of their rationale follows. Figure 23 is a schematic representation of the various flood emergency management control options in each of the flood risk zones.

Figure 24 shows how they are distributed across the Parramatta CBD after the number of categories were consolidated and micro risk pockets rationalised. Figure 25 has remapped

the categories in Figure 24 by cadastral boundary.

For Categories 1, 2, 3 and 4, all buildings located within the PMF must be structurally sound in the full range of floods.

### Category 1.

This is as per the original Category 1. In a PMF it would be subject to low hazard, short duration flooding. People would be able to walk away from rising flood waters but should they be trapped by floodwaters it would pose minimal risk to them were they to either shelter in place or choose to leave through the floodwaters.

No particular measures are needed to ensure their safety other than the building being structurally sound in the full range of floods which is not an onerous requirement given the low hazard even in the most extreme events and typical high building construction.

For Categories 2, 3 and 4, shelter in place above the PMF or evacuation to land above the PMF is required.

### Category 2.

This category recognised that multistorey development in an area with rising road access is effectively the same as development on a flood island because if occupants above the ground floor fail to evacuate prior to the arrival of floodwaters they are isolated. Using this logic, the original Category 2 presents a similar risk to life as Category 6. The original Category 3 presents a slightly higher risk than these two categories.

Category 5 may appear to have similar flood hazards in the PMF as Category 1, but because it is an island and it may be necessary to traverse higher hazard water away from the site to access flood free ground, it is more logical to group this category into this new Category 2.

The proposed measures for managing life safety are those which apply to category 1 but with some additional requirements to manage the additional risks.



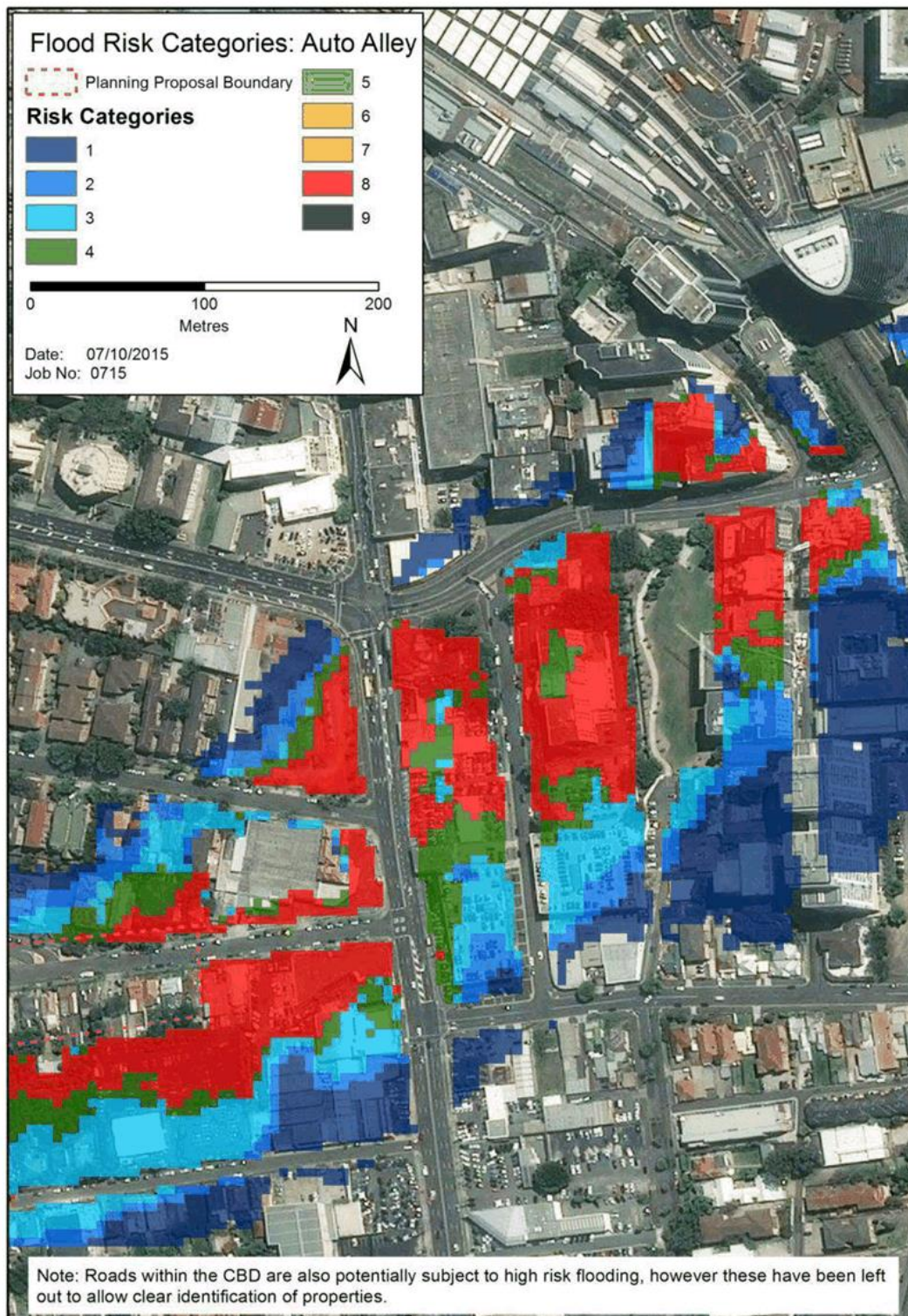


Figure 22: Flood Risk Categories around the Auto Alley Area

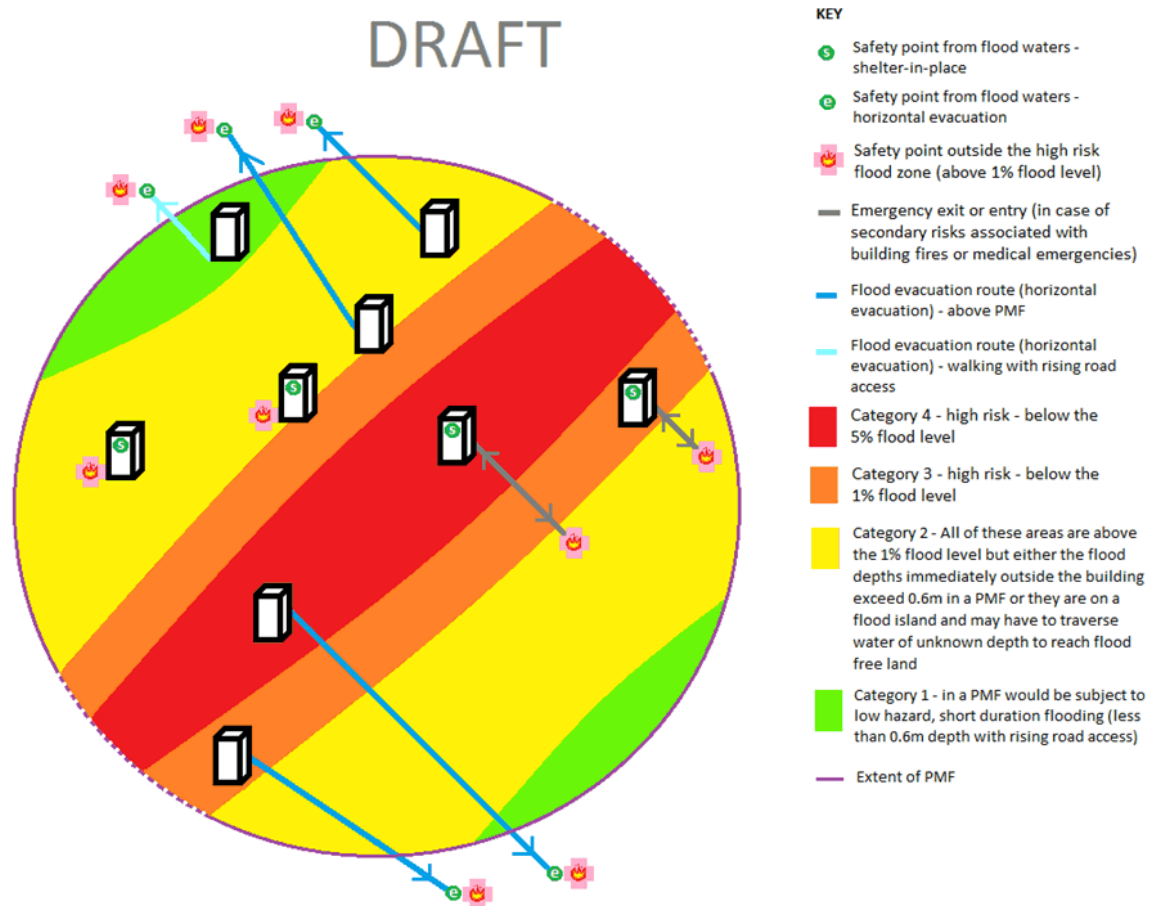


Figure 23: Schematic Diagram of Flood Emergency Response Provisions

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Table 7: Concise Life Risk Categorisation and Management Table

Flood Type	Old Category number	New category number	All buildings must do this requirement		AND	All buildings do this	OR	All buildings must do these safety requirements, if indicated by a 'Yes'				AND IF	Commercial included in the building	
			Building withstand flooding to PMF	Residential floor levels above the 1% flood level plus freeboard				Shelter for all building occupants above PMF	Fire Safety to ABCB requirements for high rise whether high rise or not	Flood Emergency Response Plan for the Building Maintained by Building Owner or Body Corporate	Residents able to exit above 1%		Only some forms of commercial development below 1%	Temporarily occupied development only below the 1%
Low Hazard, short duration PMF	1	1	Yes	Yes										
Moderate to High Hazard PMF above 1% AEP (1 in 100 ARI)	2, 3, 5 and 6	2	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
Between 1% AEP (1 in 100 ARI) and 5% AEP (1 in 20 ARI)	4 and 7	3	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Greater than 5% AEP (1 in 20 ARI)	8 and 9	4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	



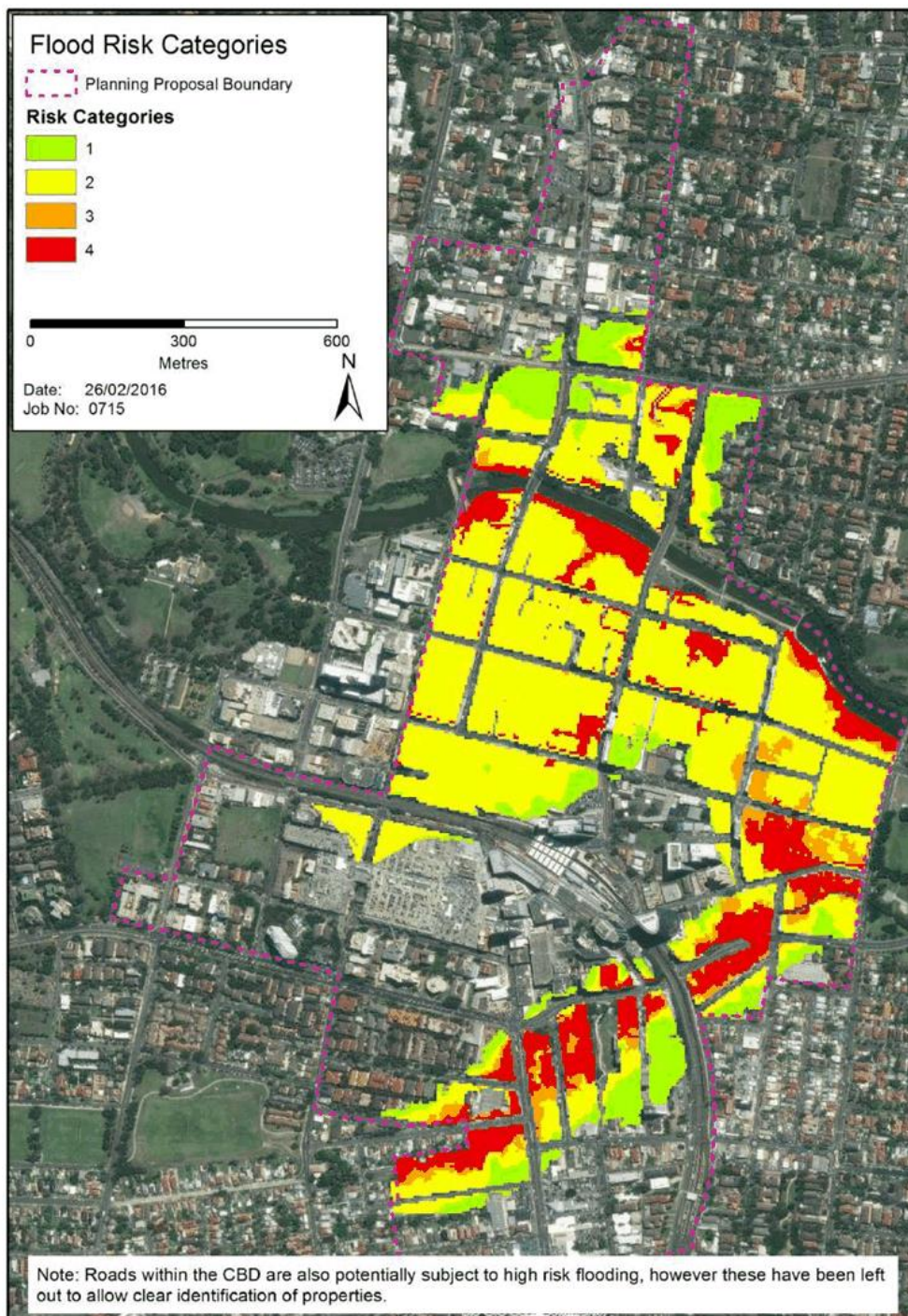


Figure 24: Rationalised Life Risk Categories Mapping





Figure 25: Rationalised Life Risk Categories Mapping by Cadastral Lot:



It is noted that all properties in this category have street frontage to a footpath which is flood free in the 1% AEP flood but they do not necessarily have a current access to a footpath above the 1% AEP flood level. It would have to be a requirement that any redevelopment of these lots has at least one access point, sufficient for fire emergency evacuation of the whole building and accessible for ingress by emergency services personnel which is above the 1% AEP flood level.

If flood free access can be provided for building occupants to an area outside the PMF, then no further controls are required. This could be achieved by having an exit from a building which is above the PMF and is accessible internally to all occupants. Alternatively, it may be achieved by providing a link to a neighbouring building, by means of internal access or a bridge, which has an exit above the PMF.

However, if that is not possible to provide flood free pedestrian access to an area outside the PMF then it would be acceptable for occupants of these buildings to shelter in place provided that:

- There are areas above the PMF sufficient for all building occupants to shelter for up to eight hours and they can be accessed by all building occupants without having to enter floodwaters. A flood emergency response plan has been developed for the building and the building owner or body corporate is legally responsible for its maintenance and implementation
- Fire safety features are included within the building to meet the requirements of the ABCB for high rise buildings whether the building is high rise or not.

#### Category 3.

As with the groupings which make up the new Category 2, it was recognised that the old Category 4 and Category 7 had many things in common, particularly the fact that they lie below the 1% AEP flood level and therefore have a higher probability of being isolated than those in the new Category 2.

It is this particular increased probability of flooding which means that they would be required to have all of the risk management

measures of the new Category 2 along with an additional control.

They must have an exit from the building above the 1% AEP flood level which is accessible to all residential occupants such that people would only be trapped inside the building by flooding greater than the 1% flood. In this way, the risk to occupants is brought into line with those in the new Category 2.

This could be achieved through internal access within the building or through a connection to a neighbouring building.

This category also recognises that some types of commercial development may be appropriate below the 1% flood level but that needs to be carefully controlled. For example if other planning considerations such as street activation make a floor level at street level preferable then this could only be permissible if the building were designed to exclude floodwaters from high value assets within the commercial spaces below the 1% level and the commercial areas have free access to a location above the PMF within the building where occupants can shelter.

#### Category 4.

The new Category 4 replaces the former Category 8 and Category 9. These are areas which are below the 5% AEP flood level and are therefore more frequently flooded and can experience high hazard flooding in larger events.

Occupancy of these areas poses a significant risk to life and property unless carefully controlled. Only temporarily occupied development would be permissible below the 1% flood level here.

In all other respects development in these areas must satisfy all of the controls which apply to Category 3. While at face value this might appear that these highest risk areas are not having stricter controls placed on them, the reality is that it will be more difficult for a development in these areas to meet these requirements. For example higher flow velocities may make it more difficult to construct a building which remains structurally sound within the PMF.

However, a creative design may address this and the other requirements so that a



development in these locations poses no greater risk to life than development elsewhere.

It should also be noted that the available flood data used to map the new Category 4 had less detail than that available to map the other categories. As such the boundaries of the new Category 4 may be somewhat conservative, particularly away from the main channels of the Parramatta River and Clay Cliff Creek.

However, a conservative approach has been taken with the mapping based on Council's currently adopted flood extents.

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## 6 MANAGEMENT OPTIONS

Table 2 summarised required floodplain management actions which have not been implemented from previous floodplain risk management plans as well as issues which council officers advised need to be addressed in a new floodplain risk management plan. In addition, management options need to be developed which appropriately manage any new flood risks which would arise due to the CBD planning proposal.

The scope of this floodplain risk management plan revision was not to undertake detailed investigation of mitigation options. It has therefore been assumed that the required unimplemented actions from the earlier plans will become part of the updated plan. Accordingly, this section focuses on options to resolve issues which relate to challenges arising from current flood planning controls or from the CBD planning proposal.

Community and stakeholder consultation for updating the Floodplain Risk Management Plan was undertaken through the Parramatta Floodplain Risk Management Committee. A committee meeting was held on 20 August 2015 and a presentation was delivered to introduce the committee to the work being undertaken, the implementation challenges with the existing flood planning controls and the risk to life issues in relation to the CBD planning proposal. This had been preceded by a presentation by City of Parramatta Council on investigations into an early flood warning system for the Parramatta River and by the NSW SES on the challenges of flood emergency response in Parramatta.

This was followed by a workshop where ideas and opinions were sought on how to deal with the issues which need to be addressed by the revised floodplain risk management plan. The following discussion has been informed in part by those workshop discussions.

### 6.1 WORKSHOP IDEAS

#### 6.1.1 Evacuation

The general consensus at the workshop, including from representatives of the NSW SES, was that wholesale vehicular evacuation of Parramatta CBD as a flood response is not practical for all of the reasons given in Section 5.5.4.

It was acknowledged, however, that it is desirable for non-resident occupants to be able to evacuate safely from flooded buildings while it is more realistic to expect residents to choose to shelter within their dwellings. To this end, planning controls are needed which minimise the risk to life of both groups of building occupants.

#### 6.1.2 Development in High Hazard Areas

It was generally accepted by the committee that there were limited opportunities to reduce the potential flood hazard. Amplifying existing channels was suggested, however after discussion it was agreed this was not feasible. The other potential solutions were generally around planning considerations, particularly:

- Using high hazard areas as shared open space
- Using planning mechanisms to encourage lot consolidation to ensure that owners of lots in high hazard areas were not financially penalised.

#### 6.1.3 Flood Isolated Areas

The need for integrating flooding constraints into master planning for the city was stressed by members of the committee.

The committee was generally not opposed to development in flood isolated areas, so long as the following issues were addressed:

- Need to maintain a publically accessible PMF refuge
- Need to ensure services (water, electricity) are maintained

Consideration was also given to placing commercial development within higher risk areas and residential development in lower risk areas.

The concept of having elevated walkways connecting buildings in isolated areas to flood free areas was also explored at length.

#### 6.1.4 Retail Floor Levels

The issue of having retail development disconnected from the street by stairs was discussed and it was agreed by the committee that the issue should be addressed.

A number of potential solutions were discussed, including:

- Use of elevated footpaths to bring the footpath level closer to the local flood planning level
- Having entrance colonnades, or setbacks from the street which allow ramping from the footpath level to the flood planning level inside
- Having terraced floor levels inside the ground floor of the building with flood resistant or easily moved contents on the lower levels (e.g. a restaurant may have its kitchen above the flood planning level but the tables and chairs could be lower)
- A retail space which is sealed watertight when the doors are closed

#### 6.1.5 Other – Street Obstructions

The committee members were given an opportunity to discuss any other potential issues. The NSW SES was concerned that during a flood, there will be a number of obstacles such as street furniture, cars etc. that will impede the passage of flood rescue boats.

The issue was discussed, and potential solutions such as undertaking clear path mapping and some form of barrier to prevent vehicles from floating away were raised. However, given the general need for vehicles and street furniture through the CBD it was agreed that it is unlikely that this will be easily resolved.

## 6.2 NSW SES LETTER

In December 2017 the NSW SES wrote to the then Department of Environment and Planning regarding a planning proposal for 180 George St Parramatta. While the letter was specifically responding to that planning proposal, Appendix 2 of the letter listed site specific design considerations and Parramatta CBD General Design considerations. Both are listed here because the site specific considerations are relevant to many sites in the Parramatta CBD, not just 180 George St.

#### *Site specific design considerations*

*The site specific design considerations should be applied to this development to assist in minimising additional risk.*

**1. Residential development:** *The habitable floors of any residential development (including aged care) should be located above the PMF with the building structurally designed for the likely flood and debris impacts.*

**2. Commercial development (including retail):** *To cater for the safety of potential occupants, clients and visitors in commercial development there should be the provision of sufficient readily accessible habitable areas above the PMF.*

**3. Child care facilities:** *Childcare facilities must be located with floor levels above the PMF level.*

**4. Car parking:** *Any additional parking should be above ground level and have pedestrian access to a podium level above the PMF.*

**5. Making buildings as safe as possible to occupy during flood events.** *Ensuring buildings are designed for the potential flood and debris loadings of the PMF so that structural failure is avoided during a flood.*

**6. Limiting exposure of people to floodwaters.** *This can be aided by providing sufficient readily accessible habitable areas above the PMF to cater for potential occupants, clients, visitors and residents.*

**7. Provision of public accessible space for the itinerant population in areas surrounding intensive development in Parramatta CBD.** *Provision of publically accessible space or access to space above*



the PMF (with adequate infrastructure to enable the physically impaired to access such space) that is easily accessible 24 hours a day for seven days a week which is clearly identified for this purpose with associated directional signage.

**8. Providing adequate services so people are less likely to enter floodwaters.** This includes access to ablutions, water, power and basic first aid equipment. Consideration must be given to the availability of on-site systems to provide for power, water and sewage services for the likely flood duration (up to 12 hours) plus a further period of up to 48 hours to provide allowance for restoration of external services.

**9. Addressing secondary risks of fire and medical emergencies during floods.** Where there is no CBD wide strategy to address secondary risks during flooding. The proponent needs to consult with the relevant emergency service agency.

#### **Parramatta CBD general considerations**

**1. Sensitive development including child care:** All new emergency response hospitals, childcare and primary school facilities in Parramatta CBD should be located on land outside the extent of the PMF on land where service interruption is likely to be limited.

**2. Secondary schools and day hospitals:** Ideally new day hospitals and secondary school classrooms should also be located above the PMF level. However, at minimum there should be within a day hospital and high school building, the provision of access to adequate space above the PMF for patients, high school students, staff and visitors.

**3. Reducing human behaviour risks through businesses, schools and childcare centres.** Undertaking regular exercising of a building flood emergency response plan similar to a building fire evacuation drill.

**4. Increasing the flood awareness of current and future communities.** Council should have community awareness strategies that include requiring current and future building owners to participate in increasing this awareness.

**5. Parramatta CBD PA system.** There needs to be consideration given to developing a

Parramatta CBD PA system like Sydney CBD to communicate evacuation directions and safety messages to the Parramatta CBD population in the lead up to and during a flood to assist in improving the safety of the community.

**6. Addressing secondary risks of fire and medical emergencies during floods.** To minimise the increased risk of fire and to reduce both the potential for adverse outcomes in the case of a medical emergency and the risks to those who may aid the patient, Council, DPE, NSW SES, Ambulance NSW and the relevant Health Functional area and fire agency servicing the area, should be consulted to determine appropriate risk management strategies during flooding.

### **6.3 PLANNING PROVISIONS**

The following recommendations take into account the results of the risk evaluation in Section 5.7 and the outcomes of the workshop summarised in Section 6.1 and the recommendations of the NSW SES in Section 6.2. Following is a discussion of recommended planning principles which be applied in the development of the planning proposal for the CBD. It includes some specific measures which should be incorporated into an update of Clause 6.3 of the Parramatta LEP and Section 2.4.2.1 of Parramatta DCP 2011 including Table 2.4.2.1.2 Floodplain Matrix. The revision of the LEP and DCP and the selection of precise wording is a detailed town planning exercise which is beyond the scope of this floodplain risk management plan revision.

It is stressed that these recommendations only relate to the DCP as it applies to the Parramatta CBD and its flood risks. They may not be appropriate for floodplains in other parts of the Parramatta LGA. The LEP provisions would also only apply to the Parramatta CBD.

The following discussion makes reference to the various planning considerations set out in the LEP and DCP.



### 6.3.1 Flood Risk Precincts

The current DCP divides the floodplain into three flood risk precincts: low, medium and high. However, these are generally defined by the extent of the PMF, 100 Year ARI and 20 Year ARI floods respectively with some consideration of high hazard flooding within the 100 Year ARI extent. They therefore do not so much represent flood risk but mostly flood probability which is only one contributor to risk. As discussed in Section 6.2.6, the current precinct classification results in unnecessarily onerous requirements in some circumstances and inadequate requirements in others with regard to managing risk to life.

There was already a recommendation that the definition of the flood risk precincts be reconsidered.

It is therefore recommended that consideration be given to using criteria in addition to flood probability in defining risk precincts. The method used in Section 5.8 is one approach which could be used but there may be better ways of doing this, particularly when better information is available from the new flood model. Alternatively, additional overlays could be used which define additional considerations to flood probability.

### 6.3.2 Unsuitable Landuse

Table 2.4.2.1.2 identifies most land uses as being unsuitable in the High Flood Risk Precinct, Critical Uses and Facilities and Sensitive Uses and Facilities as being unsuitable in the Medium Flood Risk Precinct and Sensitive Uses and Facilities being unsuitable in the Low Flood Risk Precinct.

Table 2.4.2.1.1 lists Sensitive Uses and Facilities as: community facilities or public buildings which may provide an important contribution to the flood event; child care centres; hospitals; residential care facilities; senior housing; educational establishments.

This is consistent with the recommendations of the NSW SES as set out in Section 6.2.

It does not have a category called Critical Uses and Facilities but rather Critical Utilities and Uses which includes: Hazardous industries;

Hazardous storage establishments; Offensive industries; Offensive storage establishments; Liquid fuel depots; Public utility undertakings which may cause pollution of waterways during flooding, are essential to evacuation during periods of flood or if affected during flood events would unreasonably affect the ability of the community to return to normal activities after flood events; Telecommunication facilities; Waste management facilities.

As it is in the DCP the table can only identify these as being unsuitable not prohibited. Only the LEP is able to prohibit development.

Nevertheless, while there is logic in the identification of these landuses as being unsuitable in some of the flood risk precincts, there are two issues which are overlooked by the DCP.

Firstly, many sites span more than one flood risk precinct and the matrix would suggest they are suitable in one but not the other yet the higher risk precinct gets used to determine the permissibility of a particular development. Council should consider if there is a more appropriate methodology to assess this type of site.

Consideration could be given to setting some additional objective based development controls for some of these land uses.

### 6.3.3 Minimum Floor Levels

#### a) Residential

The minimum habitable floor level of residential buildings should be maintained at the 100 year ARI plus 0.5m freeboard. This is consistent with the Section 9.1 Direction. However, it is also recommended that in areas with a chance of hazardous flood depths or longer duration flooding in the PMF that residents shelter in place above the PMF. It is logical that the best place for them to do that would be in their own apartments.

It is therefore recommended that where the street entrance for a dwelling on a flood island could be flooded in a PMF for more than three hours, that the minimum floor level for the dwelling should be constructed at the level of the PMF plus a freeboard.



This would not be consistent with the Section 9.1 Direction which states:

*A planning proposal must not impose flood related development controls above the residential flood planning level for residential development on land, unless a relevant planning authority provides adequate justification for those controls to the satisfaction of the Director-General (or an officer of the Department nominated by the Director-General).*

Exceptional circumstances exist in Parramatta CBD which warrant flood planning controls to residential development above the residential flood planning level. In particular, there are short warning times, rapid rates of rise, and no practical means of evacuating the existing populations from the floodplain. Furthermore, the numbers of people who could be isolated by flooding will increase under the existing planning instruments. This planning proposal provides the opportunity for planning controls to be introduced so that as development takes place the risk to life for individuals is reduced.

Alternatively, the same flood risk management outcomes could be achieved by applying planning requirements for other purposes. For example, stipulating that buildings in particular areas must have commercial development on the ground floor and minimum ceiling heights. By default this will set minimum floor levels for residential dwellings which would be well above the residential flood planning level.

As these recommendations are aimed principally at reducing risk to life, it is arguable that it would be better for these particular provisions to be included in the LEP rather than the DCP. In this way they cannot be easily overridden, particularly as they are not consistent with common practice.

#### **b) Commercial**

The current requirement to have all commercial floor levels at the 100 Year ARI flood level plus freeboard fails to recognise the high variability in the nature of commercial premises and the opportunities to use areas below the 100 Year ARI with minimal flood damages. It is also resulting in developments with retail spaces which do not address the

street well because they require stepping up from the footpath into the building.

It is therefore recommended that particular classes of retail development be permitted to have areas below the 100 Year ARI level if it can be demonstrated that flooding will not cause significant losses to the contents at that level. For example a restaurant may have its kitchen above the flood planning level but the tables and chairs could be set out at a lower floor level. The tables and chairs (and the floors and walls for that matter) would need to be made of flood compatible materials so that they could be cleaned and reused following a flood.

An even broader range of commercial developments may be appropriate at street levels below the 100 Year ARI if the space can be sealed water tight. We would recommend permitting any retail development with a floor level at street level providing that all of the retail space is sealed watertight when the doors are closed. Provision would have to be made to ensure that occupants can access a flood free location from within the building. There would also have to be engineering standards with which the sealing would have to comply.

It is recognised that this would be a change in direction in Parramatta Council's floodplain management principles. However, flooding is only one consideration in urban planning and design and providing that risk to life can be managed appropriately and the commercial risks are outweighed by the commercial benefits, such a change may be justified.

#### **6.3.4 Building Components and Soundness**

The existing provisions within the DCP are generally satisfactory. If some retail space below the current flood planning level is permitted (see 6.2.2 b) then the current DCP requires that they be flood compatible which is appropriate. Further provisions may need to be included if it is proposed that it be permissible to dry waterproof some commercial development below the 100 year ARI flood.

### 6.3.5 Flood Affection

The current DCP requirements with regard to flood affection are sound. However, the way in which some developments have complied with this requirement in terms of under building flow paths has led to some architecturally unattractive and hydraulically questionable buildings.

We would recommend that provision be included within the DCP which requires more than an engineer's report that it does not affect flooding.

### 6.3.6 Car Parking and Driveways

The existing provisions in the DCP in relation to car parking and driveways are designed to:

- maximise the opportunity for vehicles to evacuate from premises without driving through high hazard floodwaters
- minimise the chance of multivehicle car parks being inundated
- eliminate the risk of people being exposed to floodwaters cascading into basement car parks.

These are all laudable objectives and the provisions in the DCP are an appropriate way of achieving that.

However, if it is accepted that vehicular evacuation from the CBD, or at least those areas which are flood islands, is not a practical proposition, then a different approach is required.

For example the current DCP requirement of providing a driveway no lower than 0.2m below the 100 year ARI flood level is redundant if the access roads some distance from the building are all lower than this. What is needed in the CBD is a means of preventing vehicles from leaving the car parking areas if water has reached hazardous levels in the access roads. If this is not practical then there needs to be a means of preventing vehicles leaving the car parking areas once the water outside the carpark entrance reaches the level of the footpath.

The DCP currently uses the 100 year ARI flood to define the level of protection afforded to multiple vehicles in a car park. This is an

appropriate level of protection given their relative worth compared to building contents which are afforded a similar level of protection. These provisions can be maintained.

The final provision relates to basement car parks with design principle P.14 requiring these, if there is no alternative viable parking arrangement, to be protected from the PMF. This is not to protect the vehicles but to protect people who may be in the carpark from water cascading into the carpark and putting their lives at risk. This is supported as an objective.

Additional guidance may need to be provided in the DCP as to what are acceptable solutions. For example, a car park driveway with its crest above the PMF level would be a failsafe means of ensuring a basement car park does not flood. However, there are other means of keeping floodwaters out which require less space such as flood gates or doors which are triggered by flooding or even are floated into place by rising floodwaters.

These alternatives have some chance of failure and decisions need to be made about the level of reliability which needs to be demonstrated by solutions which might be proposed.

### 6.3.7 Evacuation

The DCP has three requirements in relation to evacuation of residential and commercial development.

For either type of development in any of the flood risk precincts the "Applicant is to demonstrate the development is consistent with any relevant flood evacuation strategy or similar plan." This is appropriate and should be maintained as a requirement.

For residential development in any flood risk precinct and for commercial development in the medium and high flood risk precinct the requirement is "Reliable access for pedestrians and vehicles is required from the site to an area of refuge above the PMF level, either on site (e.g. second storey) or off site."

This is not consistent with the results of the analysis undertaken for this project. Table 8 compares the evacuation provisions of the current DCP with those suggested by the



analysis in Section 5.7. As previously discussed, vehicular evacuation is not required, at least in the flood island areas. Furthermore, pedestrian evacuation off site is only recommended where the assessed risk to life was negligible or very low which is at the fringes of the areas with rising access and even in the areas with low risk to life, refuge above the PMF is not essential. At the same time, the Section 5.7 method is suggesting that commercial development above the 100 year ARI level needs access to a location above the PMF where depths or velocities in the PMF are high.

Given that the areas with the lowest levels of risk to life only represent a small part of the floodplain, the simplest interim change to the DCP would be to remove reference to vehicular evacuation and make this requirement apply to all residential and commercial development.

The practical implication of this is that it will not encourage developments to have a building entrance at the location with the lowest flood risk to life and it would also not require development in the high flood risk precinct to have any additional controls over those in the low or medium risk precincts. Additional controls are needed in the DCP to encourage:

- Building entrances at a point of lowest flood risk to life on a lot
- Consolidation of lots where this will connect a lot with a higher flood risk to life with a lot with a lower flood risk to life
- Pedestrian overbridges which give developments access to lots with a lower risk to life which are on the other side of a road

It is strongly recommended that the above listed access points be flood free in at least the 1% AEP flood. This is so that emergency services have a very low probability of not being able to access the building and occupants have an extremely low probability of not being able to exit the building if another emergency arises in the building while there is flooding outside. Given that this is fundamentally about minimising risk to life there is merit in this being included in the LEP rather than the DCP so that it cannot be easily overridden.

Controls are also needed to prohibit isolated developments in the high flood risk precinct.

Redevelopment of the CBD will result in the creation of new areas of public open space or public domain areas and these and existing public spaces are likely to be used by more people, more often. Currently the DCP only requires that these areas have reliable pedestrian access during a 20 year ARI peak flood and that their development is consistent with any relevant flood evacuation strategy.

We would recommend that a flood emergency response strategy be developed for the public areas of Parramatta CBD which considers flooding up to the PMF. We also recommend that the development or redevelopment of any public open space provide pedestrian pathways of sufficient capacity for all users to be able to walk ahead of a flood rising as fast as a PMF to a location above the PMF. We recommend that these paths be continuously rising to at least above the 100 year ARI flood level and thereafter not drop below this level.

It is noted that there are large areas of publicly accessible space around Parramatta Train Station and Bus Interchange which is flood free. Furthermore, Westfield Shopping Centre is also mostly flood free and should be considered, in consultation with the centre management, as a potential place of flood refuge as part of a CBD flood emergency response plan.

Probably the best means of achieving any of these is by offering additional floor space ratio incentives to developments which do one of the above. This will essentially mean that the more people developers want to put in the floodplain, the lower they will have to make the probability that the entry to the building will be cut by hazardous floodwaters.

Table 8: Evacuation Planning Provisions

Probability (AEP)	Existing Flood Risk Precinct	DCP Evacuation requirements for residential and commercial development	Risk to Life Category	Suggested Occupant Response
< 1%	Low	3. Reliable access for pedestrians and vehicles is required from the site to an area of refuge above the PMF level, either on site (e.g. second storey) or off site (residential only)  4. Applicant is to demonstrate the development is consistent with any relevant flood evacuation strategy or similar plan	1	Safe to evacuate or shelter in place. No evacuation controls required.
			2	Safe to evacuate early or shelter in place above PMF in accordance with a flood emergency response plan for the building.
< 5%	Medium	3. Reliable access for pedestrians and vehicles is required from the site to an area of refuge above the PMF level, either on site (e.g. second storey) or off site  4. Applicant is to demonstrate the development is consistent with any relevant flood evacuation strategy or similar plan  6. Adequate flood warning is available to allow safe and orderly evacuation without increased reliance upon SES and other authorised emergency services personnel	3	Evacuate early or shelter in place above PMF in accordance with a flood emergency response plan for the building providing flood free access is available to an exit through an area above the 1% flood level.
> 5%	High	As for medium flood risk precinct but only if development qualifies as concessional development	4	Evacuate early or shelter in place above PMF in accordance with a flood emergency response plan for the building providing flood free access is available to an exit through an area above the 1% flood level.



In the case of the high flood risk precinct, development should be prohibited altogether unless all occupants have reliable access to development in the medium flood risk precinct. Alternatively developments in medium or low flood risk precincts could be permitted to have increased floor space ratios if they dedicate land in the high flood risk precinct to open space uses.

Where commercial or residential development is in the medium risk precinct, or either is permitted as concessional development in the high flood risk precinct, it is a requirement that "adequate flood warning is available to allow safe and orderly evacuation without increased reliance upon SES and other authorised emergency services personnel." This is in addition to the other requirements above, and is appropriate and should be retained.

### 6.3.8 Management and Design

There are currently no management and design requirements for development in the low flood risk precinct. Residential and commercial development in the medium flood risk precinct or as concessional development in the high flood risk precinct must have:

- A Site Emergency Response Flood Plan
- An area to store goods above the 100 Year ARI flood plus freeboard
- No storage of materials below the 100 year ARI flood.

These are all appropriate but concessions with regard to the latter two requirements would need to be made if commercial development were permitted below the 100 year ARI flood level by any of the means suggested in Section 6.3.2.

We would also recommend the following additional requirements for any development which has a building entry more than 0.6m below the level of the PMF:

- The building have a building fire management system to meet ABC requirements for high rise buildings
- The building management review the Site Emergency Response Flood Plan annually or following a flood exceeding a

20 year ARI event and communicate the plan to all occupants

The exact wording of the provisions would need to be developed as part of the DCP review.

This is also the most appropriate place within the DCP to introduce provisions to prevent the current practice of having fire doors which open at street level and would be at depth in a flood. We would recommend that the fire doors be at least 0.5m above the level of the 100 year ARI flood. This would encourage building design which puts the fire exit on the high side of the building but also could be achieved by having the last part of the fire exit from the building external to the building.

Additionally, we would recommend that the DCP have provisions to the effect that critical building infrastructure, such as critical electrical, sewer, water and lift infrastructure be placed above the level of the PMF. This will reduce the likelihood that power or water would be disabled during a flood and also decrease the time that the building would be unliveable following the flood. The Queensland Reconstruction Authority has recently published guidelines for resilient electrical infrastructure which includes design guidelines for flood resilient electrical infrastructure in multistorey buildings (QRA, 2019).

### 6.3.9 Other Considerations

#### a) Controls on Residential Development above the Flood Planning Level

Most of the redevelopment within the Parramatta CBD is likely to be either entirely commercial development or will be mixed use residential and commercial development.

Mixed use development is likely to have commercial development on the ground floor with residential development above it. As discussed in Section 6.3.3, this may be a way of ensuring that minimum residential floor levels are above the PMF in areas where that is appropriate for managing risk to life in a way which does not contravene the provisions of the Section 9.1 Direction without the need for the granting of exceptional circumstances.

Similarly, recommended provisions with regard to refuge above the PMF, fire management systems, emergency power and water, protection of basement car parks and provision of a building specific FERP, could all be imposed as requirements on the commercial development in such a way that they make adequate provision for the residential development.

However, our recommendation that residential development be prohibited in some locations or be conditional upon it being connected to an area of less flood risk may be incompatible with the Section 9.1 Direction.

The Section 9.1 Direction and guideline appear to say three slightly different things in relation to controls on residential development.

The Section 9.1 Direction states:

*"A planning proposal must not impose flood related development controls above the residential flood planning level for residential development on land unless a relevant planning authority provides adequate justification for those controls ..."*

This could be interpreted to permit residential development on top of commercial development without any flood related development controls, even if the land on which the commercial development is built is below the 100 year ARI level, providing that the residential development is above the residential flood planning level.

The Guideline to which the Section 9.1 Direction refers creates more ambiguity as it states:

*"Unless there are exceptional circumstances, councils should not impose flood related development controls on residential development on land with a low probability of flooding, that is, land above the residential FPL (low flood risk areas)."*

This indicates that the controls cannot be applied where the land has a low probability of flooding (which is not what the Section 9.1 Direction says) but then provides to definitions of what that land is:

- Land above the residential FPL
- Low flood risk areas

The former is defined by the 100 year ARI plus 0.5 metres while the latter is usually defined, as it is in Parramatta's mapping, by the 100 year ARI. In areas which are reasonably flat, as parts of Parramatta CBD are, there can be a significant difference in the extent of the excluded area depending on which definition is used.

Given this ambiguity and the uncertainty around the ability to impose some of the controls it would be beneficial to use the arguments put forward in this report as *"adequate justification for those controls to the satisfaction of the Director-General"*.

#### b) Public Areas

The flood provisions in the LEP and DCP are very much focussed on managing the flood risks associated with the redevelopment of land within each city block. However, such development increases the use of public transport and increases traffic on the city streets. There is no real mechanism within the NSW planning system to manage flood risks associated with those activities.

The risk of traffic gridlock in Parramatta CBD's streets during a flood is real and, should floodwaters rise above the 100 year ARI level, occupants of those vehicles could have their lives at risk. Intensification of development in the CBD will not increase the maximum number of vehicles which could be so affected because the capacity of the streets will not increase. However, it could increase the chance of it happening because there is a higher probability that the streets would be grid locked.

Parramatta Station and the Bus Interchange are flood free but flooding will disrupt bus access and the flood producing weather is sure to disrupt trains. Intensification of CBD development will not change the probability of that occurring but it will increase the number of people affected by it. This will be people stranded in Parramatta unable to leave and those who wish to travel to Parramatta.

Both of these issues, along with the intensification of use of public domain areas, are emergency response issues which must be managed by a well-developed and resourced emergency response plan for the CBD. Such

an emergency response plan would consider flooding as one of many emergencies which need to be managed.

## 6.4 EMERGENCY PLANNING

Two of the actions which carry through into the updated floodplain management plan from the original floodplain management plan are:

- Update the local flood plan
- Continue developing the Parramatta River Flood early warning system

Both of these need to be informed by the analysis of life safety risks set out in this report and the recommended evacuation and shelter responses.

While it is proposed that buildings in categories 2 to 4 develop and maintain Flood Emergency Response Plans, these need to be consistent with an overarching Flood Emergency Response Plan for the CBD.

This plan would need to identify, amongst other things, which areas need to be warned and evacuated first, which are the safest evacuation routes and what are the most appropriate means of evacuation. It would also need to identify what areas should not be evacuated and what travel routes should be closed and under what circumstances that should occur.

Given the role of Parramatta as a major public transport hub, special consideration will need to be given to the role of public transport in flood emergency response.



## 7 CONCLUSIONS AND RECOMMENDATIONS

### 7.1 CONCLUSIONS

#### 7.1.1 CBD Planning Proposal

There are existing flooding problems within the CBD that need to be addressed and redevelopment provides opportunities to reduce the level of risk to individuals and property.

With reference to the Section 9.1 Direction, it is acknowledged that the planning proposal contains provisions that apply to the flood planning areas which:

- (6)(a) permit development in floodway areas; and
- (6)(c) permit a significant increase in the development of that land

As provided for in clause (9) of the Section 9.1 Direction, these inconsistencies are permissible if "the planning proposal is in accordance with a floodplain risk management plan prepared in accordance with the principles and guidelines of the Floodplain Development Manual 2005.

The risk assessment in this report has been carried out in line with the principles and guidelines of the Floodplain Development Manual (2005). It is our view that the planning proposal presents a tolerable flood risk to life and property if the recommendations made within this report, with regard to DCP revisions and other flood risk management measures, are implemented.

This conclusion has been made recognising that while the planning proposal increases the overall population at risk, it will also provide the opportunity to decrease the risk to that population through encouraging re-development which is more compatible with the flood risk.

This work has been undertaken using existing flood modelling information, which is currently being updated by Council through a new flood study. It is recommended that the risk to life assessments undertaken as part of this project

be revisited following the completion of the flood study, or as part of a subsequent floodplain risk management study.

#### 7.1.2 Planning Investigation Area

The Planning Investigation Area being considered for expansion of the Parramatta CBD is mostly flood free, and as such there would be almost no flooding constraints for redevelopment. The revisions to the planning controls recommended for the CBD Planning Proposal would be sufficient to manage flood risks in the Planning Investigation Area.

#### 7.1.3 Parramatta North Urban Renewal Area

The Parramatta North Urban Renewal Area is almost completely within the Parramatta River floodplain and therefore careful consideration needs to be given to planning controls for that area. Although this report has not investigated flood risks in the Parramatta North Urban Renewal Area, it is likely that it would need similar planning controls to the Parramatta CBD up to the PMF flood extent.

### 7.2 RECOMMENDATIONS

It is recommended that the City of Parramatta Council adopt the Floodplain Risk Management Plan set out in Section 8 of this report. This plan:

- Carries forward matters from the current Floodplain Risk Management Plan which have not been completed
- Carries forward matters from the current Floodplain Risk Management Plan which had been investigated and not implemented but warrant re-investigation in light of the CBD planning proposal
- Proposes continuing development of the flood early warning system for the Parramatta River
- Proposes the preparation of a Flood Emergency Evacuation Plan for the CBD
- Proposes seeking Ministerial Approval to amend Parramatta LEP 2011 with regard



to controls above the Flood Planning Level

- Proposes a revision of the Parramatta DCP 2011 with regard to flooding

The revision of the LEP should address specific recommendations in this report to ensure the Parramatta CBD Planning Proposal meets the section 9.1 direction and represents a tolerable risk to life and property. In particular, it is recommended that the City of Parramatta Council seek Minister Approval to impose controls for development within the Probable Maximum Flood area to enable occupants of buildings in identified areas that have particular evacuation or emergency response issues to:

(a) shelter within a building above the probable maximum flood level; or

(b) evacuate safely to land located above the probable maximum flood level.

Specific provisions should require that new buildings or significant alterations and additions to existing buildings contains either a safe area with emergency electricity and water for all occupants to take refuge in that is located above the probable maximum flood level, or flood free pedestrian access is available between the building and land that is above the probable maximum flood level; and the building is certified by an engineer to withstand the forces of floodwaters, debris and buoyancy resulting from a probable maximum flood event.

The provision of shelter above the PMF level and a building access at or above the 1% AEP flood level should be included within the LEP rather than just in the DCP to ensure that these minimum life safety measures are applied to all developments.

The revision of the DCP should address specific recommendations in this report to ensure that the Parramatta CBD Planning Proposal represents a tolerable risk to life and property. In particular it is recommended that the following amendments to the DCP provisions be made:

- Planning controls not be triggered solely by flood probabilities but other risk factors such as flood depth, velocity, hazard, rate of rise and duration in the full range of

floods. This may require renaming or redefinition of the current flood risk precincts although that may be more appropriate following completion of the new flood study

- Consideration be given to permitting some types of commercial development at street level where this is below the current flood planning level, providing they are designed to minimise damage to property and risk to life
- Where the street entrance for a dwelling could be flooded in a PMF for more than three hours require safe refuge for all occupants above the level of the PMF plus a freeboard
- Where the street entrance for a dwelling could be flooded in a PMF for more than eight hours require that the minimum floor level for the dwelling be constructed above the level of the PMF plus a freeboard and have access to emergency water and power
- Additional requirements be considered with regard to flood affectation provisions to try and eliminate the construction of buildings with under building flow paths which are architecturally unattractive and/or hydraulically questionable
- Remove the requirement for buildings in the CBD to have driveways which allow safe access in a 100 year ARI flood and consider including a provision that prevents vehicles from leaving the car parking areas if water has reached hazardous levels in the access roads
- Remove requirements for vehicular evacuation
- Introduce development incentives such as increased floor space ratios to developments which provide building egress points with a lower depth of flooding in a PMF. This will encourage lot consolidation or elevated walkways to provide pedestrian connection to lower flood risk areas
- Prohibit residential and commercial habitable floors in the current high flood risk precinct unless there is a flood free pedestrian access to a building outside of the high flood risk precinct
- Introduce development incentives such as increased floor space ratios to developments which dedicate high flood risk land to open space uses as an



alternative to habitable buildings on that land

- If commercial developments are permitted at street level below the flood planning level then permit the storage of goods below the flood planning level provided they are protected from floods up to the flood planning level
- Require buildings which have their highest building egress more than 0.6m below the level of the PMF to have:
  - a building fire management system to meet ABC requirements for high rise buildings
  - The building management review the Site Emergency Response Flood Plan annually or following a flood exceeding a 20 year ARI event and communicate the plan to all occupants
- External fire doors be above the level of the 100 year ARI flood plus 0.5m
- Critical services infrastructure that could be damaged by flooding; such as electrical, lift, sewer and water are placed above the PMF.

## 8 UPDATED FLOODPLAIN RISK MANAGEMENT PLAN

The recommended updated floodplain risk management plan is essentially the sum of the recommended measures within Table 2 and Chapter 6. These have been amalgamated below in Table 9. The responses have been prioritised into High, Medium and Low categories. High priority has been given to measures that could be implemented immediately and would have an impact on the flood risk for the current population at risk. Medium was assigned to measures that could be implemented in the medium term and would reduce the risk of any proposed development.

Table 9: Updated Floodplain Risk Management Plan Measures

Proposed Measure	Measure Type	Priority	Source
<i>Make revisions to the DCP as outlined within Section 6.2 and 7.2 of this report</i>	Planning Control	Medium	Existing Plan Review
<i>Council to develop a policy with respect to fencing and screening within floodways. Consideration should be given to the potential for blockage of the screen and effectiveness of the screen to convey water</i>	Planning Control	Medium	Existing Plan Review
<i>Council to consider ways in which it could be made clear that the S10.7(2) certificates do not contain all flooding information. Recommended that a guide to making the decision of purchasing S10.7(2) or S10.7(5) is included within the application form</i>	Planning Control	Medium	Existing Plan Review
<i>Council to consider ways in which S7.11 contributions could be made towards flood mitigation projects</i>	Planning Control	Medium	Existing Plan Review
<i>Council to encourage the NSW SES finalise their development of the Local Flood Sub Plan</i>	Response Modification	High	Existing Plan Review
<i>Council review the availability of flooding data to the public and develop a community awareness and education policy and program for ensuring the population at risk is aware of the flood risks to life and property</i>	Response Modification	High	Existing Plan Review
<i>Council continues developing the Flood Early Warning System for Parramatta CBD and includes a program for review and continuous improvement of the system</i>	Response Modification	High	Existing Plan Review
<i>Council to encourage Sydney Water to conduct a review of the maintenance program for the channel including removal of rubbish and excess vegetation</i>	Flood Modification	Medium	Existing Plan Review

## 9 REFERENCES

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City of Parramatta Council (2018) *Community Strategic Plan 2018 – 2038*, adopted by City of Parramatta Council 25<sup>th</sup> June 2018

Department of Environment and Climate Change (2007) *Flood Emergency Response Planning Classification of Communities*

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Department of Planning (2015) *Section 117 Directions* (<http://www.planning.nsw.gov.au/en/Plans-for-Your-Area/Local-Environmental-Plans/~media/01CC77DE8E6A441F83508CCDD205B1DD.ashx>)

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McLuckie, D., Babister, M., Smith, G., Thomson, T (2014) Updating National Guidance on Best Practice Flood Risk Management, Floodplain Management Association National Conference, Deniliquin May 2014.

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City of Parramatta Council (PCC) (2015) *Parramatta CBD Planning Strategy*, Adopted by City of Parramatta Council on 27 April 2015

City of Parramatta Council (PCC) (2015b) *Parramatta City River Strategy*

Queensland Reconstruction Authority (2019) *Planning for Stronger, More Resilient Electrical Infrastructure*, <https://www.statedevelopment.qld.gov.au/resources/guideline/qra/planning-resilient-electrical-infrastructure.pdf>

Sinclair Knight Merz (2005), *The Lower Parramatta Floodplain Risk Management Plan*, Prepared for City of Parramatta Council

## 10 GLOSSARY

**THE AUSTRALIAN BUILDING CODES BOARD (ABCB)** The organisation responsible for setting and maintaining the national construction code, which defines the minimum safety and design requirements for the construction of buildings

**ANNUAL EXCEEDANCE PROBABILITY (AEP):** The likelihood of a flood being exceeded in any given year. For example, a flood with an AEP of 1% or 1 in 100 has a 1 in 100 chance of being exceeded in any given year. Synonymous with

**AVERAGE RECURRENT INTERVAL (ARI):** The long-term average number of years between the occurrence of a flood as big as or larger than the selected event. For example, floods with a discharge as great as or greater than the 20 year ARI flood event will occur on average once every 20 years. ARI is another way of expressing the likelihood of occurrence of a flood event.

**AUSTRALIAN HEIGHT DATUM (AHD):** The standard reference level used to express the relative elevation of different features. A height given in metres AHD is essentially the height above sea level.

**BACKWATER:** An area inundated by water from a river but outside the general flow of the river.

**BANKFULL:** The condition of a river when flow is so great that no river banks are exposed.

**BoM:** The Bureau of Meteorology is the Australian Government Agency responsible for providing weather forecasts. Its legislated responsibility includes, "the issue of warnings of gales, storms and other weather conditions likely to endanger life or property, including weather conditions likely to give rise to floods or bush fires."

**CATCHMENT:** The land surface area that drains into a reservoir or to a specific point in a river system.

**CONTRAFLOW:** Altering the normal direction of flow of traffic.

**DESIGN FLOOD:** A flood where the levels at all points along the river have the same chance of occurrence. It is estimated using hydrologic and hydraulic computer models.

**DISCHARGE:** The rate of flow of water measured in terms of volume per unit time, for example, cubic metres per second ( $\text{m}^3/\text{s}$ ).

Discharge is different from the speed or velocity of flow, which is a measure of how fast the water is moving for example, metres per second (m/s).

**EVACUATION:** The movement of people from a place of danger to a place of relative safety, and their eventual return.

**EVACUATION TRIGGER:** The flood level that triggers evacuation of a particular area, usually given as the when the evacuation route is cut off by floodwaters or when the area is inundated.

**FLASH FLOODING:** Flooding that occurs without sufficient warning, usually from heavy local rainfall. For its flood warning purposes, the BoM defines it as flooding which occurs six hours or less from the onset of rain.

**FLOOD EMERGENCY RESPONSE PLAN:** A plan that sets out the actions and triggers for actions in response to a flood emergency. Usually undertaken on a development scale.

**FLOOD FREE:** An area that is unlikely to become inundated by flood waters even in a PMF.

**FLOOD ISLAND:** An area that may be inundated by floodwaters but is initially surrounded before becoming inundated.

**FLOODPLAIN:** That part of a river valley, adjacent to the river channel, over which a river flows in times of flood.

**FLOOD PROGRESSION:** The way in which the flood moves across an area.



**FLOOD STORAGE:** Areas within a flow path that provide critical temporary storage of waters during a flood

**FLOOD STUDY:** A study commissioned by a Council or Developer to determine the flood extents and levels of an area, utilising hydraulic modelling and hydrological calculations.

**FLOODWAY:** The area within a flow path that carries the majority of the flow and has higher hazard than the other portions of the flow path

**FREEBOARD:** A factor of safety that is usually expressed as a height above the designed flood level.

**GEOGRAPHIC INFORMATION SYSTEM (GIS):** A type of software system that is used to interrogate and undertake analysis on spatial data.

**HAZARD:** Flood hazard is generally defined by the depth and velocity product which is then categorised based on meaningful thresholds.

**HYDROGRAPH:** A graph showing the variation over time of water levels or flow.

**LOCAL FLOODING:** Flooding that occurs as a result of rainfall falling directly over the development.

**OVERBANK FLOWS:** River flows which cannot be contained within a river channel.

**PEDESTRIAN EVACUATION:** Evacuation by walking. Pedestrian evacuation should not be relied on as a primary means of evacuation, but may be built in to an evacuation plan as a failsafe mechanism should vehicular evacuation fail in extreme or unforeseen circumstances.

**PREMISE:** A building or development that is likely to be occupied by residents or employees.

**PROBABLE MAXIMUM FLOOD (PMF):** The largest flood likely to occur.

**RISK:** Flood risk is defined as the probability of the event occurring multiplied by the consequence, which can be made up of a number of factors (depth, velocity, damage, duration etc.)

**RISEING ROAD ACCESS:** An evacuation route along a road which is constantly rising to a higher level and eventually to a level above the PMF.

**RIVERINE:** Of or pertaining to a river.

**SECONDARY EMERGENCY:** An emergency, such as a fire or medical emergency, that occurs during a flood.

**SHELTER IN PLACE:** A flood emergency response where the occupants of a premise remain in place until the flood has passed.



## **APPENDIX A– REVIEW OF EXISTING PLANS**

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Number	Study Area	Measure Type	Proposed Measure	Review Actions	Status	Revised Measure
1	Lower	Planning Controls	Establish a graded set of planning controls for land uses relative to flood risk that is consistent with the floodplain development manual	Reviewed the current DCP, consulted Flood Policy Review report prepared previously by Molino Stewart	This measure has been implemented, however a suggestion of the Parramatta Flood Policy Review undertaken by Molino Stewart is to consider revising the wording of the DCP which lists terms the precincts as "risk" when these are largely based "hazard" categories. However, this terminology has been adopted across a number of Council DCPs throughout NSW.	It is proposed that Council consider the wording of the DCP to better reflect the nature of the precincts
2		Planning Controls	A range of suggested changes to Parramatta REP 28	Review the Parramatta REP 28 and DCP	The legislation with respect to REP has been repealed, the recommended changes for the REP have been largely carried through the relevant clauses of the updated DCP	N/A
3		Planning Controls	Amend the LEP to provide consistent framework for more detailed controls to be provided in DCP	Reviewed the current LEP and DCP	<p>It is understood that Parramatta LEP 2011 uses the Standard Instrument LEP and the wording is essentially dictated by the Department of Planning and Council has very limited scope to modify it.</p> <p>Clause 6.3 of the Parramatta LEP outlines Flood Planning and only applies to land below the 1:100 ARI flood event plus 0.5 m freeboard. The approach in this clause is not consistent with the Floodplain Development Manual which emphasises a merit based approach and consideration of floods up to the PMF. However, aspects of the DCP do consider the full range of floods</p> <p>The suggested amendment to the LEP are generally captured in the Parramatta DCP. However, the DCP doesn't define a scope for Council to consult with relevant agencies such as the NSW Office of Environment or the NSW State Emergency Service.</p>	<p>It is proposed to include a clause within the DCP along the lines of "The Council may consult with and take into consideration, any advice of the Office of Environment and Heritage, the NSW State Emergency Service and any other relevant agency, in relation to the nature of the flood hazard, the necessity and capacity to evacuate persons, and the consequence and suitability of the development."</p> <p>It is recommended Council consider implementing the requirement for basement car parks to be protected up to the level of the PMF and to determine whether this would be in contradiction to the standard instrument LEP</p>
4		Planning Controls	Utilise the foreshore building line provisions within the LEP to provide greater weight to planning decisions with respect to the high flood risk precinct	Review the current LEP and location of the foreshore building line	<p>The plan recommends matching the foreshore building line to the boundary of the high flood risk precinct. Examination of the foreshore building line does not appear to be coincident with the high flood risk precinct (particularly around George Kendall Park). This suggests that this recommendation has not been implemented.</p> <p>Discussion with Council officers suggests that this recommendation has been found to be unfeasible</p>	N/A
5		Planning Controls	Amend current DCP and Policy as per recommendations found within Appendix C	Review the Appendix C of the Plan, the current DCP and Flood Policy	<p>The policy and DCP are generally not as prescriptive as Appendix C, particularly in terms of the Information Required as part of a DA. The planning control matrix found within the DCP is similar to the recommended matrix within Appendix C of the original Plan.</p> <p>There is no mention of requirements with respect to fencing or screening within the DCP</p>	Council to develop a policy with respect to fencing and screening within floodways. During our investigations a number of screens that are intended to allow flood waters to pass below the building would not be effective and would be prone to blockages.
6		Planning Controls	Notations on Section 149(2) Certificates as per UPRC FRMP	Review of current S149 certificates	There is currently an issue with respect to the S149 certificates as a copy of the S149(2) certificate will not contain flooding information. This is generally not explained to those requesting the S149(2) certificate.	Recommendation that a note should be added, or a guide for those applying for the S149 certificate to ensure that if they require flooding information that they are directed to purchase the S149(5)
7		Planning Controls	Consider specific S94 contributions for specific developments	Review the current S94 Plans	The plan suggests limited scope for S94 contributions towards mitigation measures, however, it recommends that this should be monitored for potential opportunities. The River foreshore park improvements are listed in the Civic Improvement Plan the design principles include improvements to the management of flood events.	Given the scale of the flooding problem within the CBD and also the extent of redevelopment currently occurring, it is recommended that the potential for S94 contributions for flood mitigation works is investigated further. This may require innovative and/or large scale works.
8		Property Modification	Proposed Voluntary House Raising and Voluntary House Purchase Policy	Council to advise	Council is currently operating a Voluntary House Purchase and Voluntary Housing Raising Scheme (Local Floodplain Risk Management Policy 2006)	Recommended that the Council await the outcomes of the current Flood Study prior to pursuing further voluntary house purchase of voluntary house raising.
9		Response Modification	Develop NSW SES Local Flood Plan	Check with SES	The Parramatta DISPLAN has some emphasis on flooding and is currently being updated. An SES local flood plan is currently being developed.	Given the nature and scale of the flood risks within Parramatta, it is recommended that resources are provided for the completion of the Local Flood Plan
10		Response Modification	Distribute Flood Risk Precinct Maps to flood affected lots	Check website, Council to advise	Flood Risk Precinct Maps are not readily available on the Council website and are only available through the flood enquiry application. Advice from Council is that these have not been distributed to areas that are at risk.	Council reviews the availability of flooding data to the public and to develop a policy or program for ensuring that the population at risk is aware of the flood risks to life and property.

11		Response Modification	Discussions re early warning system	Council to advise	Council is currently progressing the installation of a flood early warning system for the Parramatta CBD. The design and price of the system has been presented to the Floodplain Risk Management Committee and was approved by the Committee	Council continues the development of the Early Warning system and implements a continuous improvement and review process to ensure that the system is effective
12		Flood Modification	Ollie Webb Reserve detention basin	Council to advise	Constructed	N/A
13		Flood Modification	Thomas Reserve Box Culvert	Council to advise	Not Constructed after further feasibility investigations	N/A
14		Flood Modification	A'Becketts Creek de-snagging and removal of rubbish and veg	Council to advise	Council advises that this was likely done at the time but there is no ongoing action.	Council and Sydney Water conduct review of maintenance program for channel removal of rubbish, excess vegetation
15		Flood Modification	Duck Creek de-snagging and removal of rubbish and veg	Council to advise	Council advises that this was likely done at the time but there is no ongoing action.	As Above
16		Flood Modification	Duck River de-snagging and removal of rubbish and veg	Council to advise	Council advises that this was likely done at the time but there is no ongoing action.	As Above
17	Upper	Flood and Property Modification	Upgrade of Briens Road Culvert, 5 Voluntary Acquisitions (North Wentworthville FRMSP)	Council to advise	Complete	N/A
18		Flood and Property Modification	Bogalara Road Toongabbie – Pipe Upgrade and Augmentation	Council to advise	Complete	N/A
19		Flood and Property Modification	Oakes Road, Old Toongabbie House Raising (6 homes) and Flood Proofing (4 homes).	Council to advise	Complete – a number of properties owners did not participate	N/A
20		Flood and Property Modification	Wentworth Avenue to Burrabogee Rd, Pendle Hill Channel Formalisation, Culvert Upgrade and Construction of Drop Structure	Council to advise	Not Complete, Council is unsure of the status of this proposed work. I.e. whether it has been found to be unfeasible	Council to determine the reason that this work did not proceed
21		Flood and Property Modification	Burrabogee Rd to Barangaroo Rd, Pendle Hill – Pendle Hills Ck Floodway	Council to advise whether this has been constructed	Complete	
22		Flood and Property Modification	Edison Pde to Einstein Ave, Winston Hills Diversion of drainage around existing levee	Council to advise whether this has been constructed	Complete	
23		Flood and Property Modification	Barangaroo Rd to Fitzwilliam Rd, Pendle Hills – channel improvement and additional cell in Fitzwilliam Rd culverts	Council to advise whether this has been constructed	Complete – however no additional cell was included in the Fitzwilliam Rd culverts as it was not found to be feasible	
24		Flood and Property Modification	O'Connell, Ferris, Iron, Barney and Church St, North Parramatta – pipe upgrade and augmentation	Council to advise whether this has been constructed	Not completed – further investigations by Council and its consultant are on going	Council to continue investigating
25		Flood and Property Modification	Bellotti Avenue, Churchill Drive, Jerome Avenue, Defoe Place and Twain Street, Winston Hills— pipe upgrade and augmentation including modification of pits	Council to advise whether this has been constructed	Some works have been undertaken, others found not to be feasible	
26		Flood and Property Modification	Belmore Street transition chamber and Belmore Park, North Parramatta flood retarding basin.	Council to advise whether this has been constructed	Complete	
27		Proposed Investigation	Brickfield Creek FRMS	Check whether completed	Complete	
28		Proposed Investigation	Fletcher Cl, Old Toongabbie – Flood Wall	Council to advise whether this has been constructed	The investigation was completed and it was decided not to undertake the works	

29		Proposed Investigation	Campbell's Cash and Carry at Kleins Road and Boundary Road, Northmead — investigation into pipe augmentation or trunk drainage diversion works.	Council to advise whether this has been undertaken	The investigation was completed and the issues have been resolved through redevelopment	
30		Proposed Investigation	Scott Street, Andrews Avenue and Lamonerie Street, Pendle Hill— pipe augmentation and channel works.	Council to advise whether this has been undertaken	The investigation was completed and the issues have been resolved through redevelopment	
31		Proposed Investigation	Sherwood Street, Old Toongabbie levee (voluntary purchase completed in 1993).	Council to advise whether this has been undertaken	The investigation was completed and some works were implemented, however it was found that the levee was not required	
32		Proposed Investigation	Lister Street, Winston Hills levee extension and pump out — these works would be additional to the major diversion drain constructed in 1990 to prevent flooding from behind the existing levee.	Council to advise whether this has been undertaken	The investigation was completed and some works were implemented, however no pump was installed	
33		Planning Controls	Change REP No.28	Check App A Vol 2	This legislation has been repealed, therefore remove from the updated FRMP	
34		Planning Controls	Change Council LEPs	Check App B Vol 2	Suggests using foreshore building line as per above measure suggested in the Lower Parramatta FRMP, response as per Item 4.	
35		Planning Controls	Adopt and Implement DCPs or Policies consistent with Flood Planning Matrix and Plan	Check Appendix C	Complete	
36		Planning Controls	Review and revise existing 2(e) zonings over flood liable areas	Check LEP	2(e) zones now redundant as Parramatta LEP 2001 has been replaced, Flood Prone Land Map in New LEP appears to be updated	
37		Response Modification	Make up-to-date flood risk precinct maps readily accessible to public.	Check Council Website	Flood Prone Land Maps not available on Councils Website – obtainable through the LEP however this is difficult for members of public and not the intention of the plan	As Per Item 10
38		Response Modification	Define and map flood way limits in critical areas	Council to advise whether this has been undertaken	Council's current approach is to define hazard through mapping and it is the responsibility of the developer if a DA is submitted to determine the floodway extent. In the future the floodway extents will be defined through the new Flood Study that is currently being commissioned.	
39		Response Modification	Review and revise provisional flood risk precincts from Trust in light of access, warning time etc. considerations.	Council to advise whether this has been undertaken	Council has continued to revise flood precincts. A major revision will be undertaken as per the new Flood Study that is currently being commissioned.	
40		Response Modification	Prepare or adapt existing data to produce flood risk precinct maps for other catchments.	Review existing studies and plans	Flood study reviews or catchment management plans undertaken for Subiaco, Vineyard, Duck, Claycliff Creeks as well as Duck River and localised flooding areas, also the Parramatta Flood Study is currently being reviewed	
41		Response Modification	Collate data on local overland flooding for ready access and use.	Look over data provided, discuss with Council	This will be undertaken with the new Flood Study that is currently being commissioned	
42		Response Modification	Prepare and run an ongoing program to raise community awareness of flood risks	Council to advise whether this has been undertaken	Currently community awareness and education is only being undertaken as per the community consultation that is required under the floodplain risk management process.	Council to develop a community awareness and education program, as per Item 10
43		Response Modification	Brochure on flood-related building controls available.	MS Check Website Council to advise whether this has been undertaken	Council is currently preparing a number of brochures internally, however these are not publically available.	Recommended that the production of brochures with respect to building controls are completed alongside the recommendations outlined in Item 10

44		Response Modification	All councils to send flood notification letters to all owners of flood liable properties every 4 years.	Council to advise whether this has been undertaken	This has not been undertaken	As per Item 10
45		Response Modification	Prepare and make widely available a flood information brochure 'Facts about Flooding'.	MS Check Website Council to advise whether this has been undertaken	This has not been undertaken, however some flooding information is now available on Councils website.	As per Item 10
46		Response Modification	Prepare and make widely available a frequently asked questions brochure.	MS Check Website Council to advise whether this has been undertaken	This has not been undertaken	As per Item 10
47		Response Modification	Consider providing flood certificates or equivalent S149 certificates with comprehensive data on flood levels, ground/floor levels and the flood risk precinct.	Request S149 certificate for flood prone property	This information is available through the flood enquiry application. The form for the flood enquiry can be found online.	
48		Response Modification	Consider using proposed wording for S149(2) certificates.	Request S149 certificate for flood prone property	The S149 certificates currently have an issue as per Item 6	As per Item 6
49		Response Modification	Develop and implement a formal process for release and adoption of updated flood data estimates.	Council to advise whether this has been undertaken	This is undertaken as per the Public Exhibition process when a new Flood Study is undertaken.	



## **APPENDIX B– CURRENT PARRAMATTA DCP (2011) FLOOD PROVISIONS**

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## 2



## 2.4 Site Considerations

### 2.4.1 Views and Vistas

The topographical setting of Parramatta, located in a river basin and bounded by hills to the north and west, means that there are significant views and vistas which contribute to the sense of place for Parramatta. Preservation and, where possible, enhancement of public views to landmark and landscape features allows people to interpret and appreciate the special character of Parramatta.

View sharing between properties is also important to balance access to private views from properties.

#### Objectives

- O.1 To preserve and enhance district and local views which reinforce and protect the City's urban form and enhance legibility.
- O.2 To encourage view sharing through complementary siting of buildings, responsive design and well-positioned landscaping.
- O.3 To ensure highly visible sites are designed in scale with the City's setting and encourage visual integration and connectivity between places.

#### Design Principles

- P.1 Development is to preserve views of significant topographical features such as ridges and natural corridors, the urban skyline, landmark buildings, sites of historical significance and areas of high visibility, particularly those identified in Appendix 2 Views and Vistas. Refer also to Views and Vistas in the Harris Park Heritage Conservation Area in Part 4 and Views and View Corridors in Parramatta City Centre in section 4.3.3.4.
- P.2 Buildings should reinforce the landform of the City and be designed to preserve and strengthen areas of high visibility. In some locations, this may be achieved through uniform heights and street walls as a means of delineating the public view corridor.
- P.3 Landscaping of streets and parks is to reinforce public view corridors.
- P.4 Building design, location and landscaping is to encourage view sharing between properties.
- P.5 Views to and from the public domain are to be protected.

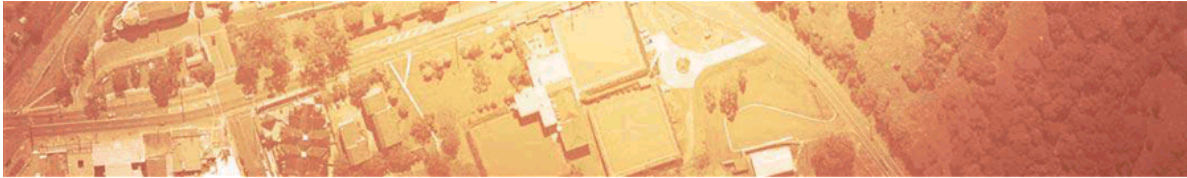
NOTE: For certain developments, 3 dimensional computer simulations or photo montages from selected locations may be required to demonstrate how the proposal affects the setting and views and vistas.

### 2.4.2 Water Management

#### 2.4.2.1 Flooding

Flooding is a significant issue that affects existing and future development in the Parramatta Local Government Area (LGA). This Section establishes Council's approach to floodplain planning and the general flood prone land requirements relating to development control for the whole LGA. The development of Council's approach to flooding has regard to and complies with the New South Wales Government's Floodplain Development Manual (FDM 2005).

The criteria for determining applications for proposals potentially affected by flooding are structured to recognise that different controls are applicable to different land uses and levels of potential flood inundation and hazard. As a first step in the development consent process, proponents are strongly advised to consult with Council officers, particularly for proposals located in the medium and high flood risk categories.



### Objectives

- O.1 To ensure the proponents of development and the community in general are aware of the potential flood hazard and consequent risk and liability associated with the use and development of flood liable land.
- O.2 To manage flood liable land in an economically, environmentally and socially sustainable manner.
- O.3 To ensure that developments with high sensitivity to flood risk (eg. critical public utilities) are sited and designed to provide reliable access and minimise risk from flooding.
- O.4 To allow development with a lower sensitivity to the flood hazard to be located within the floodplain, subject to appropriate design and siting controls and provided that the potential consequences that could still arise from flooding remain acceptable.
- O.5 To prevent any intensification of the development and use of High Flood Risk Precinct or floodways, and wherever appropriate and feasible, allow for their conversion to natural waterway corridors.
- O.6 To ensure that the proposed development does not expose existing development to increased risks associated with flooding.
- O.7 To ensure building design and location address flood hazard and do not result in adverse flood impact and unreasonable impacts upon the amenity or ecology of an area.
- O.8 To minimise the risk to life by ensuring the provision of appropriate access from areas affected by flooding up to extreme events.
- O.9 To minimise the damage to property, including motor vehicles, arising from flooding.
- O.10 To incorporate the principles of Ecologically Sustainable Development (ESD).

### Design Principles

- P.1 New development should not result in any increased risk to human life.
- P.2 The additional economic and social costs which may arise from damage to property from flooding should not be greater than that which can reasonably be managed by the property owner, property occupants and general community.
- P.3 New development should only be permitted where effective warning time and reliable access is available for the evacuation of an area potentially affected by floods to an area free of risk from flooding. Evacuation should be consistent with any relevant flood evacuation strategy where in existence.
- P.4 Development should not adversely increase the potential flood affectation on other development or properties, either individually or in combination with similar developments(s) that are likely to occur within the same catchment.
- P.5 New developments must make allowances for motor vehicles to be relocated to an area with substantially less risk from flooding, within an effective warning time.
- P.6 New developments must provide an evacuation plan detailing procedures that would be in place for an emergency (such as warning systems, signage or evacuation drills).
- P.7 Flood mitigation measures associated with new developments should not result in significant impacts upon the amenity of an area by way of unacceptable overshadowing of adjoining properties, privacy impacts (eg. by unsympathetic house raising) or by being incompatible with the streetscape or character of the locality (including heritage).

## 2



- P.8 Proposals for raising structures must provide a report from a suitably qualified engineer demonstrating that the raised structure will not be at risk of failure from the forces of floodwaters.
- P.9 Development is to be compatible with any relevant Floodplain Risk Management Plan, Flood Studies, or Sub-Catchment Management Plan.
- P.10 Development must not divert flood waters, nor interfere with floodwater storage or the natural function of waterways.
- P.11 Filling of land up to 1:100 Average Recurrence Interval (ARI) (or flood storage area if determined) is not permitted. Filling of and above 1:100 ARI up to the Probable Maximum Flood (PMF) (or in flood fringe) must not adversely impact upon flood behaviour.
- P.12 New development must consider the impact of flooding resulting from local overland flooding whether it is a result of Local Drainage or Major Drainage.
- P.13 Where hydraulic flood modelling is required, flow hazard categories should be identified and adequately addressed in the design of the development.
- P.14 Council strongly discourages basement car parks on properties within the floodplain. Where site conditions require a basement car park on a property within the floodplain, development applications must provide a detailed hydraulic flood study and design demonstrating that the proposed basement car park has been protected from all flooding up to and including the PMF event. An adequate emergency response and evacuation plan must also be provided where basement car parks are proposed in the floodplain.

#### Design Controls

All proposals are to have regard to the planning matrix at Figure 2.7. The procedure to determine which design standards apply to proposed development involves:

Step 1: identify the land use category of the development from Table 2.6;

Step 2: determine which flood risk category applies to the land (refer to Catchment Management Unit of Council for the Flood Risk Precincts and relevant flood risk mapping); and

Step 3: apply the objectives and design principles as outlined in this section and then the design standards in the planning matrix at Figure 2.7 as applicable to the floodplain and land use category.

NOTE: An evacuation plan is not enough to negate compliance with all building regulations.

Additional guidelines relating to flood risk management and flood prone land are contained in Council's Local Floodplain Risk Management Policy.



Table 2.6: Land Use Category Definitions

NOTE: Refer to the Parramatta LEP 2011 for definitions of each land use.

LAND USE CATEGORIES	IDENTIFIED LAND USES
Sensitive Uses and Facilities	Community facilities or Public administration buildings which may provide an important contribution to the notification and evacuation of the community during flood events; Child care centres; Hospitals; Residential care facilities; Seniors housing; Educational establishments.
Critical Utilities and Uses	Hazardous industries; Hazardous storage establishments; Offensive industries; Offensive storage establishments; Liquid fuel depots; Public utility undertakings which may cause pollution of waterways during flooding, are essential to evacuation during periods of flood or if affected during flood events would unreasonably affect the ability of the community to return to normal activities after flood events; Telecommunication facilities; Waste management facilities.
Subdivisions	Subdivision of land which involves the creation of additional allotments.
Filling	<p>The net importation of fill material onto a site, except where:</p> <ul style="list-style-type: none"> <li>(i) final surface levels are raised by no more than 100mm over no more than 50% of the site; or</li> <li>(ii) filling is no more than 800mm thick beneath a concrete building slab only.</li> </ul> <p>Compensatory earthworks, involving cut and fill, is not considered to be filling provided that:</p> <ul style="list-style-type: none"> <li>(i) there is no net importation of fill material onto the site; and</li> <li>(ii) there is no net loss of flood storage at all flood levels.</li> </ul>
Residential	Backpackers accommodation; Bed and breakfast establishments; Boarding houses; Community facilities (other than sensitive uses and facilities); Dual occupancies; Dwelling houses; Group homes; Health consulting rooms; Home based child care; Home businesses; Hostels; Multi dwelling housing; Neighbourhood shops; Residential flat buildings; Serviced apartments; Public utility undertakings (other than critical utilities).
Commercial or Industrial	Bulky goods premises; Business Premises; Car parks; Depots; Entertainment facilities; Food and drink premises; Freight transport facilities; Funeral chapels; Funeral homes; Function centres; Hardware and building supplies; Heavy industries; Hotel accommodation; Industries; Landscape and garden supplies; Light industries; Materials recycling or recovery centres; Medical centres; Mixed use development; Office premises; Passenger transport facilities; Places of public worship; Public administration buildings (other than an essential community facility); Pubs; Recreation facilities (indoor); Registered clubs; Restricted premises; Retail Premises; Service stations; Sex services premises; Shop top housing; Tourist and visitor accommodation; Vehicle body repair workshops; Vehicle repair stations; Vehicle showrooms; Veterinary hospitals; Warehouse or distribution centres.



## 2



## Land Use Category Definitions

LAND USE CATEGORIES	DEFINITIONS
Tourist Related Development	Advertising structures; Kiosks; Markets; Information and education facilities; Signage.
Open Space or Non-urban Uses	Animal boarding and training establishments; Boat launching ramps; Boat repair facilities; Boat sheds; Environmental facilities; Helipad; Jetty; Recreation areas and minor ancillary structures (e.g. Toilet blocks or kiosks); Recreation facilities (outdoor).
Concessional Development	<p>Concessional development is any development or redevelopment that would normally not be permitted under this Plan, but may be permitted as a concession provided it:</p> <ul style="list-style-type: none"> <li>(i) is kept clear of any floodway; and</li> <li>(ii) involves an acceptably small (see below for limits) addition or alteration to an existing development that will not cause a significant increase in potential flood losses, risks or have an adverse impact on adjoining properties; or</li> <li>(iii) redevelopment for the purposes of substantially reducing the extent of flood affectation to the existing building; provided that such redevelopments incorporate to the fullest extent practical, design features and measures to substantially reduce the existing potential for flood losses and personal risks, and avoid any adverse impacts on adjoining properties – especially obstruction or diversion of floodwaters and loss of flood storage.</li> </ul> <p>In the case of residential development, The maximum size of a concessional development is:</p> <ul style="list-style-type: none"> <li>(i) a once-only addition or alteration to an existing dwelling of no more than 10% or 30m<sup>2</sup> (whichever is the lesser) of the habitable floor area which existed at the date of commencement of this Policy or Plan; or</li> <li>(ii) the construction of an outbuilding with a maximum floor area of 20m<sup>2</sup>.</li> </ul> <p>In the case of other development categories, the maximum size of a concessional development is a once- only addition to existing premises of no more than 10% of the floor area which existed at the date of commencement of this Policy or Plan.</p>

Table 2.7: FLOODPLAIN MATRIX																														
Planning & Development Controls																														
Flood Risk Precincts (FRP's)																														
Planning Consideration	Low Flood Risk								Medium Flood Risk								High Flood Risk													
	Concessional Development	Open Space & Non-Urban	Tourist Related Development	Commercial & Industrial	Residential*	Filling	Subdivision	Critical Uses & Facilities	Sensitive Uses & Facilities	Concessional Development	Open Space & Non-Urban	Tourist Related Development	Commercial & Industrial	Residential*	Filling	Subdivision	Critical Uses & Facilities	Sensitive Uses & Facilities	Concessional Development	Open Space & Non-Urban	Tourist Related Development	Commercial & Industrial	Residential*	Filling	Subdivision	Critical Uses & Facilities	Sensitive Uses & Facilities			
	3		2, 5	2, 5	2, 5															4, 5	1, 5	2, 5	2, 5	2, 5						
	2																			1, 5	1, 5	1, 5	1, 5	1, 5						
	2																													
	2	2	1	2	2																	2	1	1	1	1	1	1	1	
	1, 3, 5, 6			1, 3, 5, 6	1, 3, 5, 6	1, 3, 5, 6																1, 3, 5, 6, 7	1, 3, 5, 6, 7	1, 3, 5, 6, 7	1, 3, 5, 6, 7	1, 3, 5, 6, 7				
	2, 4, 6	5																				3, 4, 6	3, 4, 6	3, 4, 6	3, 4, 6	3, 4, 6				
	2, 3, 4	1																				2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4				

- Not Relevant      ■ Unsuitable Land Use      \* For redevelopment of an existing dwelling refer also to 'Concessional Development' provisions
- i. Freeboard equals an additional height of 500mm.
- ii. The Parramatta LEP 2011 identifies development permissible with consent in various zones. Notwithstanding, constraints specific to individual sites may preclude Council granting consent for certain forms of development on all or part of a site. The above matrix identifies where flood risks are likely to determine where certain development types will be considered "unsuitable" due to flood related risks.
- iii. Filling of the site, where acceptable to Council, may change the FRP considered to determine the controls applied in the circumstances of individual applications.
- iv. Any fencing that forms part of a proposed development is subject to the relevant Flood Effects and Structural Soundness planning considerations of the applicable land use category.
- v. Development within the floodplain may be subject to Clause 6.7 Foreshore Building Line in the Parramatta LEP 2011.

## 2

**Floor Level**

- 1 All floor levels to be equal to or greater than the 20 year Average Recurrence Interval (ARI) flood level plus freeboard
- 2 Habitable floor levels to be equal to or greater than the 100 year ARI flood level plus freeboard.
- 3 All floor levels to be equal to or greater than the Probable Maximum Flood (PMF) level plus freeboard
- 4 Floor levels to be equal to or greater than the 100 year ARI flood level plus freeboard. Where this is not practical due to compatibility with the height of adjacent buildings, or compatibility with the floor level of existing buildings, or the need for access for persons with disabilities, a lower floor level may be considered. In these circumstances, the floor level is to be as high as practical, and, when undertaking alterations or additions, no lower than the existing floor level.
- 5 A restriction is to be placed on the title of the land, pursuant to S.88B of the Conveyancing Act, where the lowest habitable floor area is elevated more than 1.5m above finished ground level, confirming that the subfloor space is not to be enclosed.

**Building Components & Method**

- 1 All structures to have flood compatible building components below the 100 year ARI flood level plus freeboard.
- 2 All structures to have flood compatible building components below the PMF.

**Structural Soundness**

- 1 An engineers report is required to certify that the structure can withstand the forces of floodwater, debris and buoyancy up to and including a 100 year ARI flood level plus freeboard.
- 2 An engineers report is required to certify that the structure can withstand the forces of floodwater, debris and buoyancy up to and including a PMF level.

**Flood Affection**

- 1 An engineers report is required to certify that the development will not increase flood affection elsewhere, having regard to: (i) loss of flood storage; (ii) changes in flood levels, flows and velocities caused by alterations to flood flows; and (iii) the cumulative impact of multiple potential developments in the vicinity.
- 2 The impact of the development on flooding elsewhere to be considered having regard to the three factors listed in consideration 1 above.

**Car Parking and Driveway Access**

- 1 The minimum surface level of open spaces or carports shall be as high as practical, but no lower than 0.1m below the 100 year ARI flood level. In the case of garages, the minimum surface level shall be as high as practical, but no lower than the 100 year ARI flood level.
- 2 The minimum surface level of open parking spaces or carports shall be as high as practical, but no lower than 0.3m above the 20 year ARI flood level.
- 3 Garages capable of accommodating more than 3 motor vehicles on land zones for urban purposes, or enclosed car parking, must be protected from inundation by floods equal to or greater than the 100 year ARI flood. Ramp levels to be no lower than 0.5m above the 100 year ARI flood level.
- 4 The driveway providing access between the road and parking spaces shall be as high as practical and generally rising in the egress direction.
- 5 The level of the driveway providing access between the road and parking spaces shall be no lower than 0.2m below the 100 year ARI flood level.
- 6 Enclosed car parking and car parking areas accommodating more than 3 vehicles, with a floor below the 100 year ARI flood level, shall have adequate warning systems, signage, exits and evacuation routes.
- 7 Restraints or vehicle barriers to be provided to prevent floating vehicles leaving a site during a 100 year ARI flood.

**Evacuation**

- 1 Reliable access for pedestrians required during a 20 year ARI peak flood.
- 2 Reliable access for pedestrians and vehicles required to a publicly accessible location during the PMF peak flood.
- 3 Reliable access for pedestrians and vehicles is required from the site to an area of refuge above the PMF level, either on site (eg. second storey) or off site.
- 4 Applicant is to demonstrate the development is consistent with any relevant flood evacuation strategy or similar plan.
- 5 Applicant is to demonstrate that evacuation in accordance with the requirements of this DCP is available for the potential development resulting from the subdivision.
- 6 Adequate flood warning is available to allow safe and orderly evacuation without increased reliance upon SES or other authorised emergency services personnel.

**Management and Design**

- 1 Applicant is to demonstrate that potential development as a consequence of a subdivision proposal can be undertaken in accordance with this the relevant FRMS and FRMP
- 2 Site Emergency Response Flood plan required where the site is affected by the 100 year ARI flood level, (except for single dwelling-houses).
- 3 Applicant is to demonstrate that area is available to store goods above the 100 year flood level plus freeboard.
- 4 No storage of materials below the 100 year ARI flood level.

#### Further Information

Flood Risk Management Plan, Flood Studies, Sub-Catchment Management Plans, and Local Floodplain Risk Management Policy available from Council.

NSW Government's Floodplain Development Manual 2005 – [www.dnr.nsw.gov.au/floodplains/manual.shtml](http://www.dnr.nsw.gov.au/floodplains/manual.shtml)

Parramatta City Council's Local Floodplain Risk Management Policy, 2006.

#### 2.4.2.2 Protection of Waterways

##### Objective

- O.1 To ensure development contributes to the protection and rehabilitation of waterways in order to improve waterway health and to develop and maintain ecologically sustainable waterways.

##### Design Principles

- P.1 Development is to make provision for buffer areas for the preservation and maintenance of floodway, riparian corridors and habitat protection. Refer to Clause 6.7 Foreshore Building Line and Clause 6.5 Water Protection in the Parramatta LEP 2011.
- P.2 Development on land subject to Clause 6.5 Water Protection in the Parramatta LEP 2011 or that abuts a waterway is to be landscaped with local indigenous species, to protect bushland and wildlife corridors and soften the interface between the natural landscape and the urban environment. Riparian vegetation also plays an important role in stabilising bed and banks and attenuating flood flows.
- P.3 The piping, enclosing or artificial channelling of natural watercourses and drainage channels is not permitted. Consideration is to be given to re-opening piped or lined drainage systems wherever feasible.
- P.4 Development is to ensure that natural channel design principles are incorporated in any works on or in waterways. Refer to Figure 2.8.
- P.5 Ongoing maintenance costs are to be considered in the design of any waterway protection features.

#### Further Information

Brisbane City Council 2000, *Natural Channel Design Guidelines*

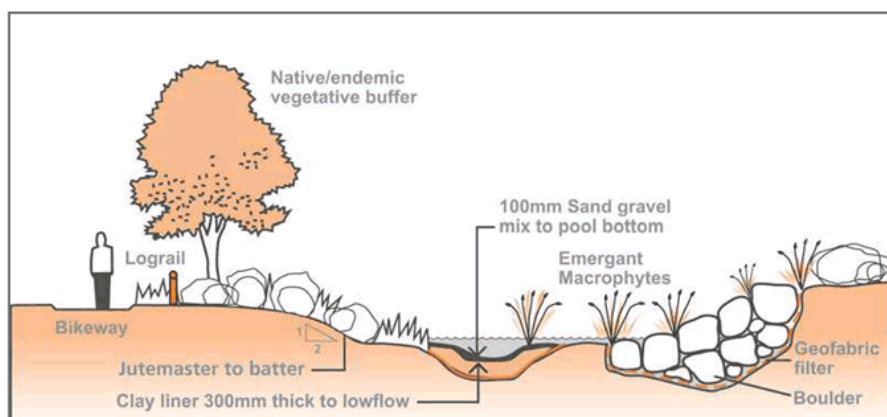


Figure 2.8 Elements of the Natural Drainage System  
Sources: Stormwater outlets in parks and waterways (Brisbane City Council, 2001)



## 2

## 2.4.2.3 Protection of Groundwater

**Objective**

- O.1 To protect groundwater quality, flows and drainage patterns during demolition, construction and ongoing operation phases of a development.

**Design Principles**

- P.1 Operating practices and technology including dewatering shall not contaminate groundwater or adversely impact on adjoining properties and infrastructure.
- P.2 Groundwater is to be recharged where possible while still protecting and/or enhancing groundwater quality.
- P.3 Protection measures for groundwater are to be proportional to the risk the development poses. Where the potential risk to groundwater is high, a separate Groundwater Impact and Management Report will be required.

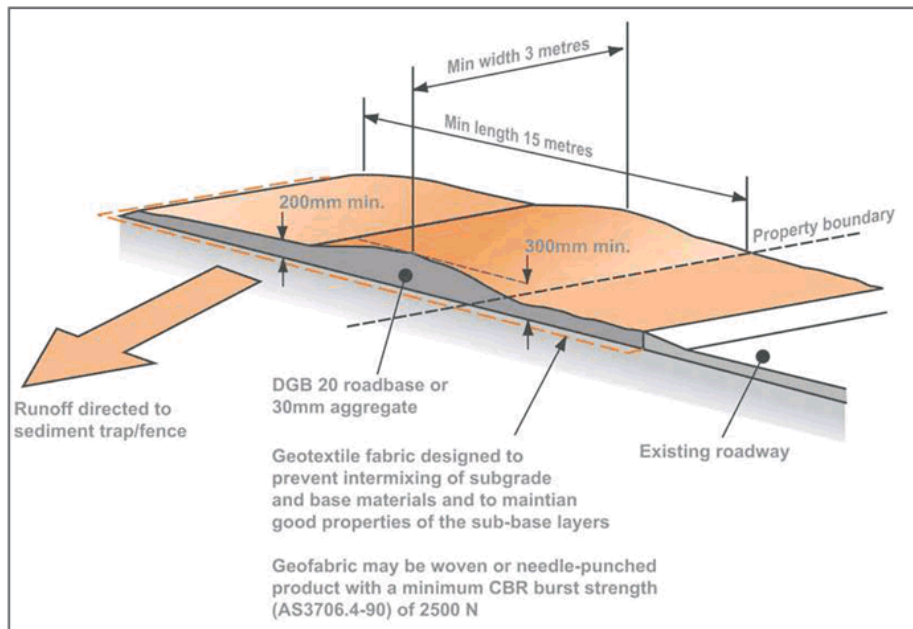
NOTE: The potential risk to groundwater is high when construction involving excavation is below the water table and is within alluvial areas and sandstone environments.

## 2.4.3 Soil Management

## 2.4.3.1 Sedimentation

**Objectives**

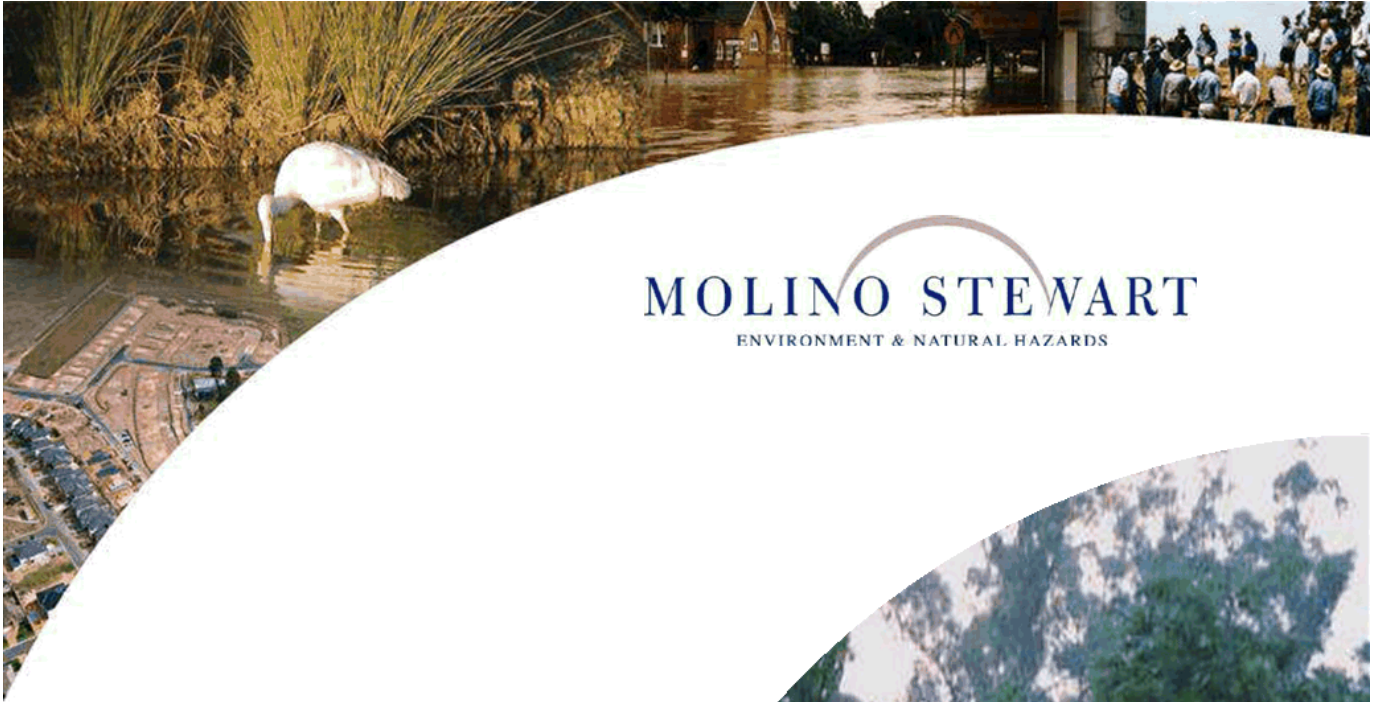
- O.1 To ensure through effective site controls during and after demolition and construction, that development does not contribute to sedimentation of waterways and drainage systems, or cause wind blown soil loss.
- O.2 To ensure that development does not result in environmental damage of waterways and bushland in the City.



**Figure 2.9** Stabilised Site Access  
Source: *Soils and Construction: Managing Urban Stormwater*, Landcom, March 2004.



DRAFT



**MOLINO STEWART**  
ENVIRONMENT & NATURAL HAZARDS



## **Parramatta CBD Flood Evacuation Assessment**

*Draft Revised Report*







## Parramatta CBD Flood Evacuation Assessment

DRAFT REVISED REPORT

for

City of Parramatta

by

Molino Stewart Pty Ltd

ACN 067 774 332

SEPTEMBER 2019

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## DOCUMENT APPROVAL

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## EXECUTIVE SUMMARY

The NSW State Government and the City of Parramatta Council have identified Parramatta CBD as a key growth centre for large-scale commercial and residential development. In April 2015, Council adopted the Parramatta CBD Planning Strategy, detailing the type of development envisaged and devising an implementation plan.

One of the main constraints to development in Parramatta CBD is the risk of flooding from the Parramatta River and its tributaries. The flooding is considered to be flash flooding with floodwaters rising within a few hours from the beginning of the rainfall. The short time available for evacuation and the current lack of a flood warning system make flood emergency response in Parramatta CBD a difficult exercise, even with the current CBD population.

The aim of this study was to identify the most suitable flood emergency response strategy for Parramatta CBD, under existing and future conditions. This was achieved by assessing and comparing the following possible flood evacuation strategies:

- Horizontal Street Level (HSL) evacuation, achieved by vehicle before any roads are cut by floodwaters;
- Horizontal High Level (HHL) evacuation, achieved on foot by using a network of elevated walkways which would allow late evacuation. A draft design and costing of the required infrastructure is provided;
- Vertical Evacuation through Sheltering In Place (SIP), in which evacuees would reach a refuge above the flood level within their building and wait for floodwaters to recede.

The analysis was performed using different flood events (20 year ARI, 100 year ARI, PMF), different degrees of implementation of the Parramatta CBD Planning Strategy (year 2016, year 2036 and year 2056), and different times of the day at which a flood emergency response may be necessary (Midnight, Midday, PM Peak). Using Multi-Criteria Analysis (MCA), the evacuation strategies were compared and the most suitable strategy was identified. The following evaluation criteria were used:

- Strategy effectiveness, in terms of capability to safely evacuate the population before routes are cut by floodwaters. The total evacuation time for each strategy was calculated using state of the art flood evacuation models, including the NSW SES Timeline Evacuation Model. The simulations addressed 24 "worst-case" scenarios, combining flood probability, degree of implementation of the Parramatta CBD Planning Strategy, and time of the day. Evacuation time was then compared with the time available to assess the strategy effectiveness;
- Difficulty of implementation of the strategy, arising from setting-up the necessary infrastructure (e.g. elevated walkways) and from the logistics of the response;
- Risks associated with the strategy and the extent to which these can be reduced;
- Impacts on the urban environment (i.e. due to the elevated walkways);
- Cost of implementation and maintenance of the strategy;
- Load on emergency services.

The results showed that:

- Under the assumptions of the NSW SES Timeline Evacuation Model, safe vehicular evacuation would not be realistically achievable under any circumstances;
- A network of elevated walkways would allow safe HHL evacuation (including late evacuation), however evacuation time would be of the same order of magnitude as the flood duration.



- Importantly, a network of elevated walkways catering for events up to the PMF would have a high cost (\$324 million) and very significant impacts on the CBD urban landscape and heritage buildings. A smaller network of elevated walkways, catering for events up to the 20 year or the 100 year ARI flood, would have lower costs (i.e. \$94.5 million and \$111 million respectively), but would need to be paired with SIP to cater for larger flood events, and the impacts on the CBD landscape would still be significant.
- SIP is the optimal flood emergency response strategy for Parramatta CBD. However, SIP could expose people to a number of secondary risks to life, including (but not limited to) those arising from: building structural failure, medical emergencies, building fires or people deciding to leave the shelter and walk through floodwaters. Provision would also need to be made for building access for people in the public domain. Development controls would need to be imposed on development to reduce these risks to a tolerable level and ensure there was not an increased demand for search and rescue operations by the NSW SES. This report suggests ways in which this can be realistically achieved.

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# 1 BACKGROUND AND AIM

## 1.1 CONTEXT

The NSW Government and the City of Parramatta Council (Council) have identified the Parramatta CBD as a key growth centre for large-scale commercial and residential development. Council has developed the Parramatta CBD Planning Strategy (the "CBD Strategy"), which was adopted in April 2015. Key features are:

- Expand the boundaries of the CBD;
- Increase the floor space ratios in certain areas;
- Alter solar access controls;
- Alter building height restrictions;
- Expand the commercial core of the CBD.

An implementation strategy for the CBD Strategy has been developed, which includes the development of a Planning Proposal to modify the Parramatta Local Environmental Plan (LEP) 2011.

However, one of the most significant constraints for development is that the Parramatta River passes through the middle of the CBD, and most of the CBD is within the floodplain of the river or its tributaries. In addition, the relatively small catchment upstream of the CBD results in flash flooding with very short warning times. Even with the current population of the CBD, this lack of warning of an oncoming flood will create significant evacuation challenges, and the proposed population increase could exacerbate these. Council has implemented a flood warning system but even with this in place the warning time available in floods big enough to enter the main areas of the CBD could be less than two hours.

All development proposed in the CBD Strategy should proceed in such a way that people can be protected from hazardous floodwaters.

The NSW SES has a general policy that evacuation of people away from the floodplain

is the safest course of action because if they stay:

- They can be isolated in buildings for some time, possibly without power and water;
- If floodwaters rise above their building they area in severe danger;
- It puts SES and emergency service personal at risk when trying to rescue them

In a letter to the City of Parramatta Council dated 2 December 2016, the NSW SES has expressed a strong preference that this should be achieved by evacuating people out of floodplains before the arrival of floodwaters. They concede that this might not be possible in some flash flood areas and that in these circumstances vertical evacuation (Sheltering In Place, or "SIP") may be preferable to trying to evacuate and finding oneself in hazardous floodwaters. However, they have expressed that this is a concession to existing development only and should not be a method of managing flood risk for new development.

The Parramatta CBD consists of existing development which might fit into this category, but new development is proposed which would increase the number of people in the floodplain. At the same time, the urban planning and development approval process presents the opportunity to include development controls which can minimise the risk of flooding to the occupants of buildings should they choose to SIP.

Risk reduction can be achieved either by providing a means of horizontal evacuation to areas which are not flood-affected, or vertical evacuation in buildings to safe refuge above the reach of floodwaters. While horizontal evacuation is traditionally achieved through vehicular or pedestrian evacuation at street level, this can also be achieved through the use of elevated walkways.

While planning controls can in theory be used to create improved flood risk outcomes in Parramatta CBD, statutory requirements currently limit the controls which Council can impose. Specifically, Section 9.1 Direction 4.3 restricts the imposition of flood planning controls on residential development above the Flood Planning Level (FPL) (which is generally defined as the 1% flood level plus 0.5m

freeboard) except in "exceptional circumstances".

Council contends that the flood situation in the Parramatta CBD is such that exceptional circumstances exist and the 2107 version of this report was used to support Council's application for exception circumstances.

In December 2018 the Deputy Secretary of the then Department of Planning and Environment wrote:

*"I have decided to grant exceptional circumstances to enable further agency consultation and community consultation. However, consistency with section 9.1 Direction 4.3 Flood Prone Land will require further consideration and agreement from the Department's Secretary."*

To support its original case for exceptional circumstances, Council required an evacuation analysis that considered many of the overlapping processes such as warning time, evacuation routes, and population demographics to estimate the ability of people within the Parramatta CBD to evacuate either horizontally or vertically during a flood.

This version of the report includes updates which take into consideration modifications to the Parramatta CBD Planning Proposal.

## 1.2 PROJECT AIM

City of Parramatta engaged Molino Stewart Pty Ltd to explore, at a high level, the various means of horizontal and vertical evacuation which might be feasible for Parramatta CBD now and into the future. The aim of this project was to assess and compare their feasibility in light of the number of people, the estimated evacuation time and other practical challenges including infrastructure cost and impact on the CBD urban landscape. Namely, the scope of this work was to:

- Prepare a feasibility analysis for each of the three potential evacuation methods: (a) horizontal evacuation at street level, (b) horizontal evacuation at high level, and (c) vertical evacuation;

- Prepare an analysis comparing evacuation capability and risks of the three evacuation methods that considered the following variables: (a) year (2016, 2036, 2056); time of flood (midday, midnight and PM peak); type of flood (20 year ARI, 100 year ARI, PMF);
- Summarise the results of the study with sufficient detail that a case can be presented to support a preferred evacuation option (which may include a combination of methods).

The study used a risk analysis framework which is technically rigorous, transparent and defensible.

## 1.3 STUDY AREA

The study area includes the extent of the Parramatta CBD Planning Proposal boundary, plus part of the "Western Corridor" (i.e. the blocks west of the Parramatta CBD Planning Proposal boundary, between Marsden St and Parramatta Park). Although the Western Corridor is not included in the Planning Proposal, it was considered in this study because its proximity to the CBD would result in a similar flood response strategy. The study area is shown in Figure 1.

## 1.4 NATURE OF FLOODING

Flooding in Parramatta CBD occurs as a joint effect of three mechanisms:

- The Parramatta River overtopping its banks and expanding laterally into the CBD;
- Overbank flooding of Brickfield Creek and Clay Cliff Creek;
- Overland flooding of streets caused by intense rainfall.

A detailed description of the flooding behaviour in Parramatta CBD is provided in Molino Stewart (2016). This section will only summarise the key-information about flood timing (e.g. rate of rise and duration) and extent, because, as indicated by NSW SES,



these directly underpin the selection of the most suitable emergency response strategy.

Figure 2 shows the Probable Maximum Flood (PMF) hydrograph upstream of Charles St Weir. The figure also includes the Council's adopted flood levels for the 20 year and 100 year ARI events.

If floodwaters rose as quick as in the PMF (which is the worst case scenario), it would take 180 minutes from the beginning of the rainfall to reach the level of the 20 year ARI, 192 minutes to reach the 100 year ARI level, and 320 minutes to reach the peak of the PMF. After that, floodwaters would begin to recede, and would return to the pre-flood level in about 700 minutes (i.e. 11.6 hours) from the beginning of the rainfall.

Because the PMF would reach its peak within six hours, the flooding of Parramatta CBD is classified as "flash flooding".

Figure 3 shows the extent of the currently adopted 20 year ARI and 100 year ARI floods and the PMF. In addition to informing the peak flood extent, Figure 3 also shows indirectly which areas would flood first (i.e. those exposed to the 20 year ARI flood) and which areas would flood later during the PMF.

It should be noted that updated flood modelling of the Upper Parramatta River and its tributaries is currently being prepared for Council and the shown flood extents may be revised. However, until that work is completed and adopted by the elected Council, the existing flood modelling and mapping applies.



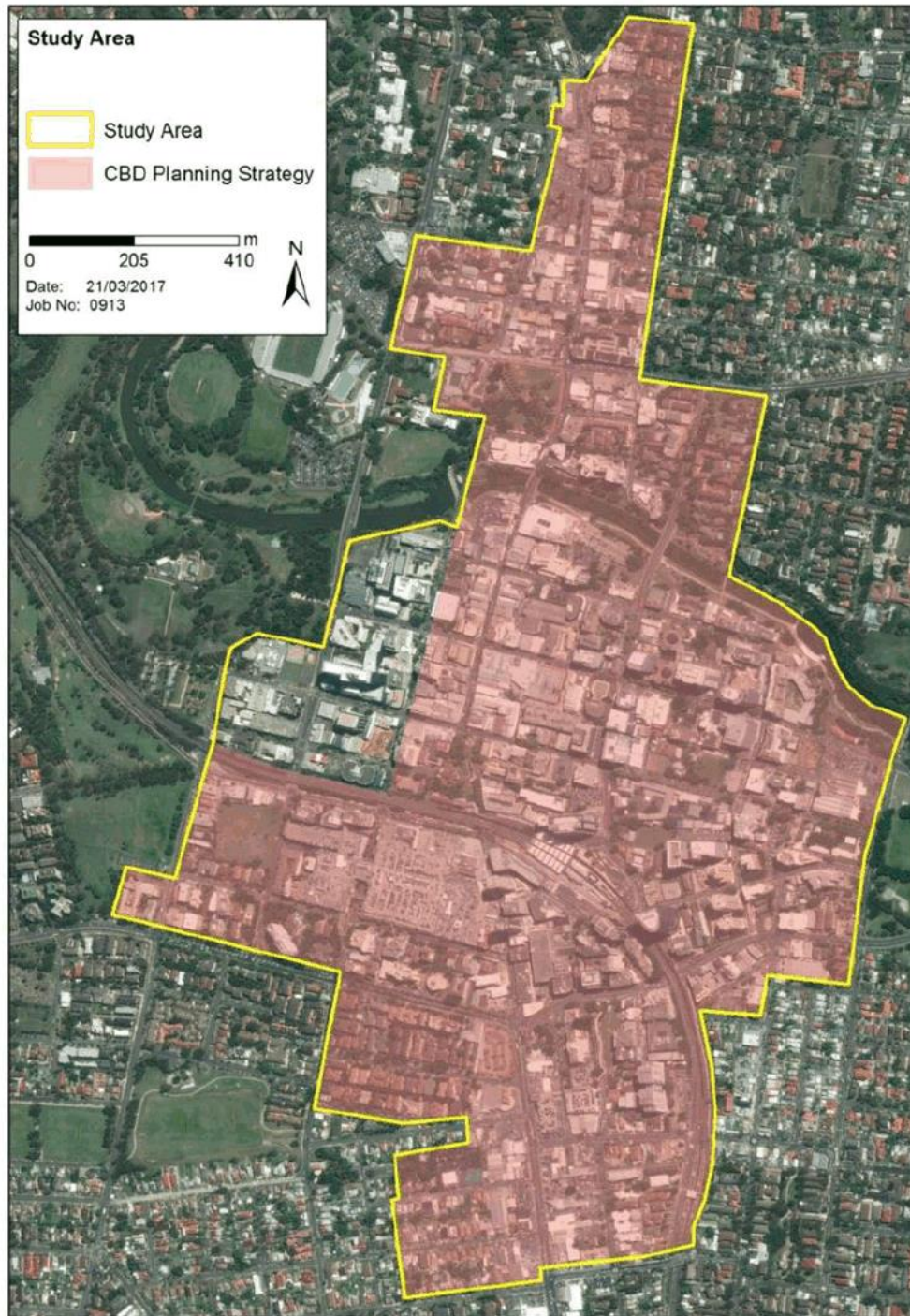


Figure 1: Study Area



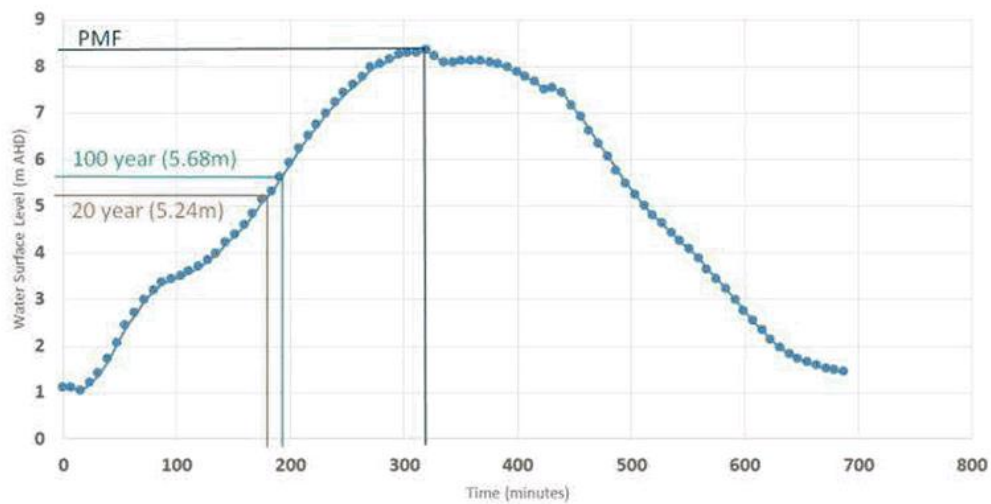


Figure 2: PMF hydrograph upstream of Charles Street Weir

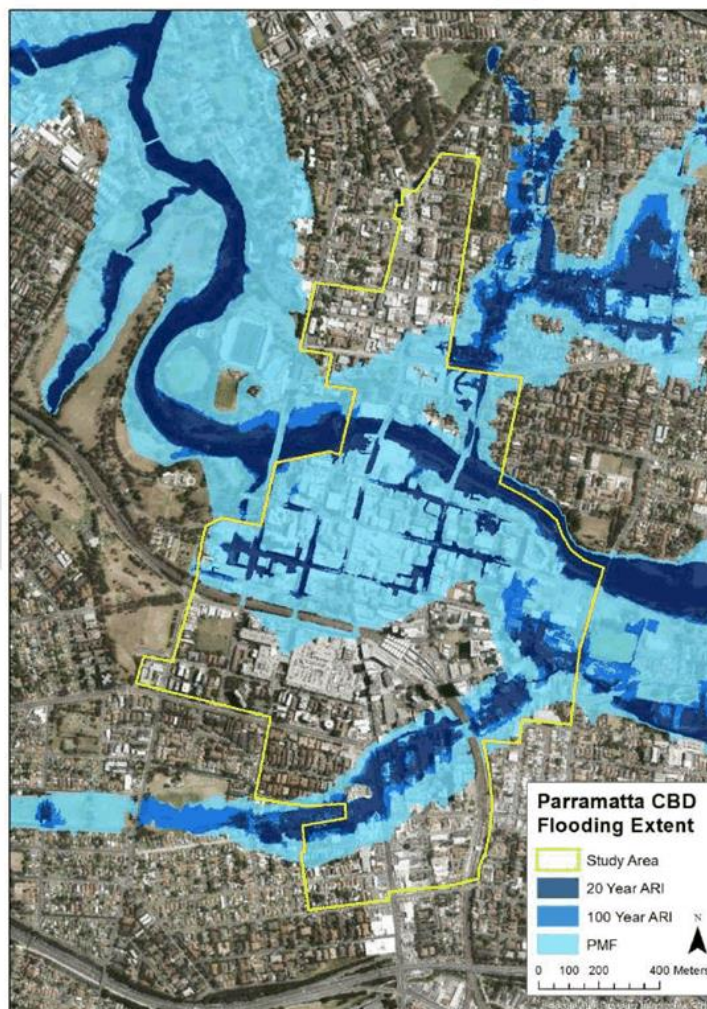


Figure 3: Flood extent in Parramatta CBD

## 1.5 ANALYSIS OF LOCAL EMERGENCY MANAGEMENT

The NSW SES has been involved in this project since its early stages to provide guidance on the most suitable emergency response strategy under present and future conditions. This section summarises the position of the NSW SES with regard to flood response in Parramatta CBD and vertical evacuation.

### 1.5.1 NSW SES Letter to the City of Parramatta Council (2016)

The brief of this project was initially submitted to the NSW SES for feedback, which was provided to the City of Parramatta Council together with a letter dated 2 December 2016 about their views on evacuation from the CBD. The letter encompasses the role of the NSW SES in flood emergency response, and points out the view of the NSW SES on some key emergency management principles. These are:

- Risk assessment should consider the full range of design flood events up to the PMF, ideally encapsulating a measure of the variability associated with the flood model results for each event.
- Flood risk assessment should also have particular regard to flood warning and evacuation demand on existing and future access/egress routes.

The NSW SES letter goes on stating that horizontal evacuation should be the primary response strategy during flooding, and should possess the following requisites:

- It should be completed before the onset of a flood;
- Evacuees should use vehicles where feasible (pedestrian evacuation is a backup option);
- It must not require people to drive or walk through floodwaters;
- It should use rising roads leading away from the flood.

With regard to the option of vertical evacuation, also referred to as Shelter In Place (SIP), the NSW SES points out that:

- SIP in isolated buildings represents a higher risk than a properly conducted evacuation and should only be used when evacuation is not possible. In these cases, the risks associated with SIP should be adequately considered and addressed. These include the instability of buildings due to pressure and velocity of floodwaters, risk of medical emergencies, and the risk of people leaving the SIP refuge before floodwaters have withdrawn.
- SIP increases the risk to emergency service personnel during search and rescue operations. If the risk of assisting someone who is taking shelter in place is deemed too high by the emergency responders, assistance may not be provided.
- SIP should only be preferred to evacuation where the risks associated with evacuation are higher than the risks of SIP. This happens, for instance, if evacuation routes are cut by floodwaters before flooding is obvious to residents. In these cases, a response based on horizontal evacuation may result in people driving through floodwaters, as discussed in Haynes et al (2009).

With regard to future development and SIP, the NSW SES letter highlights that:

- Development strategies relying on SIP are not equivalent, in risk management terms, to horizontal evacuation.
- Development strategies assuming that mass rescue of people taking SIP is possible are not acceptable to the SES.
- Future development must not conflict with NSW SES's flood response and evacuation strategy for the existing community.

The letter concludes by referencing the literature landscape around the NSW SES's view on SIP. The next sections include a summary of such literature, which appeared in



the "Three Tributaries Floodplain Risk Management Study" (Molino Stewart, 2015).

and then had a change of mind once they were surrounded by floodwater;

**a) Opper and Toniato (2008)**

- NSW SES holds the position that if development is to occur on floodplains, it must be possible to evacuate people out of the floodplain in advance of floods;
- NSW SES has recognised that in an existing flash flood context, and only in that context, causing residents to attempt to evacuate at the time of flash flooding is occurring, could be a serious risk to life. Only in areas where urban redevelopment cannot be prevented under existing planning policy (e.g. already approved under the gazetted planning policy), it has therefore been proposed that the DCP for any new or redeveloped dwelling will require an internal refuge area above the level of the PMF. (Note: the Fairfield DCP is one that allows this in parts of some floodplains);
- This concession has been seized upon to wrongly apply it to all flood contexts and to justify any new development;
- In response, NSW SES may have no choice but to adopt a harder line and to not support any redevelopment or development in flash flood areas;
- Two elements of flood isolation risk – which may arise when sheltering in place - are particularly significant: structural fire and medical emergency;
- An example of the problems that can arise due to isolation and the vagaries of human behaviour occurred during flooding in June 2007, when a nursing home at Wyong needed to be urgently evacuated due to its rapid isolation by floodwater and the threat of further inundation. This required six ambulance crews and other emergency services to deal with just this one facility. The management and residents had ignored early advice to evacuate before they were isolated

**b) Opper et al. (2011); AFAC (2013)**

- The safest place to be in a flash flood is well away from the affected area. Evacuation is the most effective strategy, provided that evacuation can be safely implemented. Properly planned and executed evacuation is demonstrably the most effective strategy in terms of a reliable public safety outcome;
- Late evacuation may be worse than not evacuating at all because of the dangers inherent in moving through floodwaters, particularly fast-moving flash flood waters. If evacuation has not occurred prior to the arrival of floodwater, taking refuge inside a building may generally be safer than trying to escape by entering the floodwater;
- Remaining in buildings likely to be affected by flash flooding is not low risk and should never be a default strategy for pre-incident planning. It is not equivalent to evacuation;
- The risks of 'shelter-in-place' include:
  - a) Floodwater reaching the place of shelter (unless the shelter is above the PMF level);
  - b) Structural collapse of the building that is providing the place of shelter (unless the building is designed to withstand the forces of floodwater, buoyancy and debris in a PMF);
  - c) Isolation, with no known basis for determining a tolerable duration of isolation;
  - d) People's behaviour (drowning if they change their mind and attempt to leave after entrapment);
  - e) People's mobility (not being able to reach the highest part of the building);
  - f) People's personal safety (fire and accident); and





- g) People's health (pre-existing condition or sudden onset e.g. heart attack).
- In line with EMA's Manual (2009) and Handbook (2007), NSW SES reinforces that for evacuation to be a defensible strategy, the risk associated with the evacuation must be lower than the risk people may be exposed to if they were left to take refuge within a building which could either be directly exposed to or isolated by floodwater;
  - Pre-incident planning needs to include a realistic assessment of the time required to evacuate a given location via safe evacuation routes. This requires consideration of barriers to evacuation posed by available warning time, availability of safe routes and resources available;
  - Successful evacuation strategies require a warning system that delivers enough lead time to accommodate the operational decisions, the mobilisation of the necessary resources, the warning and the movement of people at risk;
  - Effective evacuation typically requires lead times of longer than just a couple of hours and this creates a dilemma for flash flood emergency managers. Due to the nature of flash flood catchments, flash flood warning systems based on detection of rainfall or water level generally yield short lead times (often as short as 30 minutes) and as a result provide limited prospects for using such systems to trigger planned and effective evacuation;
  - Initiating evacuation of large numbers of people from areas prone to flash flooding based only on forecasts may be theoretically defensible in a purely risk-avoidance context but it is likely to be viewed as socially and economically unsustainable. Frequent evacuations in which no flooding occurs, which statistically will be the outcome of forecast-based warning and evacuation, could also lead to a

situation where warnings are eventually ignored by the community.

#### c) NSW SES (2014)

- In the context of future development, self-evacuation of the community should be achievable in a manner consistent with the NSW SES's principles for evacuation;
- Development must not conflict with the NSW SES's flood response and evacuation strategy;
- Evacuation must not require people to drive or walk through floodwaters;
- Development strategies relying on deliberate isolation in buildings are not equivalent to evacuation;
- Development strategies relying on the assumption that mass rescue may be possible where evacuation either fails or is not implemented are not acceptable to the NSW SES;
- The NSW SES is opposed to the imposition of development consent conditions requiring private flood evacuation plans rather than the application of sound land use planning and flood risk management.

#### d) Summary of the NSW SES position

The NSW SES holds that horizontal evacuation is the preferred emergency response for floodplain communities, where this can safely be achieved. Late evacuation, through floodwater, may be a recipe for disaster and in that situation it might be safer to remain inside the building, though sheltering-in-place has a number of direct and indirect risks associated with it. Evacuating prior to flooding is therefore much preferred. Where current hydro-meteorological monitoring systems, communications systems, road infrastructure and expected community behaviours do not allow this, the NSW SES advocates improvements to these so that evacuation can proceed safely. However, the AFAC (2013) guide makes clear that, even with these improvements, insufficient time may be available to inform evacuation decisions with confidence. If evacuations are ordered



based only on predicted rainfall, the community may eventually come to ignore warnings.

### 1.5.2 Subsequent SES Correspondence

In December 2017 the NSW SES wrote to the then Department of Environment and Planning regarding a site-specific planning proposal for 180 George St Parramatta. While the letter was specifically responding to that planning proposal, it stated that, *"Ideally, it is better to address flood risk in land use planning activities at a strategic or precinct scale than in the planning proposal stage."* The letter then went on to articulate generic principles which should be adhered to in development planning generally and Parramatta CBD in particular. This includes statements such as:

*"Despite modifying buildings to reduce the risk, research into human behaviour during actual events has shown that in populations surrounded by a hazard there is always the chance that a person will not behave rationally and remain in place but rather place themselves at unnecessary risk."*

*"...where safe evacuation is compromised by a lack of adequate infrastructure and/or warning time, the NSW SES recognises that the situation may result in it being safer for a population at risk to remain in place as long as the building in which the occupants are sheltering is structurally sound and there is sufficient accessible space available above the PMF for all occupants to shelter where adequate services are available and maintained."*

*"Emergency service response will likely be compromised by the hazardous nature of flash flooding in Parramatta CBD. In this area it is likely that emergency services cannot respond to assist those trapped in buildings due to the rapid onset and hazardous nature of fast flowing floodwater and limitations caused by access and transport issues."*

Appendix 2 of the letter listed site specific design considerations and Parramatta CBD General Design considerations but both are listed here because the site specific

considerations are relevant to many sites in the Parramatta CBD, not just 180 George St.

#### Site specific design considerations

*The site specific design considerations should be applied to this development to assist in minimising additional risk.*

**1. Residential development:** *The habitable floors of any residential development (including aged care) should be located above the PMF with the building structurally designed for the likely flood and debris impacts.*

**2. Commercial development (including retail):** *To cater for the safety of potential occupants, clients and visitors in commercial development there should be the provision of sufficient readily accessible habitable areas above the PMF.*

**3. Child care facilities:** *Childcare facilities must be located with floor levels above the PMF level.*

**4. Car parking:** *Any additional parking should be above ground level and have pedestrian access to a podium level above the PMF.*

**5. Making buildings as safe as possible to occupy during flood events.** *Ensuring buildings are designed for the potential flood and debris loadings of the PMF so that structural failure is avoided during a flood.*

**6. Limiting exposure of people to floodwaters.** *This can be aided by providing sufficient readily accessible habitable areas above the PMF to cater for potential occupants, clients, visitors and residents.*

**7. Provision of public accessible space for the itinerant population in areas surrounding intensive development in Parramatta CBD.** *Provision of publically accessible space or access to space above the PMF (with adequate infrastructure to enable the physically impaired to access such space) that is easily accessible 24 hours a day for seven days a week which is clearly identified for this purpose with associated directional signage.*

**8. Providing adequate services so people are less likely to enter floodwaters.** *This includes access to ablutions, water, power and basic first aid equipment. Consideration must be given to the availability of on-site systems*





to provide for power, water and sewage services for the likely flood duration (up to 12 hours) plus a further period of up to 48 hours to provide allowance for restoration of external services.

**9. Addressing secondary risks of fire and medical emergencies during floods.** Where there is no CBD wide strategy to address secondary risks during flooding. The proponent needs to consult with the relevant emergency service agency.

**Parramatta CBD general considerations**

**1. Sensitive development including child care:** All new emergency response hospitals, childcare and primary school facilities in Parramatta CBD should be located on land outside the extent of the PMF on land where service interruption is likely to be limited.

**2. Secondary schools and day hospitals:** Ideally new day hospitals and secondary school classrooms should also be located above the PMF level. However, at minimum there should be within a day hospital and high school building, the provision of access to adequate space above the PMF for patients, high school students, staff and visitors.

**3. Reducing human behaviour risks through businesses, schools and childcare centres.** Undertaking regular exercising of a building flood emergency response plan similar to a building fire evacuation drill.

**4. Increasing the flood awareness of current and future communities.** Council should have community awareness strategies that include requiring current and future building owners to participate in increasing this awareness.

**5. Parramatta CBD PA system.** There needs to be consideration given to developing a Parramatta CBD PA system like Sydney CBD to communicate evacuation directions and safety messages to the Parramatta CBD population in the lead up to and during a flood to assist in improving the safety of the community.

**6. Addressing secondary risks of fire and medical emergencies during floods.** To minimise the increased risk of fire and to reduce both the potential for adverse outcomes in the case of a medical emergency

and the risks to those who may aid the patient, Council, DPE, NSW SES, Ambulance NSW and the relevant Health Functional area and fire agency servicing the area, should be consulted to determine appropriate risk management strategies during flooding.

## 2 METHODOLOGY

### 2.1 A MULTI-SCENARIO APPROACH

This study employed a multi-scenario approach to provide a comprehensive overview of the circumstances under which flood evacuation of Parramatta CBD may be required, today and in the future.

Each scenario is the result of a combination of variables, including flood probability, year (as a proxy of the degree of development of the CBD), type of evacuation, and time of day.

For each combination of year, flood probability, and evacuation type, the worst case scenario was determined by the time of the day. These scenarios were identified and assessed.

The following sections describe in more detail the variables used to construct the evacuation scenarios.

#### 2.1.1 Flood Probability

As advised by NSW SES, evacuation assessment should consider a wide range of flood events, up to the PMF. This study used the following design flood events:

- 20 year ARI
- 100 year ARI
- PMF

These were selected because:

- The 20 year ARI is a relatively frequent flood event that may require evacuation. More frequent events, such as the 10 year or 5 year ARI, are unlikely to require a large-scale response.
- The 100 year ARI is the design event adopted for planning and development purpose.
- The PMF represents the greatest flood extent and flood hazard and is indicative of the potential fastest rate of rise.
- Availability of flood model results.

#### 2.1.2 Year

Evacuation was assessed in three different years: 2016, 2036 and 2056.

Year 2016 represents the existing condition in terms of development and evacuee numbers.

Year 2036 was obtained by projecting 20 years into the future the number of evacuees that would be achieved under the existing planning controls, plus some site-specific planning proposals that have at least received Council endorsement to be sent for Gateway determination.

Year 2056 was obtained by assuming that two-thirds of the additional development capacity introduced by the CBD Planning Proposal would be taken up.

#### 2.1.3 Evacuation Type

The following three types of evacuation were considered in this study.

- Horizontal Street-Level (HSL) evacuation, entirely achieved by vehicle;
- Horizontal High-Level (HHL) evacuation, achieved on foot by means of a network of elevated walkways which would allow evacuees to walk out of the CBD even if this has already flooded;
- Vertical Evacuation (Shelter in Place). Evacuees would reach a designated refuge above the flood level within their building, or within an adjoining building which provides a shelter above the flood level.

In addition to this, a "mixed" evacuation was also considered. In "mixed" evacuation scenarios it was assumed that only buildings not isolated by the 20 year ARI flood would be able to evacuate by car, while the remainder would need to evacuate on foot. These scenarios may represent a more "realistic" situation, in which building blocks at the boundary of the CBD could evacuate by car, while the commercial core of the CBD, which would be reached by local flooding earlier than peripheral blocks, would evacuate on foot using the elevated walkways.

### 2.1.4 Time of Day

A large number of workers and visitors travel to and from Parramatta CBD on a daily basis. Similarly, many of the CBD residents go to work in different parts of the Sydney Metropolitan Area.

As a consequence of this, the time of day at which an evacuation order is issued would have a profound influence on the number of evacuees, the willingness of evacuees to leave and ultimately on the evacuation duration.

For instance, if the evacuation were triggered late at night, mostly residents would need to evacuate. On the other hand, if an evacuation order were issued during business hours, the majority of evacuees would be workers and visitors, while the number of residents would be much lower.

Additional challenges for emergency responders may then arise in more specific scenarios. For instance, during the PM peak hour, workers and visitors would need to evacuate, but at the same time residents would be returning to the CBD after work. This scenario would be particularly difficult to manage regardless of the selected emergency response strategy (horizontal evacuation vs SIP).

In the case of vehicular evacuation, returning residents would generate significant background road traffic, which would slow down the evacuation of workers and visitors. This would also result in additional load on emergency responders, who, in addition to facilitating evacuation, would have to prevent residents from entering the CBD.

If SIP were the preferred strategy, it would be difficult to ensure that workers would remain within their offices at the end of the day, when they are keen to leave and go home.

The following times of the day and scenarios were considered in the evacuation assessment:

- Midnight: only residents evacuate/SIP;
- Midday: only workers and visitors evacuate/SIP;
- PM peak: only workers and visitors evacuate/SIP, residents return home. This "time of the day" option constitutes in fact a variation of the Midday option, because the number of evacuees would be the same (i.e. workers and visitors). However, because the variables making the PM peak scenario slightly worse than the Midday one (i.e. background traffic, and human behaviour) cannot be modelled using the NSW Timeline Evacuation Model, the additional challenges of the PM peak scenario are only discussed qualitatively.

The AM was not considered to be as problematic as other scenarios because it would involve residents being told to evacuate when they would be leaving the CBD anyway and telling workers and visitors not to enter the CBD which is not expected to be met with a lot of resistance.

### 2.1.5 Simulated Scenarios

Combining all possible scenario variables would result in 81 scenarios to be modelled and/or discussed. However, for practical reasons, only the 24 "worst case" scenarios were modelled. These are listed in Table 1 and Table 2.

It should be noted that scenarios 7, 8 and 23 are different from all the others.

Scenario 8 represents a situation in which all car spaces within the CBD would evacuate at the same time. This would include residential, commercial and visitor cars. Although such a scenario is unlikely to happen in the real world, this approach is often used by the NSW SES to get a sense of the worst possible situation in terms of vehicular evacuation.

Scenarios 2 and 23 represent "mixed" evacuation types.



Table 1: Evacuation scenarios modelled for each combination of flood probability and year.

	2016	2036	2056
<b>1 in 20</b>	Scenario 1	Scenario 9	Scenario 15
	Scenario 2	Scenario 10	Scenario 16
			Scenario 17
<b>1 in 100</b>	Scenario 3	Scenario 11	Scenario 18
	Scenario 4	Scenario 12	Scenario 19
			Scenario 20
<b>PMF</b>	Scenario 5	Scenario 13	Scenario 21
	Scenario 6	Scenario 14	Scenario 22
	Scenario 7		Scenario 23
	Scenario 8		Scenario 24

Table 2: Variables used to generate each evacuation scenario. (year\_flood event\_time of day\_evacuation type).

Scenario number	Code	Scenario number	Code
1	2016_20yr_Midday_HSL	13	2036_PMF_Midday_HSL
2	2016_20yr_Midday_HHL	14	2036_PMF_Midday_HHL
3	2016_100yr_Midday_HSL	15	2056_20yr_Midday_HSL
4	2016_100yr_Midday_HHL	16	2056_20yr_Midnight_HSL
5	2016_PMF_Midday_HSL	17	2056_20yr_Midday_HHL
	2016_PMF_Midday_HHL	18	2056_100yr_Midday_HSL
7	2016_PMF_Midday_Mixed	19	2056_100yr_Midnight_HSL
8	2016_PMF_AllCars_HSL	20	2056_100yr_Midday_HHL
9	2036_20yr_Midday_HSL	21	2056_PMF_Midnight_HSL
10	2036_20yr_Midday_HHL	22	2056_PMF_Midday_HHL
11	2036_100yr_Midday_HSL	23	2056_PMF_Midday_Mixed
12	2036_100yr_Midday_HHL	24	2056_PMF_Midday_HSL



## 2.2 DATA COLLECTION

Due to the spatial nature of the information required to build each scenario, a GIS (Geographic Information System) was created.

The input data needed included:

- People: maximum number of Residents, Workers and Visitors at any one time of the day;
- Vehicles: number of residential, commercial and visitor car spaces;
- Buildings: cadastre lots, current and future land zoning, Floor Surface Area (FSA) for residential and commercial development, heritage sites;
- Transport Network: road network, lane numbers, one-way roads;
- Flood model results for the selected design events;
- Flood warning lead time.

In order to be used as input in the evacuation modelling exercise, each dataset had to satisfy the following requirements:

- Possess the highest possible spatial resolution, so that it could be referred to each cadastre lot;
- Be available and evenly distributed across the whole CBD;
- Be available for year 2016, 2036 and 2056.

As only a part of the above-listed data was available, a number of assumptions were introduced to obtain the missing information. These are described in detail in Appendix A.

## 2.3 EVACUATION MODELLING

The scope of an evacuation modelling exercise is to calculate the time needed to complete a full evacuation and to compare this with the time available before evacuation routes are cut by floodwaters.

The time needed to complete the evacuation is generally estimated using evacuation models,

while the time available depends on the lead time provided by the flood warning system.

Evacuation models range from simplified calculation spreadsheet to more sophisticated agent-based algorithms, which simulate the incoming flood, traffic conditions and the behaviour of individual evacuees.

This study employed the NSW SES Timeline Evacuation Model. This was preferred to an agent based model because it incorporates the assumptions made by the NSW SES and provides a level of accuracy that was deemed sufficient for the scope of this work.

In setting up the evacuation modelling exercise, this study introduced a number of assumptions, which are summarised in Appendix A. Each assumption is supported by the relevant literature and was assessed in consultation with the City of Parramatta Council.

At the time this study was originally undertaken, the City of Parramatta Council was developing a flood warning system for the CBD. Preliminary results suggested that a warning time of two hours should be used for the purpose of the evacuation assessment (Assumption 1 – Appendix A). Council has confirmed since commissioning of the warning system that two hours remains an appropriate lead time for evacuation assessment purposes.

This lead time is intended as the notice that would be given before a particular flood level is reached. These warnings would be issued by SMS to the NSW SES and members of the public who are registered to receive flood warnings.

It is possible that during any particular event several warnings will be given as flood forecasting predicts increasing flood levels over time as rain continues. For example, recipients may receive a warning that the 20 year ARI flood level will be reached in two hours' time but 30 minutes later might receive a warning that the 100 year ARI level will be reached in two hours from the second warning, and 30 minutes after that that an even higher level will be reached two hours after this third warning.





It should be noted that once the NSW SES receives each warning it would need to spend time to decide if an evacuation order needs to be issued, and then to disseminate such an order to the population.

The NSW SES in its standard evacuation planning modelling assumes that, after an evacuation order is communicated to the population, a minimum delay of two hours is to be expected before the evacuation begins (Assumption 2 – Appendix A).

This delay, or “lag”, is due to two factors:

- The Warning Acceptance Factor (WAF), defined as the time required by a member of the public to acknowledge the evacuation order and accept that it applies to them; and
- The Warning Lag Factor (WLF), defined as the time required by members of the public to get organised for the evacuation and leave their houses.

The NSW SES assumes that the WAF and the WLF will require one hour of time each.

For this reason, a warning time of no more than two hours would leave no time for the population of Parramatta CBD to evacuate at street level. Even if the NSW SES could instantaneously make a decision and issue an evacuation order as soon as it receives a warning, by the time the population is ready to evacuate (i.e. minimum two hours), the water level would already be at the level that the warning system forecast. If rain has continued then the flooding could already be rising above that level during the time it takes people to actually evacuate.

This means that using the standard SES evacuation assumptions, coupled with a warning time of two hours would not allow any type of street-level evacuation at all, regardless on the evacuation means (vehicles or on foot) employed. In the case of Parramatta CBD, the NSW SES will need to find ways to minimise its own decision making and dissemination time for evacuation orders and reduce the response time of evacuees if any evacuation is to be possible.

For this reason, the scope of the evacuation modelling exercise undertaken as part of this

project solely estimated the evacuation time under a range of different scenarios and did not compare this with the time available before the evacuation routes would be cut.

Evacuation modelling was performed in two different ways, reflecting the two main evacuation modes (vehicular vs pedestrian). Refer to Appendix A.

### 2.3.1 Vehicular Evacuation (HSL)

Vehicular evacuation was considered first as this is the evacuation mode recommended by the NSW SES.

Vehicular evacuation, which is herein referred to as “Horizontal Street Level (HSL)”, was modelled under the assumption that evacuation routes would not be cut by floodwaters before the evacuation is completed. In other words, vehicular evacuation was considered an “early evacuation option” (Assumption 3 – Appendix A).

In addition to this, it was also assumed that any evacuees that do not have access to a car would be able to evacuate on foot in a time shorter than the time needed to complete the vehicular evacuation. This would therefore not affect the total evacuation time (Assumption 4 – Appendix A). This assumption is consistent with the time it would take for a pedestrian to walk from a location adjacent to the river to the nearest land above the reach of the PMF.

#### a) Vehicular Evacuation Model

The vehicular evacuation model used in this study is the NSW SES Timeline Evacuation Model (Oppen et al., 2009). The model integrates the following recommended parameters (Assumption 5 – Appendix A):

- Lane Capacity: 600 cars per lane per hour;
- Queue length per car: 6m;
- Warning Acceptance Factor: 1 hour;
- Warning Lag Factor: 1 hour;
- Traffic Safety Factor: 1-3.5 hours depending on the duration of evacuation;

- Warning Rate per Hour per Door Knock Team (not used in this study): 12 properties.

#### b) Evacuation Routes

Vehicular evacuation routes leading out of the CBD were selected by inspecting the regional extent of the PMF and identifying routes that are least likely to be cut by floodwaters within (or in proximity of) the CBD. This analysis shortlisted the following evacuation routes:

- North: Pennant Hills Road;
- East: Victoria Road;
- South: Church Street and Harris Street;
- West: Great Western Highway.

However, it should be noted that the majority of these routes are likely to be cut by flooding at some point outside the CBD. Figure 4 shows the distribution of low points along the main roads around Parramatta CBD.

#### c) Vehicular Evacuation Precincts

The next part of this exercise allocated the flood-affected CBD cadastre to each of the five selected evacuation routes. This was achieved by:

- Locating each building's driveway;
- Assuming that, upon exiting each driveway, vehicles would move away from Parramatta River, Clay Cliff Creek or Brickfield Creek;
- Assuming that traffic would move according to normal traffic flow direction on roads including one-way roads.

Under these assumptions (Assumption 6 – Appendix A), the shortest path from each building to any of the five evacuation routes was identified and used to allocate each lot to an evacuation route. Lots evacuating to the same route were then grouped in the same vehicular evacuation precinct. The precincts obtained for each flood event are shown in Figure 5, Figure 6 and Figure 7.

A building was assumed to have to evacuate if it was "touched" or isolated by floodwaters in the model. The other buildings in the CBD were assumed not to have to evacuate (Assumption 7 – Appendix A). This may overestimate the number of vehicles which need to evacuate because the extent of flooding in some of these buildings may not be sufficient to require them to be evacuated.

While crossing the river or creeks was generally avoided, to reduce the risk of cars being trapped by traffic and then being overwhelmed by fast flowing water, there was one location where crossing the river was unavoidable. This is discussed in the next paragraph.

There are several buildings in Phillip Street on the corner of Wilde Street which have their parking areas at the rear and they share access to Wilde Street with a large multi-deck carpark adjacent to the river. This direct access to Wilde Street only allows them to turn left onto Wilde Street and cross over the river as there is a median in Wilde Street preventing a right-hand turn. If vehicles need to travel south from this location, away from the river, they need to head towards the river and go under Wilde Street. As this would take people towards more flood prone land it was deemed not to be a suitable vehicular evacuation route for this car park and adjacent buildings.



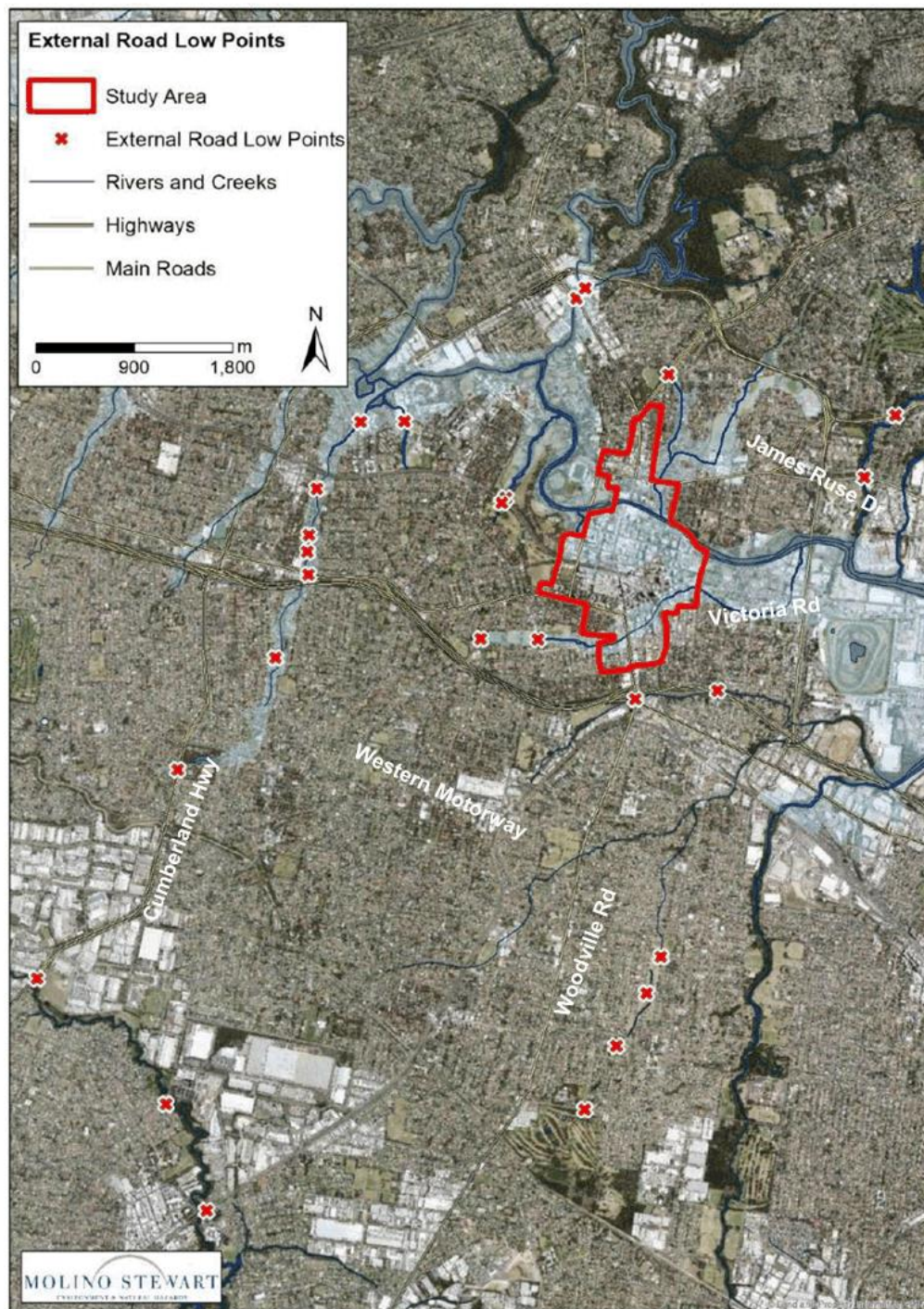


Figure 4: External road low points that may be cut by floodwaters



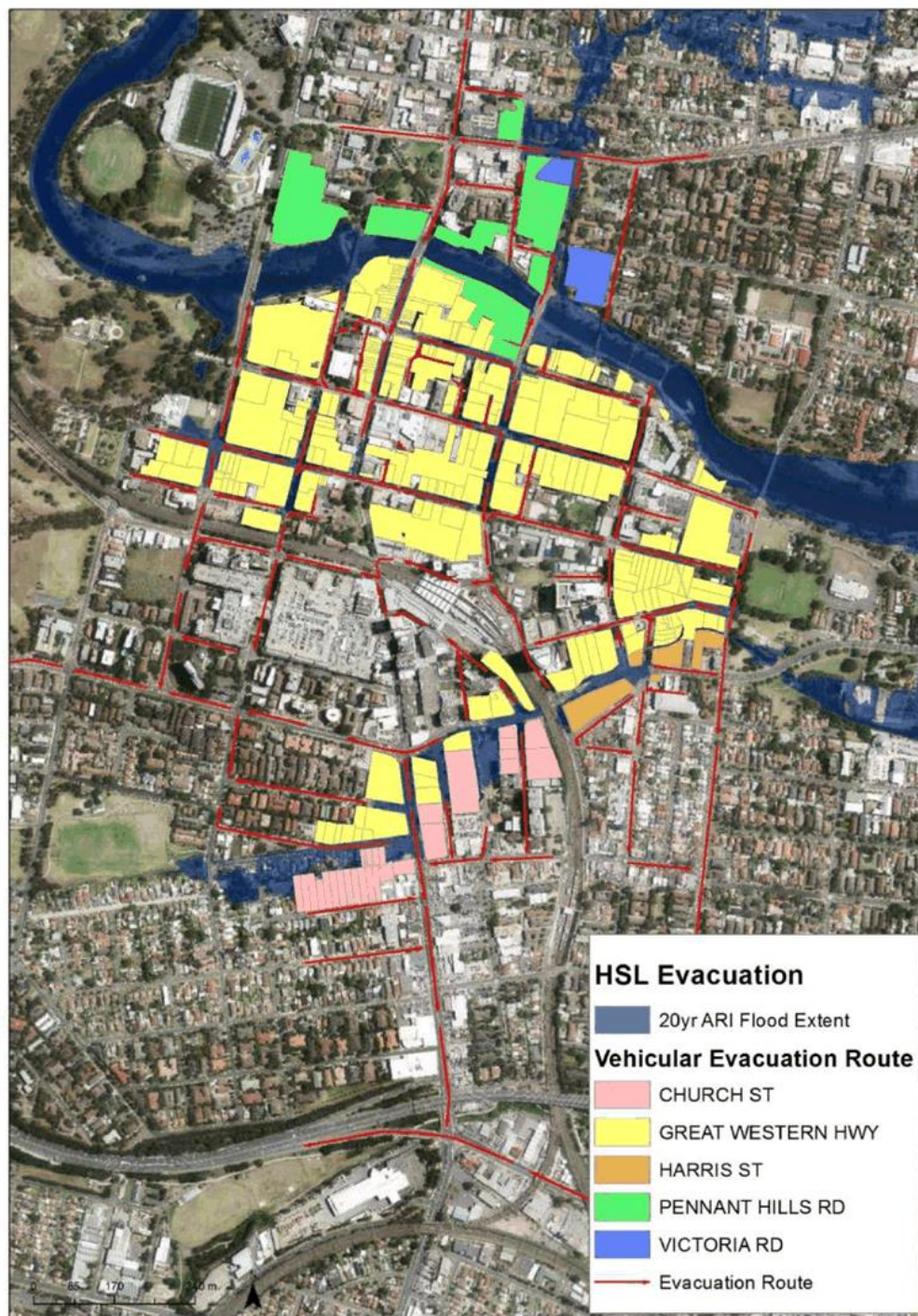


Figure 5: Allocation of buildings affected by the 20 year ARI event to five vehicular evacuation routes and precincts



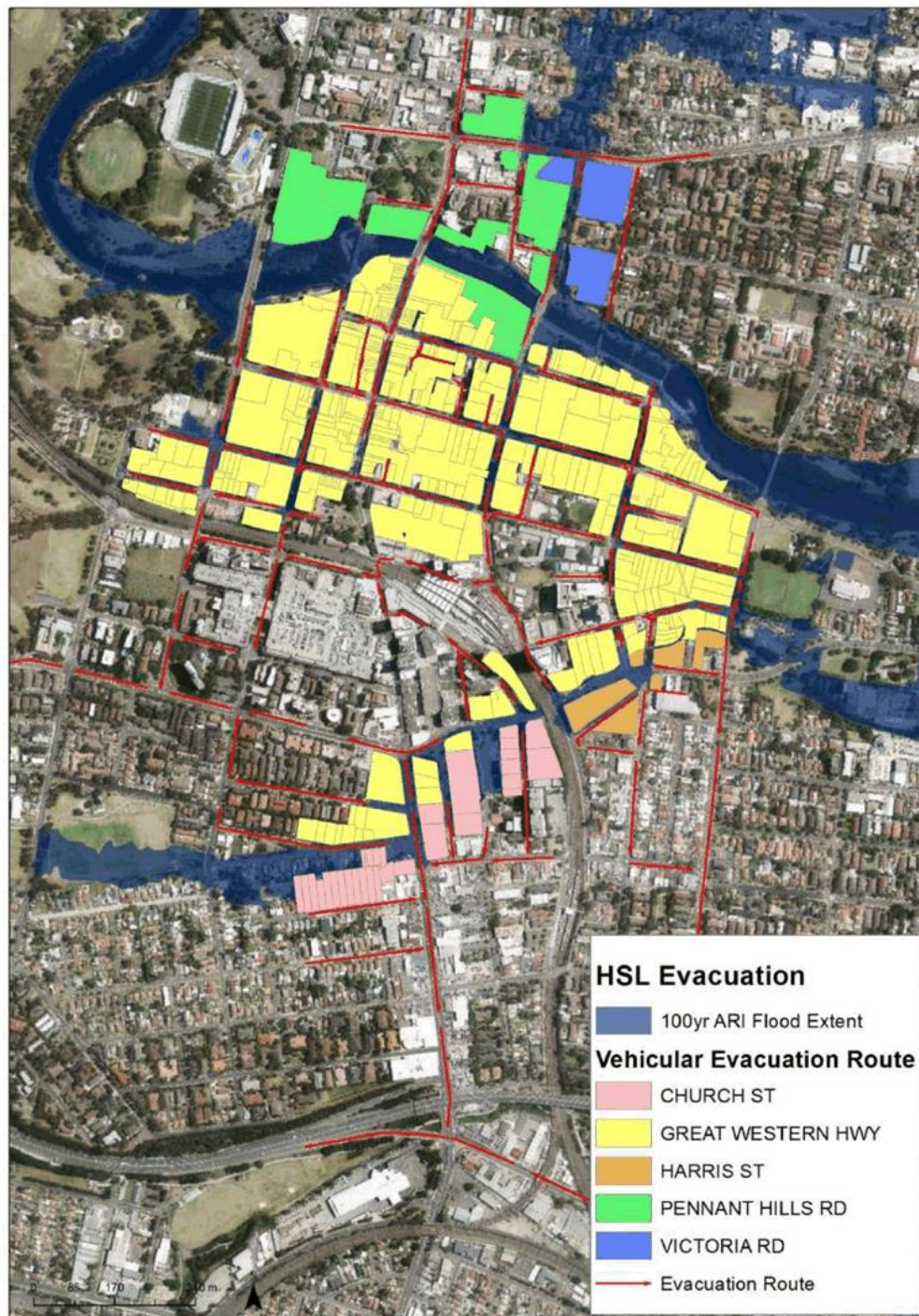


Figure 6: Allocation of buildings affected by the 100 year ARI event to five vehicular evacuation routes and precincts



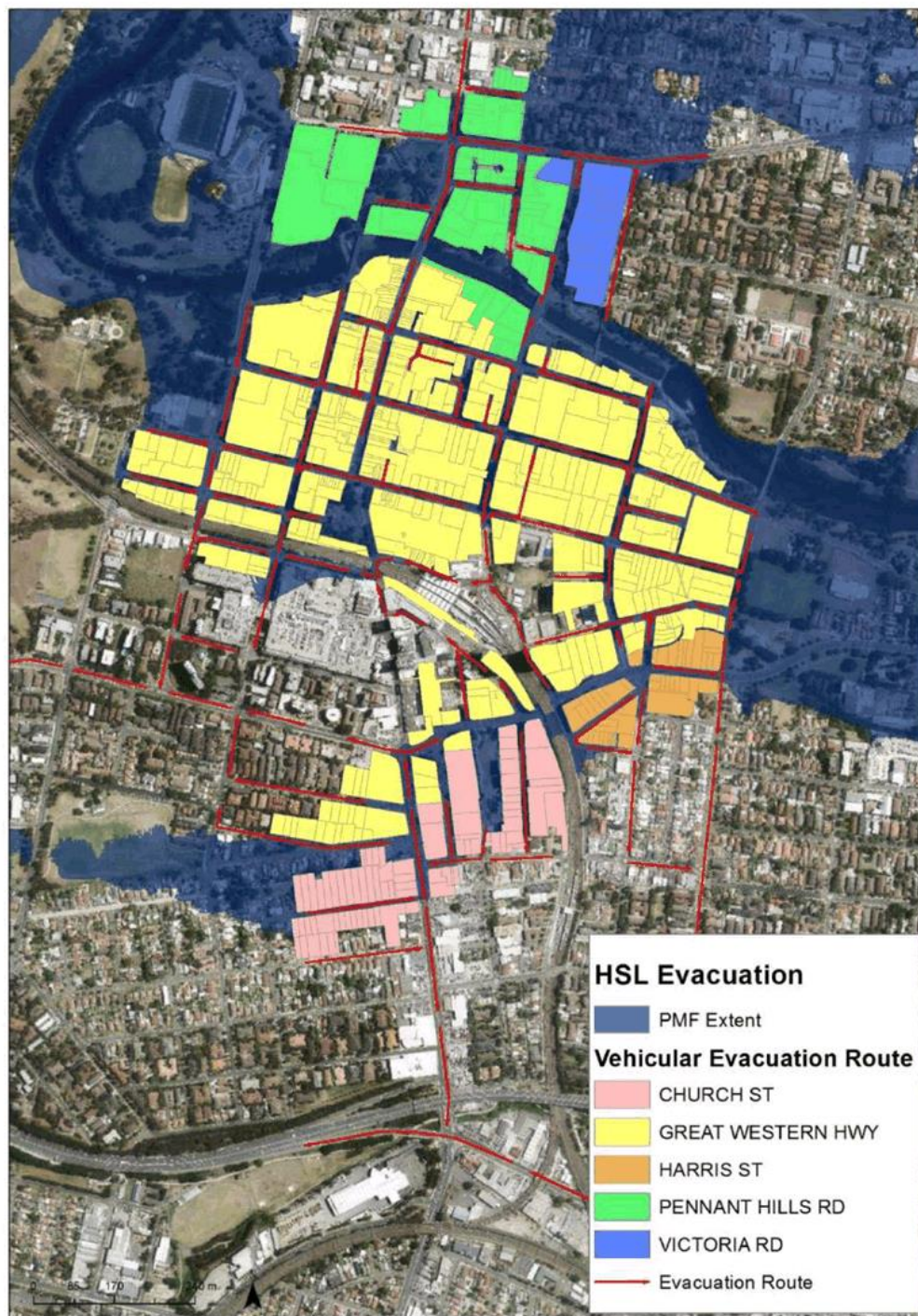


Figure 7: Allocation of buildings affected by the PMF to five vehicular evacuation routes and precincts

### 2.3.2 Pedestrian Evacuation (HHL)

Pedestrian evacuation, which is also referred to as "Horizontal High Level (HHL)", was considered as an alternative to vehicular evacuation because in Parramatta CBD it offers the following advantages:

- It is not constrained by one-way roads;
- People who do not have access to a car would have to evacuate on foot anyway;
- In Parramatta CBD the furthest distance to a safe flood shelter is relatively short.

#### a) Where to?

All evacuees between the Parramatta River and Clay Cliff Creek were assumed to head to a building of the scale and location of Westfield, which has:

- capacity to accommodate a large number of people for several hours,
- is open for most of the day.

Although dedicated arrangements would be necessary to make sure that the building designated as the refuge is accessible outside business hours, these should be fairly simple to achieve, for example making use of the 24-hour security patrol service.

Evacuees north of the Parramatta River could not cross the river and would need to evacuate to a location to be determined. Similarly, evacuees south of Clay Cliff Creek would need to evacuate south. However, these are a small number compared to evacuees between the Parramatta River and Clay Cliff Creek, and would be relatively easy to accommodate in smaller buildings/refuges.

#### b) Elevated Walkways

Importantly, this study used pedestrian evacuation as a "late evacuation" option. This means that pedestrian evacuation would need to be a viable option regardless of the time at which people are ready to evacuate.

Because most of the roads of the CBD are within the floodplain, late evacuation on foot

could only be achieved by means of a network of elevated walkways. These would need to be installed at strategic locations within the CBD to allow evacuees to safely cross flooded roads. The extent of the elevated walkways would have to be proportional to the size of the flood event up to which these can be used.

As part of this project, a concept design of the elevated walkways was completed by a team of urban planners and architects (i.e. Studio GL). Appendix C includes a report from Studio GL describing and assessing in detail the concept design's extent, dimensions, accessibility and urban planning implications (e.g. visual impact, overshadowing). It should be stressed that, while the concept design is sized to cater for events up to the 20yr ARI, the same design could be conceptually extended to larger flood events.

In events up to a 20 year ARI, it was assumed that evacuees would be able to reach the elevated walkways using communal stairs and ramps accessible from street level, while in larger events a dedicated building-by-building access would be necessary (Assumption 8 – Appendix A). This assumes that in events up to the 20 year ARI event flooding of the roads does not extend onto the adjacent footpaths to a level which would be hazardous for pedestrian to walk through to access the nearest walkway.

If the walkway network were built to cater for the 20 year ARI, then in the event of a larger flood people would not be able to access the walkways and would be trapped in their buildings.

In the case of the 100 year ARI walkway network, people within the extent of the 100 year ARI event would be able to access the walkways in any size flood because they would be accessing them from an upper floor of their building. However, should they fail to evacuate in a flood larger than the 100 year ARI event before the flood reaches the 100 year ARI level then they would not be able to safely return to street level to complete their evacuation.

The PMF walkway network on the other hand would allow people to leave their building at any time and not come in contact with floodwaters.



The extent of the elevated walkways network for each flood event is shown in Figure 8, Figure 9 and Figure 10. As with vehicular evacuation it was assumed that only those

buildings which were touched by floodwaters would need to evacuate and all others could remain within their buildings.

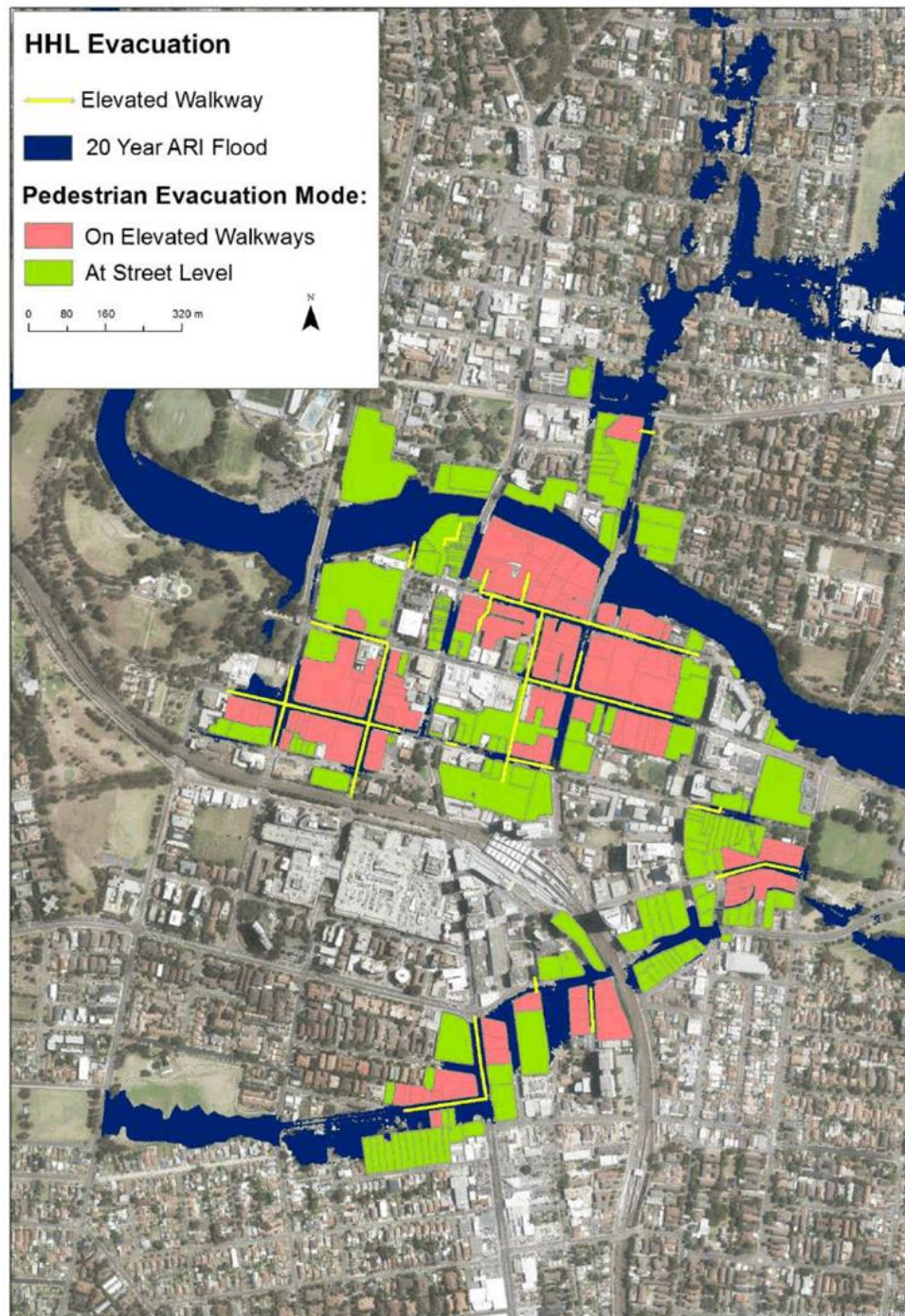


Figure 8: Extent of elevated walkways catering up to the 20 year ARI event.



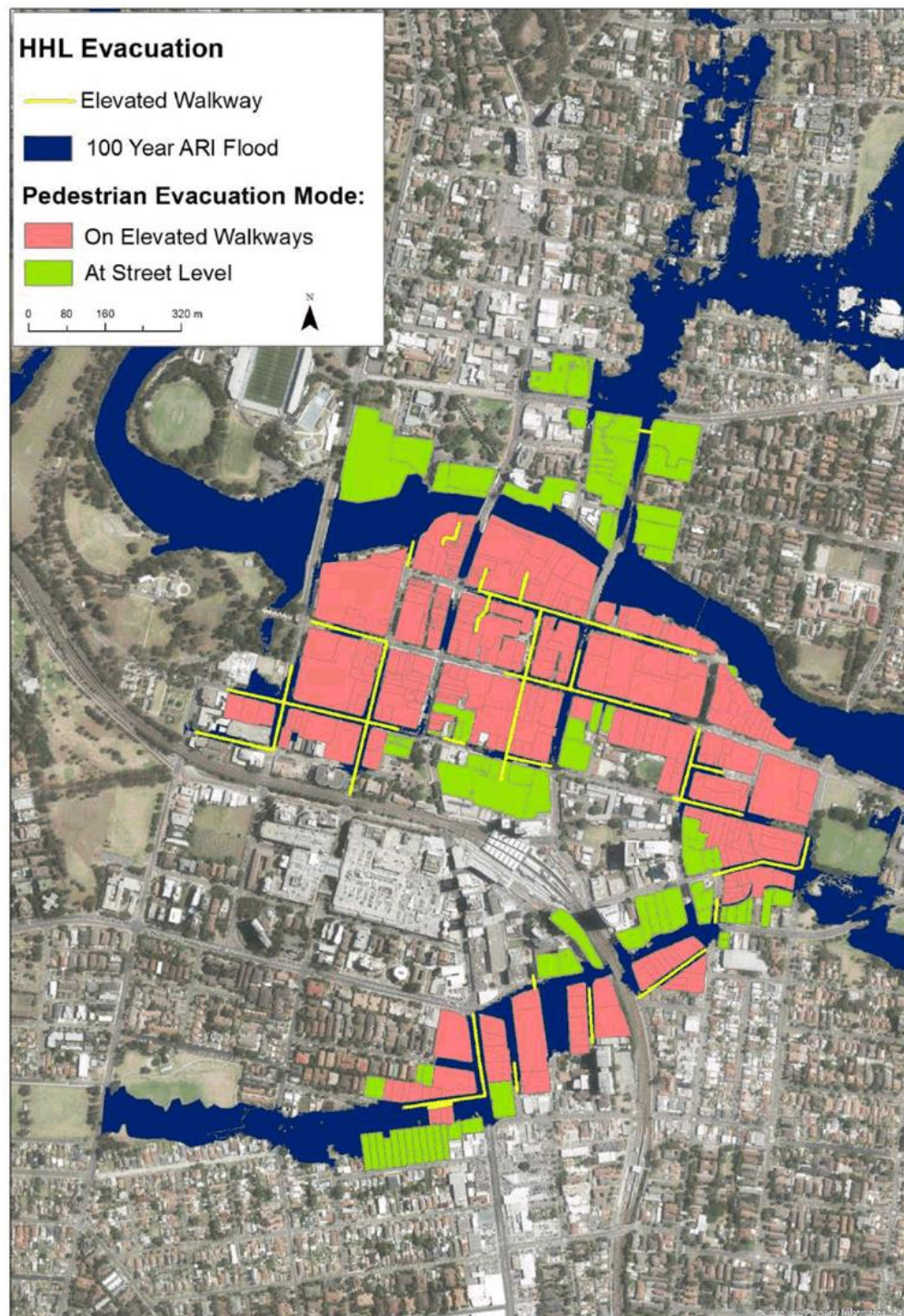


Figure 9: Extent of elevated walkways catering up to the 100 year ARI event.



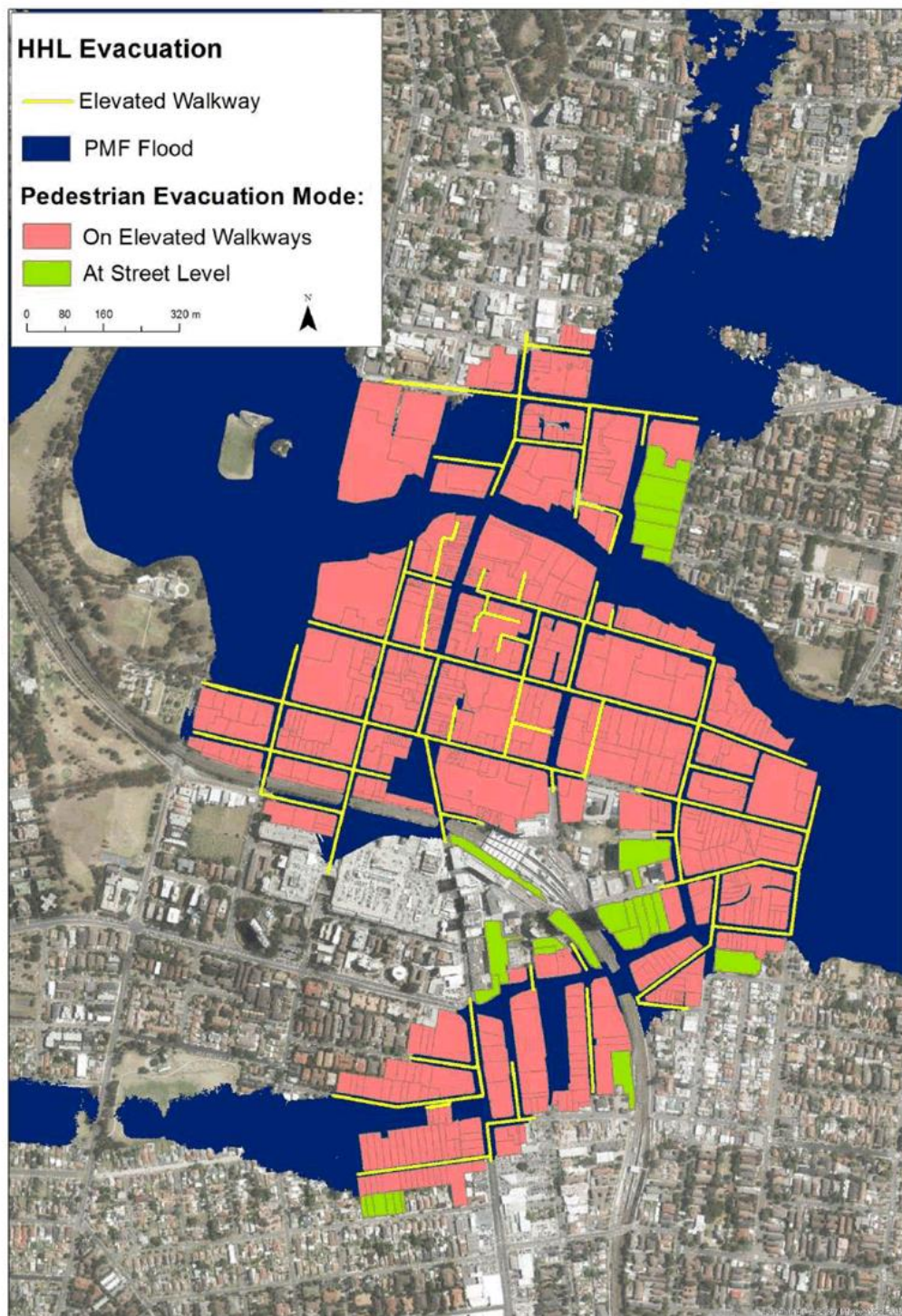


Figure 10: Extent of elevated walkways catering up to the PMF.



### c) Pedestrian Evacuation Precincts

As part of the pedestrian evacuation modelling exercise, a new set of evacuation precincts was generated. Pedestrian evacuation precincts differ from vehicular evacuation precincts because:

- Pedestrians would evacuate to different locations; and
- Pedestrians would not need to abide by one-way roads.

Evacuation routes were identified for each building as the shortest "flood-free" path to the designated pedestrian refuge. For most buildings (i.e. those that are isolated by floodwaters), a flood-free path to safety could only be obtained using the elevated walkways. However, for a small number of buildings, pedestrian evacuation could be achieved without making use of the elevated walkways. This is the case of buildings that would be affected by the peak of the flood, but that would still maintain flood-free access to one of the designated pedestrian refuges. In this case, the evacuation route is entirely at street level.

Buildings were then grouped into evacuation precincts based on the narrower "bottleneck" along their designated evacuation route. Buildings sharing the same bottleneck were assigned to the same pedestrian evacuation precinct (Assumption 9 – Appendix A).

A bottleneck is defined as the point along the evacuation route with the slowest evacuation speed. Evacuation speed is inversely proportional to density of evacuees, which in turns depends on the number of evacuees and the width of the evacuation route.

For elevated walkways, which have all the same width of 2.5m, the bottleneck was identified at the walkway's exit point, where the number of evacuees would be a maximum.

Similarly, for street-level evacuation, the bottleneck was identified along the last road before reaching the evacuation refuge.

Pedestrian evacuation precincts are shown in Figure 11, Figure 12 and Figure 13. Precincts identified by the acronym SL (i.e. Street Level)

would be able to complete the evacuation remaining at street level, while the remainder would need to make use of the elevated walkways.

### d) Pedestrian Evacuation Model

The model used to calculate evacuation time is based on literature findings (Seyfried et al., 2005) regarding the relationship between pedestrian walking speed and density.

The time required for a group of people to walk along a road from point A to point B depends on the walking speed, the distance between A and B, the pedestrian numbers and the path's width.

The time required to clear all pedestrians from an elevated walkway was obtained as:

Walkway Clearance Time (WCT) = (number of pedestrians) / [(walking speed) x (effective width at bottleneck) x (pedestrian density)]

It was then assumed that pedestrians would be able to move at a speed of at least 700 metres per hour, with a density of up to two people per square metre. While elevated walkways have a fixed width of 2.5m, it was conservatively assumed that only 2m of width would be effectively used.

Where the calculated WCT resulted in a shorter time than that which a single person would take to walk the same distance at a speed of 2km/h, the latter figure was used as WCT.

The total pedestrian evacuation time for each precinct was then obtained as:

Precinct Evacuation Time = WAF + WLF + WCT

Where:

WAF = Warning Acceptance Factor (=1hr)

WLF = Warning Lag Factor (=1hr)

Finally, for each scenario, the total evacuation time was obtained as the maximum of all Precincts' Evacuation Times.

The total number of pedestrians to be evacuated in each HHL scenario is shown in Table 3

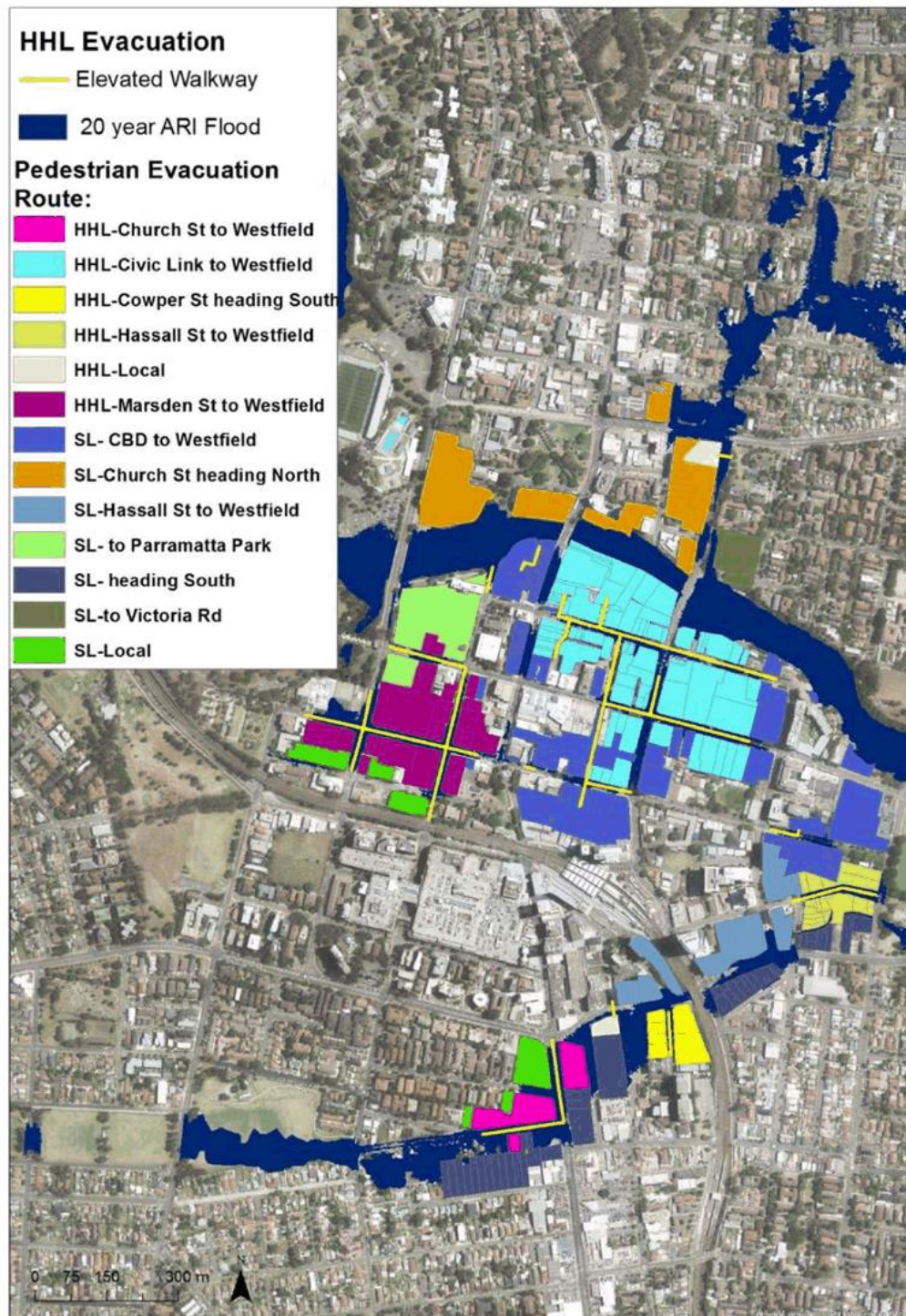


Figure 11: Pedestrian evacuation precincts evacuation routes for buildings affected by the 20 year ARI event.



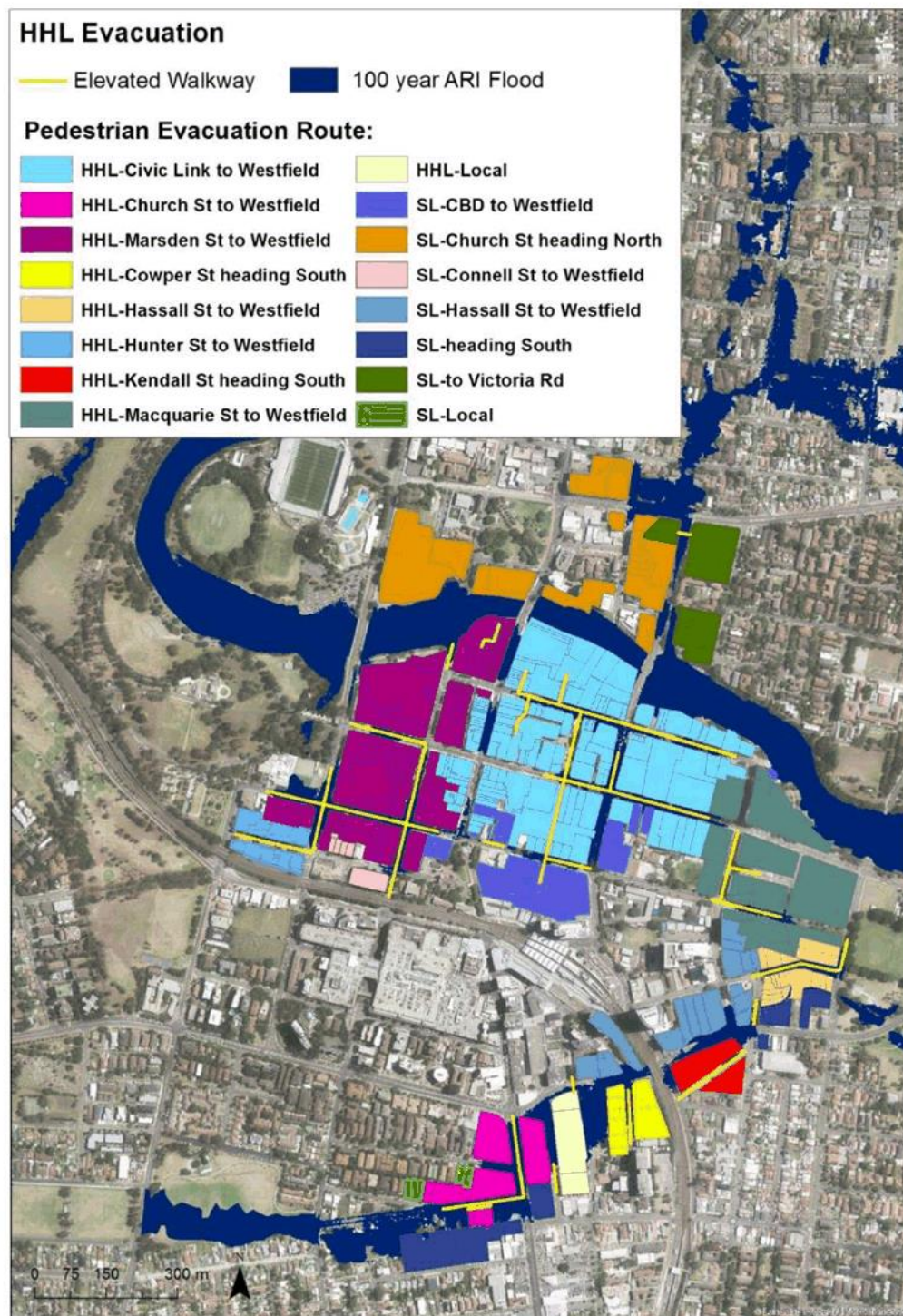


Figure 12: Pedestrian evacuation precincts evacuation routes for buildings affected by the 100 year ARI event



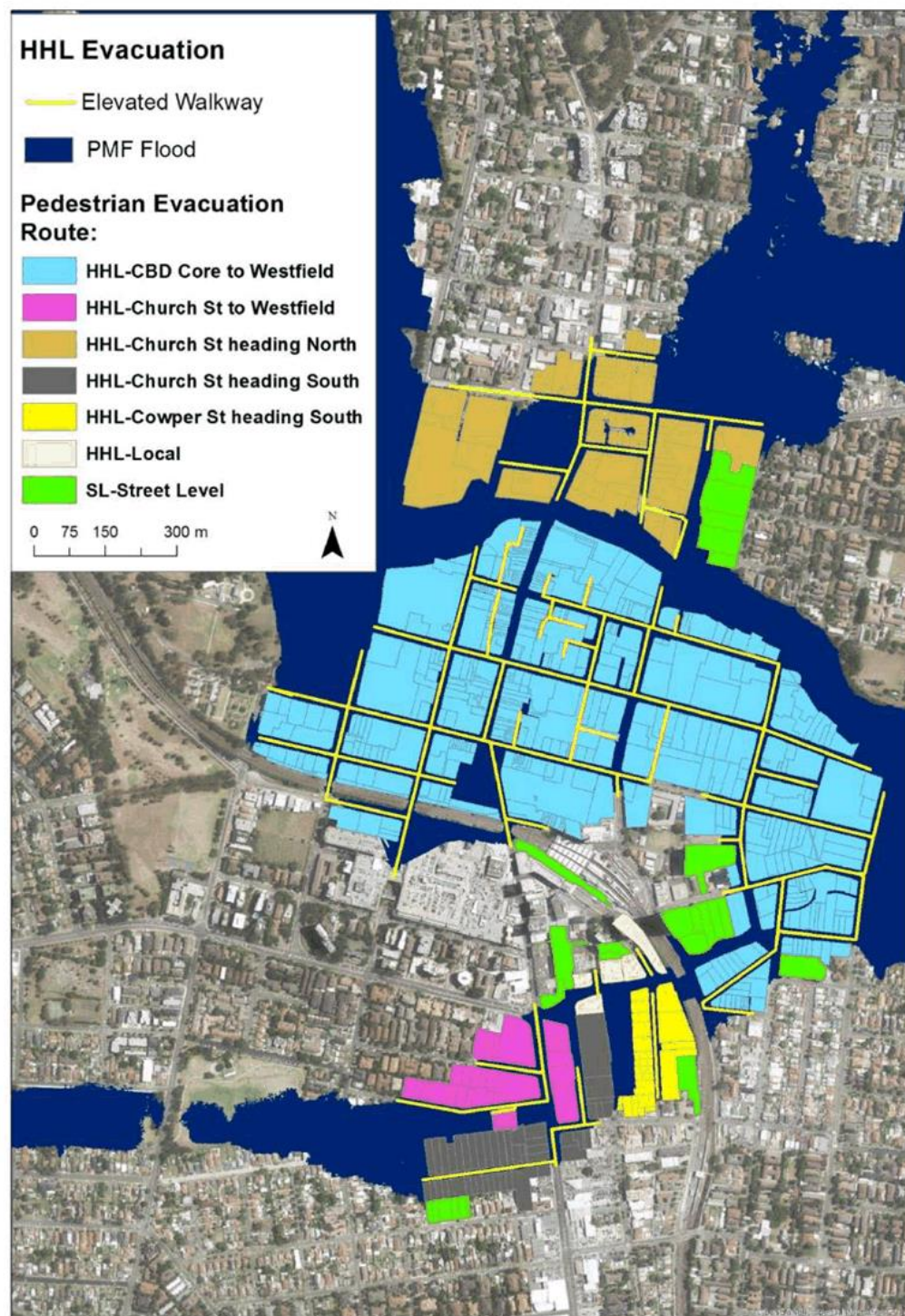


Figure 13: Pedestrian evacuation precincts evacuation routes for buildings affected by the PMF



Table 3: Pedestrians to be evacuated in HHL scenarios

Evacuation Scenario	Total Number of Pedestrians	Pedestrians on Elevated Walkways	Pedestrians at Street Level
2016 + 20yr + Midday	49,147	22,662	26,485
2016 + 100yr + Midday	53,376	44,093	9,283
2016 + PMF + Midday	73,646	68,341	5,305
2036 + 20yr + Midday	92,137	45,744	46,393
2036 + 100yr + Midday	99,324	85,096	14,228
2036 + PMF + Midday	130,245	123,524	6,721
2056 + 20yr + Midday	115,089	60,941	54,148
2056 + 100yr + Midday	123,865	110,070	13,795
2056 + PMF + Midday	167,821	158,733	9,088



### 3 RESULTS

Table 4 shows the total evacuation time obtained under the assumptions described in Section 2, for each of the selected scenarios. Figure 14 and Figure 15 provide a comparison

of evacuation times across different years and flood probabilities, using the worst case scenario in terms of time of the day.

Evacuation times for each precinct are presented in detail in Appendix B.

Table 4: Total evacuation time for each scenario

Scenario number	Code	Total Evacuation Time (hrs)
1	2016_20yr_Midday_HSL	8.1
2	2016_20yr_Midday_HHL	4.5
3	2016_100yr_Midday_HSL	9
4	2016_100yr_Midday_HHL	5.2
5	2016_PMF_Midday_HSL	10.7
6	2016_PMF_Midday_HHL	4.4
7	2016_PMF_Midday_Mixed	5.6
8	2016_PMF_AllCars_HSL	11.8
9	2036_20yr_Midday_HSL	8.7
10	2036_20yr_Midday_HHL	7.3
11	2036_100yr_Midday_HSL	9.4
12	2036_100yr_Midday_HHL	8.9
13	2036_PMF_Midday_HSL	10.8
14	2036_PMF_Midday_HHL	6.8
15	2056_20yr_Midday_HSL	8.9
16	2056_20yr_Midnight_HSL	7.4
17	2056_20yr_Midday_HHL	9.1
18	2056_100yr_Midday_HSL	9.6
19	2056_100yr_Midnight_HSL	8.9
20	2056_100yr_Midday_HHL	11.2
21	2056_PMF_Midnight_HSL	9.7
22	2056_PMF_Midday_HHL	7.9
23	2056_PMF_Midday_Mixed	9.1
24	2056_PMF_Midday_HSL	11

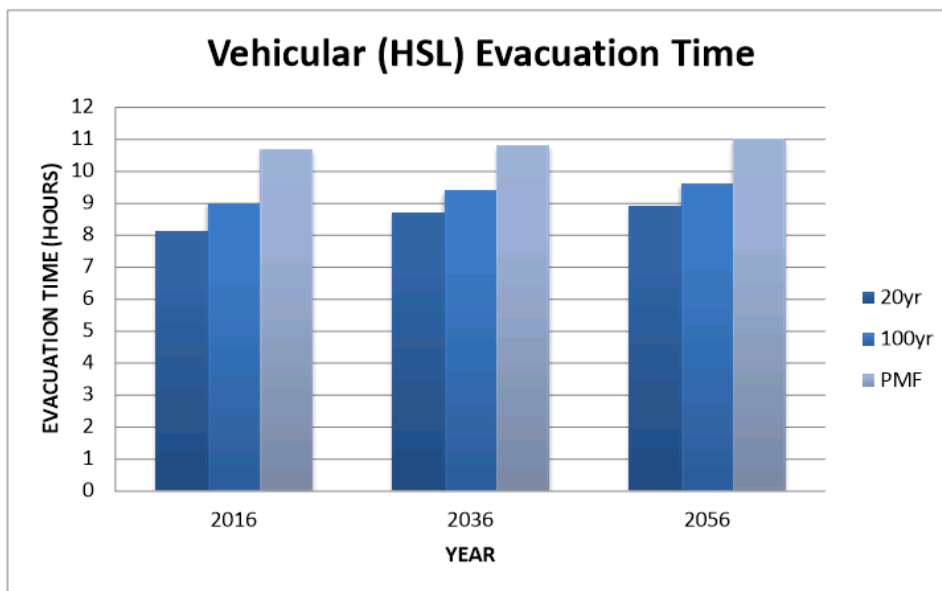


Figure 14: Comparison of vehicular evacuation times obtained for different years and flood probabilities and worst case in terms of time of the day.

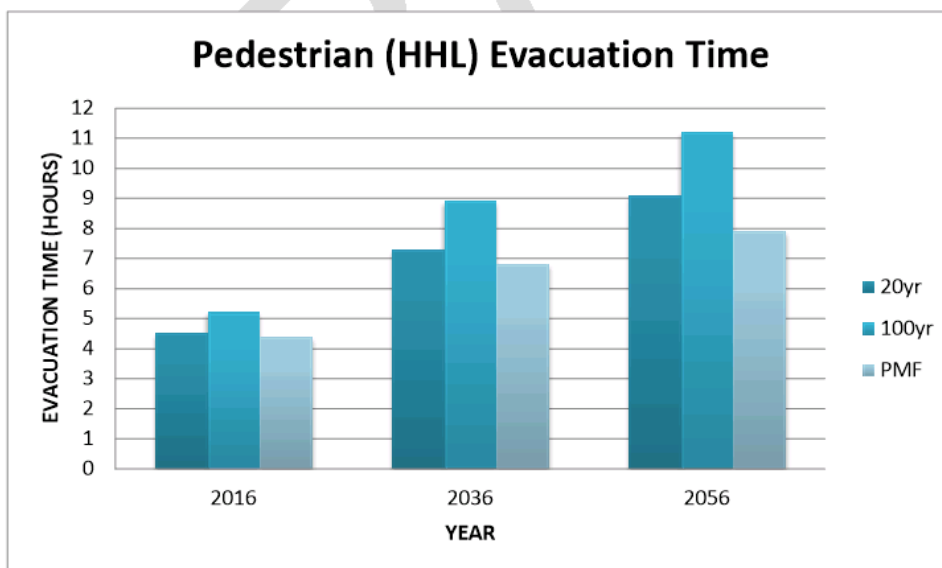


Figure 15: Comparison of pedestrian evacuation times for different years and flood probabilities and worst case in terms of time of the day

## 4 DISCUSSION

### 4.1 VEHICULAR EVACUATION (HSL)

#### 4.1.1 Evacuation Time

Results show that, among all scenarios, vehicular evacuation time ranges between a minimum of 8 and a maximum of 11 hours. In all cases, the final evacuation time is driven by the precinct evacuating to the Great Western Highway, which includes the CBD core and, as such, contains the largest number of vehicles.

As expected, evacuation time increases consistently in future scenarios, although with relatively small increments (Figure 14). For example, the average increment from 2016 to 2036 is +4.2%, and from 2016 to 2056 the increment is +6.4%. This is due to the proposed new planning controls regulating the number of commercial and residential car spaces for new development and represents the best case scenario.

While existing controls, which are used in the 2016 scenario, require one commercial car space for every 100m<sup>2</sup> of effective commercial Floor Surface Area (FSA), new controls will allow only one commercial car space for every 50 m<sup>2</sup> of total site area. For mixed-use developments having both residential and commercial components, the new controls for commercial car parking were further adjusted by using the proportion of the commercial floor space to the total floor space of the development. The most obvious consequence of this is that multi-storey commercial buildings will undergo a significant reduction of commercial car spaces, because their site area is likely to be smaller than their commercial FSA.

However, this reduction is balanced out by the overall increase of commercial site area across the CBD. The result is a slight increase of the number of commercial car spaces from 2016 to 2056, which is reflected in the vehicular evacuation time's trend. Another consequence of the new controls on commercial car spaces is that the number of pedestrians in future

scenarios will increase, which is accounted for in pedestrian evacuation scenarios.

Similarly to the increment by year, vehicular evacuation time is directly proportional to flood extent. In this case, results show an average increment of +9% from the 20 year ARI to the 100 year ARI event, and +26% from the 20year ARI event to the PMF.

In all scenarios, smaller evacuation precincts, located around the CBD core have evacuation times significantly shorter, ranging between 3 and 5 hours.

While all scenarios considered here are either based on a "midday" or "midnight" evacuation (where only a part of the available car spaces would evacuate), in Scenario 8 all the available car spaces in the CBD are assumed to evacuate at the same time. This scenario was only assessed in existing conditions (i.e. year 2016) and during a PMF event, with the intent of giving a sense of the theoretical upper limit of the evacuation time, which would be just under 12 hours.

#### 4.1.2 Challenges of Vehicular Evacuation

There are several challenges associated with vehicular evacuation of Parramatta CBD:

##### a) Flood Timing

As discussed in Section 1.3.2, Parramatta CBD is affected by flash flooding. In the PMF, for example, floodwaters would reach the peak level after about 5 hours from the beginning of the rainfall, while local flooding would start affecting the road network almost immediately.

The flood warning system developed by the City of Parramatta Council is likely to be able to provide about two hours' notice of predicted flood levels being reached.

Figure 16 uses coloured arrows to show at what point on the PMF hydrograph the NSW SES would know that a given flood level is going to be reached. For instance, the NSW SES would know that a PMF is going to eventuate after about 3.5 hours from the beginning of the rainfall (this is indicated by the blue arrow in Figure 16). At that point, floodwaters would have already reached the

100 year level, most roads would be cut and vehicular evacuation from the CBD core would be impossible.

Similarly, smaller events such as the 20 year ARI and the 100 year ARI could be predicted no earlier than one hour after the beginning of the rainfall. Even though there are no flood model results for events smaller than the 20 year ARI, it is likely that at that point some degree of local flooding would have already occurred, preventing vehicular evacuation of part of the CBD.

In addition to this, even if vehicular evacuation could begin before streets are cut by local flooding, the number of cars to be directed to Great Western Highway would result in an evacuation time comparable to the flood duration, under any of the scenarios considered here.

#### b) Evacuation Delays

The willingness for people to evacuate by vehicle will be influenced by many factors including why they are in the building, when they were otherwise intending to leave, and whether they were travelling in the vehicle with others.

Generally, those who are visitors or workers are likely to evacuate promptly, particularly if they intended to leave soon. Those who are residents are more likely to delay evacuation or refuse to evacuate altogether if they consider their dwelling to be a safe refuge above floodwaters.

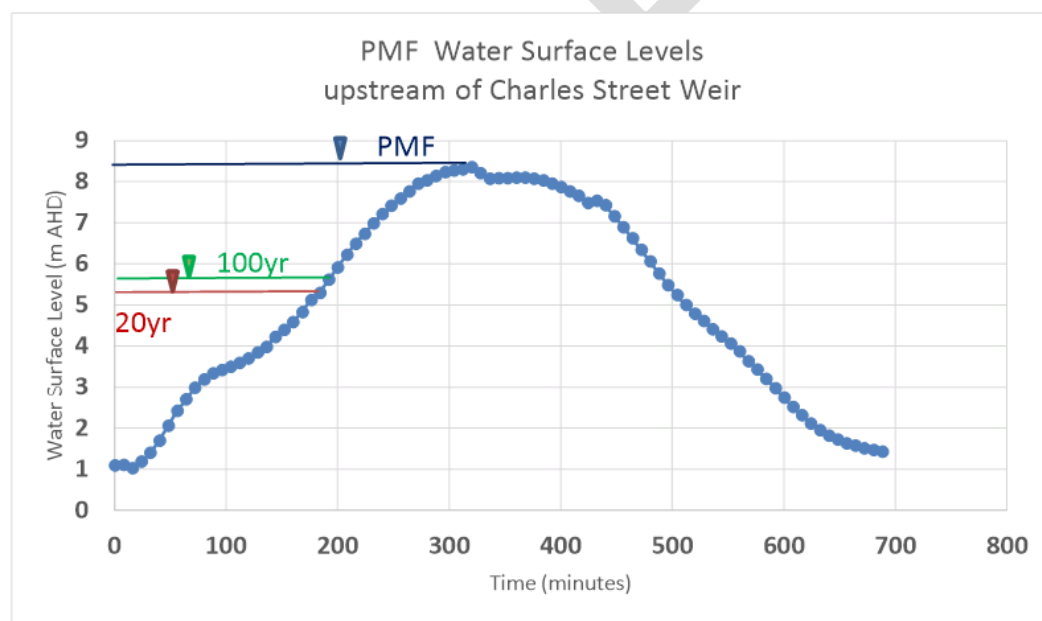


Figure 16: Flood duration and flood warning lead time

#### c) Regional Road Blockages

Even if evacuation could be successfully completed before roads within the CBD are cut, the extent of the regional flooding (i.e. outside the CBD) would be such that it would be difficult – if not impossible – for the large

majority of vehicles to travel long distances before they reach a point on their evacuation route which is cut by flooding (Figure 4). For example, all cars evacuating to the Great Western Highway are likely to be isolated in the area between the Finlayson's Creek (west), Parramatta River (north), Clay Cliff



Creek (east) and the Motorway (south). Similarly, cars heading south on Church Street or Harris Street would most likely have their route cut by A'Becketts Creek.

#### d) Background Traffic

The evacuation modelling assumes that there is no other traffic on the roads when the evacuation order is given (Assumption 11 – Appendix A). This may be a reasonable assumption if the evacuation is called in the middle of the night but would not be the case during the day. On most weekdays there are considerable traffic delays during morning and afternoon peaks in Parramatta CBD and it can take 30 minutes to access the Great Western Highway or Church Street from some parts of the CBD in the evening peak in the absence of any flooding. If all vehicles are trying to leave the CBD simultaneously there is a risk of gridlocked streets as they try and merge with regional through traffic on the main roads which evacuation traffic will be directed to.

#### e) Traffic Queues

If cars evacuate from buildings but encounter roads blocked by regional flooding or regional traffic, then traffic will queue back into the CBD and may even prevent vehicles from leaving buildings. For example, there is only sufficient space on the Great Western Highway evacuation routes for about 1,150 cars to queue between the CBD and Finlayson Creek but there are up to 12,677 vehicles which would need to evacuate in such an event. While vehicles could go into side streets to queue above the reach of floodwaters and allow others to be evacuated, most people would be reluctant to leave their place in the queue.

#### f) Returning traffic

In a PM peak there are likely to be many residents returning home by car and this returning traffic will need to be managed to ensure it does not enter the evacuation zone. It is unlikely that there will be sufficient emergency services resources to control this.

## 4.2 PEDESTRIAN EVACUATION (HHL)

### 4.2.1 Evacuation Time

Results show that pedestrian evacuation using elevated walkways (HHL) is generally more efficient than vehicular evacuation, particularly in existing conditions (year 2016). The only scenario in which vehicular evacuation would be faster is Scenario 20 (i.e. 2056\_100yr\_Midday\_HHL).

Interestingly, the shortest evacuation time is always achieved in the PMF. The reason for this is that the PMF would require a larger network of elevated walkways (because the flood extent is larger), which would result in the CBD evacuees being distributed across a greater number of egress points. For example, in the PMF there would be eight egress points for evacuees heading to Westfield, while in the 20 year and 100 year ARI events there would be only 4 and 5 respectively.

It should be noted that the extent of the elevated walkways in each scenario was minimised to contain infrastructure costs and other adverse impacts (Assumption 12 – Appendix 2), however shorter evacuation times in smaller flood events could be achieved by extending the network to increase the number of egress points.

### 4.2.2 Challenges of Pedestrian Evacuation

Pedestrian evacuation using elevated walkways (HHL) would allow late evacuation from- access to- any flood-affected building. However, the following challenges/downsides need to be taken into consideration:

- **Cost:** Infrastructure cost would be significant and ranging from \$94.5 to \$324 million. A detailed breakdown of costs is provided in Appendix D.
- **Visual impact / overshadowing:** the elevated walkways would cause major visual impact on the urban landscape, particularly on heritage-listed buildings. The walkways would also increase the shadowing effect on





streets and lower levels of buildings. (Appendix C);

- **Impact on street trees:** because most walkways would be built above the footpath and/or parking lane at a height of 4.5m, any trees located along the walkway's path may need to be removed and replaced with low-level shrubs (Appendix C);
- **Compatibility with building levels:** in events larger than the 20 year ARI, the walkways would need to be directly accessible from the upper levels of each building. This would be difficult to achieve in practice, because floor levels vary between different buildings (Appendix C);
- **Limited road access for large vehicles:** where walkways traverse a road, or a crossroad, large vehicles which are taller than 4.5m (e.g. construction vehicles) would not be able to enter;
- **Evacuation Logistics:** all pedestrian evacuation scenarios were simulated under the assumption that people in buildings that are exposed to the flooding, but whose pedestrian evacuation routes are not cut by the flooding, would be able to evacuate at street level. However, this assumption implies that pedestrians would know if they are supposed to use the elevated walkways or not, which poses a challenge in terms of warning messaging. However, we note that this would only be a problem if the elevated walkways were built to cater for floods up to the 20 year ARI event, because only in this case would the walkways be accessible by anyone at street level;
- **Flood Duration:** pedestrian evacuation times range between 4 to 5 hours (in 2016) and 8 to 11 hours (in 2056). If the evacuation order is issued a few hours after the beginning of the rainfall, the evacuation process may finish after floodwaters have already receded.

- **Security:** Providing an extensive network of walkways that will not be used on a daily basis, will potentially create issues with informal use and security, and is an inefficient use of land within the CBD.

- **Road Impacts:** Providing ramps to access the walkway will impact on road layouts within the CBD.

In addition to the aforementioned challenges which are specific to using elevated walkways for pedestrian evacuation the following challenges apply to pedestrian evacuation generally:

- Those who arrived by light rail (when it is built) are unlikely to be able to leave by light rail because water across the tracks would stop its operation, many who arrived by bus will not be able to leave by bus because many bus routes will be cut by flooding, those who arrived by train may not be able to leave by train if flooding elsewhere or the inclement weather generally has disrupted rail services. All of these people may be reluctant to leave their buildings if they have no means of leaving Parramatta;
- People will be reluctant to leave a dry building to walk through torrential rain to shelter in another dry building, particularly if they perceive that their building provides shelter above the reach of floodwaters (whether that is true or not);
- Residents in particular have demonstrated an unwillingness to evacuate when orders have been given to evacuate in floods throughout Australia in recent years so it may be especially difficult to get people to leave an elevated dwelling in a high rise building on foot in torrential rain.

## 4.3 MIXED EVACUATION

### 4.3.1 Evacuation Time

Scenarios 7 and 23 incorporate mixed evacuation types, in which it is assumed that local flooding is already occurring (up to the extent of the 20 year ARI event) at the time evacuation begins, but that all buildings which could be affected by the PMF evacuate. Given that the flood warning system developed for Parramatta CBD will provide a relatively short lead time (i.e. two hours), these scenarios represent an attempt to simulate a realistic situation.

Buildings that are not isolated by events up to the 20 year ARI are assumed to evacuate by vehicle (Figure 17). These are, for the most part, located in the CBD's peripheral zones, where local flooding is a lesser issue compared to the CBD core. People in buildings from which vehicular evacuation is not possible because of local flooding in events up to the 20 year ARI are assumed to evacuate on foot.

Some of these people could complete the evacuation by remaining at street level, because even if their vehicular evacuation route is cut by local flooding, their pedestrian route is not. The remainder would need to use elevated walkways (Figure 18). Pedestrian evacuation time for these scenarios is determined by the proportion of pedestrians evacuating at high-level because the walkways are a narrower bottleneck than footpaths.

Because local flooding is assumed to have reached an extent up to the peak of the 20 year ARI event, elevated walkways are here assumed to cater up to the extent of the 20 year ARI flood.

Results of the mixed evacuation modelling show that:

- The total evacuation time would be 5.6 hours (Scenario 7) and 9.1 hours (Scenario 23);
- In both Scenario 7 and 23, the total evacuation time would be determined by vehicular evacuation to the Great Western Highway, which would take longer than pedestrian evacuation within the CBD core;

- Total evacuation times would be lower than the corresponding PMF scenarios in which evacuation is entirely achieved by car (i.e. Scenarios 5 and 24), but higher than the PMF scenarios in which evacuation is entirely done on foot (i.e. Scenarios 6 and 22).

### 4.3.2 Challenges of Mixed Evacuation

A large flood event with the same rate of rise as the PMF would reach and exceed the 20 year ARI extent in about 3 hours from the beginning of the rain. Because in scenarios 7 and 23 the elevated walkways would only cater up to the 20 year ARI flood extent, all evacuees would need to exit the walkways within 3 hours from the beginning of the rain. However, results of the pedestrian evacuation modelling for the CBD core (i.e. 4.5 hours for Scenario 7 and 9.1 hours Scenario 23) show that this would not be possible, unless the evacuation begins significantly earlier than the rainfall.

Extending the elevated walkways to cover the 100 year ARI flood would buy pedestrians some time (i.e. about 30 minutes), but would still not be enough for them to exit the walkways before the 100 year ARI extent is exceeded in a flood rapidly rising to a level beyond the 100 year ARI peak.

In fact, the only configuration for horizontal evacuation that would guarantee safe pedestrian evacuation of the CBD core in any event in which floodwaters rise as fast as in the PMF would be that in which the elevated walkways network covers the full extent of the flood event being considered. For example, if this event is the PMF, then the CBD core would need to be equipped with an elevated walkways network catering up to the PMF. However, in this case, a fully pedestrian evacuation like the one simulated in Scenarios 6 and 22 would be faster and more practical than a mixed type evacuation, and infrastructure cost would be only marginally higher.



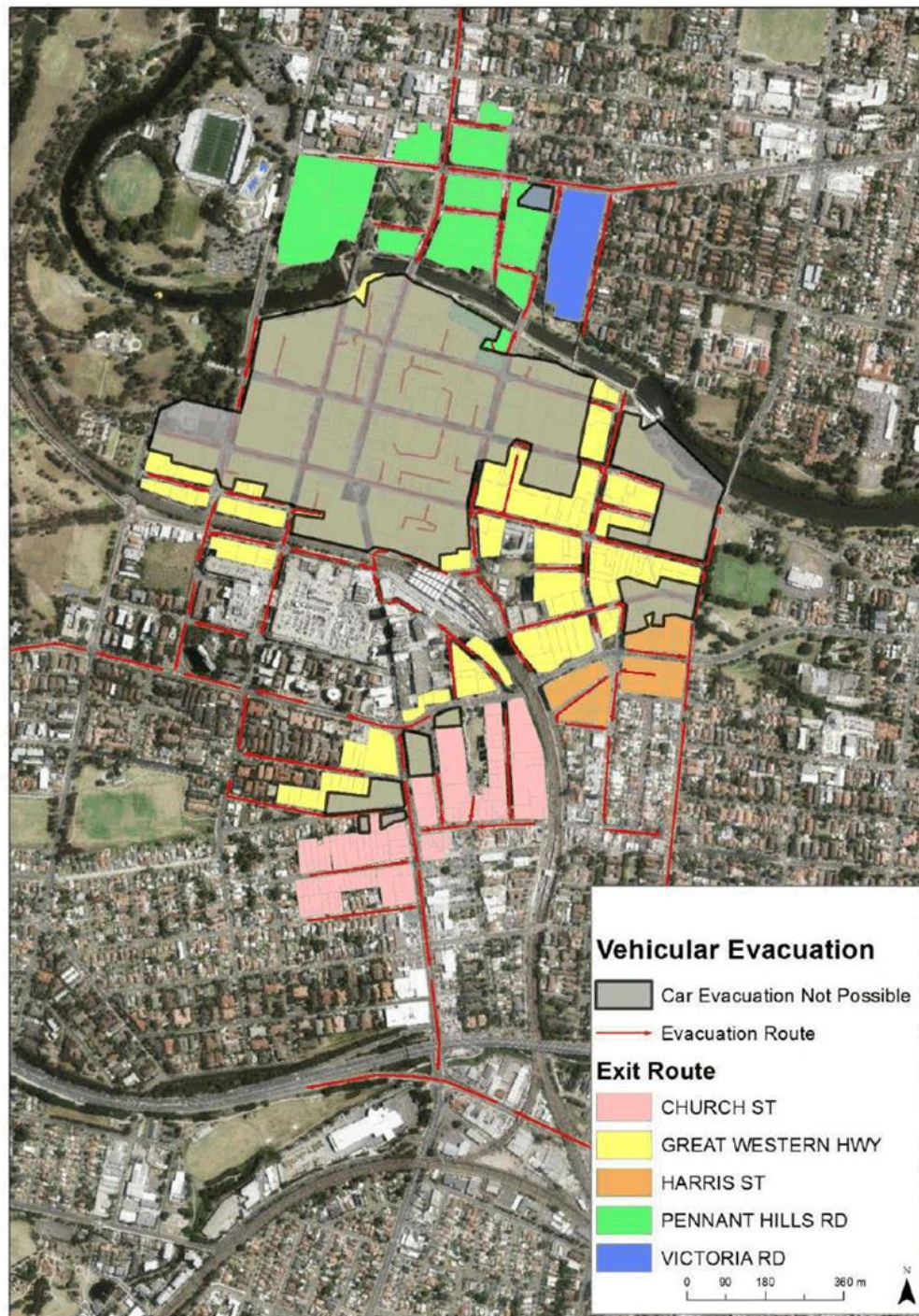


Figure 17: Mixed evacuation scenarios 7 and 23. People in greyed-out lots would not be able to evacuate by car if there was already local flooding up to the 20 year ARI event when the evacuation begins

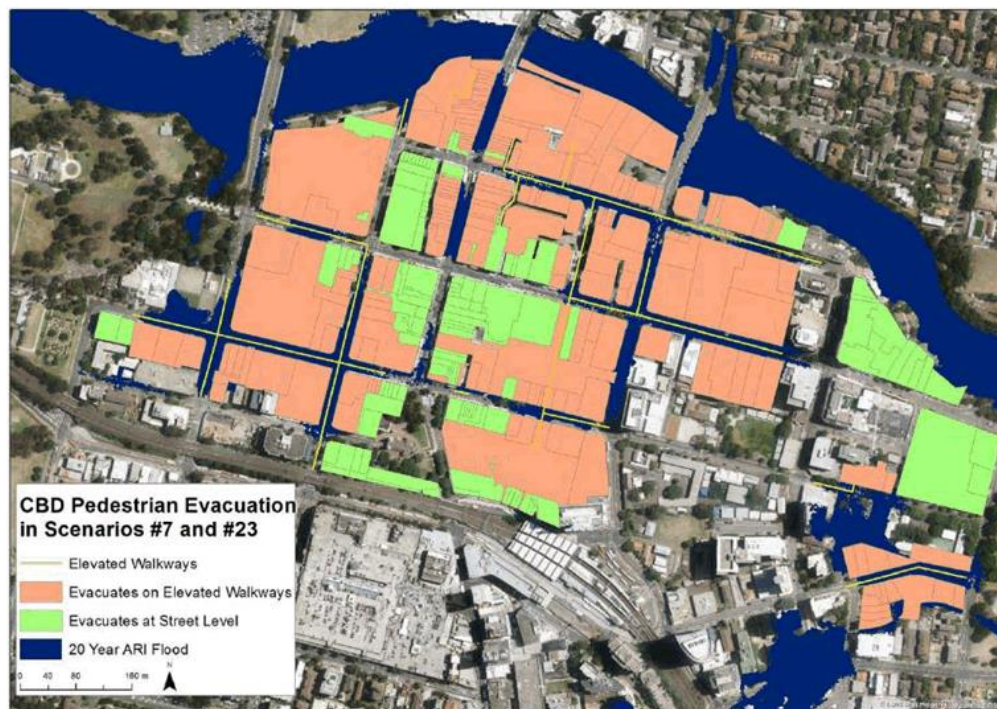


Figure 18: Pedestrian evacuation of the CBD in Scenarios 7 and 23.



## 4.4 SHELTER IN PLACE (SIP)

### 4.4.1 Risks of SIP

Shelter in Place (SIP), or vertical evacuation, is often considered a viable option in areas exposed to flash flooding, where there is not enough time for the population to evacuate safely. SIP as a possible flood emergency response strategy in Parramatta CBD is thoroughly discussed in Molino Stewart (2016). While SIP, where appropriate, is a policy requirement for new development, some existing sites may not be able to achieve this (e.g. heritage buildings). This issue is further discussed in Section 4.4.2.

The risks associated with SIP in Parramatta CBD could include:

- **No refuge above the floodwater:** the flooding reaches a peak higher than the highest accessible space in the building;
- **Structural failure:** the building used as a shelter cannot withstand the flood forces and may collapse;
- **Power supply:** the lack of power, which is likely to occur during a major flood, may make the SIP refuge unsafe or uncomfortable. People may decide to leave the building and walk through floodwaters;
- **Medical emergency:** evacuees taking shelter in place may require urgent medical assistance requiring hospital grade care, which would be difficult (and risky) to deliver because the building is isolated by floodwaters;
- **Fire emergencies:** building fires can be triggered during a flood by a short-circuit, or by human behaviour. For instance, evacuees taking shelter in place may use naked flames for improvised lighting or cooking. A building fire happening during a flood would be very difficult to manage, because the building could not be easily accessed by firefighters and it may not be safe to evacuate the building because it is surrounded by hazardous floodwaters;

- **Human behaviour:** evacuees taking shelter in place may decide to leave the building and walk through floodwaters for a number of reasons. For example, if the flood emergency occurs at the end of a working day (e.g. PM peak), workers may not like the idea of remaining in their offices. Similarly, evacuees may leave the building if they cannot communicate with their families, or if the refuge is not functional or safe enough.

Risks associated with SIP can be mitigated in a number of ways. These are summarised in Table 5. However it should be noted that SIP doesn't directly solve the issue of where to put people in the public domain during a flood. This needs to be addressed as part of the overall response strategy by providing access to appropriate buildings.

As part of the work undertaken by Molino Stewart to support the update of Parramatta Floodplain Risk Management Plans (Molino Stewart, 2016), a zoning of the CBD was proposed based on the degree of risks associated with SIP. For each zone, Molino Stewart (2016) generated a set of development controls to reduce these risks. The risk zoning proposed by Molino Stewart is shown in Figure 19 (in which zone 4 has the highest risk, while zone 1 has the lowest). In Figure 20, each lot was allocated to the corresponding risk zone. All lots within zone 1 and 2 have street frontage which is at or above the 100 year ARI flood level. Existing buildings might not have an access currently on that frontage but the development controls would require at least emergency access to these lots at or above the 100 year ARI flood level.

Table 6 shows the proposed development controls for each risk zone, while Table 7 shows how the number of people in each risk zone is expected to change from year 2016 to year 2056 as a consequence of the implementation of the CBD Strategy.

It is noted that the majority of buildings, and therefore people, are in zones 1 and 2. The areas with highest risk (zones 3 and 4) are principally those affected by flooding from Clay Cliff Creek rather than the Parramatta River.



Table 5: Example of mitigation measures for risks associated with SIP

SIP Risks	Examples of Risk Mitigation Measure	Suggested Mechanism for Implementation
Inadequate Refuge	Habitable space above the reach of the PMF is accessible to all occupants	LEP
Structural Failure	Buildings able to withstand PMF forces	LEP
Power Supply	Backup power supply available in SIP refuge	DCP
Medical Emergencies	Managed high level evacuation or access system	DCP & DA
Fire Emergencies	Switchboards that automatically shut down when electrical circuits are in contact with water	DCP & DA
	Fire suppression equipment as required for residential high rise buildings including sprinkler systems	DCP
	Backup power supply above reach of the PMF	DCP
Human Behaviour	Safe, functional and flood-free shelter	DCP & DA
	Managed high level evacuation or access system	

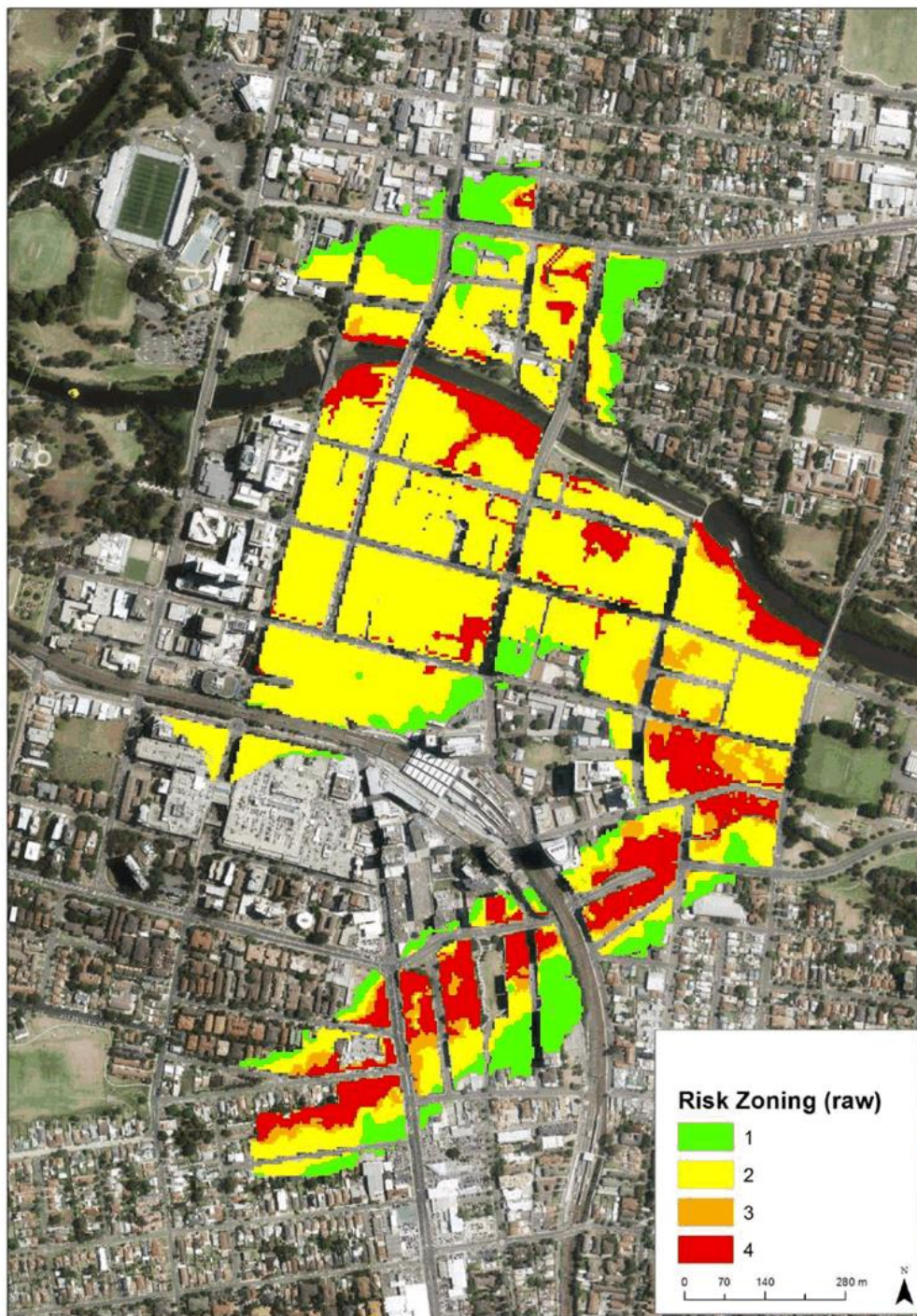


Figure 19: Risk Zoning (raw map) proposed by Molino Stewart (2016) to reduce risks of SIP through development controls. The western part of the study area is not zoned because not included in the scope of Molino Stewart (2016).





Figure 20: Risk Zoning (interpolated by lot) proposed by Molino Stewart (2016) to reduce risks of SIP through development controls. The western part of the study area is not zoned because it is not included in the scope of the Parramatta CBD Planning Proposal.



Table 6: Development controls to mitigate SIP risks proposed by Molino Stewart (2016)

Probability (AEP)	Existing Parramatta Development Control Plan 2011'		Recommended Amendments to the existing DCP	
	Existing Flood Risk Precinct	Evacuation requirements for residential and commercial development	Risk Zone	Suggested Occupant Response
< 1%	Low	3. Reliable access for pedestrians and vehicles is required from the site to an area of refuge above the PMF level, either on site (e.g. second storey) or off site (residential only)  4. Applicant is to demonstrate the development is consistent with any relevant flood evacuation strategy or similar plan	1	Safe to evacuate or shelter in place. No evacuation controls required.
			2	Safe to evacuate early or shelter in place above PMF in accordance with a flood emergency response plan for the building.
< 5%	Medium	3. Reliable access for pedestrians and vehicles is required from the site to an area of refuge above the PMF level, either on site (e.g. second storey) or off site  4. Applicant is to demonstrate the development is consistent with any relevant flood evacuation strategy or similar plan  6. Adequate flood warning is available to allow safe and orderly evacuation without increased reliance upon SES and other authorised emergency services personnel	3	Evacuate early or shelter in place above PMF in accordance with a flood emergency response plan for the building providing flood free access is available to an exit through an area above the 1% flood level.
> 5%	High	As for medium flood risk precinct but only if development qualifies as concessional development	4	Evacuate early or shelter in place above PMF in accordance with a flood emergency response plan for the building providing flood free access is available to an exit through an area above the 1% flood level.



Table 7: Number of people in each risk zone.

Zone	Year	Residents	Workers	Visitors
1	2016	4,545 (45%)	12,947 (37%)	11,778 (45%)
	2036	9,239 (28%)	23,275 (37%)	16,670 (37%)
	2056	15,143 (30%)	26,991 (33%)	19,574 (33%)
2	2016	4,658 (47%)	21,468 (61%)	13,471 (51%)
	2036	21,858 (67%)	39,073 (62%)	27,985 (62%)
	2056	32,486 (64%)	51,920 (63%)	37,652 (63%)
3	2016	402 (4%)	244 (1%)	371 (1%)
	2036	837 (3%)	385 (1%)	275 (1%)
	2056	1,623 (3%)	1,083 (1%)	786 (1%)
4	2016	405 (4%)	272 (1%)	625 (2%)
	2036	859 (3%)	397 (1%)	284 (1%)
	2056	1,322 (3%)	1,832 (2%)	1,328 (2%)



#### 4.4.2 Single-Storey Buildings

It should be noted that SIP is unsuitable in buildings that do not have a level above the PMF (e.g. single-storey buildings, or two storey buildings close to the river). All existing buildings less than 4.5m high are shown in Figure 21. These buildings are unlikely to be suitable for sheltering in place as they probably don't have a second storey and are too low to have direct access to an elevated walkway. This issue could be addressed as part of the CBD redevelopment, with single-storey buildings being redeveloped into multi storey buildings with appropriate features to manage the secondary risks of sheltering in place.

However, the problem remains for single-storey buildings that cannot be redeveloped, for example because they are heritage listed. For these buildings, a different flood response strategy needs to be put in place. These buildings are already at high risk from flooding, regardless of any future development of the CBD, because neither evacuation nor SIP are achievable.

An option for these buildings could be to Shelter In Place in neighbouring buildings that have a safe refuge above the PMF level (24h access to these buildings may need to be provided as part of the response strategy).

Figure 21 shows the location of heritage-listed buildings and buildings whose height is less than 4.5 metres. This shows that most of the single storey heritage listed buildings are in the risk zoning 1 or 2 which means they have access in the 1% AEP flood and some have flood free access. The two exceptions are a brick cottage near the corner of Wigram Street and Hassall Street which is in the Risk Zone 3 and a brick cottage in Lansdowne Street near the corner of Church Street which is in Risk Zone 4.

#### 4.4.3 Existing Buildings Unable to Withstand the Forces of the PMF

SIP is not an option for buildings that do not have a safe refuge above the PMF levels. This includes existing buildings whose structure is not able to withstand the forces of the PMF. For these buildings, redevelopment offers a chance to reduce flood risk. However, until redevelopment can be undertaken, an alternative safe refuge above the PMF should be identified, for example in neighbouring buildings (24 hour access to these buildings may need to be provided as part of the response strategy).

#### 4.4.4 Vulnerable Facilities

If the suggested SIP requirements are satisfied, vulnerable buildings such as hospitals, nursing homes, schools or childcare centres should put in place SIP emergency plans to ensure that all occupants are safely transferred to the refuge area before the peak of the flood is reached. The plan should also include measures to communicate with the families before, during and after the emergency to assure them that their loved ones are safe but also to discourage people trying to access the building through floodwaters.

Alternatively, some of these land uses may need to be prohibited where it is deemed any probability or duration of sheltering in place poses an unacceptable risk although this needs careful thought.

In the case of preschools it is possible to ensure that the children are not coming and going during a flood, but it is more difficult keeping parents from travelling through floodwaters to try and drop off or pick up children.

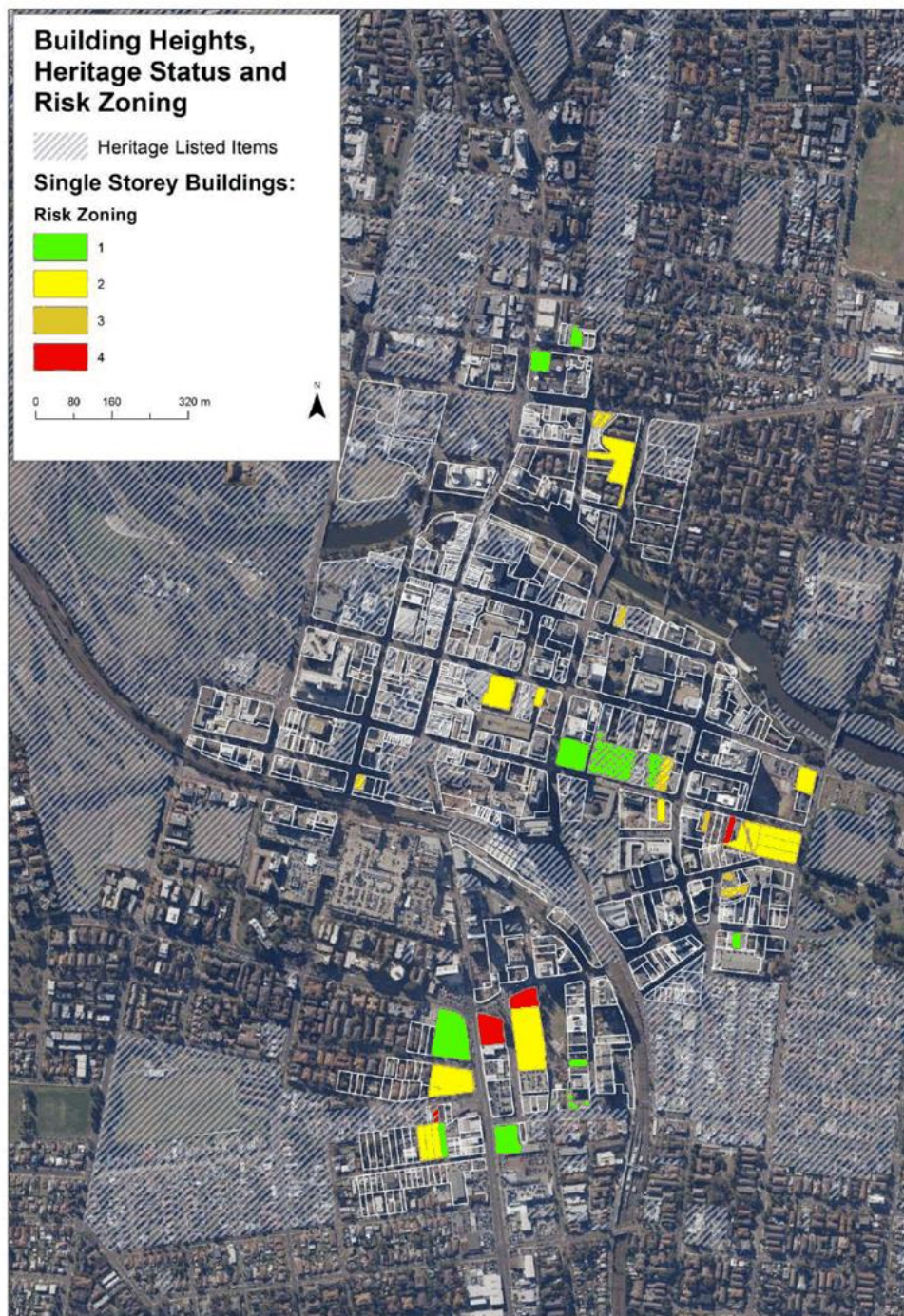


Figure 21: One-storey buildings and heritage listed buildings



#### 4.4.5 SIP to Manage Residual Risk of Horizontal High Level Evacuation

SIP could also be used to manage residual risk in Pedestrian Evacuation Scenarios (HHL). For example, if it was decided to build a network of elevated walkways to cater for flood events up to the 20 year ARI, SIP could be used as the backup emergency response strategy for rarer floods.

#### 4.4.6 Managed High-Level Evacuation/Access System

A substantial part of the risks of SIP, such as the risk of medical emergencies, could be addressed by implementing a "managed high-level evacuation or access system". This would entail the installation of a lightweight system of walkways with managed access to be used mainly by emergency responders. This option would also address a number of the key issues associated with HHL evacuation, namely:

- A suitable walkway width could be provided for emergency responder access, and evacuation of a limited number of people within the existing street pattern;
- Ramped access would not be required to be provided, as emergency personnel could evacuate individuals using specialist equipment/ stretchers where necessary;
- A lightweight single width (approx. 1m) walkway could be provided, potentially utilising existing buildings and awnings, significantly reducing overshadowing and visual impact on the street;
- The length of proposed walkways could potentially be reduced by terminating the route at designated multi-storey car parks within the CBD suitable for helicopter access/ evacuation;
- By providing a lightweight, less visually obtrusive and secure walkway system that is only accessible by emergency

responders, informal use of the walkways is minimised;

- Providing a lightweight route will enable the retention of more street trees;
- Providing a route that is managed by trained emergency responders enables temporary deployable structures, including bridges, to be utilised reducing the visual impact of the route and not permanently closing streets to high vehicles;
- Narrower and potentially shorter length of walkways, with no accessibility requirements, will keep construction and maintenance costs significantly lower.

Key issues for further investigation, should this option be progressed, include:

- Discussion of the suitability of the concept of a managed high level evacuation route with the NSW SES staff.
- Discussion of access requirements including walkway widths, steps, and ladders with the NSW SES.
- Discussion with Council and the NSW SES regarding ownership and maintenance of the system.
- Investigation of how building codes would apply to the proposal.
- More detailed design investigations of how the walkways would access buildings, the street, and be structurally supported.
- A visual impact study, once design parameters and the suitability of the proposal have been established demonstrating the effect of the proposals on views within the CBD.

## 5 SENSITIVITY TESTING

Since the original version of this report was prepared in 2017, there have been some changes in the study area which could potentially have some bearing on the results presented in the previous sections of this report.

This section describes those changes and provides an analysis of the extent to which these may affect the evacuation assessment results.

### 5.1 NEW WARNING SYSTEM

At the time of writing the original version of this report, in 2017, Council was in the process of developing a flood warning system for the Parramatta River. Since that time the system has been commissioned and used.

In Section 2.3 it was assumed that the warning system would be able to provide about two hours' notice. Council has since advised that two hours represents the maximum warning likely to be available in the extreme floods which would enter the CBD (C. Gooch pers comm).

It had also been assumed that the flood warnings would only be sent to the NSW SES and the NSW SES would then have to issue evacuation orders.

The Parramatta Floodsmart warning system, as eventually commissioned, not only sends flood warning messages to the NSW SES, but it also sends warning messages directly to members of the public who have subscribed to the service.

Floodsmart only issues flood warning information, not evacuation orders. Evacuation orders would still need to come from the NSW SES. Those who receive warnings directly from Floodsmart may choose to evacuate without receiving an order from the NSW SES. However, currently only 516 people have registered on Floodsmart which compares to the 30,000 flood affected properties across the entire catchment. Furthermore, many of the registrants are not in flood prone properties.

This means that, unless the number of Floodsmart's registrants increases significantly, it is unlikely to make a significant difference to the sequence of evacuation decisions and departures assumed in the original evacuation modelling.

### 5.2 DRAFT PLANNING PROPOSAL CHANGES

There have been some minor changes to the draft Parramatta CBD Planning Proposal within the areas affected by flooding.

#### 5.2.1 Zonings

The draft zonings in the Parramatta CBD Planning Proposal, as endorsed by Council in April 2016 for the purpose of seeking a Gateway determination, and the draft zonings which are now proposed (as of June 2019) are identical (Figure 22)

However, at the time that the original version of this evacuation assessment report was being prepared, consideration was being given to a slight variation to the proposed zonings along the southern end of Church Street. These interim zonings, which were the basis of the evacuation calculations, are shown in Figure 23.

The location with the changes are circled in both figures. There are two lots which are zoned partly mixed use and partly commercial whereas during the evacuation analyses they were considered to be completely mixed use.

For the same floor surface area (FSA), commercial office space would have about 1.5 to 1.8 as many people as residential space. However, there would be a decrease in the number of vehicles in the building.

In the case of vehicles evacuating from these premises, they would evacuate onto the Great Western Highway. This is the most congested evacuation route and determines the maximum evacuation time from the CBD. The area of zoning difference is so small compared to all of the areas evacuating onto the Great Western Highway that the decrease in vehicle numbers would not make a significant difference to the evacuation time.

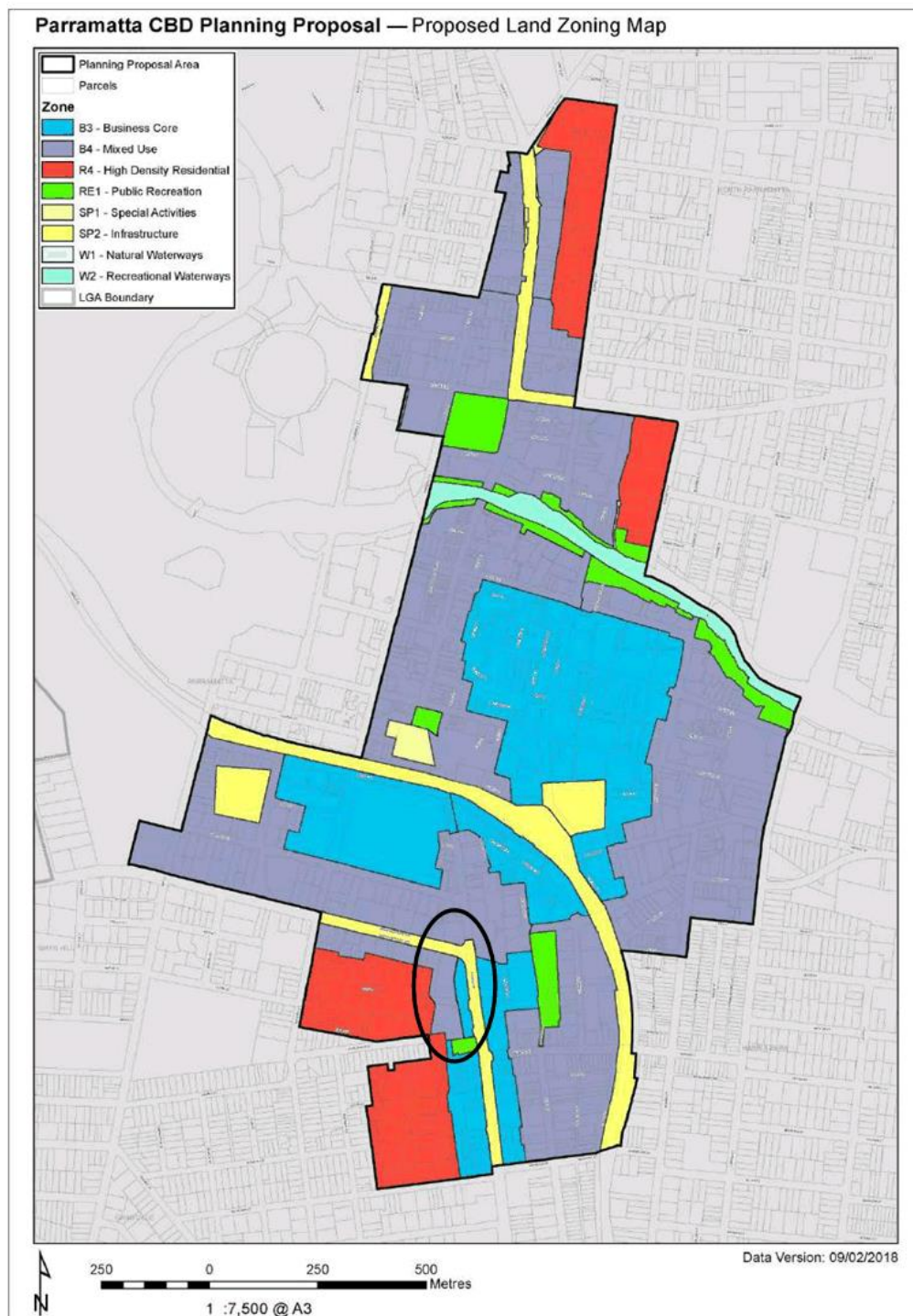


Figure 22: Current Draft Zonings



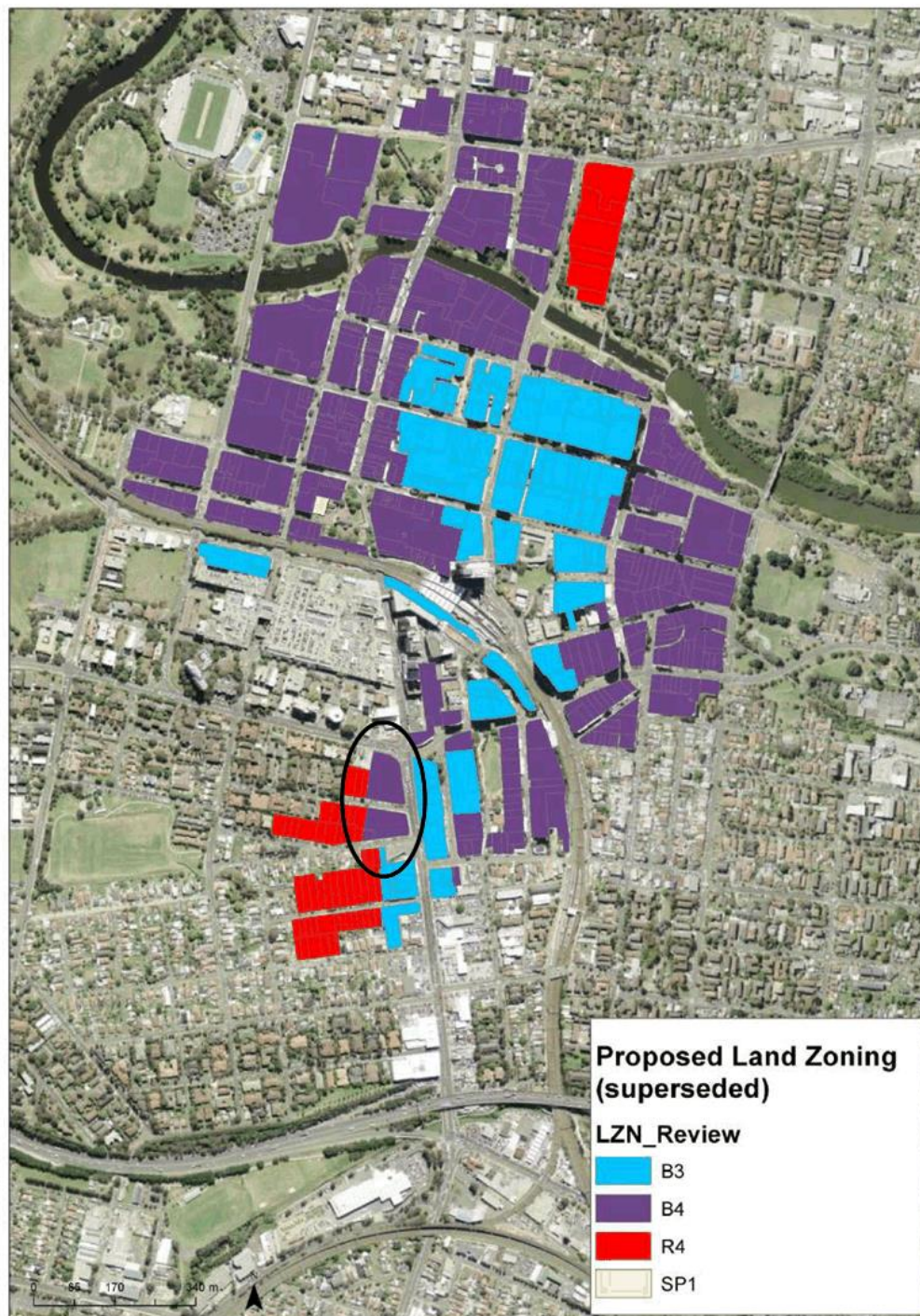


Figure 23: Interim Draft Zonings (used for evacuation calculations).

As far as pedestrian evacuation is concerned, these premises would evacuate north to seek refuge in a building of the scale and location of Westfield. There are only a few people evacuating from this area compared to those evacuating from the core of the CBD north of the railway line. It is the latter area which determines the minimum time for pedestrian evacuation. As such, a relatively small change in the number of people evacuating from Church Street will make no difference to the time needed to safely evacuate the whole of Parramatta CBD. It will have no impact on the cost of infrastructure because the same high level walkway will be required in this location irrespective of the scale of the development.

### 5.2.2 Floor Surface Area

There have been some substantial changes to floor space ratios (FSRs) and maximum building heights between the Parramatta CBD Planning Proposal as endorsed by Council in April 2016 and the current draft as at June 2019. These changes convert to changes in FSA, which underpinned the estimates of the number of vehicles and pedestrians who would need to evacuate in each future scenario. They have no impact on the Year 2016 evacuation estimates.

The FSRs and building heights which appeared in the April 2016 draft of the Planning Proposal were not the ones used to estimate FSAs and vehicle and pedestrian numbers for the evacuation analyses.

Firstly, all of the sites which had redevelopment approval or commencement since the draft planning proposal exhibition, were assigned actual FSAs in accordance with their planning approval or development approval on the assumption that these would not be redeveloped again within the next 40 years. For the residual properties the incentive FSRs were used because these represented the maximum development possible on each site.

Therefore to determine how changes to FSRs in the revised planning proposal affect the evacuation analyses, the redevelopable lots used in the evacuation analysis (Figure 24)

need to be compared with the current planning proposal incentive FSRs (Figure 25).

The following section discusses the changes and the impact they would have on the evacuation analyses. The locations of the changes are highlighted in Figure 24.

#### a) Cnr Villiers St and Victoria Rd

The site on this corner would evacuate north onto Pennant Hills Road and has had its Incentive FSR reduced from 6.0 to 4.8, which equates to fewer vehicles and pedestrians evacuating from this block if fully redeveloped in the future. This is a relatively small reduction in FSR for a site which is only a small part of the area evacuating along this route.

This route is not a constraint to the vehicle evacuation analysis and is only part of the PMF pedestrian evacuation analysis.

The small changes in FSR for a minor contributor to evacuation in this area would not make a significant difference to the results and conclusions.

#### b) Between Lamont St and the River

This block has had its Incentive FSR reduced from 6.0 to 5.2. It is one of many blocks which evacuate to Pennant Hills Road. As with the block on the corner of Villiers Street and Victoria Road, the small change in the FSR of a block which makes a small contribution to one of the smaller evacuation flows is not going to make a significant difference to the evacuation analyses.

#### c) Between Argus St and Harris St

This block was assumed to have an Incentive FSR of 7.2 in the evacuation analyses but had an Incentive FSR of 10.0 in the current draft as at June 2019. This block evacuates onto the Great Western Highway, although its vehicle evacuation routes get cut early in the flooding.

It is only a small contributor to the evacuation traffic onto the Great Western Highway. However, this is the route which has the most traffic and therefore this increase in FSR would only make vehicular evacuation harder to achieve.



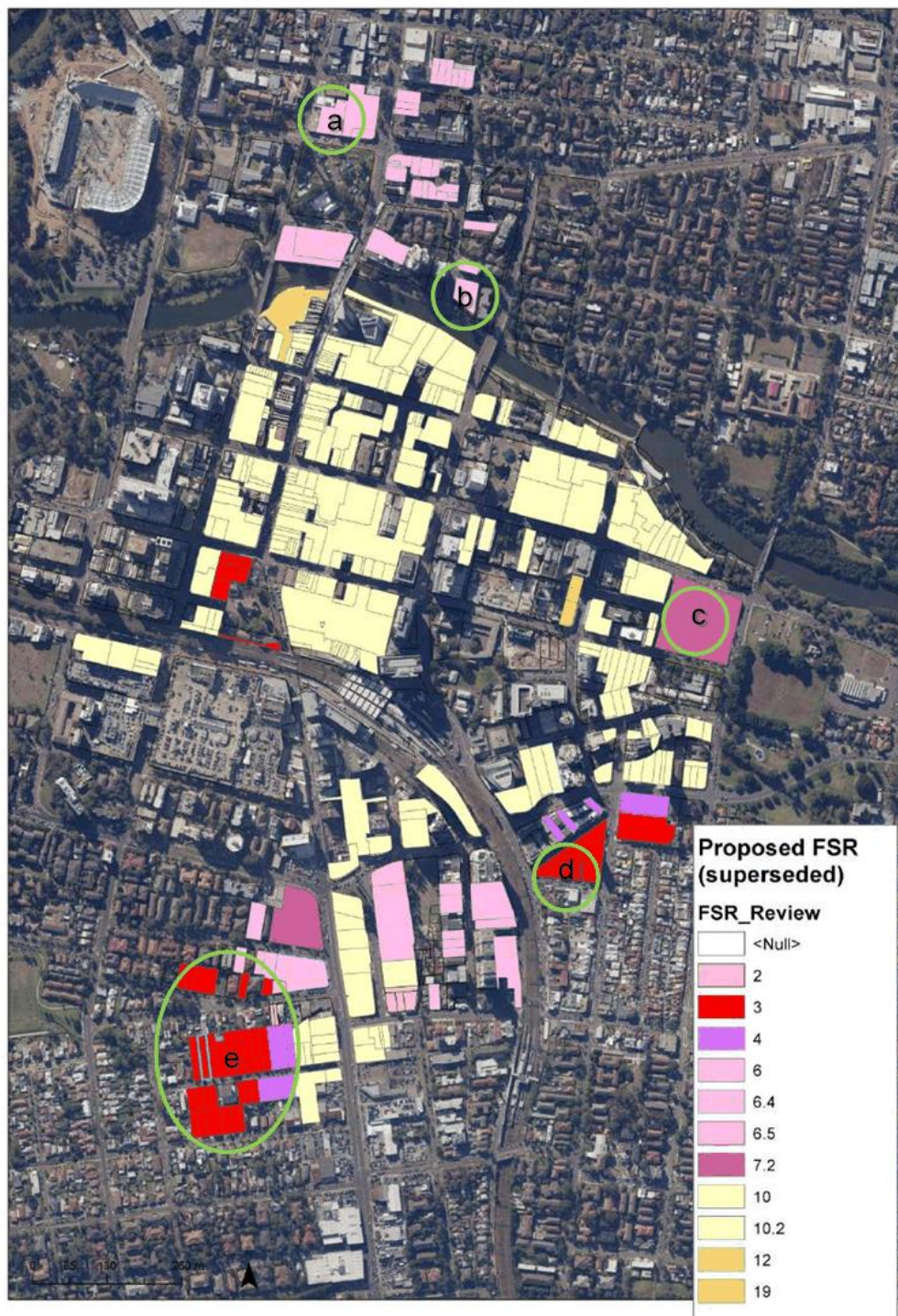


Figure 24: FSRs of Redevelopable Lots used in Evacuation Analyses



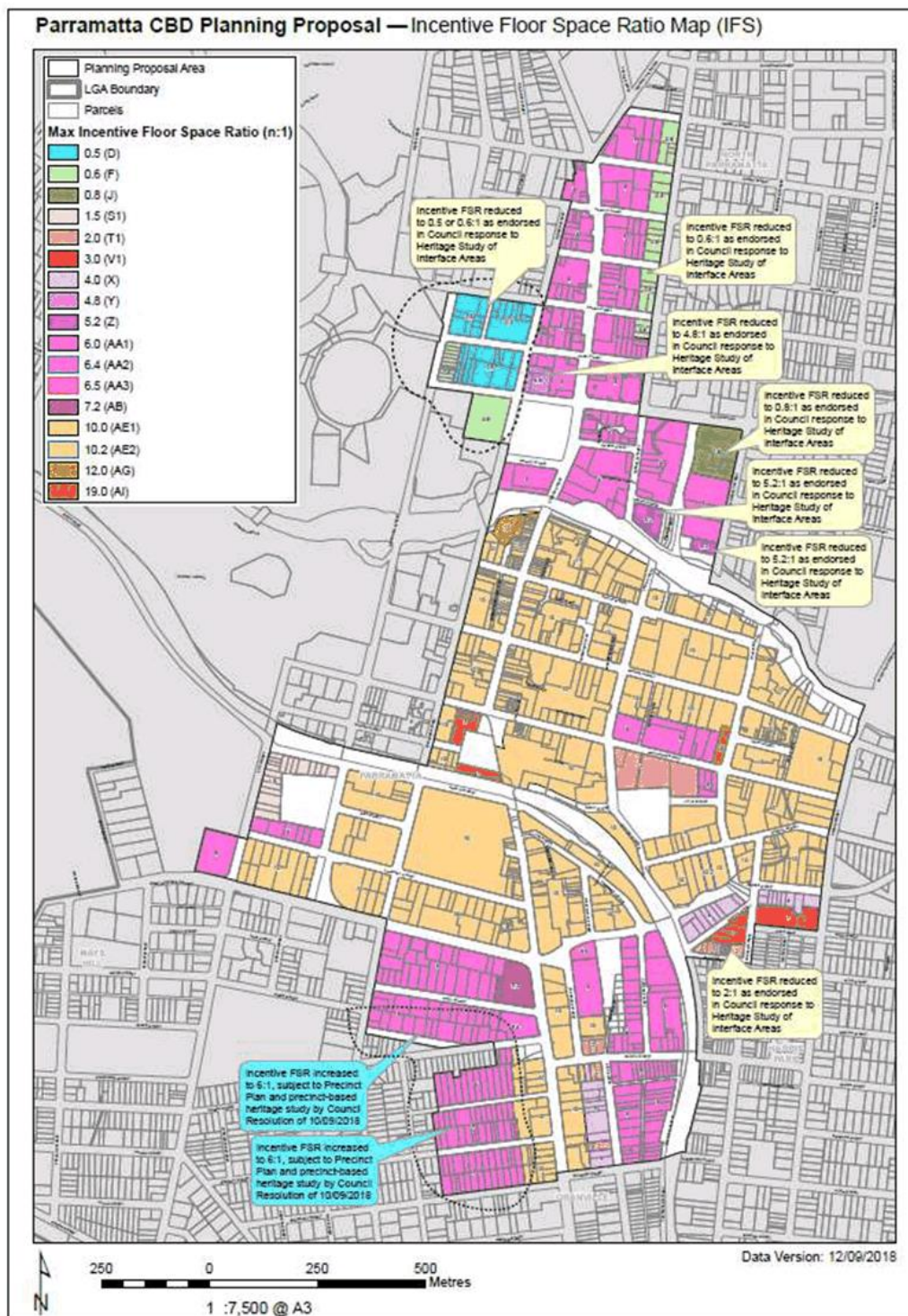


Figure 25: Incentive FSRs in 2019 Draft Planning Proposal



It would not increase the cost of elevated pedestrian infrastructure but would increase the number of people using it.

#### d) Ada St

There is a strip of properties along this street which have had their Incentive FSR reduced from 3 to 2. While this is a significant percentage reduction in the FSRs for these particular properties, these are a small part of the area which evacuates to Harris Street which itself is the second smallest evacuation precinct.

The changes here would not make a significant difference to the results and conclusions.

#### e) Lansdowne St and Dixon St

In this area the Incentive FSR is proposed to increase from 3.0 to 6.0, therefore doubling the number of vehicles and people needing to evacuate from these properties.

The few which are affected on the North of Lansdowne Street would evacuate by vehicle to the Great Western Highway and cause an extremely small increase on the route which takes the longest time to evacuate.

The rest of the properties would evacuate to Church Street and head south. Their contribution to this traffic stream would be more noticeable than that of their neighbours because Church Street would not have to accommodate as many evacuees as the Great Western Highway. Nevertheless, this traffic stream would take less than 40% of the total time that the Great Western Highway takes to evacuate so the changes in Church Street evacuation times would not make a difference to previous conclusions about the viability of vehicular evacuation.

These increases would not affect the quantum of elevated pedestrian evacuation infrastructure, just the number of people using it. The increase in the time taken would be small compared to the total time taken to evacuate the CBD core which the most critical to evacuating the viability of pedestrian evacuation as an option.

There would be a significant increase in the number of people needing to shelter in place in

this street if that were the adopted response option.

## 5.1 SUMMARY OF SENSITIVITY ANALYSES RESULTS

Overall, the sensitivity analyses indicated that:

- The new flood warning system does not affect the assumptions of the evacuation modelling exercise
- The updated planning proposal causes only very minor differences in the numbers of people and vehicles evacuating. Where there are decreases it is in the least critical areas. The Great Western Highway, which is most critical for vehicular evacuation, will have more traffic directed to it



## 6 CONCLUSIONS

Based on the results produced in this work, the following conclusions can be drawn:

- Under the assumptions of the NSW SES Timeline Evacuation Model, HSL vehicular evacuation would take between 8 and 11 hours (depending on year and flood event). It should be noted that the flood warning lead time for Parramatta CBD is about two hours before the peak of any probability event is reached, and that the PMF would reach its peak level in about 5 hours from the beginning of the rainfall.
- In addition to this, the NSW SES assumes a time lag of at least two hours between when the evacuation order is communicated to the population and when the evacuation actually begins. Under this assumption, safe vehicular evacuation would not be realistically achievable under any circumstances.
- HHL pedestrian evacuation would take between 4.5 and 11 hours, and would be generally faster than HSL vehicular evacuation. Still, the pedestrian evacuation time would be of the same order of magnitude as the flood duration. This means that by the time evacuees have reached the designated refuge through the elevated walkways, most likely queuing under intense rain, floodwaters may have already receded.
- A specific urban design analysis, which was undertaken as part of this project, demonstrated that the infrastructure required to allow high-level evacuation (i.e. a network of elevated walkways) would have a cost ranging between \$94.5 million and \$324 million, depending on the size of the flood event these would need to cater for.
- The elevated walkways would also have very significant impacts on the urban landscape in terms of visual disturbance, overshadowing, removal of urban trees, impacts on heritage buildings, capability of large vehicles to access the CBD, maintenance costs and safety.
- A suitable alternative to evacuation would be for the population to Shelter In Place (SIP) and wait until the floodwaters have receded. SIP would be particularly appropriate in Parramatta CBD due to the type of the development (i.e. most buildings are multi-storey), and to the flashing nature of the flooding which would not allow enough time to evacuate safely.
- SIP could expose people to a number of secondary risks to life, including (but not limited to) those arising from: building structural failure, medical emergencies, building fires or people deciding to leave the shelter and walk through floodwaters. These risks would need to be managed. This project, as well as the work by Molino Stewart (2016) suggested a number of achievable risk reduction measures through development controls.
- Furthermore, SIP is not an option for buildings that do not have a shelter above the PMF level (e.g. some of the one-storey buildings), and that do not possess the structural strength to withstand the PMF hydraulic forces (e.g. lightweight timber-frame buildings). However, occupants of these buildings are already exposed to the same level of flood risk, because this study has demonstrated that evacuation of Parramatta CBD is not achievable within the available time. If SIP were deemed the preferred emergency response strategy, measures would need to be put in place to allow the occupants of these buildings to access a suitable refuge in neighbouring, appropriate structures. In the future, redeveloping these buildings will provide an opportunity to reduce their flood risk.
- SIP risks could also be reduced through a "managed high-level

evacuation/access system". This would entail the installation of a network of light-weight elevated walkways to facilitate access of emergency responders to isolated buildings and/or allow evacuation of a small number of people (e.g. those requiring medical attention).

- In addition to these risks, SIP does not directly address the issue of people that are in the public domain when floodwaters begin to rise. The overall response strategy needs to address this issue, for example identifying suitable refuge above the PMF level within buildings that (a) can withstand PMF forces, and (b) can be accessed by the general public at any time of the day.

The analysis included also an assessment of the combined use of some evacuation types. Results showed that:

- Combining HSL (vehicular) and HHL (pedestrian) evacuation types would not provide significant advantages over fully pedestrian HHL evacuation types;
- If the elevated walkways network was designed to cater only for smaller events (i.e. the 20 year ARI), the residual risk associated with larger low-probability events could be managed using SIP.

Based on the results obtained, the following response options may be suitable:

- Mandatory evacuation. This option could theoretically apply to either vehicular (street-level) or pedestrian (high-level) evacuation, although safe vehicular evacuation is likely to be unachievable.
- Optional Evacuation/SIP. This option would leave the decision to evacuate or SIP to the evacuees. Because of the high risks associated with vehicular evacuation, this option is only recommended for high-level pedestrian evacuation (HHL). It should be noted that the use of elevated walkways would in fact eliminate the

risk of buildings being isolated by floodwaters, because the occupants would have a safe way out at any time. As a consequence, occupants could either evacuate or remain in their buildings (if these are equipped with a refuge above the flood level and all SIP risks are managed appropriately).

- Mandatory SIP. This option would be required if no elevated pedestrian evacuation routes were available, and would require appropriate development controls to manage all risks associated with SIP.

Results of this study should be interpreted in conjunction with the assumptions made to obtain the evacuation model input data. Please refer to Appendix A for a detailed description of these assumptions.

The sensitivity analysis undertaken using new information which has become available since the completion of the original report does not alter the abovementioned conclusions. In fact, it suggests that, overall, vehicular evacuation may be slightly more difficult to achieve than originally thought. These should be re-examined when the new Upper Parramatta Flood Study results become available.

## 7 RECOMMENDED STRATEGY

The identification of the most suitable flood emergency response strategy in Parramatta CBD is a complex exercise, because it depends on the assessment of each alternative's performance against multiple evaluation criteria.

These types of problems involve subjective evaluations and can be simplified using an approach based on Multi-Criteria Analysis (MCA). The main strengths of MCA are that it:

- Provides a structure for decision making while still allowing flexibility and is particularly useful for complex problems;
- Follows naturally from the way people tend to approach problems with multiple objectives;
- Has flexible data requirements;
- Allows information that is agreed upon by all parties to be distinguished from areas of contention;
- Is amenable to sensitivity analysis;
- Does not require assignment of monetary value to all quantities;

The use of MCA allowed us to rank the evacuation strategies in a way that takes account of different evaluation criteria. Each criterion was selected to evaluate the key issues to be addressed by the evacuation strategy, which are discussed throughout this report. The evaluation criteria used in the MCA exercise were:

- The strategy effectiveness, in terms of capability to reduce the risk of casualties during a flood. This is determined by the probability that evacuees have to reach a suitable flood-free area timely and safely, i.e. without any risk of contact with floodwaters. This was assessed using state of the art evacuation models (Section 2.3);
- The difficulty of implementation of the strategy, arising from setting-up the

appropriate response infrastructure (e.g. elevated walkways) and from the logistics of the response. For instance, it may be difficult to communicate to the population a very complex evacuation plan in which some of the evacuees use elevated walkways, and some do not. Similarly, it may be difficult to communicate to the population that they should evacuate on elevated walkways in events smaller than the 20 year ARI event, but take shelter in place for bigger events;

- The risks associated with the strategy and the extent to which these can be reduced. This accounts for any risks associated with not being able to evacuate in a timely manner, or risks of SIP (Section 4.4);
- The impacts on the urban environment (i.e. due to the construction of elevated walkways);
- The cost of implementation and maintenance of the strategy;
- The load on emergency services, in terms of the support required from emergency services to support the strategy (e.g. communication of evacuation order, management of traffic, search and rescue).

The alternatives that were assessed against the evaluation criteria were:

- Vehicular Evacuation;
- Shelter in Place;
- Horizontal High-Level (HHL) Pedestrian Evacuation up to the PMF;
- Horizontal High-Level (HHL) Pedestrian Evacuation up to the 20 year ARI, and SIP for larger events;
- Horizontal High-Level (HHL) Pedestrian Evacuation up to the 100 year ARI, and SIP for larger events;

The multi-criteria assessment is summarised in Appendix E.

Under the assumption that all selection criteria have the same weight, results show that the preferable response option is Shelter In Place



(overall score = 22/30), followed by HHL Pedestrian Evacuation up to the 20 year ARI, and SIP for larger events (overall score of 18/30).

SIP scores are relatively low under the following two selection criteria:

- Residual Risk, and
- Load on emergency services.

These scores could be improved by implementing a "managed light weight high-level access system" (Section 4.4.6), which would allow emergency managers to access dwellings requiring urgent assistance and/or to evacuate people who cannot remain in the SIP refuge (e.g. medical emergencies).

It should be noted that this type of system would have a cost of installation/maintenance and would cause a moderate impact on the CBD urban landscape. However, both these adverse effects would be smaller than in the case of a full-sized network of elevated walkways. As such, we recommend that further studies assess in detail the risks, costs and benefits associated with a lightweight managed high-level access system, paired with a SIP policy. Specifically, the issues to be addressed include: access requirements, ownership and maintenance of the system, implications for building codes, detailed structural design and management of visual impact.



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## **APPENDIX A - ASSUMPTIONS**

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## Evacuation Model Assumptions

Assumption	Description	Notes
1: Warning Time	A minimum two hours lead time is provided by the flood warning system before any size event is reached	At the time this study was undertaken, the City of Parramatta Council was developing a flood warning system for the CBD. Preliminary results suggested that a warning time of two hours should be used for the purpose of the evacuation assessment
2: Time lag between warning and response	After an evacuation order is communicated to the population, a minimum delay of two hours is to be expected before the evacuation begins	<p>This is based on the assumptions underlying the NSW Timeline Evacuation Model.</p> <p>This delay, or "lag", is due to two factors:</p> <ul style="list-style-type: none"> <li>• The Warning Acceptance Factor (WAF), defined as the time required by a member of the public to acknowledge the evacuation order and accept that it applies to them; and</li> <li>• The Warning Lag Factor (WLF), defined as the time required by members of the public to get organised for the evacuation and leave their houses.</li> </ul> <p>The NSW SES assumes that the WAF and the WLF will require one hour of time each.</p>
3: Time available in vehicular evacuation scenarios	Evacuation routes are not be cut by floodwaters before vehicular evacuation is completed	Vehicular evacuation, which is herein referred to as "Horizontal Street Level (HSL)", was modelled under the assumption that evacuation routes would not be cut by floodwaters before the evacuation is completed. In other words, vehicular evacuation was considered an "early evacuation option".
4: Evacuees without access to a vehicle	In a vehicular evacuation scenario, people with no access to a car are able to evacuate on foot in a time shorter than the time needed to complete the vehicular evacuation	Evacuees that do not have access to a car would be able to evacuate on foot in a time shorter than the time needed to complete the vehicular evacuation, therefore not impacting on the total evacuation time. This assumption is consistent with the time it would take for a pedestrian to walk from a location adjacent to the river to the nearest land above the reach of the PMF.
5: Vehicular Evacuation Model	<ul style="list-style-type: none"> <li>• Lane Capacity: 600 cars per lane per hour;</li> <li>• Queue length per car: 6m;</li> <li>• Warning Acceptance Factor: 1 hour;</li> <li>• Warning Lag Factor: 1 hour;</li> <li>• Traffic Safety Factor: 1-3.5 hours depending on the duration of evacuation</li> </ul>	These are the NSW SES recommended parameters for the NSW Timeline Evacuation Model, which is the model adopted in this study to simulate vehicular evacuation.
6: Vehicular Evacuation Precincts	Vehicles move away from rivers and creeks; Vehicles would move according to one-way roads	<p>Each building was allocated to an evacuation route by:</p> <ul style="list-style-type: none"> <li>• Locating each building's driveway;</li> <li>• Assuming that, upon exiting each driveway, vehicles would move away from Parramatta River, Clay Cliff Creek or Brickfield Creek;</li> </ul>

		<ul style="list-style-type: none"> <li>Assuming that traffic would move according to normal traffic flow direction on roads including one-way roads.</li> </ul>
7: Buildings that need to evacuate	Buildings that are "touched" or isolated by floodwaters will need to be evacuated	This may overestimate the number of vehicles or pedestrians who need to evacuate because the extent of flooding in some of these buildings may not be sufficient to require them to be evacuated.
8: Elevated Walkways	In events up to a 20 year ARI, evacuees would be able to reach the elevated walkways using communal stairs and ramps accessible from street level, while in larger events a dedicated building-by-building access would be necessary	In a 20 year ARI flood there would be a relatively small amount of water ponding in the streets when the evacuation begins. This would allow evacuees to reach the access to the elevated walkways (stairs and ramps) from street level. In larger events, the local flooding would have a larger extent and direct access to the elevated walkways would be necessary
9: Pedestrian Evacuation Precincts	Defined based on the narrower bottleneck along the designated evacuation route	Buildings sharing the same bottleneck are assigned to the same pedestrian evacuation precinct. For elevated walkways, the bottleneck is at the end of the walkway. For on street pedestrian evacuation, the bottleneck is the last road before reaching the evacuation refuge.
10: Pedestrian Evacuation Dynamics	Walking speed: 700metres per hours Density: two people per square metre Effective width of elevated walkways: 2m only are used by evacuees	Assumption based on literature (Seyfried et al., 2005)
11: Background Traffic	Vehicular evacuation is modelled under the assumption that there is no background traffic	In a real world day evacuation scenario, vehicular evacuation time would be significantly longer than the one obtained using the NSW Timeline Evacuation Model.
12: Extent of Elevated Walkways	Minimised to contain infrastructure cost and adverse impacts on the urban landscape	This results in the system of elevated walkways catering for the PMF having a larger number of egress points, and an overall smaller evacuation time. Shorter evacuation times in smaller flood events could be achieved by extending the network to increase the number of egress points.



Input data needed to calculate vehicular and pedestrian evacuation time and relevant codes. Each code is described in the following table.

Exit Road	2016	2036	2056
Number of Residents	A1	A2	A3
Number of Workers	B1	B2	B3
Number of Visitors	C1	C2	C3
Residential Car Spaces	D1	D2	D3
Commercial Car Spaces	E1	E2	E3
Visitor Car Spaces	F1	F2	F3

Description of the assumptions made to obtain the input data

Code	Description
A1	<p><b>Number of Residents, 2016.</b></p> <p>It was agreed with Council that the existing number of residents in each lot could not be obtained by applying current development controls, because these are based on the existing residential FSA, whose exact value is not known to Council (although an approximate estimate is available).</p> <p>Instead, the existing number of residents in each Travel Zone within the study area was extracted from the NSW Bureau of Transport Statistics website. This figure was then allocated to individual lots according the ratio between the lot's estimated existing residential FSA and the total estimated existing residential FSA in the Travel Zone.</p>
A2	<p><b>Number of Residents, 2036.</b></p> <p>The number of residents in 2036 was obtained by summing the 2016 number of residents and the additional number of residents expected from 2016 to 2036.</p> <p>The number of residents in 2016 was adjusted to account for any change of land zoning from 2016 to 2036.</p> <p>The additional number of residents (from 2016 to 2036) was obtained by applying the development controls to the additional residential FSA for year 2036. Namely:</p> <p>Additional residents = 2.31 per dwelling</p> <p>Number of additional dwellings = <math>[(2/3) * (\text{additional residential FSA})] / 100</math></p>

Code	Description
	Finally, the number obtained was reduced by a factor of 0.75 to account for the expected residential take-up rate from 2016 to 2036.
A3	<p><b>Number of Residents, 2056.</b></p> <p>The number of residents in 2056 was obtained by summing the 2016 number of residents and the additional number of residents expected from 2016 to 2056.</p> <p>The number of residents in 2016 was adjusted to account for any change of land zoning from 2016 to 2056.</p> <p>The additional number of residents (from 2016 to 2056) was obtained by applying the CBD Strategy development controls to the additional residential FSA for year 2056. Namely:</p> <p>Additional residents = 2.31 per dwelling</p> <p>Number of additional dwellings = <math>[(2/3) * (\text{additional residential FSA})] / 100</math></p>
B1	<p><b>Number of Workers, 2016.</b></p> <p>It was agreed with Council that the existing number of workers in each lot could not be obtained by using current development controls, because these are based on the existing commercial FSA in each lot, whose exact value is not known to Council (although an approximate estimate is available).</p> <p>Instead, the existing number of workers in each Travel Zone within the study area was extracted from the NSW Bureau of Transport Statistics website. This figure was then allocated to individual lots according to the ratio between the lot's estimated existing commercial FSA and the total commercial FSA in the Travel Zone.</p>
B2	<p><b>Number of Workers, 2036.</b></p> <p>The number of workers in 2036 was obtained by summing the 2016 number of workers and the additional number of workers expected from 2016 to 2036.</p> <p>The number of workers in 2016 was adjusted to account for any change of land zoning from 2016 to 2036.</p> <p>The additional number of workers (from 2016 to 2036) was obtained by applying the CBD Strategy development controls to the additional commercial FSA for year 2036. Namely:</p> <p>Number of additional workers = <math>[(2/3) * (\text{additional commercial FSA})] / 24</math></p> <p>Finally, the number obtained was reduced by a factor of 0.65 to account for the expected commercial take-up rate from 2016 to 2036.</p>
B3	<p><b>Number of Workers, 2056.</b></p> <p>The number of workers in 2056 was obtained by summing the 2016 number of workers and the additional number of workers expected from 2016 to 2056.</p> <p>The number of workers in 2016 was adjusted to account for any change of land zoning from 2016 to 2056.</p> <p>The additional number of workers (from 2016 to 2056) was obtained by applying the CBD Strategy development controls to the additional commercial FSA for year 2056. Namely:</p>

Code	Description
	Number of additional workers = $[(2/3) * (\text{additional commercial FSA})] / 24$
C1	<p><b>Number of Visitors, 2016.</b></p> <p>The number of visitors in 2016 was deducted from the number of daily Opal tap offs at Parramatta CBD train and bus stations. Namely, it was assumed that the average number of Opal tap offs between 5am and 12pm includes part of the daily visitors and all workers travelling to the CBD by public transport. The number of workers was then calculated by taking 37% of the total number of workers (obtained as described at point B1), based on the mode share estimate provided by the City of Parramatta CBD Strategic Transport Study (AECOM, 2016).</p> <p>The number of visitors arriving between 9am and 12am was then obtained by subtracting 37% of the total workers from the number of Opal tap offs between 5am and 12pm, under the assumptions that visitors would start arriving at 9am.</p> <p>This was divided by 3 (i.e. the number of hours between 9am and 12pm) to obtain the number of visitors arriving every hour. The result was then multiplied by 6 to obtain the number of visitors arriving (by public transport) over a 9 hour-long day, assuming that visitors would remain in the CBD on average for 3 hours, and that no visitors would be arriving after the 6th hour. The figure obtained was then assumed to correspond to 11% of the total number of visitors travelling daily to the CBD, based on the mode share for household trips in the West Central Region proposed by the 2012/2013 Household Travel Survey Report (BTS, 2014).</p> <p>The maximum number of visitors in the CBD <u>at any one time</u> was finally obtained by dividing the daily total number of visitors by 3, based on the assumption that each visitor would remain in the CBD for 3 hours, over a 9-hour long day.</p> <p>Based on guidance provided by the City of Parramatta Council, it was then assumed that 45% of these visitors would be within the Westfield building. The remaining 55% was allocated to each lot according to the lot's commercial FSA. This was based on the assumption that most visitors travel to Parramatta CBD for shopping/commercial/business purpose.</p>
C2 and C3	<p><b>Number of Visitors, 2036 and 2056.</b></p> <p>The number of visitors in 2036 (and 2056) was obtained from the number of visitors in 2016, assuming that these would increase at the same rate of workers from 2016 to 2036 (and 2056). This was based on the assumption that most visitors travel to Parramatta CBD for shopping/commercial/business purpose.</p> <p>The number obtained was then adjusted to account for the additional number of visitors (i.e. 1 million extra visitors per year) that from year 2022 are expected to travel to the CBD to visit the new Museum of Applied Arts and Sciences (MAAS), as estimated by PWC (2016), in "Parramatta 2021: Unlocking the potential of a new economy".</p>
D1 and E1	<p><b>Number of Residential and Commercial Car Spaces, 2016</b></p> <p><u>Private Residential and Commercial Car Spaces</u></p> <p>A reliable count of the number of existing private car spaces in the CBD is provided by AECOM (2017), in "Technical Paper 03: Parking Review". This number was obtained on</p>

Code	Description
	<p>a block-by-block basis via a survey recently undertaken by the City of Parramatta Council. The document however does not differentiate between commercial and residential car spaces, and does not go down to the scale of individual lots. The figures provided by AECOM (2017) were therefore modified as follows:</p> <ul style="list-style-type: none"> <li>Allocated to each cadastre lot within the relevant block, and</li> <li>Split between residential and commercial car spaces.</li> </ul> <p>This was achieved by:</p> <ol style="list-style-type: none"> <li>Calculating the <u>estimated</u> number of residential and commercial car spaces in each lot based on current development controls. These are: <ol style="list-style-type: none"> <li>For residential car spaces: one space per dwelling. The City of Parramatta Council assumes an average of 2.38 residents per dwelling (in 2016). The estimated number of residential car spaces per lot was then calculated as = (number of residents in the lot)/2.38.</li> <li>For commercial car spaces: 1 space every 100 sq.m. of commercial FSA. Commercial FSA values for 2016 were available for each lot, however it was agreed with Council that this value was not reliable for year 2016. A reliable value of commercial FSA was then obtained from the number of workers in each lot, using the assumption that there is 1 worker every 24 sq.m. of "effective" commercial FSA. Council assumes that the "effective" portion of commercial FSA is 2/3. This resulted in the following equation:  (Estimated commercial car spaces in 2016) = 0.36 * (number of workers in 2016)</li> </ol> </li> <li>It was then observed that the estimated number of car spaces (residential and commercial) obtained as described at point 1 exceeded the availability of car spaces in each block surveyed by AECOM (2017). Council advised that this is due to previous development controls that would have applied to the older buildings of the CBD when these were originally constructed. To overcome this discrepancy, the number of residential and commercial car spaces in each lot calculated at point 1 was "scaled down" using to the ratio between the estimated number of car spaces within each block (obtained as described at point 1) and the actual number of car spaces within each block (obtained from AECOM, 2017).</li> </ol> <p><u>Public Commercial Car Spaces</u></p> <p>The City of Parramatta Council provided an estimate of the average number of car spaces used by workers in each of the publicly accessible car parks within the CBD. These are:</p> <ul style="list-style-type: none"> <li>Wentworth Street (1,163 car spaces): 80% allocated to commercial use</li> <li>Horwood Place (558 car spaces): 40% allocated to commercial use</li> <li>Riverside (805 car spaces): 40% allocated to commercial use</li> </ul> <p>It should be noted that Westfield is omitted on purpose because not significantly affected by flooding.</p>

Code	Description
D2 and D3	<p><b>Number of Residential Car Spaces, 2036 and 2056</b></p> <p>Based on guidance from the City of Parramatta Council, it was assumed that in 2036 (and 2056) there will be 0.28 additional residential car spaces per additional resident. The number of residents in each lot was adjusted to account for any change of land zoning from 2016 to 2036 (and to 2056).</p>
E2 and E3	<p><b>Number of Commercial Car Spaces, 2036 and 2056</b></p> <p>The total number of commercial car spaces in 2036 (and 2056) was obtained by applying the new development controls. These allow one commercial car space every 50 sq.m. of commercial site area.</p> <p>The new controls were applied to the whole CBD but in the Western Corridor, which is not included in the Planning Proposal. For this area the existing development controls were used (i.e. 1 commercial car space every 100 sq.m. of commercial FSA).</p> <p>It was also assumed that the number of commercial car spaces in publicly accessible car parks within the CBD would not change in future scenarios.</p>
F1	<p><b>Number of Visitors Car Spaces, 2016.</b></p> <p>Based on guidance from the City of Parramatta Council, it was assumed that the car spaces available to visitors would include:</p> <ul style="list-style-type: none"> <li>• All on-street car spaces</li> <li>• The remainder of the car spaces in the publicly-accessible car parks within the CBD, namely: <ul style="list-style-type: none"> <li>○ Wentworth Street (1,163 car spaces): 20% allocated to commercial use</li> <li>○ Horwood Place (558 car spaces): 60% allocated to commercial use</li> <li>○ Riverside (805 car spaces): 60% allocated to commercial use</li> </ul> </li> </ul> <p>It should be noted that Westfield is omitted on purpose because not significantly affected by flooding.</p>
F2 and F3	<p><b>Number of Visitors Car Spaces, 2036 and 2056</b></p> <p>Based on guidance from the City of Parramatta Council, this was assumed to be the same as in 2016.</p>





## **APPENDIX B – EVACUATION MODELLING RESULTS**

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Scenario 1 – 2016\_20yr\_Midday\_HSL

Exit Road	Cars	Lanes	WAF	WLF	Travel Time	TSF	Evac Time
Church St	215	3	1	1	0.1	1	3.1
Great Western Hwy	8222	3	1	1	4.6	1.5	8.1
Harris St	132	1	1	1	0.2	1	3.2
Pennant Hills Rd	978	2	1	1	0.8	1	3.8
Victoria Rd	14	3	1	1	0	1	3

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Scenario 2 - 2016\_20yr\_Midday\_HHL

Exit Road	No. of Workers + Visitors	No. of Lanes	WAF	WLF	Walkway Clearance Time (Travel Time)	Evac Time
Marsden St	6383	1	1	1	2.3	4.3
Civic Link	13814	2	1	1	2.5	4.5

Scenario 3 – 2016\_100yr\_Midday\_HSL

Exit Road	Cars	Lanes	WAF	WLF	Travel Time	TSF	Evac Time
Church St	258	3	1	1	0.1	1	3.1
Great Western Hwy	9932	3	1	1	5.5	1.5	9.0
Harris St	156	1	1	1	0.3	1	3.3
Pennant Hills Rd	1003	2	1	1	0.8	1	3.8
Victoria Rd	14	3	1	1	0	1	3



Scenario 4 - 2016\_100yr\_Midday\_HHL

Exit Road	No. of Workers + Visitors	No. of Lanes	WAF	WLF	Walkway Clearance Time (Travel Time)	Evac Time
Marsden St	10236	2	1	1	1.8	3.8
Macquarie St	6241	1	1	1	2.2	4.2
Civic Link	18142	2	1	1	3.2	5.2

Scenario 5 – 2016\_PMF\_Midday\_HSL

Exit Road	Cars	Lanes	WAF	WLF	Travel Time	TSF	Evac Time
Church St	501	3	1	1	0.3	1	3.3
Great Western Hwy	12023	3	1	1	6.7	2	10.7
Harris St	217	1	1	1	0.4	1	3.4
Pennant Hills Rd	1520	2	1	1	1.3	1	4.3
Victoria Rd	25	3	1	1	0	1	3

Scenario 6 - 2016\_PMF\_Midday\_HHL

Exit Road	No. of Workers + Visitors	No. of Lanes	WAF	WLF	Walkway Clearance Time (Travel Time)	Evac Time
CBD Core to Westfield	53699	8	1	1	2.4	4.4
Church Street heading North	5697	2	1	1	1	3

Scenario 7 - 2016\_PMF\_Midday\_Mixed Evacuation (Vehicular Part)

Exit Road	Cars	Lanes	WAF	WLF	Travel Time	TSF	Evac Time
Church St	624	3	1	1	0.3	1	3.3
Great Western Hwy	4704	3	1	1	2.6	1	5.6
Harris St	214	1	1	1	0.4	1	3.4
Pennant Hills Rd	903	2	1	1	0.8	1	3.8
Victoria Rd	82	3	1	1	0	1	3

Scenario 7 - 2016\_PMF\_Midday\_HHL (Pedestrian Part)

Elevated Walkway	Workers + Visitors	WAF	WLF	Walkway Clearance Time (Travel Time)	Evac Time
Marsden St	6692	1	1	2.39	4.39
Civic Link	14205	1	1	2.5	4.5
Hassal St	453	1	1	0.25	2.25
Church St	597	1	1	0.53	2.53

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Scenario 8 – 2016\_PMF\_AllCars\_HSL

Exit Road	Cars	Lanes	WAF	WLF	Travel Time	TSF	Evac Time
Church St	1463	3	1	1	0.8	1	3.8
Great Western Hwy	14048	3	1	1	7.8	2	11.8
Harris St	627	1	1	1	1	1	4
Pennant Hills Rd	2606	2	1	1	2.2	1	5.2
Victoria Rd	255	3	1	1	0.1	1	3.1

Scenario 9 – 2036\_20yr\_Midday\_HSL

Exit Road	Cars	Lanes	WAF	WLF	Travel Time	TSF	Evac Time
Church St	558	3	1	1	0.3	1	3.3
Great Western Hwy	9407	3	1	1	5.2	1.5	8.7
Harris St	65	1	1	1	0.1	1	3.1
Pennant Hills Rd	1044	2	1	1	0.9	1	3.9
Victoria Rd	17	3	1	1	0	1	3

Scenario 10 - 2036\_ 20yr\_ Midday\_HHL

Exit Road	No. of Workers + Visitors	No. of Lanes	WAF	WLF	Walkway Clearance Time (Travel Time)	Evac Time
Marsden St	11335	1	1	1	4	6
Civic Link	29751	2	1	1	5.3	7.3

Scenario 11 – 2036\_100yr\_Midday\_HSL

Exit Road	Cars	Lanes	WAF	WLF	Travel Time	TSF	Evac Time
Church St	601	3	1	1	0.3	1	3.3
Great Western Hwy	10698	3	1	1	5.9	1.5	9.4
Harris St	124	1	1	1	0.2	1	3.2
Pennant Hills Rd	1086	2	1	1	0.9	1	3.9
Victoria Rd	17	3	1	1	0	1	3

Scenario 12 - 2036\_100yr\_Midday\_HHL

Exit Road	No. of Workers + Visitors	No. of Lanes	WAF	WLF	Walkway Clearance Time (Travel Time)	Evac Time
Marsden St	18384	2	1	1	3.3	5.3
Macquarie St	10302	1	1	1	3.7	5.7
Civic Link	38813	2	1	1	6.9	8.9



Scenario 13 – 2036\_PMF\_Midday\_HSL

Exit Road	Cars	Lanes	WAF	WLF	Travel Time	TSF	Evac Time
Church St	1053	3	1	1	0.6	1	3.6
Great Western Hwy	12292	3	1	1	6.8	2	10.8
Harris St	307	1	1	1	0.5	1	3.5
Pennant Hills Rd	1722	2	1	1	1.4	1	4.4
Victoria Rd	28	3	1	1	0	1	3

Scenario 14 - 2036\_PMF\_Midday\_HHL

Exit Road	No.of Workers + Visitors	No. of Lanes	WAF	WLF	Walkway Clearance Time (Travel Time)	Evac Time
CBD Core to Westfield	108368	8	1	1	4.8	6.8
Church Street heading North	4361	2	1	1	0.8	2.8

Scenario 15 – 2056\_20yr\_Midday\_HSL

Exit Road	Cars	Lanes	WAF	WLF	Travel Time	TSF	Evac Time
Church St	388	3	1	1	0.2	1	3.2
Great Western Hwy	9667	3	1	1	5.4	1.5	8.9
Harris St	69	1	1	1	0	1	3
Pennant Hills Rd	937	2	1	1	0.5	1	3.5
Victoria Rd	17	3	1	1	0	1	3

Scenario 16 – 2056\_20yr\_Midnight\_HSL

Exit Road	Cars	Lanes	WAF	WLF	Travel Time	TSF	Evac Time
Church St	600	3	1	1	0.3	1	3.3
Great Western Hwy	6950	3	1	1	3.9	1.5	7.4
Harris St	562	1	1	1	0.3	1	3.3
Pennant Hills Rd	1373	2	1	1	0.8	1	3.8
Victoria Rd	191	3	1	1	0.1	1	3.1

Scenario 17 - 2056\_20yr\_ Midday\_HHL

Exit Road	No. of Workers + Visitors	No. of Lanes	WAF	WLF	Walkway Clearance Time (Travel Time)	Evac Time
Marsden St	12959	1	1	1	4.7	6.7
Civic Link	39759	2	1	1	7.1	9.1



Scenario 18 – 2056\_100yr\_Midday\_HSL

Exit Road	Cars	Lanes	WAF	WLF	Travel Time	TSF	Evac Time
Church St	404	3	1	1	0.2	1	3.2
Great Western Hwy	10218	3	1	1	6.1	1.5	9.6
Harris St	93	1	1	1	0.1	1	3.1
Pennant Hills Rd	980	2	1	1	0.5	1	3.5
Victoria Rd	17	3	1	1	0	1	3

Scenario 19 – 2056\_100yr\_Midnight\_HSL

Exit Road	Cars	Lanes	WAF	WLF	Travel Time	TSF	Evac Time
Church St	778	3	1	1	0.4	1	3.4
Great Western Hwy	9751	3	1	1	5.4	1.5	8.9
Harris St	618	1	1	1	0.3	1	3.3
Pennant Hills Rd	1400	2	1	1	0.8	1	3.8
Victoria Rd	226	3	1	1	0.1	1	3.1

Scenario 20 - 2056\_100yr\_Midday\_HHL

Exit Road	No. of Workers + Visitors	No. of Lanes	WAF	WLF	Walkway Clearance Time (Travel Time)	Evac Time
Marsden St	21810	2	1	1	3.9	5.9
Macquarie St	11669	1	1	1	4.2	6.2
Civic Link	51342	2	1	1	9.2	11.2

Scenario 21 – 2056\_PMF\_Midnight\_HSL

Exit Road	Cars	Lanes	WAF	WLF	Travel Time	TSF	Evac Time
Church St	1444	3	1	1	0.8	1	3.8
Great Western Hwy	11246	3	1	1	6.2	1.5	9.7
Harris St	944	1	1	1	0.5	1	3.5
Pennant Hills Rd	2213	2	1	1	1.2	1	4.2
Victoria Rd	276	3	1	1	0.2	1	3.2

Scenario 22 - 2056\_PMF\_Midday\_HHL

Exit Road	No. of Workers + Visitors	No. of Lanes	WAF	WLF	Walkway Clearance Time (Travel Time)	Evac Time
CBD Core to Westfield	131071	8	1	1	5.9	7.9
Church Street heading North	5393	2	1	1	1	3



Scenario 23 - 2056\_PMF\_Midday\_Mixed Evacuation (Vehicular Part)

Exit Road	Cars	Lanes	WAF	WLF	Travel Time	TSF	Evac Time
Church St	712	3	1	1	0.4	1	3.4
Great Western Hwy	3626	3	1	1	2	1	5
Harris St	184	1	1	1	0.1	1	3.1
Pennant Hills Rd	894	2	1	1	0.5	1	3.5
Victoria Rd	82	3	1	1	0	1	3

Scenario 23 - 2056\_20Yr\_Midday\_HHL (Pedestrian Part)

Exit Road	No. of Workers + Visitors	No. of Lanes	WAF	WLF	Walkway Clearance Time (Travel Time)	Evac Time
Marsden St	12959	1	1	1	4.6	6.6
Civic Link	39759	2	1	1	7.1	9.1

Scenario 24 – 2056\_PMF\_Midday\_HSL

Exit Road	Cars	Lanes	WAF	WLF	Travel Time	TSF	Evac Time
Church St	790	3	1	1	0.4	1	3.4
Great Western Hwy	12677	3	1	1	7	2	11
Harris St	189	1	1	1	0.1	1	3.1
Pennant Hills Rd	1509	2	1	1	0.8	1	3.8
Victoria Rd	28	3	1	1	0	1	3

DRAFT

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## **APPENDIX C – HIGH LEVEL EVACUATION ROUTE CONCEPT DESIGN**

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Flood Evacuation Assessment for the Parramatta CBD

## HIGH LEVEL EVACUATION ROUTE CONCEPT DESIGN

Final Report

Issued 06 September 2017

Prepared for Molino Stewart and City of Parramatta Council

by Studio GL



Document Information

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Client	Molino Stewart
Job number	1704
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Revision	Date	Prepared by	Approved by
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Final	04/05/2017	RE	FL
Final 2	15/05/2017	RE	FL
Final 3	22/05/2017	RE	FL
Final 4	06/09/2017	RE	FL

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- 02 Key assumptions
- 03 Observations - comments - concerns
- 04 Evacuation route mapping
- 05 Elevated walkway typologies
- 06 Elevated walkway junction types
- 07 Typical ramp/ stair access
- 08 Concept walkway construction
- 09 100 year ARI flood and PMF
- 10 Heritage impact
- 11 Managed Evacuation Route
- 12 Conclusions

APPENDIX 01 Restricted vehicle access



## 01 INTRODUCTION

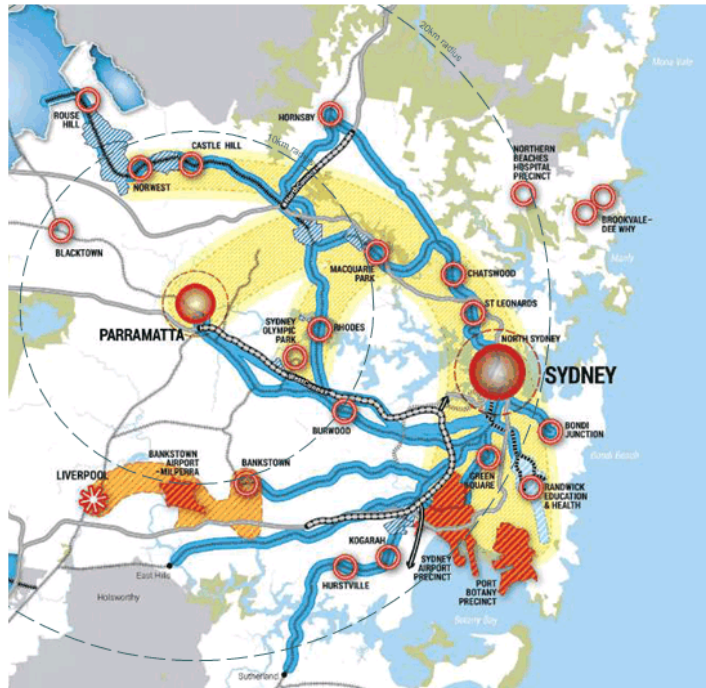


Figure 1 Metropolitan context diagram  
(Source: A Plan For Growing Sydney, 2014)

### 1-1 Background

Parramatta CBD is of metropolitan importance, and in recognition of its growing role council commissioned a number of studies to identify how the City of Parramatta can develop.

The result of these studies informed a planning proposal to allow additional employment opportunities supported by high density residential development.

As part of this process a draft update of the Parramatta Floodplain Risk Management Plans (2016) was produced by Molino Stewart. The report described how large parts of the Parramatta CBD would be affected by overbank flooding of the Parramatta River, and by flooding due to local overland flows.

One of the key findings of the report is that there is not sufficient advance warning of a major flood to enable evacuation of large parts of the CBD, and therefore for these areas, 'shelter in place' or 'flood free evacuation routes' need to be considered.

Adopting some or all of the recommendations within the Molino Stewart Report would require the imposition of some controls above the flood planning level. This is currently prohibited by state government for residential properties unless 'exceptional circumstances' can be demonstrated.



## 01 INTRODUCTION

### 1-2 Flood Evacuation Feasibility Assessment

Council has commissioned a team of consultants lead by Molino Stewart to undertake a Flood Evacuation Feasibility Assessment. The aim of the assessment is to estimate the ability of people within the Parramatta CBD to safely evacuate during a flood event, both now and in the future, when it is predicted there will be higher resident, employee and visitor populations.

The project will assess the benefits and risks of three approaches to evacuation to flood free areas:

- Street Level Evacuation
- Vertical Evacuation (shelter in place)
- Horizontal Evacuation (high level)

The overall purpose of the study is to:

- Help the council identify and understand the long term implications of preferred evacuation strategies.
- To inform a potential application for 'exceptional circumstances'
- To inform further discussions with the NSW State Emergency Services (SES) and Office of Environment and Heritage (OEH).

### 1-3 Scope of this Document

The scope of this document is

- to provide strategic analysis of potential urban design implications of a high level horizontal evacuation system, and
- to provide a preliminary concept design for a high level evacuation route.

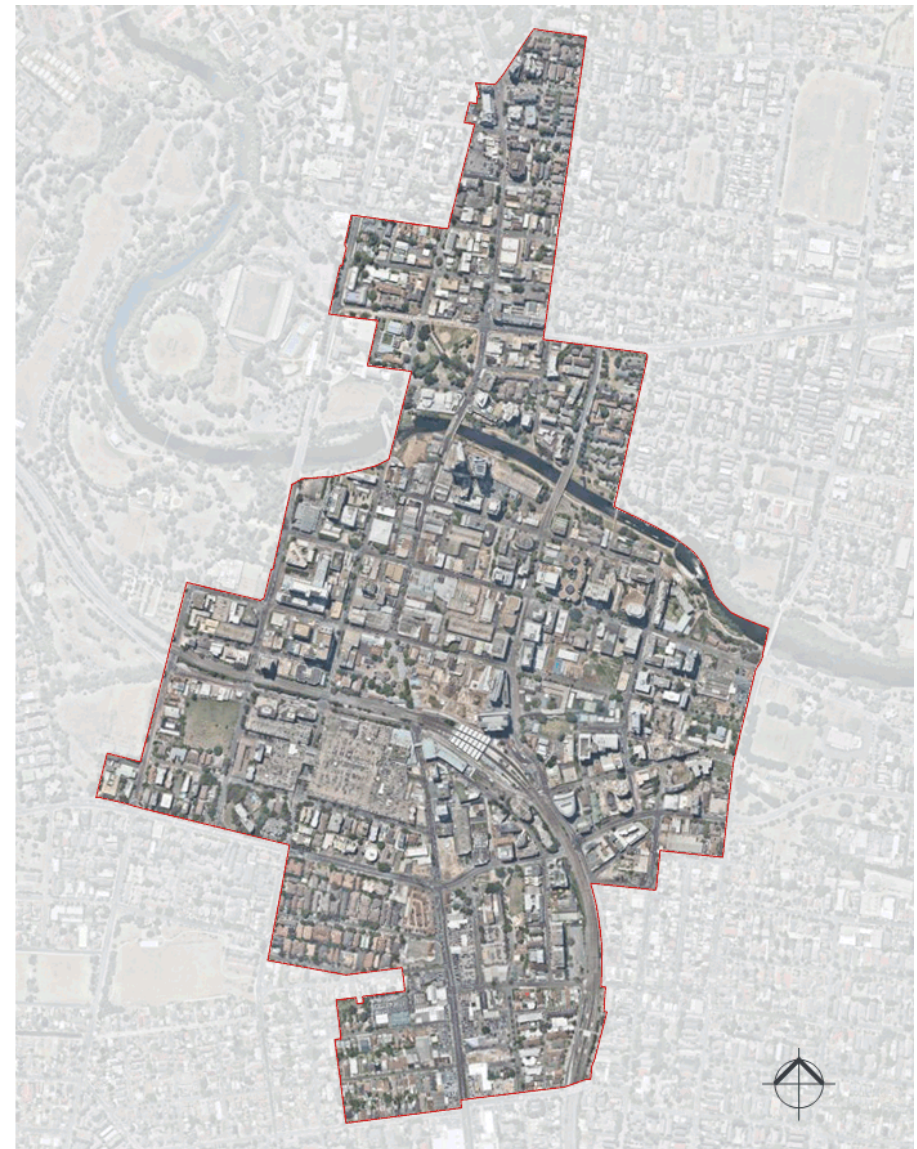


Figure 2 Study Area, Aerial Map

## 02 KEY ASSUMPTIONS

### 2-1 Scope of Concept Design

The proposed concept route design is based on the assumption of providing flood free evacuation routes during a 20 year ARI flood event. The proposed design and concept elements have the potential to be scaled to provide flood free evacuation routes during a 100 year ARI flood event and during a probable maximum flood (PMF)

### 2-2 Access Points

Further to discussions with Molino Stewart, no direct connection between the high level evacuation route and the upper levels of existing buildings has been assumed for the 20 year ARI concept design. Direct connection between the evacuation route and the upper levels of existing buildings would be required if the concept design were scaled for 100 year ARI and PMF events. A high level building access concept design is shown in section 9-1.

To provide a fully accessible system, ramps and stairs have been proposed to access the walkway, and it is assumed these will be accessed when the road is not yet in flood. Lifts have not been proposed due to the potential interruption of power supply during a flood event.

The location of ramps and stairs is based on the assumption of providing access at key intersections, and at regular intervals between these points. These locations are indicative only as detailed design would be required to determine an accurate location.

### 2-3 Walkway Width

The width of the high level walkway is proposed to be 2.5m. No modelling of evacuation numbers has been undertaken, and the suitability of this width to provide a safe evacuation route has not been assessed.

### 2-3 Fixed System

A fixed system of walkways has been proposed. To accommodate vehicle traffic within the CBD, and avoid level changes to the walkway when crossing roads, a height to the underside of the walkway has been established at 4.5m.

### 2-4 Cover to Walkways

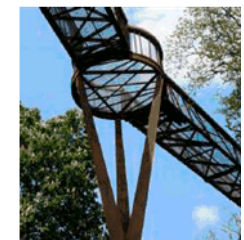
No cover has been proposed to the walkways. Covered walkways would provide protection from adverse weather and could encourage use of the system in a flood event, however they would have a significant detrimental effect on visual impact and overshadowing.

### 2-5 Flood Doors

No internal routes between buildings have been considered as part of this concept design. It is noted that internal flood escape routes could be feasible if redeveloping a number of adjacent buildings simultaneously, however providing internal escape routes via adjoining properties presents a number of issues, including differing internal floor levels, differing uses and floor layouts (e.g office to residential), building management, fire evacuation and protection measures, and security.

### 2-3 Street Width

Typical street widths within the CBD have been measured from a cadastre to provide a number of typical street typologies. Footpath and carriageway widths were estimated from street photographs.



Examples of high level walkways



### 03 OBSERVATIONS - COMMENTS - CONCERNS

#### 3-1 Public Use

It is proposed that the elevated walkway is accessed by ramp and stair from street level, prior to the road becoming flooded. We would question whether members of the public would walk to the nearest stair/ ramp access point, and use an elevated escape route if their street is yet to flood.

#### 3-2 Walkway Width

It is our understanding that the proposed high level walkway will be unmanaged, and open to public access. Figures have not yet been provided for the number of people (current and potential) required to be evacuated via the route, however the proposed routes detailed in section 4 show that the walkways will encompass a number of city blocks, and it is likely thousands of people will be concentrated on routes crossing Macquarie St, and Hunter St.

#### 3-3 Location of Ramps

Stairs and ramps need to be located at regular intervals to provide access to the high level walkway. A large length of ramp is required to ascend 4.8m (4.5m + structural allowance). A 1.5m wide ramp produces a footprint of 21x3m, which has a significant impact on the

street layout. Where side streets without walkways cannot be used to locate ramps, the ramp may result in the loss of parking and/or a traffic lane, as well as resulting in a narrower footpath. (fig 3+4).

#### 3-4 Visual Impact

Providing an elevated walkway will significantly affect the character of the CBD, as the supporting columns, walkway deck, stairs and ramps will be prominent features within the street scene. Whilst attractive design and detailing can help create a feature of the infrastructure, its impact will still be significant.

#### 3-5 Daily Use

Roads within the CBD accommodate 2-4 lanes of traffic and there are pedestrian crossings at frequent intersections, therefore it is unlikely that any future walkway will be used to cross the road when it requires ascending 4.8m. This may lead to issues with how the walkways are used on a day to day basis, and whether they become appropriated for inappropriate uses: e.g graffiti/ rough sleeping/ drug use.

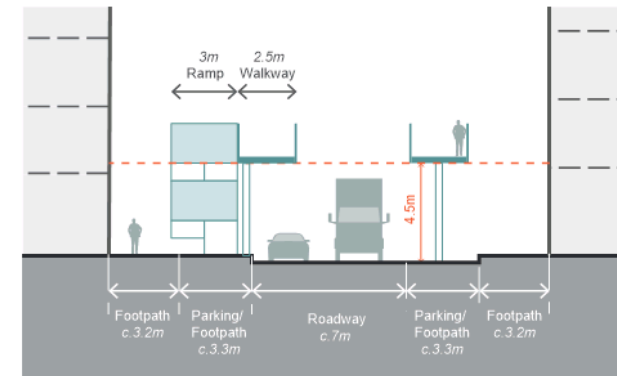


Figure 3 Typical ramp location section

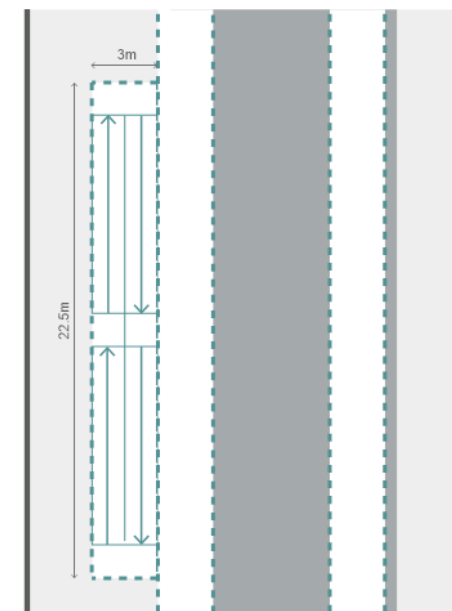


Figure 4 Typical ramp location plan

### 03 OBSERVATIONS - COMMENTS - CONCERNS

#### 3-6 Overshadowing

Providing an elevated walkway will result in significant overshadowing of the public realm, and ground floor units (fig 5+6). Where taller buildings already shade the street, walkways will still reduce light-levels due to blocking ambient and reflected light. The level of overshadowing is dependant on the walkways width and height, the design of the balustrades also impacts overshadowing.

#### 3-7 Street Trees

There are a large number of street trees within the CBD. In order to accommodate an independent high level walkway a number of these would have to be removed, especially on roads with walkways on both sides. Whilst lower level planting could be introduced beneath or adjacent to the walkways, the loss of mature street trees results in a harsher urban environment.

#### 3-8 Building Levels

If buildings directly connect to the high level walkway in the future ramped access may be required. The proposed walkway height is at approx. 4.8m above

road level, which will be significantly above 1st floor level for most buildings. The height of the walkway would compromise windows at the upper levels.

#### 3-9 Deployable Bridges

Proposing a lower height of walkway with temporary deployable bridges to span roads could make it impossible to accommodate fixed walkways over parking bays and traffic lanes. Temporary deployable bridges could also result in a higher risk due to the time and management required in deploying temporary structures.

#### 3-10 Maintenance

The walkways, support structures, ramps, and stairs will require maintenance to ensure they remain safe do not visually deteriorate. This maintenance cost may be significant, especially when it is considered that the structures are unlikely to be in use for decades.

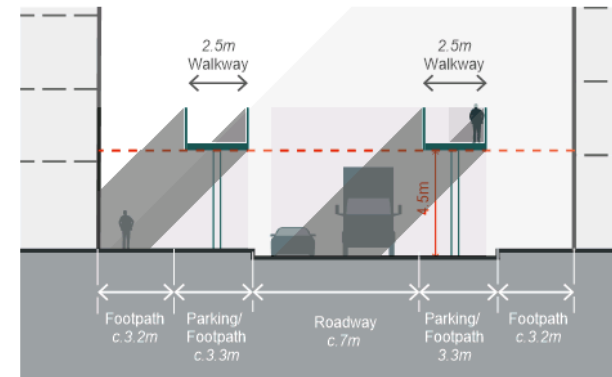


Figure 5 Overshadowing Section Diagram

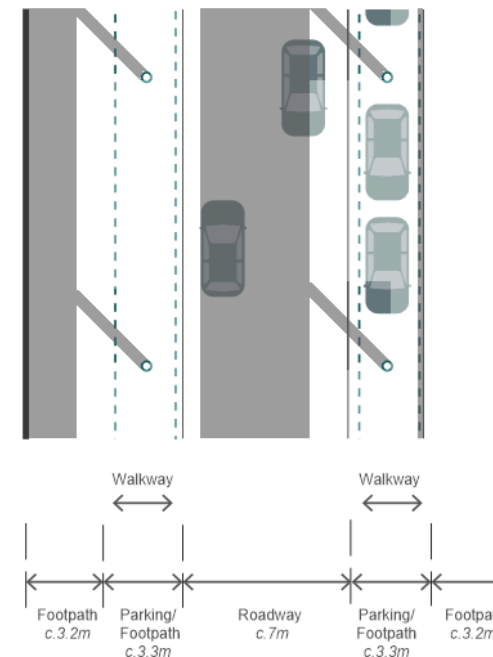


Figure 6 Overshadowing Plan Diagram

## 04 EVACUATION

### 4-1 Overview







Figure 7 Proposed

## 04 EVACUATION ROUTE MAPPING

### 4-2 Evacuation Route Area A

Area A		
Walkway Typology 1 (walkway both sides of street)	1,550m	
Walkway Typology 2 (walkway one side of street)	800m	
Walkway Typology 3 (walkway one side of street cantilevered)	300m	
Walkway Typology 4 (access street, walkway bridges street)	45m	
Walkway Typology 5 (8m height walkway above light rail)	70m	
<b>Total Walkway Length</b>	<b>2,765m</b>	
Stairs	29	S
Ramps	36	R

#### Key

-  Buildings requiring high level evacuation in a 20 year ARI flood event.
-  Heritage items
-  Junction Type (detailed in section 6-1)
-  Preferred Light Rail route

**Note:** Evacuation routes based on information provided by Molino Stewart. Location of ramps and stairs is indicative only. Provided for pricing.

\* For walkway options relating to the proposed civic link see work undertaken by other consultants.

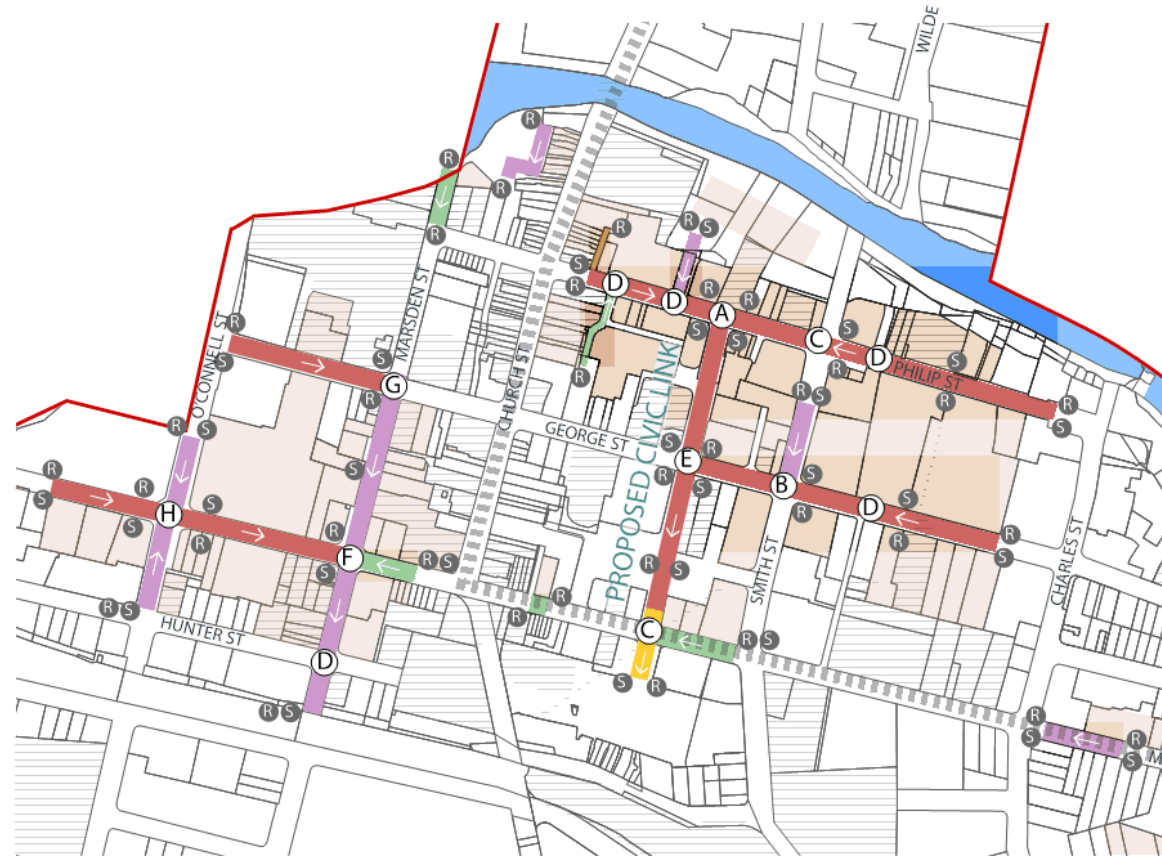


Figure 8 Proposed evacuation route map Area A

## 04 EVACUATION ROUTE MAPPING

4-3 Evacuation Route Area B

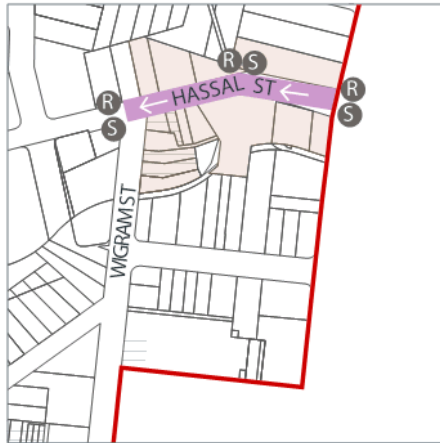


Figure 9 Proposed evacuation route map

Area B		
Walkway Typology 2 (walkway one side of street)		170m
<b>Total Walkway Length</b>		<b>170m</b>
Stairs		3
Ramps		3

4-4 Evacuation Route Area C

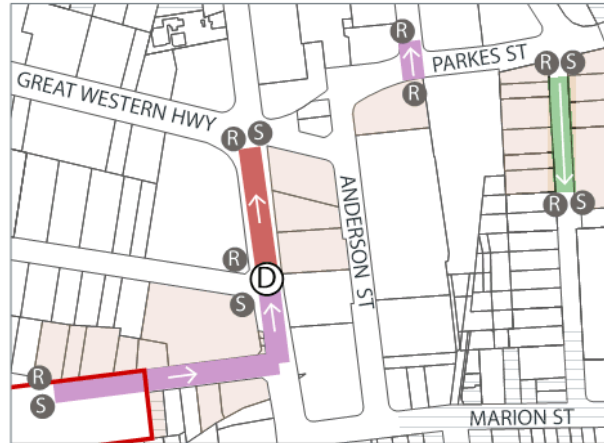


Figure 10 Proposed evacuation route map

Area C		
Walkway Typology 1 (walkway both sides of street)		100m
Walkway Typology 2 (walkway one side of street)		290m
Walkway Typology 3 (walkway one side of street cantilevered)		90m
<b>Total Walkway Length</b>		<b>480m</b>
Stairs		5
Ramps		7

4-5 Evacuation Route Area D



Figure 11 Proposed evacuation route map

Area D		
Walkway Typology 2 (walkway one side of street)		25m
<b>Total Walkway Length</b>		<b>25m</b>
Stairs		0
Ramps		2

**Note:** Evacuation routes based on information provided by Molino Stewart. Location of ramps and stairs is indicative only. Provided for pricing.







## 04 EVACUATION ROUTE MAPPING

### 4-6 Evacuation Walkway Schedule

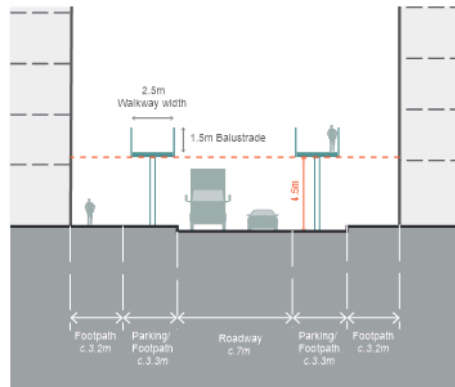
The table below summarises the total lengths of different walkway typologies, and stair and ramp units, proposed in the concept design for providing flood free evacuation routes during a 20 year ARI flood event.

Totals		
Walkway Typology 1 (walkway both sides of street)		1,650m
Walkway Typology 2 (walkway one side of street)		1,285m
Walkway Typology 3 (walkway one side of street cantilevered)		390m
Walkway Typology 4 (access street, walkway bridges street)		45m
Walkway Typology 5 (8m height walkway above light rail)		70m
<b>Total Walkway Length</b>		<b>3,440m</b>
Stairs		37
Ramps		48

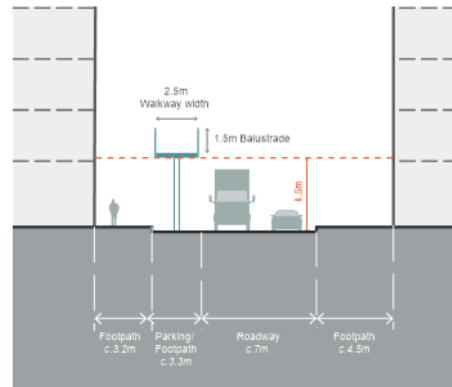
Note: Approximate length of walkway, only provided for costing.

## 05 ELEVATED WALKWAY TYPOLOGIES

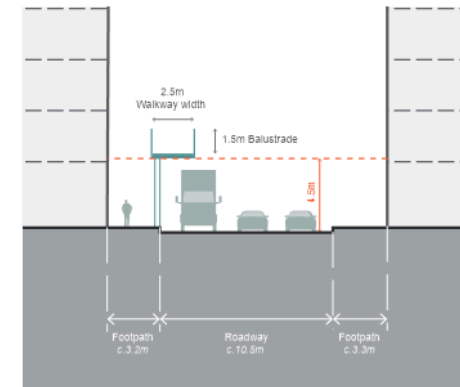
5-1 Walkway typology 1



5-2 Walkway typology 2



5-3 Walkway typology 3



Walkway typology 1  
(walkways both sides of street)

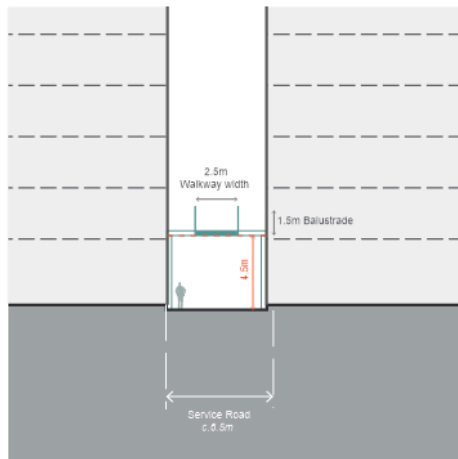
Walkway typology 2  
(walkways one side of street)

Walkway typology 3  
(walkways one side of street, cantilevered)

**Note:** This information is provided  
for pricing only.

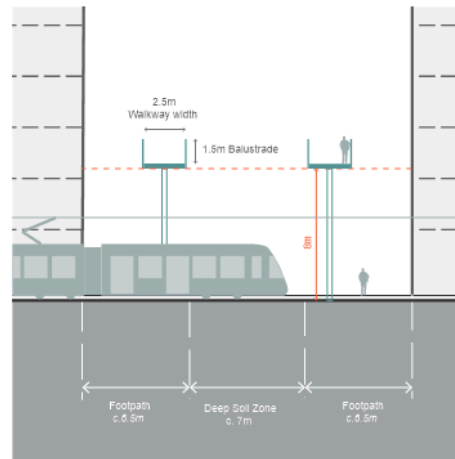
## 05 ELEVATED WALKWAY TYPOLOGIES

5-4 Walkway typology 4



Walkway typology 4  
(Access street, walkway bridges street)

5-5 Walkway typology 5

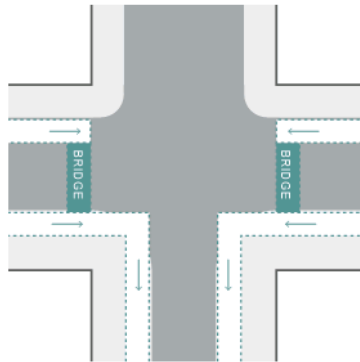


Walkway typology 5  
(8m height walkway above light rail)

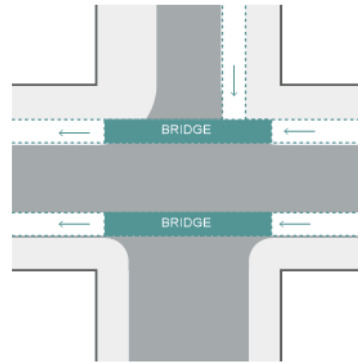
**Note:** This information is provided for pricing only.

## 06 ELEVATED WALKWAY JUNCTION TYPES

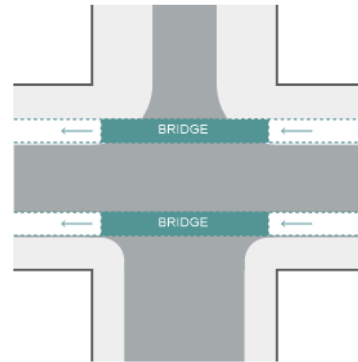
### 6-1 Junction types



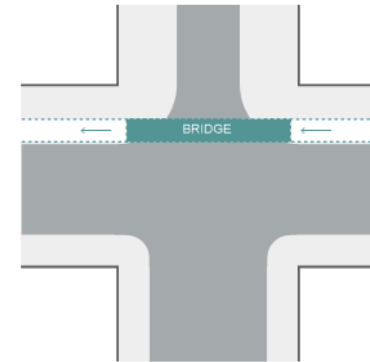
Junction Type A



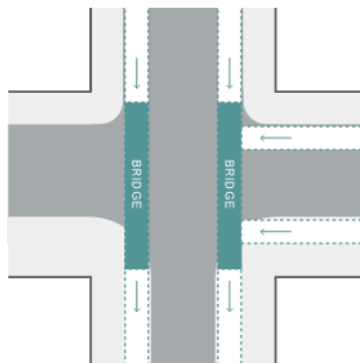
Junction Type B



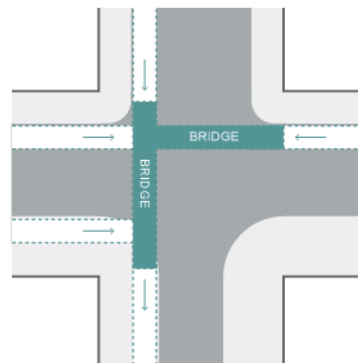
Junction Type C



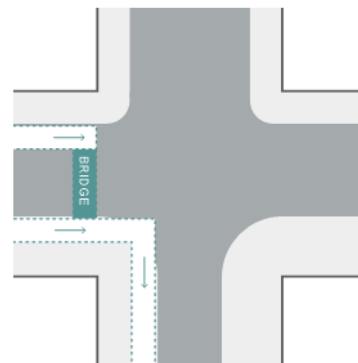
Junction Type D



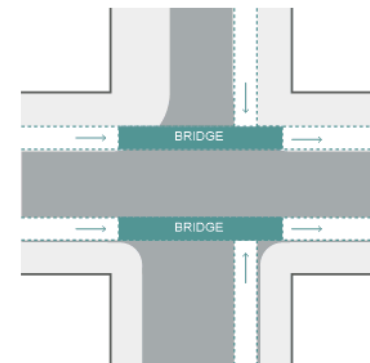
Junction Type E



Junction Type F



Junction Type G



Junction Type H

**Note:** This information is provided for pricing only.

## 07 TYPICAL RAMP/ STAIR ACCESS

### 7-1 Typical design

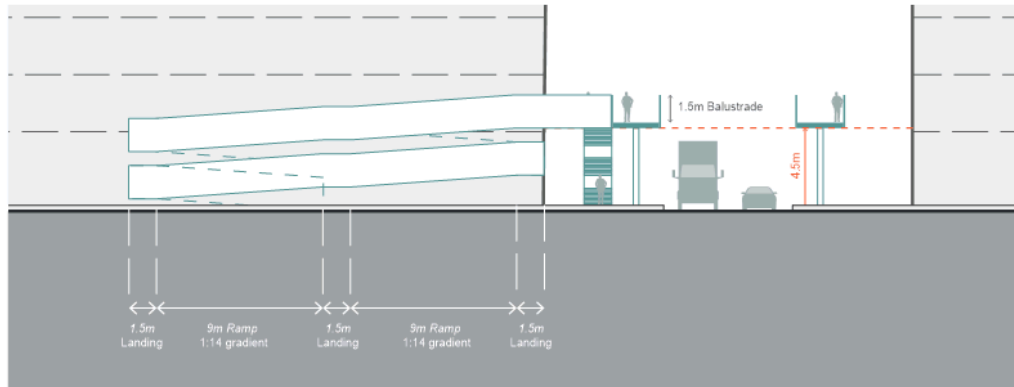


Figure 12 Typical ramp elevation

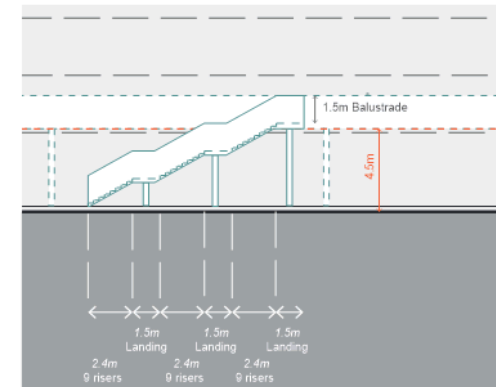


Figure 13 Typical stair elevation

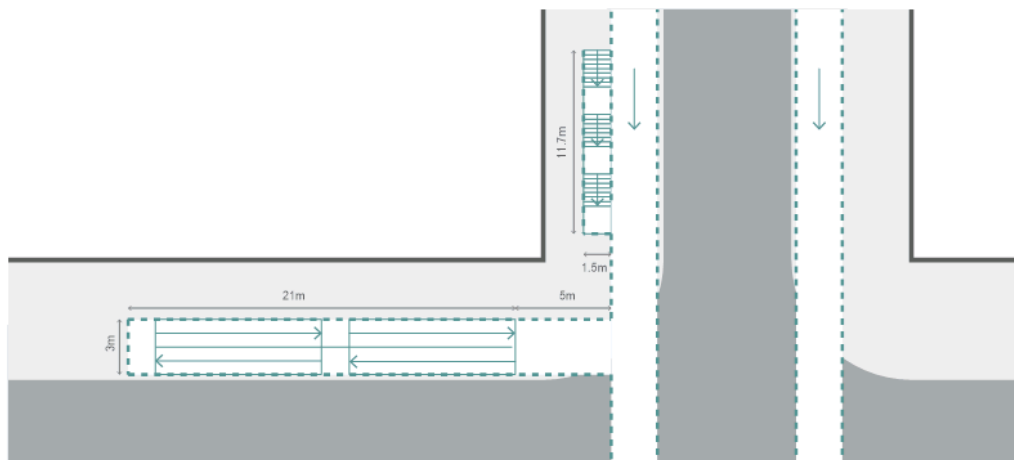


Figure 14 Typical plan

Note: This information is provided for pricing only.



## 08 CONCEPT WALKWAY CONSTRUCTION

### 8-1 Concept drawings

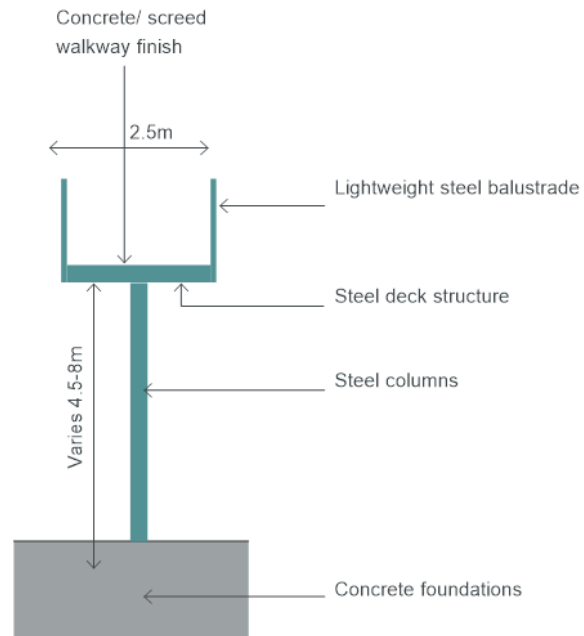


Figure 15 Typical walkway section

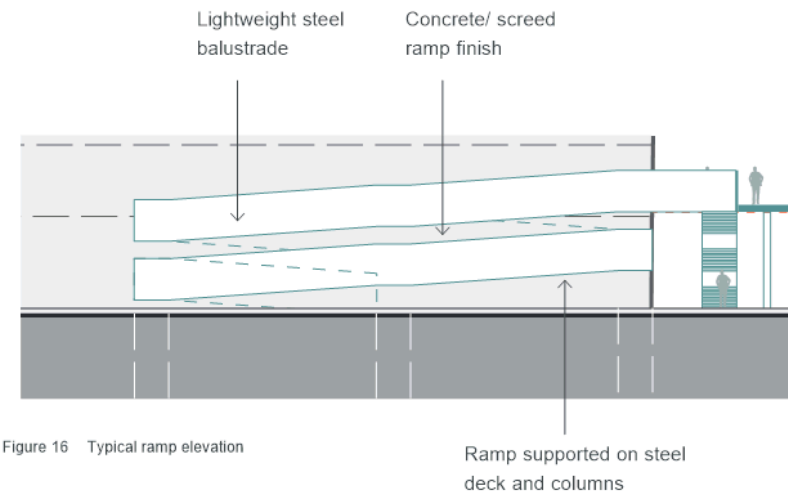


Figure 16 Typical ramp elevation

Ramp supported on steel deck and columns

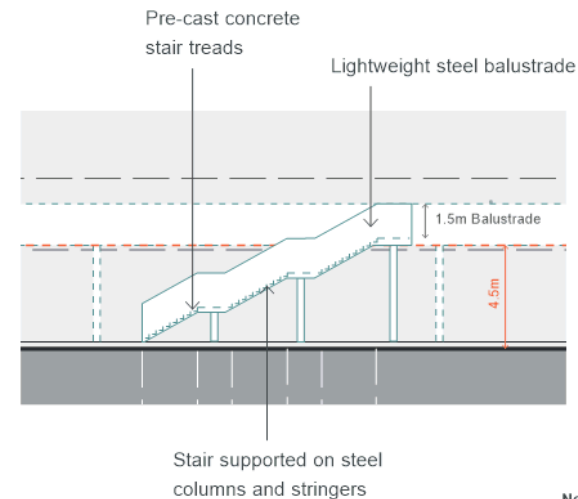


Figure 17 Typical stair elevation

Note: This information is provided for pricing only.

## 09 100 YEAR ARI FLOOD & PMF

### 9-1 Concept Design Elements

During a 100 year ARI or PMF event Molino Stewart have advised that direct access may be required from the upper levels of buildings to the high level walkway. Additionally the flood depths in a limited number of locations near the Parramatta River may exceed the 4.5m height of the proposed walkway system, during a PMF event. Concept designs for high level building access, and higher level walkway infrastructure are provided opposite and on the following page.

Providing direct access from buildings to the walkway at high level, in addition to increasing the size of the walkway network, will significantly increase many of the impacts discussed in section 3. Specifically the negative visual impact, and overshadowing created by the system will be increased through the enlarged network affecting the character and amenity of a wider area. These impacts will also be intensified by the increase in structure required for direct building access.

### 9-2 High Level Building Access Concept Design

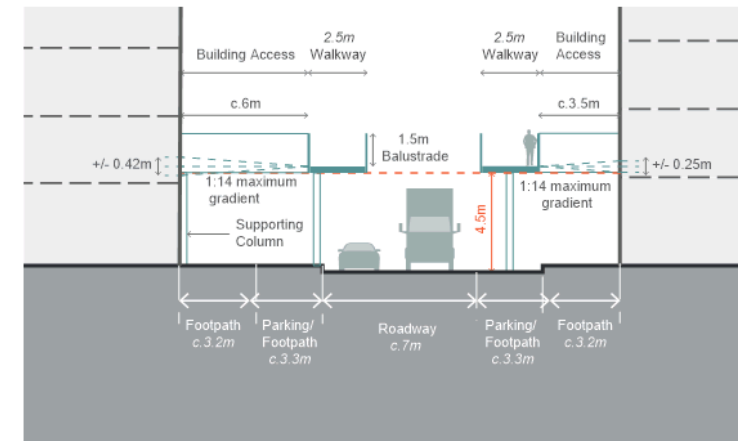


Figure 18 Typical High Level Building Access Arrangement

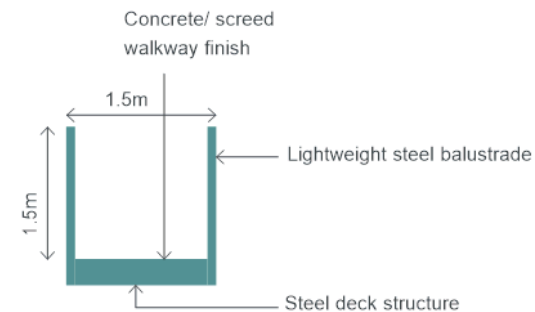


Figure 19 Typical Building Access Section

## 09 100 YEAR ARI FLOOD & PMF

### 9-3 Higher Level Walkway Concept Design

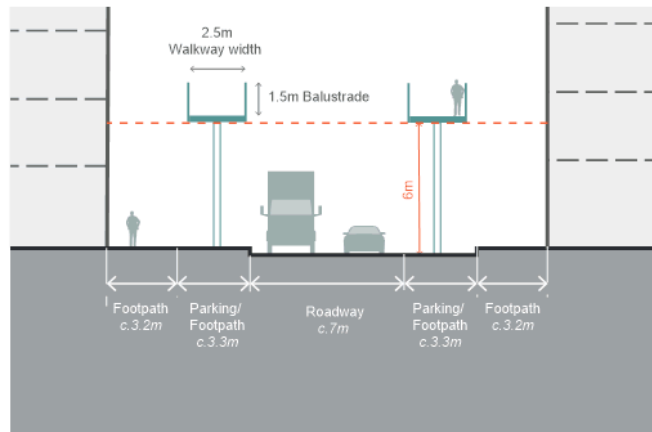


Figure 20 Walkway Typology 6 (6m height walkway)

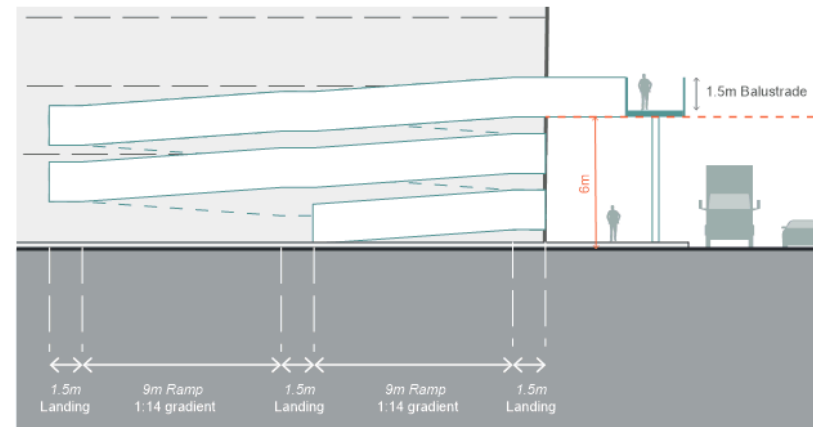


Figure 21 6m Height Ramp, Elevation (typical plan see section 7-1 fig.14)

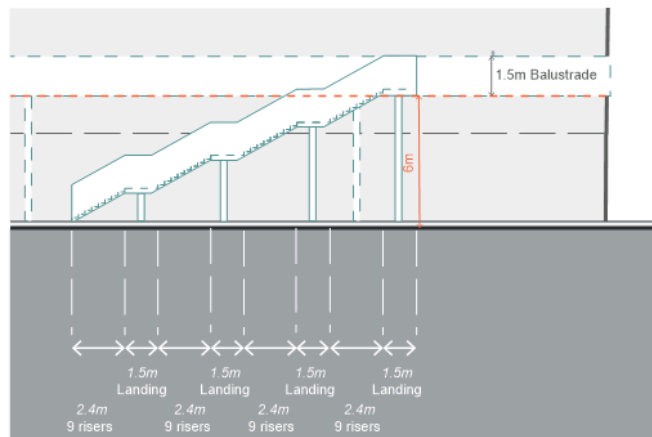


Figure 22 6m Height Stair, Elevation (typical plan see section 7-1 fig.14)

## 10 HERITAGE IMPACT

### Key



-  Heritage Listed Buildings
-  Heritage Listed Buildings opposite walkway
-  Heritage Listed Buildings adjacent to walkway



Figure 23 Heritage properties impact map  
(Heritage properties identified by Molino Stewart)

### 10-1 Impact on heritage buildings

Locating an extensive network of elevated walkways within the Parramatta CBD will affect a large number of heritage listed buildings.

The concept design proposes locating the walkways approximately 3m off the building property line. The walkways will be elevated approximately 4m above the footpath level.

The visual impact of a 2m wide walkway surface, with upstand balustrades, and associated support structures, will be significant when viewed against generally one and two storey heritage buildings.

The walkway will cut across and obscure key features of the facades of these buildings, including windows and colonnades, and may obscure the upper levels of buildings entirely when viewed from across the street, especially when this occurs from beneath another walkway.

Long views down the street are likely to be severely impacted as the walkways will potentially obscure rooflines and upper level façade details, and be the dominant element in the streetscape.

It is recommended that a detailed visual impact assessment be carried out by a heritage architect to fully understand and document the likely impacts on the range of high value heritage buildings within the Parramatta CBD.



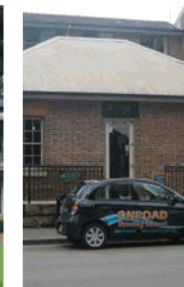
A 164 Marsden Street



B 306 Church Street



C 34 Philip Street



D 70 Philip Street

## 11 MANAGED EVACUATION ROUTE

### 11-1 Managed high level evacuation route

An alternative to creating a high level unmanaged evacuation route is to provide a managed high level access for emergency responders (e.g SES) to reach members of the public who have sheltered in place and may require assistance. This option addresses a number of the key issues raised in Section 3:

- A suitable walkway width can be provided for SES staff access, and evacuation of a limited number of people within the existing street pattern.
- Ramped access would not be required to be provided, as SES staff could evacuate individuals using specialist equipment/ stretchers where necessary.
- A lightweight single width (approx. 1m) walkway could be provided, potentially utilising existing buildings and awnings, significantly reducing overshadowing and visual impact on the street.
- The length of proposed walkways could potentially be reduced by terminating the route at designated multi-storey car parks within the CBD suitable for helicopter access/ evacuation.
- By providing a lightweight, less visually obtrusive and secure walkway system that is only accessible by the SES, the potential for unwanted informal uses of the walkways is minimised.
- Providing a lightweight route will enable the retention of more street trees.
- Providing a route that is managed by trained SES staff enables temporary deployable structures, including bridges, to be utilised reducing the visual impact of the route.
- Narrower and potentially shorter length of walkways, with no accessibility requirements, will reduce maintenance costs.

Key issues for further investigation should this option be progressed include:

- Discussion of the suitability of the concept of a managed high level evacuation route with SES staff.
- Discussion of access requirements including walkway widths, steps, and ladders with the SES.
- Discussion with Council and SES regarding ownership and maintenance of the system.
- Investigation of how building codes would apply to the proposal.
- More detailed design investigations of how the walkways would access buildings, the street, and be structurally supported.
- A visual impact study, once design parameters and the suitability of the proposal have been established, demonstrating the effect of the proposals on views within the CBD.



Examples of lightweight high level access/escape solutions.



# 11 MANAGED EVACUATION ROUTE

## 11-2 Map of potential managed high level evacuation routes

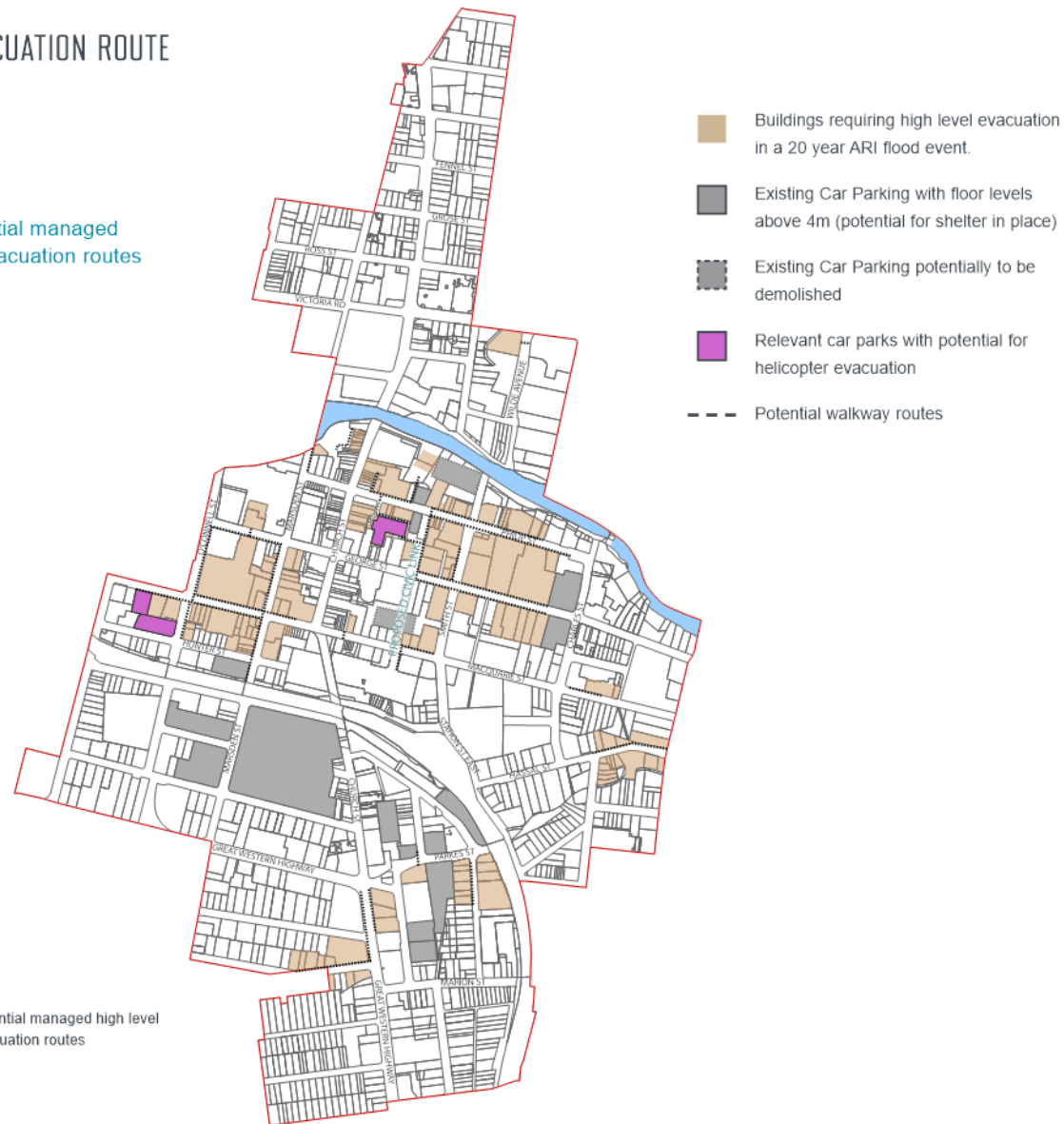


Figure 24 Potential managed high level evacuation routes

## 12 CONCLUSIONS

The proposed concept route design is based on the assumption of providing flood free evacuation routes during a 20 year ARI flood event. The proposed design and concept elements have the potential to be scaled to provide flood free evacuation routes during a 100 year ARI flood event and during a probable maximum flood (PMF)

Good design and detailing has the potential to make a feature of the proposed infrastructure, however given the significant detrimental impact on the urban character and heritage of the CBD we do not recommend an unmanaged high level horizontal evacuation route. Key concerns include:

- Providing a high level horizontal evacuation route will significantly impact on the character and amenity of the CBD.
- High level walkways will result in significant overshadowing of the street and ground floor units.
- High level walkways will result in the loss of street trees.

- Providing an extensive network of walkways that will not be used on a daily basis, will potentially create issues with informal use and security, and is an inefficient use of land within the CBD.
- Modelling of likely pedestrian numbers will be required to determine the requirements for the actual width of the walkway to ensure the safety of those evacuating.
- Providing ramps to access the walkway will impact on road layouts within the CBD.

A high level managed evacuation route, as described in section 11, could provide safer access for the SES to members of the public requiring assistance in a flood event, whilst reducing the visual impact and associated costs of the walkway infrastructure.



# APPENDIX 01 RESTRICTED VEHICLE ACCESS



Note: Evacuation routes based on information provided by Molino Stewart.

Figure 25 Restricted vehicle access map



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**APPENDIX D - UNIT COSTS OF ELEVATED  
WALKWAYS**

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NORTH

Flood Evacuation - Parramatta CBD  
Strategic Estimate

ITEM	DESCRIPTION				RATE	Unit	Qty	AMOUNT	Note
1	Walkway (Type 1-3) for 15m (L) span/ Segment *2.5m (W)								
1.1	1.7t Steelwork/15m Foundation- 1.5*1.5*0.8m- 2*no per segment 2. no columns per segment	Demo	4.00	m3	\$ 50	/ m3	2	\$ 400	
		Excavation & Disposal	4.00	m3	\$ 200	/ m3	2	\$ 1,600	
		Blinding- 50mm thick	2.00	m3	\$ 50	/ m3	2	\$ 200	
		FRP+ supply concrete	1.35	m3	\$ 3,000	/ m3	2	\$ 8,100	
		Backfill	2.65	m3	\$ 50	/ m3	2	\$ 265	
1.2	Walkway Steel framework - Tonnage rate	Fabricate, Supply and Install	1.70	T/ 15LM	\$ 10,000	/T	1	\$ 17,000	Based on 250*8SHS steel column and 200PFC Beam, EA75*5 bracing
1.3									
1.4	Walkway Concrete Deck	15 lm (L)*2.5m (W)	37.50	m2	\$ 250	/m2	1	\$ 9,375	Assumed 200 thick - Bondek, Precast in the yard
1.5	Handrails (stainless steel)	Supply & Install	15.00	LM	\$ 500	/LM	2	\$ 15,000	
		Kick rails (stainless steel)	15.00	LM	\$ 200	/LM	2	\$ 6,000	
		Allowance for seals/fitings	15.00	LM	\$ 30	/LM	2	\$ 900	No Allowance for Escalation or GST
1.6	Temp. works		1.00	Unit	\$ 10,000		1	\$ 10,000	Assume free standing
1.7	Traffic Control/ Permits						15%	\$ 10,326	Assume pad foundations are sufficient, no allowance for piled foundations
1.8	Site Survey- 2% of Construction cost						2%	\$ 1,583	No Allowance for contaminated material
	Direct Works Total							\$ 80,749	No allowance to demolish/alter existing building for connection to building access walkway
1.9	Night shift- installation work & Permitt- 30% over						30%	\$ 24,224.80	No allowance for reconfiguration of the existing pavements roads drainage or street furniture
1.10	Overhead/Admin/ Margin						35%	\$ 36,740.94	Exposed Steelwork assumed to be painted
1.11	Design and Investigation Costs 10% of DC						10%	\$ 8,075	No allowance for Property Acquisitions
1.12	Project Management cost - 5.5% on DC						5%	\$ 4,037	No Allowance for CCTV
1.13	Contingency based on minimal info. 40-70%						55%	\$ 77,943	No allowance for relocation of services
									No allowance for Lighting (assumed existing street lighting is sufficient)
	Total							\$ 231,771	+GST / 15m segment walkway
								\$ 15,452	per m
2	Walkway (Type 4) for 15m (L) span/ Segment *2.5m (W)								
2.1	2.6t Steelwork/15m Foundation- 1.5*1.5*0.8m- 4*no per segment 4. no columns per segment	Demo	4.00	m3	\$ 50	/ m3	4	\$ 600	
		Excavation & Disposal	4.00	m3	\$ 200	/ m3	4	\$ 3,200	
		Blinding- 50mm thick	2.00	m3	\$ 50	/ m3	4	\$ 400	
		FRP+ supply concrete	1.35	m3	\$ 3,000	/ m3	4	\$ 16,200	
		Backfill	2.65	m3	\$ 50	/ m3	4	\$ 530	
2.2	Walkway Steel framework - Tonnage rate	Fabricate, Supply and Install	2.80	T/ 15LM	\$ 10,000	/T	1	\$ 28,000	Based on 250*8SHS steel column and 200PFC Beam, EA75*5 bracing
2.3									
2.4	Walkway Concrete Deck	15 lm (L)*2.5m (W)	37.50	m2	\$ 250	/m2	1	\$ 9,375	Assumed 200 thick - Bondek, Precast in the yard
2.5	Handrails (stainless steel)	Supply & Install	15.00	LM	\$ 500	/LM	2	\$ 15,000	
		Kick rails (stainless steel)	15.00	LM	\$ 200	/LM	2	\$ 6,000	
		Allowance for seals/fitings	15.00	LM	\$ 30	/LM	2	\$ 900	No Allowance for Escalation or GST
2.6	Temp. works		1.00	Unit	\$ 10,000		1	\$ 10,000	Assume free standing
2.7	Traffic Control/ Permits						15%	\$ 13,261	Assume pad foundations are sufficient, no allowance for piled foundations
2.8	Site Survey- 2% of Construction cost						2%	\$ 2,033.32	No Allowance for contaminated material
	Direct Works Total							\$ 103,699	No allowance to demolish/alter existing building for connection to building access walkway
2.9	Night shift- installation work & Permitt- 30% over						30%	\$ 31,110	No allowance for reconfiguration of the existing pavements roads drainage or street furniture
2.10	Overhead/Admin/ Margin						35%	\$ 47,183	Exposed Steelwork assumed to be painted
2.11	Design and Investigation Costs 10% of DC						10%	\$ 10,370	No allowance for Property Acquisitions
2.12	Project Management cost - 5.5% on DC						5%	\$ 5,185	No Allowance for CCTV
2.13	Contingency based on minimal info. 40-70%						55%	\$ 100,096	No allowance for relocation of services
									No allowance for Lighting (assumed existing street lighting is sufficient)
	Total							\$ 297,642	+GST / 15m segment walkway
								\$ 19,843	per m

ITEM	DESCRIPTION			RATE	Unit	Qty	AMOUNT	Note	
3	Walkway (Type 5) for 15m (L) span/ Segment *2.5m (W)								
3.1	2.2t Steelwork/15m Foundation- 1.5*1.5*0.8m- 2*no per segment 2. no columns per segment	Demo Excavation & Disposal Blinding- 50mm thick FRP+ supply concrete Backfill	4.00 4.00 2.00 1.35 2.85	m3 m3 m3 m3 m3	\$ 50 \$ 200 \$ 50 \$ 3,000 \$ 50	/ m3 / m3 / m3 / m3 / m3	2 2 2 2 2	\$ 400 \$ 1,600 \$ 200 \$ 8,100 \$ 285	
3.2	Walkway Steel framework - Tonnage rate	Fabricate, Supply and Install	2.20	T/ 15LM	\$ 10,000	/T	1	\$ 22,000	Based on 250*8SHS steel column and 200PFC Beam, EA75*5 bracing
3.3									
3.4	Walkway Concrete Deck	15 lm (L)*2.5m (W)	37.50	m2	\$ 250	/m2	1	\$ 9,375	Assumed 200 thick - Bondek, Precast in the yard
3.5	Handrails (stainless steel)	Supply & Install Kick rails (stainless steel) Allowance for seals/fitings	15.00 15.00 15.00	LM LM LM	\$ 500 \$ 200 \$ 30	/LM /LM /LM	2 2 2	\$ 15,000 \$ 6,000 \$ 900	No Allowance for Escalation or GST
3.6	Temp. works							\$ 10,000	Assume free standing
3.7	Traffic Control/ Permits						15%	\$ 11,076	Assume pad foundations are sufficient, no allowance for piled foundations No Allowance for contaminated material
3.8	Site Survey- 2% of Construction cost						2%	\$ 1,698.32	No allowance to demolish/alter existing building for connection to building access walkway
3.9	Direct Works Total							\$ 86,614	No allowance for reconfiguration of the existing pavements roads drainage or street furniture
3.10	Night shift- installation work & Permitt- 30% over						30%	\$ 25,984	Exposed Steelwork assumed to be painted
3.11	Overhead/Admin/ Margin						35%	\$ 39,409.52	No allowance for Property Acquisitions
3.12	Design and Investigation Costs 10% of DC						10%	\$ 8,661	No Allowance for CCTV
3.13	Project Management cost - 5.5% on DC						5%	\$ 4,331	No allowance for relocation of services
3.13	Contingency based on minimal info. 40-70%						55%	\$ 83,604	No allowance for Lighting (assumed existing street lighting is sufficient)
	Total							\$ 248,605	+GST / 15m segment walkway
								\$ 16,574	per m

ITEM	DESCRIPTION			RATE	Unit	Qty	AMOUNT	Note	
4	Staircase & Landing								
4.1	Foundation- 1.5*1.5*0.8m 3*no per staircase	Demo Excavation & Disposal Blinding- 50mm thick FRP+ supply concrete Backfill	4.00 4.00 2.00 1.35 1.75	m3 m3 m3 m3 m3	\$ 50 \$ 110 \$ 50 \$ 3,000 \$ 50	/ m3 / m3 / m3 / m3 / m3	3 3 3 3 3	\$ 600 \$ 1,320 \$ 300 \$ 12,150 \$ 263	
4.2	Walkway Steel framework - Tonnage rate		1.10	T/ Stair case	\$ 10,000	/T	1	\$ 11,000	Based on 250*8SHS column and 150PFC stringer
4.3	Precase concrete stair treads- Supply & Install		1.00		\$ 110	each	27	\$ 2,970	
4.4	Precase concrete landing		2.25	m2	\$ 200	/m2	3	\$ 1,350	Assumed 100 thick - Bondek
4.5	Handrails (stainless steel)	Supply & Install Kick rails (stainless steel) Allowance for seals/fitings	12.00 12.00 12.00	LM LM LM	\$ 500 \$ 200 \$ 30	/LM /LM /LM	2 2 2	\$ 12,000 \$ 4,800 \$ 720	No Allowance for Escalation or GST
4.6	Traffic Control/ Permits						15%	\$ 7,121	Assume free standing Assume pad foundations are sufficient, no allowance for piled foundations No Allowance for contaminated material
4.7	Site Survey- 2% of Construction cost						2%	\$ 1,092	No allowance to demolish/alter existing building for connection to building access walkway
4.8	Direct Works Total							\$ 55,685	No allowance for reconfiguration of the existing pavements roads drainage or street furniture
4.9	Night shift- installation work & Permitt- 30% over						30%	\$ 16,706	Exposed Steelwork assumed to be painted
4.10	Overhead/Admin/ Margin						35%	\$ 25,337	No allowance for Property Acquisitions
4.11	Design and Investigation Costs 10% of DC						10%	\$ 5,569	No Allowance for CCTV
4.12	Project Management cost - 5.5% on DC						5%	\$ 2,784	No allowance for relocation of services
4.12	Contingency based on minimal info. 40-70%						55%	\$ 53,750	No allowance for Lighting (assumed existing street lighting is sufficient)
	Total							\$ 159,831	+GST / staircase
								\$ 160,000	per staircase

ITEM	DESCRIPTION			RATE	Unit	Qty	AMOUNT	Note
<b>5</b>	<b>Access Ramp</b>							
	Structural steel frame & Columns							
5.1	Foundation- 1.5*1.5*0.8m 4" no.	Demo	4.00	m3	\$ 50	/m3 4	\$ 800	
		Excavation & Disposal	4.00	m3	\$ 110	/m3 4	\$ 1,760	
		Blinding- 50mm thick	2.00	m3	\$ 50	/m3 4	\$ 400	
		FRP+ supply concrete	1.35	m3	\$ 3,000	/m3 4	\$ 18,200	
		Backfill	1.75	m3	\$ 50	/m3 4	\$ 350	
5.2	Structural Steel framework - Tonnage rate	Fabricate, Supply and Install	8.80	T/ each	\$ 10,000	/T 1	\$ 88,000	Assume 4.no columns 250*8SHS. under the landings- 250PFC stringer- EA75*5 angle bracing
5.3	Concrete Deck (71 LM inclusive landing)	15 lm (L)*2.5m (W)	108.50	m2	\$ 250	/m2 1	\$ 28,625	Assumed 100 thick - Bondek
5.4	Handrails (stainless steel)	Supply & Install	71.00	LM	\$ 500	/LM 2	\$ 71,000	
		Kick rails (stainless steel)	71.00	LM	\$ 200	/LM 2	\$ 28,400	
		Allowance for seals/fitings	71.00	LM	\$ 30	/LM 2	\$ 4,280	No Allowance for Escalation or GST
5.5	Traffic Control/ Permits					15%	\$ -	Assume free standing
5.6	Site Survey- 2% of Construction cost					2%	\$ 5,009	Assume pad foundations are sufficient, no allowance for piled foundations
	<b>Direct Works Total</b>						\$ 255,474	No Allowance for contaminated material
5.7	Night shift- installation work & Permitt- 30% over					30%	\$ 76,642	No allowance to demolish/alter existing building for connection to building access walkway
5.8	Overhead/Admin/ Margin					35%	\$ 116,240	No allowance for reconfiguration of the existing pavements roads drainage or street furniture
5.9	Design and Investigation Costs 10% of DC					10%	\$ 25,547	No allowance for Property Acquisitions
5.10	Project Management cost - 5.5% on DC					5%	\$ 12,774	No Allowance for CCTV
5.11	Contingency based on minimal info. 40-70%					55%	\$ 246,596	No allowance for relocation of services
								No allowance for Lighting (assumed existing street lighting is sufficient)
	<b>Total</b>						\$ 733,273	+GST / 71m access ramp
							\$ 10,328	per m

ITEM	DESCRIPTION			RATE	Unit	Qty	AMOUNT	Note
6	<b>Building Access Walkway (Cantilevered walkway)</b>							
	Cantilevered building access walkway 4.5m high, 6m span, 1.5m width	Height Span Width	4.50 6.00 1.50	m m m				Assume negligible gradient in building access walkway
6.1	<b>Support</b> Pad footing foundation (1.5x1.5x0.8m)	Length Width Depth	1.50 1.50 0.80	m m m				Assume pad foundations are sufficient, no allowance for piled foundations
		Supply Concrete	1.35	m3	\$ 350 /m3	1	\$ 473	
		Supply reinforcement	0.27	tonnes	\$ 1,300 /tonne	1	\$ 351	
		Install reinforcement	0.27	tonnes	\$ 800 /tonne	1	\$ 216	
		Pump concrete	1.35	m3	\$ 450 /m3	1	\$ 608	
		Formwork	2.25	m2	\$ 200 /m2	1	\$ 450	
		Saw Cut 150thk	10.00	m	\$ 14 /m	1	\$ 140	
		Demo	3.75	m3	\$ 50 /m3	1	\$ 188	
		Excavation & Disposal	3.75	m3	\$ 200 /m3	1	\$ 750	
		Backfill	2.40	m3	\$ 50 /m3	1	\$ 120	
		Labour	16.00	hours	\$ 84 /hr	2	\$ 2,688	Rate allowance includes for nightworks
		Excavator	8.00	hours	\$ 100 /hr	1	\$ 800	
		Truck	8.00	hours	\$ 100 /hr	3	\$ 2,400	
	Column (Assume 2 250x9SHS with EA75x5 Bracing) 250x9 SHS	Weight Supply	65.00 298.55	kg/m kg	\$ 8,000 /tonne	2	\$ 4,745	
	Bracing - Assume EA75*5 - 5.27kg/m	Length Weight	2.80 5.27	m kg/m				
		Supply	14.76	kg	\$ 8,000 /tonne	4	\$ 472	
		Allowance for bolts/connections (5%)				5%	\$ 261	
		Labour	5.00	hours	\$ 84 /hr	2	\$ 640	Rate allowance includes for nightworks
		Franna Crane	5.00	hours	\$ 200 /hr	1	\$ 1,000	
6.2	<b>Walkway</b> Concrete walkway (1.5m x 6m)	Area	9.00	m2				
		Supply concrete	1.80	m3	\$ 350 /m3	1	\$ 630	Assume 0.2m depth
		Pump concrete	1.80	m3	\$ 35 /m3	1	\$ 63	
		Finish	9.00	m2	\$ 4 /m2	1	\$ 36	
		Cure	9.00	m2	\$ 4 /m2	1	\$ 36	
	Steel deck (Assume 200PFC Beam - 25.4kg/m)	Area Weight Supply (8PFC to make the deck)	9.00 25.40 152.40	m2 kg/m kg	\$ 8,000 /tonne	8	\$ 9,754	
		Allowance for bolts/connections (5%)				5%	\$ 488	
		Labour	11.00	hours	\$ 84 /hr	2	\$ 1,848	Rate allowance includes for nightworks
		Franna Crane	8.00	hours	\$ 200 /hr	1	\$ 1,600	
6.3	<b>Handrails (stainless steel)</b>	Supply & install Kick rails Allowance for seals/fitings	8.00 8.00 8.00	m m m	\$ 500 /m \$ 200 /m \$ 30 /m	2 2 1	\$ 8,000 \$ 2,400 \$ 180	Assume supported by to-be-constructed walkway No allowance to demolish/alter existing building for connection to building access walkway No Allowance for Escalation or GST No Allowance for contaminated material No allowance for reconfiguration of the existing pavements roads drainage or street furniture Exposed Steelwork assumed to be painted
		Labour	8.00	hours	\$ 60 /hr	2	\$ 960	No allowance for Property Acquisitions
6.4	<b>Traffic Management</b>	Pedestrian Traffic Management				15%	\$ 5,930	No Allowance for CCTV No allowance for relocation of services No allowance for Lighting (assumed existing street lighting is sufficient)
	Direct costs total						\$ 46,425	
6.5	Overhead/Margin/Admin					35%	\$ 16,249	
6.6	Project management					10%	\$ 4,642	
6.7	Contingency					50%	\$ 33,658	
	<b>Total</b>						\$ 100,974	+GST / 6m cantilevered building access walkway (4.5m high, 6m span, 1.5m width)
							\$ 16,829	per m

ITEM	DESCRIPTION			RATE	Unit	Qty	AMOUNT	Note
7	<b>Building Access Walkway (Standard walkway)</b>							
7.1	Standard building access walkway 4.5m high, 3.5m span, 1.5m width	Height	4.50	m				Assume negligible gradient in building access walkway
		Span	3.50	m				
		Width	1.50	m				
		<b>Support</b>						Assume pad foundations are sufficient, no allowance for piled foundations
		Pad footing foundation (1.5x1.5x0.8m)						
		Length	1.50	m				
		Width	1.50	m				
		Depth	0.80	m				
		Supply Concrete	1.35	m3	\$ 350	/m3 1	\$ 473	
		Supply reinforcement	0.27	tonnes	\$ 1,300	/tonne 1	\$ 351	
		Install reinforcement	0.27	tonnes	\$ 800	/tonne 1	\$ 218	
		Pump concrete	1.35	m3	\$ 450	/m3 1	\$ 608	
		Formwork	2.25	m2	\$ 200	/m2 1	\$ 450	
		Saw Cut 150thk	10.00	m	\$ 14	/m 1	\$ 140	
		Demo	3.75	m3	\$ 50	/m3 1	\$ 188	
		Excavation & Disposal	3.75	m3	\$ 200	/m3 1	\$ 750	
		Backfill	2.40	m3	\$ 50	/m3 1	\$ 120	
		Labour	16.00	hours	\$ 84	/hr 2	\$ 2,688	Rate allowance includes for nightworks
		Excavator	8.00	hours	\$ 100	/hr 1	\$ 800	
		Truck	8.00	hours	\$ 100	/hr 3	\$ 2,400	
7.2	Column (Assume 2 250x9SHS with EA75x5 Bracing) 250x9 SHS	Weight	85.00	kg/m				
		Supply	298.55	kg	\$ 8,000	/tonne 2	\$ 4,745	
		Length	2.80	m				
		Weight	5.27	kg/m				
		Supply	14.76	kg	\$ 8,000	/tonne 4	\$ 472	
		Allowance for bolts/connections (5%)				5%	\$ 261	
		Labour	5.00	hours	\$ 84	/hr 2	\$ 840	Rate allowance includes for nightworks
		Franna Crane	5.00	hours	\$ 200	/hr 1	\$ 1,000	
		<b>Walkway</b>						
		Concrete walkway (1.5m x 3.5m)						Assume 0.2m depth
		Area	5.25	m2				
		Supply concrete	1.05	m3	\$ 350	/m3 1	\$ 368	
		Pump concrete	1.05	m3	\$ 35	/m3 1	\$ 37	
		Finish	5.25	m2	\$ 4	/m2 1	\$ 21	
		Cure	5.25	m2	\$ 4	/m2 1	\$ 21	
		Steel deck (Assume 200PFC Beam - 25.4kg/m)						
		Area	5.25	m2				
		Weight	25.40	kg/m				
		Supply (8PFC to make the deck)	152.40	kg	\$ 8,000	/tonne 8	\$ 9,754	
		Allowance for bolts/connections (5%)				5%	\$ 488	
		Labour	9.00	hours	\$ 84	/hr 2	\$ 1,512	Rate allowance includes for nightworks
		Franna Crane	6.00	hours	\$ 200	/hr 1	\$ 1,200	
		<b>Handrails (stainless steel)</b>						
		Supply & install	3.50	m	\$ 500	/m 2	\$ 3,500	Assume supported by to-be-constructed walkway No allowance to demolish/alter existing building for connection to building access walkway No Allowance for Escalation or GST No Allowance for contaminated material No allowance for reconfiguration of the existing pavements roads drainage or street furniture Exposed Steelwork assumed to be painted
		Kick rails	3.50	m	\$ 200	/m 2	\$ 1,400	
		Allowance for seals/fittings	3.50	m	\$ 30	/m 1	\$ 105	
		Labour	4.00	hours	\$ 60	hr 2	\$ 480	
		<b>Traffic Management</b>						
		Pedestrian Traffic Management				15%	\$ 5,236	
		<b>Direct costs total</b>					\$ 40,621	No allowance for Property Acquisitions
7.5	Overhead/Margin/Admin					35%	\$ 14,217	No Allowance for CCTV
7.6	Project management					10%	\$ 4,062	No allowance for relocation of services
7.8	Contingency					50%	\$ 29,450	No allowance for Lighting (assumed existing street lighting is sufficient)
<b>Total</b>							\$ 88,350	+GST / 3.5m standard building walkway (4.5m high, 3.5m span, 1.5m width)
							\$ 25,243	per m Rate skewed due to short span and high setup costs



ITEM	DESCRIPTION			RATE	Unit	Qty	AMOUNT	Note
8	<b>Building Access Walkway (Elevated standard walkway - type 5)</b>							
8.1	<b>Support</b> Elevated standard building access walkway 8m high, 3.5m span, 1.5m width  Pad footing foundation (1.75x1.75x0.8m)	Height	8.00	m				Assume negligible gradient in building access walkway
		Span	3.50	m				
		Width	1.50	m				
		Length	1.75	m				Assume pad foundations are sufficient, no allowance for piled foundations
		Width	1.75	m				
		Depth	0.80	m				
		Supply Concrete	2.45	m3	\$ 350	/m3 1	\$ 858	
		Supply reinforcement	0.40	tonnes	\$ 1,300	/tonne 1	\$ 520	
		Install reinforcement	0.40	tonnes	\$ 800	/tonne 1	\$ 320	
		Pump concrete	2.45	m3	\$ 450	/m3 1	\$ 1,103	
		Formwork	3.08	m2	\$ 200	/m2 1	\$ 613	
		Saw Cut 150thk	11.00	m	\$ 14	/m 1	\$ 154	
		Demo	8.05	m3	\$ 50	/m3 1	\$ 303	
		Excavation & Disposal	6.05	m3	\$ 200	/m3 1	\$ 1,210	
		Backfill	3.80	m3	\$ 50	/m3 1	\$ 180	
		Labour	16.00	hours	\$ 84	/hr 2	\$ 2,688	Rate allowance includes for nightworks
		Excavator	8.00	hours	\$ 100	/hr 1	\$ 800	
		Truck	8.00	hours	\$ 100	/hr 3	\$ 2,400	
		Column (Assume 2 250x9SHS with EA75x5 Bracing) 250x9 SHS	Weight	85.00	kg/m			
			Supply	527.20	kg	\$ 8,000 /tonne 2	\$ 8,435	
8.2	<b>Walkway</b> Concrete walkway (1.5m x 3.5m)	Length	2.80	m				
		Weight	5.27	kg/m				
		Supply	14.76	kg	\$ 8,000 /tonne 8		\$ 944	
		Allowance for bolts/connections (5%)				5%	\$ 469	
		Labour	8.00	hours	\$ 84	/hr 2	\$ 1,344	Rate allowance includes for nightworks
		Franna Crane	8.00	hours	\$ 200	/hr 1	\$ 1,600	
		Area	5.25	m2				
		Supply concrete	1.05	m3	\$ 350	/m3 1	\$ 368	Assume 0.2m depth
		Pump concrete	1.05	m3	\$ 35	/m3 1	\$ 37	
		Finish	5.25	m2	\$ 4	/m2 1	\$ 21	
		Cure	5.25	m2	\$ 4	/m2 1	\$ 21	
		Steel deck (Assume 200PFC Beam - 25.4kg/m)	Area	5.25	m2			
8.3	<b>Handrails (stainless steel)</b>	Weight	25.40	kg/m				
		Supply (8PFC to make the deck)	152.40	kg	\$ 8,000 /tonne 8		\$ 9,754	
		Allowance for bolts/connections (5%)				5%	\$ 488	
		Labour	12.00	hours	\$ 84	/hr 2	\$ 2,016	Rate allowance includes for nightworks
		Franna Crane	4.00	hours	\$ 200	/hr 1	\$ 800	
		Supply & install	3.50	m	\$ 500	/m 2	\$ 3,500	
		Kick rails	3.50	m	\$ 200	/m 2	\$ 1,400	
		Allowance for seals/fittings	3.50	m	\$ 30	/m 1	\$ 105	Assume supported by to-be-constructed walkway
		Labour	4.00	hours	\$ 80	/hr 2	\$ 480	No allowance to demolish/alter existing building for connection to building access walkway
								No Allowance for Escalation or GST
								No Allowance for contaminated material
								No allowance for reconfiguration of the existing pavements roads drainage or street furniture
8.4	<b>Traffic Management</b>	Pedestrian Traffic Management				15%	\$ 6,396	Exposed Steelwork assumed to be painted
8.5	<b>Direct costs total</b>						\$ 49,513	No allowance for Property Acquisitions
8.6	<b>Overhead/Margin/Admin</b>					35%	\$ 17,329	No Allowance for CCTV
8.7	<b>Project management</b>					10%	\$ 4,951	No allowance for relocation of services
	<b>Contingency</b>					50%	\$ 35,897	No allowance for Lighting (assumed existing street lighting is sufficient)
	<b>Total</b>						\$ 107,690	+GST / 3.5m elevated standard building walkway (8m high, 3.5m span, 1.5m width)
							\$ 30,769	per m Rate skewed due to high walkway elevation (based off walkway typology 5)

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## **APPENDIX E – MULTI-CRITERIA ANALYSIS**

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## Multi-criteria Analysis

ALTERNATIVES	CRITERIA (scores range between zero and 5)					
	A. Effectiveness in Reducing Risk to Life	B. Difficulty of Implementation	C. Residual Risks after Mitigation Measures are Implemented	D. Impacts on Urban Landscape	E. Cost of implementation	F. Load on emergency services
1. Vehicular Evacuation Overall Score: 11	Score = 0	Score = 1	Score = 0	Score = 5	Score = 5	Score = 1
2. Shelter In Place Overall Score: 22 (best score)	Score = 4	Score = 4	Score = 2	Score = 5	Score = 5	Score = 2
3. HHL PMF Overall Score: 16	Score = 5	Score = 1	Score = 5	Score = 1	Score = 1	Score = 4
4. HHL 20 year ARI + SIP Overall Score: 18	Score = 4	Score = 3	Score = 3	Score = 2	Score = 3	Score = 3
5. HHL 100 year ARI + SIP Overall Score: 16	Score = 4	Score = 2	Score = 4	Score = 2	Score = 2	Score = 3

## Notes

## Alternative 1 – Vehicular Evacuation

**1A:** Under the assumptions of the NSW SES Timeline Evacuation Model, vehicular evacuation cannot be completed before evacuation routes are cut by floodwaters. This poses a very high risk to life.

**1B:** Implementation would be possible, but very difficult. Drivers in different precincts would need to know where to evacuate. Regional flooding would cut most of the main roads out of Parramatta CBD. Cars evacuating to Great Western Highway would most likely cue back to the CBD preventing more cars to leave their building. Background traffic would need to be managed in day scenarios, particularly in a PM peak scenario (residents returning to the CBD).

**1C.** This strategy would not reduce risk to life because evacuation cannot be completed before the arrival of floodwaters. In fact, this strategy may even increase risk to life because evacuees would experience inundation while they are blocked in their cars.

**1D.** There would be no alteration of the urban landscape

**1E.** There would be no significant implementation costs involved

**1F.** Emergency Managers would need to deal with the very high residual risks. This would require a complex warning communication strategy to ensure evacuees would know where to drive to, managing evacuating and background traffic, and most importantly rescuing a large number of people from their cars.

#### **Alternative 2 – Shelter In Place up to the PMF**

**2A.** In most instances, people would be able to take shelter in a refuge above the PMF within their own building. People in the public domain as well as people in buildings unsuitable to be used as shelters would need to have access to neighbouring buildings with a refuge above the PMF level.

**2B.** Ad-hoc communication strategy and risk awareness activities may be required to ensure that evacuees know what to do. A focus should be put on reducing the risk of people leaving the refuge before the emergency has passed.

**2C.** If risks of SIP are addressed as recommended in Molino Stewart (2016) and in this report, residual risk would be moderate.

**2D.** There would be no alteration of the urban landscape

**2E.** There would be no significant implementation costs involved

**2F.** Emergency responders may need to intervene in case the mitigation measures in place to address SIP risks fail.

#### **Alternative 3: HHL up to the PMF**

**3A.** Each building would have direct access to a flood free area up to the PMF. Risk to life would be minimum.

**3B.** It is expected that the construction of such a large system of elevated walkways would be very difficult to achieve. Some of the main challenges include the compatibility with existing and future development, maintenance, informal use of the structure causing safety issues and acceptance of the general public

**3C.** The main risk would be in case occupants of one-storey buildings refuse to evacuate on the elevated walkways.

**3D.** The impacts on urban landscape would be extremely high. These would include visual impact (particularly on heritage sites), overshadowing, loss of urban trees, inefficient use of land, limited accessibility to the CBD.

**3E.** Costs would be extremely high (estimated total construction cost of \$ 324 Million. Note that this does not include maintenance costs)

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3F. With such a system in place, virtually no dwellings would be isolated by floodwaters in any event up to the PMF. This would greatly simplify the role of emergency responders.

**Alternatives 4 (and 5): HHL up to the 20 (100) year ARI and SIP in greater events**

**4(5)A.** Risk to life would be significantly reduced

**4(5)B.** It is expected that the construction of such a large system of elevated walkways would be very difficult to achieve. Some of the main challenges include the compatibility with existing and future development, maintenance, informal use of the structure causing safety issues and acceptance of the general public.

**4(5)C.** Residual risk would be similar to the SIP only alternative, but SIP would only be required in large flood events

**4(5)D.** The impacts on urban landscape would be very high. These would include visual impact (particularly on heritage sites), overshadowing, loss of urban trees, inefficient use of land, limited accessibility to the CBD. Because of the smaller size of the elevated walkways network, impacts would be smaller than in Alternative 3 (HHL up to the PMF). Because the 100 year ARI event would require a network of elevated walkways only slightly larger than the 20 year ARI event, impacts would be similar.

**4(5)E.** The estimated total construction cost would be \$ 94.5 Million (20 year ARI) and of \$ 111 Million (100 year ARI). Note that this does not include maintenance costs)

**4(5)F.** Isolation would be avoided up to the 20 (100) year ARI event, so it is expected that the burden on emergency responders would be lower than in a SIP only scenario (Alternative 3)





DRAFT

# Horizontal Evacuation Pilot Study

Parramatta CBD



SJB Architects



**Project**

Horizontal Evacuation Pilot Study

Ref #5568

Date issued: 14/03/2017

Version: 01

Prepared by: AG, FL, JH, JL

Checked by: JK

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# Introduction

- Parramatta is Sydney's second CBD and is expected to grow significantly in the coming years.
- Parramatta CBD lies within the Parramatta River floodplain, and is subject to flash flooding that can potentially have less than 1 hour warning to evacuate.
- NSW SES has developed a classification of communities to determine priority areas for evacuation, including:
  - **Low flood island (high risk)**
  - **High flood island**
- Safest option for emergency situation was determined to be **Shelter in Place** (not evacuate).
- Safety concerns for occupants sheltering in some buildings due to:
  - **injury;**
  - **fire;**
  - **duration of flood event; and**
  - **occupants entering hazardous floodwaters.**
- Risk to buildings and occupants is lowered by through connecting buildings via passageways **elevated above the PMF.**
- SJB to investigate potential issues with three methods of connecting passageways above the PMF.





## Emergency response



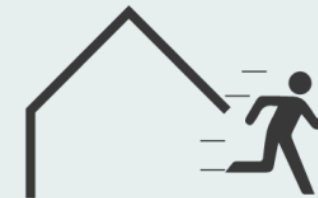
### 01. Shelter in Place

Occupants are encouraged to stay within the building for as long as possible, unless there is a hazard present such as a fire, or if an occupant requires medical assistance.



### 02. Evacuate to Adjacent Building to Shelter in Place

Occupants are encouraged to evacuate to the nearest adjacent building that provides a safe space to Shelter in Place.

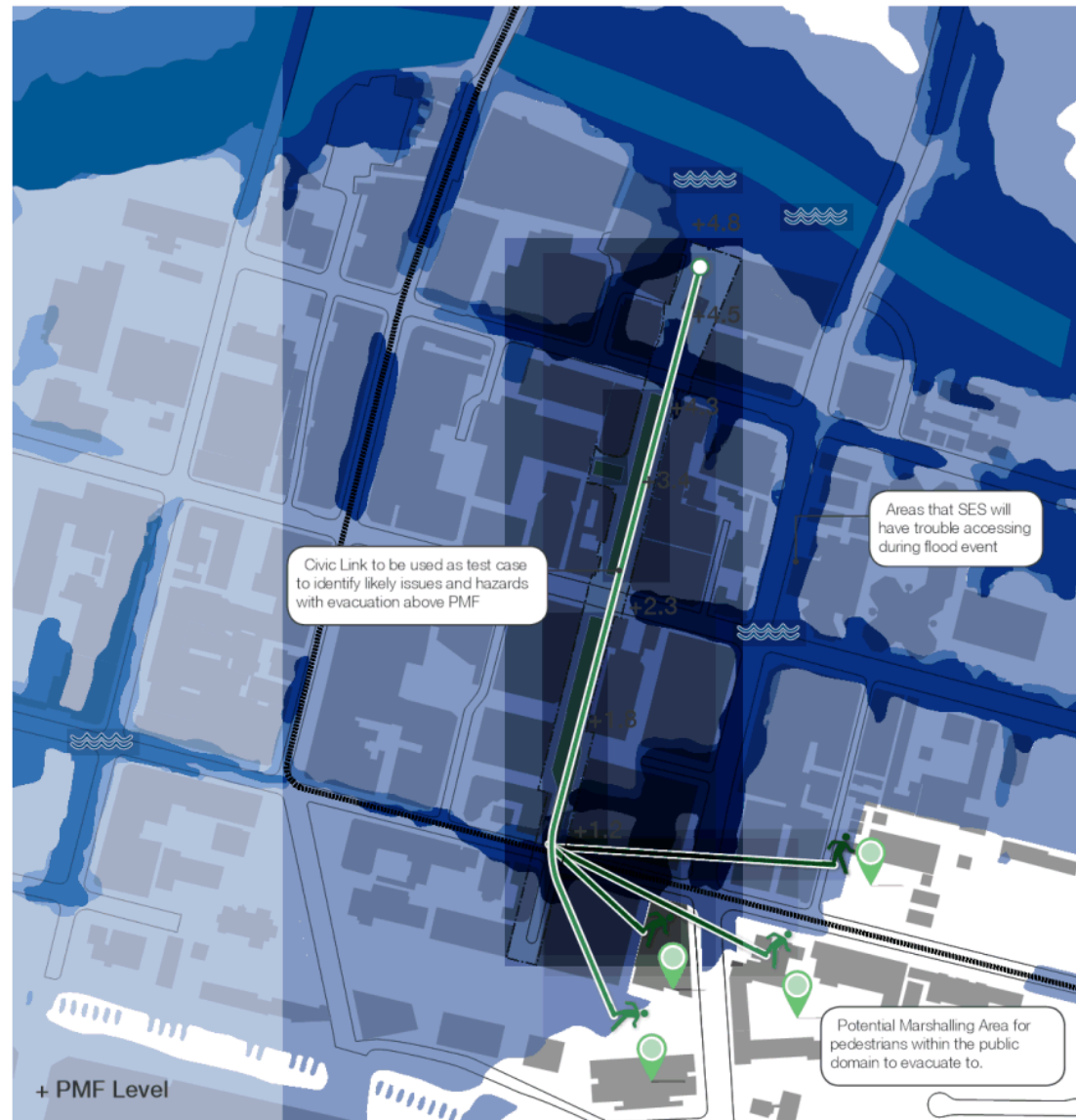


### 03. Evacuate to Marshalling area

If all adjacent buildings are considered unsafe to Shelter in Place, only then are occupants encouraged to evacuate via the proposed method to a public marshalling area that is located above the PMF.

## The Situation

- CoP has identified a rough outline of marshalling areas and evacuation routes for a flood event, however this is largely for **pedestrians within the public domain**.
- Ideally occupants already within buildings will **shelter in place** within the building for the duration of the flood event, which is likely to be a **matter of hours**.
- Using the Civic Link project to test the issues associated with evacuation above the PMF, this report identifies potential issues, conflicts, and safety concerns with three methods of evacuation:
  - Above Awning
  - Above Podium
  - Indoors
- The areas identified as dark blue are the 1 in 100 year flood levels, and are considered **inaccessible by SES during a flood event**.
- The area shown in light blue indicates the PMF which varies throughout the CBD as being below and above the height of an awning.



# Baseline Review

**The Best Practice Urban Design in Flood Prone Areas Urban Design Strategy Report** was prepared by Architects for Panama City Council and completed in December 2016.

The report considers the particular opportunities and challenges for Panama City as a flood-prone area that is currently undergoing intensive urban development.

These concerns have generally been addressed according to the particular characteristics of key areas of interest within the Panama City region. These are identified as the Panama City CBD, River Forefront and Clay Creek, Urban Renewal Areas: Roswell and Canella, North Panama City and Shoville.

A series of integrated built form and public domain design strategies have been developed to address the particular flood conditions, in alignment with the requirements of the NCDI State Government Flood Prone Land Policy and other relevant legislation, policy and guidelines.

The study addresses the specific issues identified for Panama City within the following categories:

- Activation
- Density
- Aesthetics
- High hydraulic hazard
- Car parking

The report recommends an integrated approach to managing Panama City's urban form and public realm that responds to these five categories, while ensuring an attractive and accessible urban environment.

Final design recommendations for best practice approaches are supported by relevant case studies and design testing, in addition to consideration of policy context and site conditions.

The following pages provide a summary of key aspects of the report (text extracted from the body of the report).

**Objectives**

The following objectives are outlined in the introduction section of the report:

- To create active and vibrant streets and public spaces within flood-prone areas of Panama City.
- To minimise flood damage and risks, to increase resilience and to ensure safety within both the public domain and adjacent building spaces.
- To identify lessons learned, their relevance to Panama City and implications for the existing NCDI policy context.
- To address a range of flood conditions and scales relevant to Panama City from the scale of the city to the waterfront to buildings and their public domain interface.
- To test case study findings against sample building designs (groundline and basement) to demonstrate compliance with standards, building systems design requirements, viability and good urban design outcomes.
- To complement the CBD Planning Framework: flood study work being undertaken by Council.
- To provide recommendations for policy that could inform an alternative approach to current practice in NCDI and that can be reviewed by Office of Environment and Heritage (OEH) and the State Emergency Services (SES).
- To use diagrams, precedents and technical references to clearly explain analysis and recommendations.

**Considerations for Flood Management Design**

**The Human Scale**

A series of height thresholds are proposed to define urban design solutions that vary according to flooding impact, in relation to the human scale. These heights are defined as:

- Seating height: 450mm and under
- Walking height: 900mm and under
- Eye Level: 1500mm and under
- Ceiling height: 1800mm and above

**Built Form**

Four main aspects of the management of flood risk in development have been identified as issues of fundamental built form outcomes:

- Minimum floor level requirements and the Flood Planning Level (FPL)**  
By constructing minimum floor levels to the current FPL, there is often significant grade changes between ground floors and adjacent street levels requiring careful design to ensure activation and aesthetics.
- Basement entry level requirements**  
The current basement entry minimum level requirement for FPL cannot feasibly be achieved in developments where the FPL is up to 3 metres higher than adjacent street levels.
- Flood emergency response requirements**  
The rapid rate of rise for Panama River and its tributaries, limits the feasibility of flood emergency response provisions for developments, in particular vehicles.
- Maintaining flood conveyance and storage**  
One currently adopted approach to managing flood conveyance through sites is to utilise covered underpass areas below ground level. This presents difficulties for the streetscape and building design.

**Assessment Criteria**

An assessment criteria has been established to measure the effectiveness of proposed design strategies and solutions from both an urban design and flood risk management perspective. This criteria is categorised as the following:

**Urban Design Criteria:**

- Content
- Activation
- Connectivity
- Aesthetics

**Flood Management, Feasibility and Risk Criteria (Flood Management):**

- Flood Risk to Life and Evaluation
- Feasibility

**Flood Context - Panama City**

An investigation of the existing flood conditions for Panama City has been included in the preliminary stages of the report. The flood characteristics particular to the Panama City region are described on page 12.

The spectrum of flooding in Panama City ranges from shallow, fast moving water occurring as a result of frequently occurring heavy storms through to large, slow subiding inundations of depths over 3m that occur much more rarely. Flood events affect streets, shops, homes, offices and public space each has its own specific design requirements and patterns of use.

The constraints for flood emergency response as a result of these conditions are elaborated on further in Section 3.0 Flood Context (p. 20).

"Panama City River and its tributaries is classed as a flash flooding environment as the time to flooding is less than 6 hours, at some locations on tributaries this can reduce to less than 30 minutes. This means that flood emergency response is difficult for the area as there will be very limited time available for emergency services such as the SES to evacuate occupants of the location in the event of flooding."

The specific flood characteristics for the Panama City area are identified as the following (p. 21):

- A number of Panama City flood-prone areas are affected by 100y ARI high hazard from river flooding.
- Other parts of the CBD are affected in the 100y ARI by low hazard overland flow flooding which mostly align with the road network.
- The majority of the CBD is affected by high hazard flooding (up to 4 metres depth, assumed low velocity) from Panama River in the PUE event.
- There is significant overland flow and consequent flooding across much of the CBD reaching higher levels than river flooding.

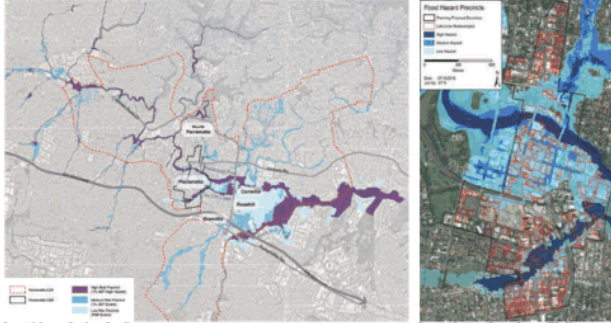


Figure 1.1.2 Panama City Flood Context Plan (a2)  
Note: Panama City flood-prone areas as per information on 10 May 2016

Figure 1.1.1 Flood-Prone Points - Panama City (a2)

**Flood Response - Case Studies**

A series of case studies are presented in the Architects report to investigate potential design approaches and solutions for the flood-prone areas of Panama City. The following design and key design elements are identified for each case study through an analysis of flood and inundation examples of what has been implemented.

The following case study categories are included in the report:

- Placing over the water**  
Involves the integration of elevated built form elements with the urban environment.
- Imperviousness, Movement and Managed Inundation**  
Involves the use of public domain elements that can be easily transported or safely submerged during a flood event.
- Temporary Resistance**  
Provides permanent flood protection and resilience through the use of flood-resistant built form elements, construction materials and design approaches.
- Integrated Resistance**  
Provides permanent flood protection and resilience through the use of flood-resistant built form elements, construction materials and design approaches.
- Step within the Site**  
Addresses the management of level changes within a building and across the site.
- Step within Streets**  
Addresses strategies for the design and retrofitting of the streetscape to manage floodwaters.

**Design Testing**

A series of design testing options were developed to provide alternative built form solutions that address the specific flood conditions and urban environments within the Panama City Context. This included the testing of design strategies for residential, retail and commercial built form typologies as well as elements within the public realm.

The design testing was informed by the case study research and guided by the following key principles:

- Human Scale Steps**  
Aims to minimise the height transition from the public domain to the ground floor of a building. This includes the testing of tiered building setbacks, inclusion of human scaled design elements and defining of a desirable maximum height change within a case.
- Active Spaces - Not Just Threshold**  
Focuses on the activation of transitional spaces through good design integration and connectivity. This includes the integration of amenity within a transition zone, definition of the spatial width that permits an active transition space and the use of water level permeability to connect buildings.
- A Two Tier City**  
Addresses approaches to design for creating safe refuge facilities in the event of the PUE worst case scenario. This includes the provision of active, connected spaces at ground and first floor level.

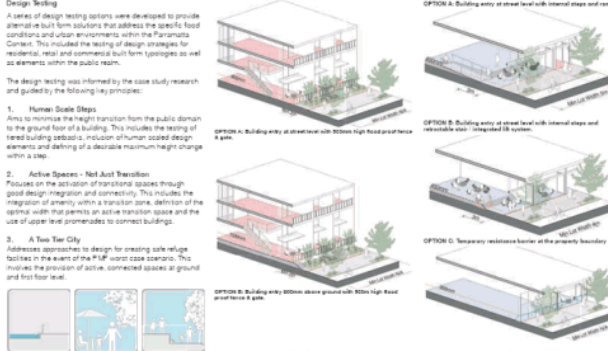


Figure 1.1.3 Diagrams Showing Design Testing Options (a2)

Figure 1.1.4 Residential Built Form Testing (a2)

Figure 1.1.5 Retail & Commercial Testing (a2)

**Recommendations - Panama City CBD**

The following design recommendations are provided for the Panama City CBD precinct, in line with the three Design Guiding Principles:

**Step within the Site and connected promenade** that allow pedestrian circulation during flood events. Supporting the installation of new and re-landscaped green roofs should be considered.

**Streets and adjacent parkways** could be upgraded to include new VCDI pavements, footpaths and medians.

**More extensive on street curbside and conversion of parking spaces** to landscaped pedestrian zones should be considered where appropriate.

**Implementation of new bicycle path infrastructure** should consider additional accommodation of flood water channeling.

**In areas of the precinct such as Church Street**, utilise temporary resistance strategies to retain the integration between shop fronts, the footpath and outdoor dining areas.

**Managed inundation** for a portion of the temporary adjacent footpath could also be considered to reduce the impact of steps and ramps on the public domain and building footings.

**Recommendations - Overall**

The Best Practice Study provides a set of recommendations that are informed by flood management and response policy, current analysis, case study research and design testing undertaken within the report.

These recommendations are presented under the following categories:

- Design Approach:**  
Specific design objectives and principles are provided to address the different characteristics and requirements of the following elements within the urban fabric:  
Impervious Public Realm  
Phenomena and Renewal Areas  
VCDI Sites  
Building Typologies (Commercial CBD, Mixed Use, Fine Grain/Residential, Adaptive Re-use, Residential Apartments)  
The Design (Emergency Egress, Basement Design, Vehicle Streets and Pedestrian Routes, Building Details, High Hydraulic Hazard Flood Conveying, Closures, Wallways and Ramps, Walls and Materials).
- Guiding Principles**  
Recommendations that enable the optimum implementation of the three guiding principles (See 'Design Testing') have been derived from the testing of design options.
- Site Planning and Design Process**  
A series of steps are outlined to be undertaken as part of the planning and design process for future development of flood affected sites.

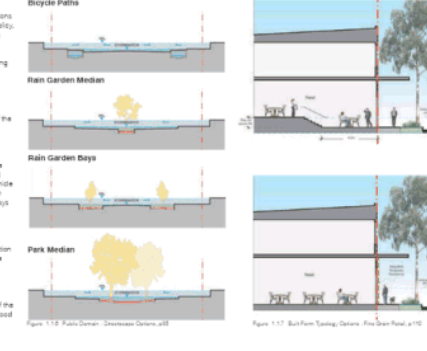
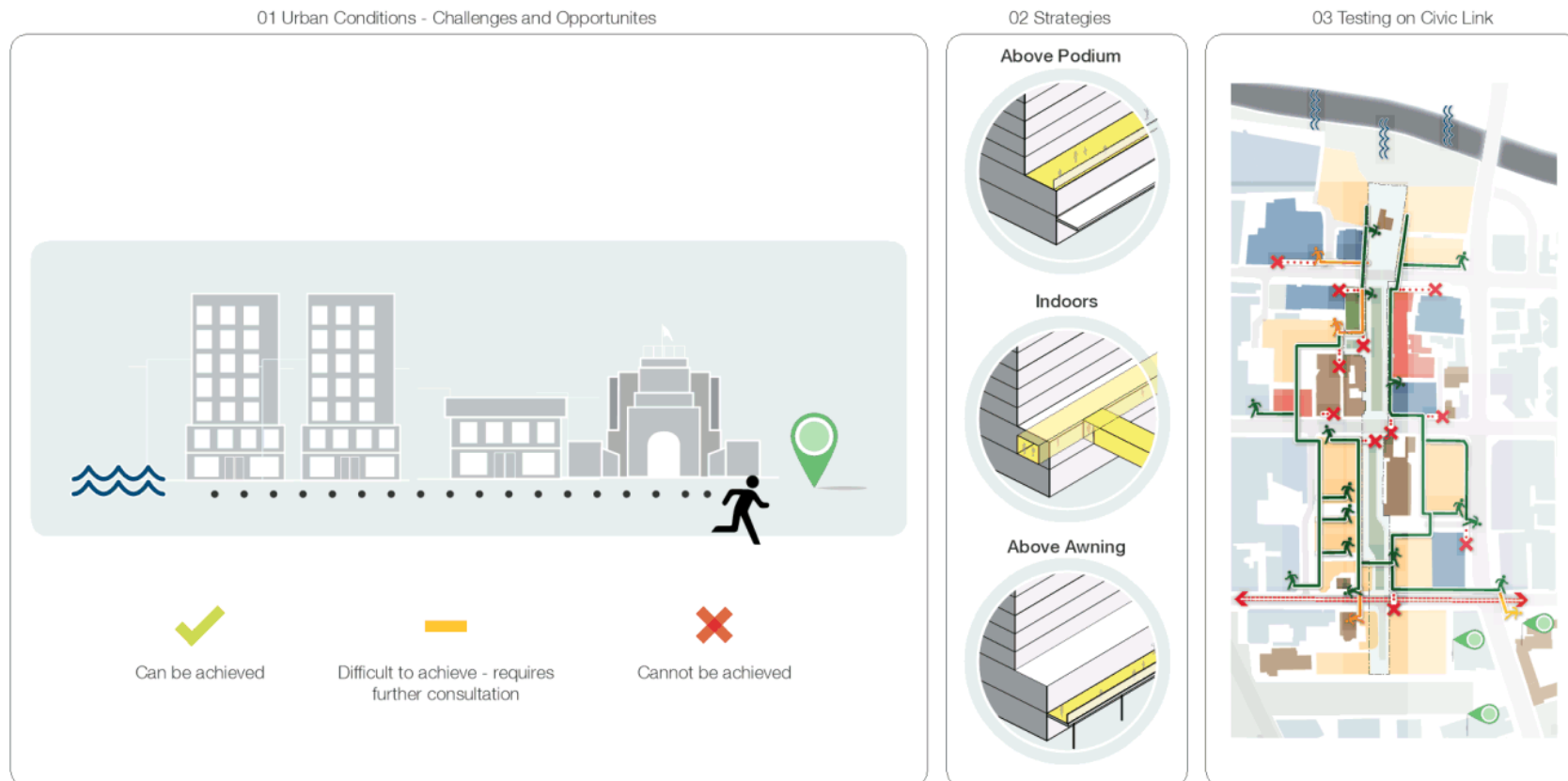


Figure 1.1.6 Public Domain - Greenways, Canals (a2)

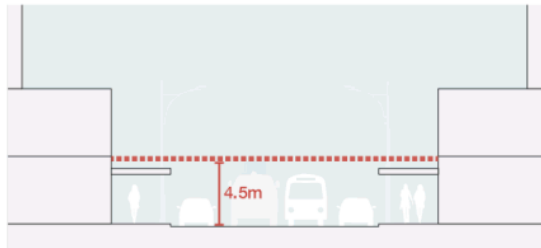
Figure 1.1.7 Built Form Testing Options - Fine Grain Retail (a2)

# Approach methodology



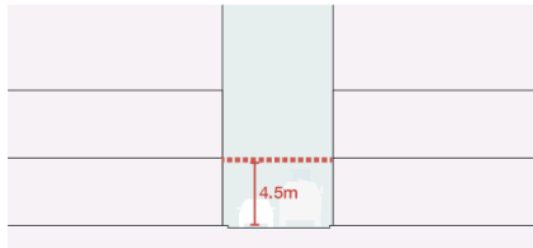
# Evacuation Strategies

## Urban Conditions



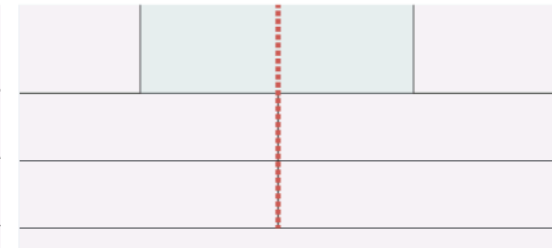
### Over the Road

- Maintaining clearance height for service vehicles
- Spans of walkways will be longer and will need structural support within the public domain
- BCA/AS compliance issues
- Feasibility and cost issues



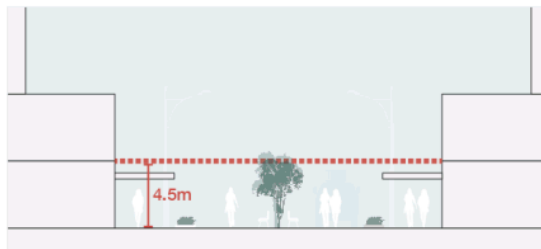
### Over Lane

- Spans of walkways will be shorter and may not require structure within the public domain
- Maintaining clearance height for service vehicles
- BCA/AS compliance issues
- Feasibility and cost issues



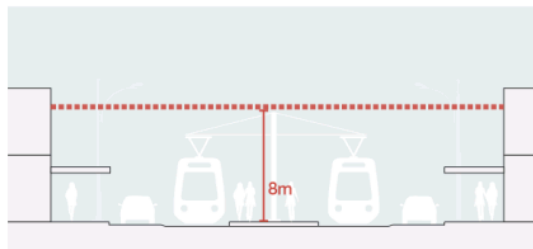
### Over Boundary

- Dependant on adjacent buildings have podiums and internal floor levels at similar heights
- BCA/AS compliance issues
- Feasibility and cost issues



### Over Public Space

- Visual structure in the space would detract from amenity and character of the public space
- Overhead structure may impede on solar access for open space.
- Requires clearance height for emergency and services vehicles.
- Structure to achieve span of walkways



### Over Parramatta Light Rail

- 8m clearance height for light rail vehicles and infrastructure.
- Safety issues regarding interference with power lines and infrastructure.
- Spans of walkways



# Evacuation Strategies

## Building Conditions



### New Building - New Building

- Access paths can be integrated in new building design
- Opportunity to create continuous street wall heights



### New Building - 'Unlikely to Change'

- Spans of walkways will be shorter and may not require structure within the public domain
- Maintaining clearance height for service vehicles
- BCA/AS compliance issues
- Feasibility and cost issues



### 'Unlikely to Change' - 'Unlikely to Change'

- Dependant on adjacent buildings have podiums and internal floor levels at similar heights
- BCA/AS compliance issues
- Feasibility and cost issues



### Heritage - New Building

- Misaligned street walls
- Compromised character of heritage building
- Integration of walkways into heritage fabric and structure
- Structural integrity
- Will be cheaper and easier to retrofit over the top of buildings (for all of Top of Podium)



### Heritage - 'Unlikely to Change'

- Misaligned street walls
- Compromised character of heritage building
- Integration of walkways into heritage fabric and structure
- Structural integrity
- Will be cheaper and easier to retrofit over the top of buildings (for all of Top of Podium)



### Heritage - Heritage

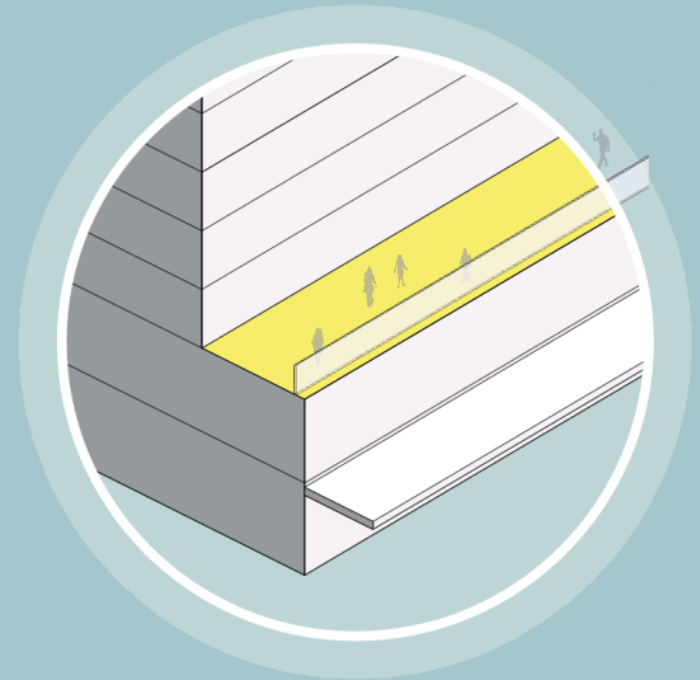
- Misaligned street walls
- Compromised character of heritage building
- Integration of walkways into heritage fabric and structure
- Structural integrity
- Will be cheaper and easier to retrofit over the top of buildings (for all of Top of Podium)

# The Civic Link

## Building Conditions

- Heritage Item
- Unlikely to Change
- Under Consideration for Redevelopment
- High Likelihood of Change

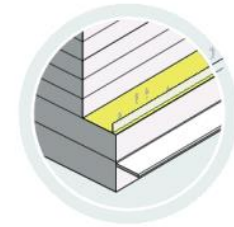




**Top of Podium**

# Evacuation Strategy

## Top of Podium



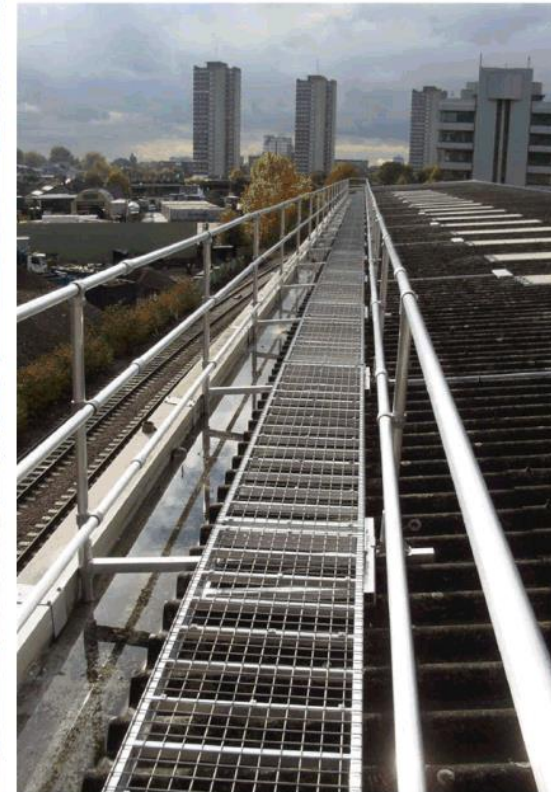
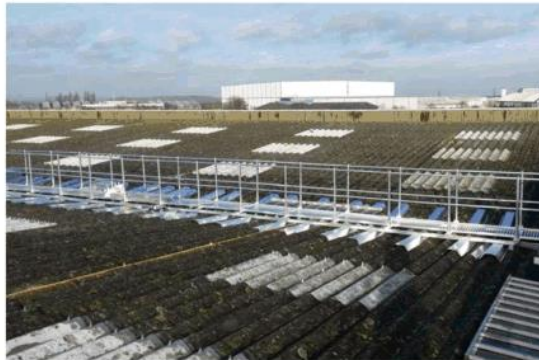
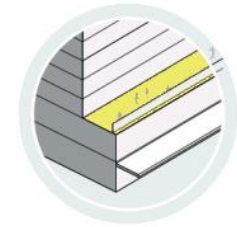
This evacuation method utilises setbacks above the street wall, roofs of existing small scale buildings, and podiums of new larger developments as an evacuation route to safety. This strategy assumes that most of these spaces are typically not occupied for everyday uses, and can be made to allow for evacuation to other rooftops. Proposed solutions as a part of this strategy are intended for the purposes of a flood event only and would not provide access at other times.





## Case Study

Top of Podium

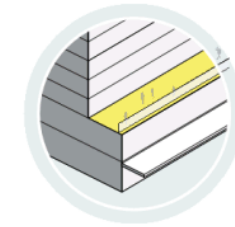
































# Strategy Evaluation

## Top of Podium

 Can be achieved  
 Difficult to achieve - requires further consultation  
 Cannot be achieved

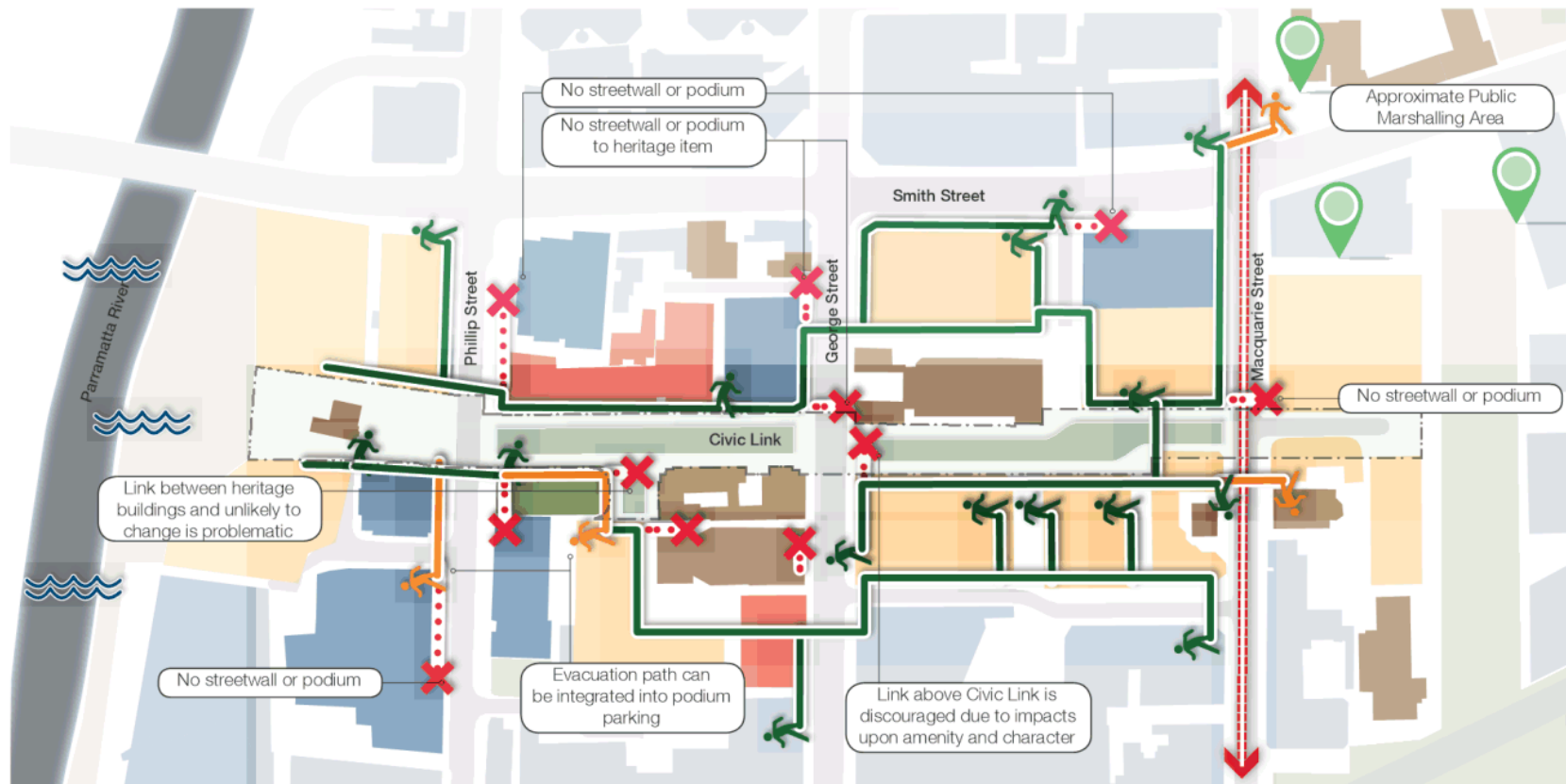


Conditions	Interface	1. New Building - New Building	2. New Building - Existing Building 'Unlikely to Change'	3. Existing Building - Existing Building	4. Heritage - New Building	5. Heritage - Existing Building 'Unlikely to Change'	6. Heritage - Heritage
<b>A. Over Road</b>		 New sky bridge/ temporary structure can be integrated as part of design	 may require retrofitted structure on existing building may be visible/ unsightly in the public domain.	 may require retrofitted structure on existing building may be visible/ unsightly in the public domain.	 may require retrofitted structure on existing building may be visible/ unsightly in the public domain.	 may require retrofitted structure on existing building may be visible/ unsightly in the public domain.	 Bridges and walkways over the road will impact the integrity of the heritage item
<b>B. Over Lane</b>		 New sky bridge / temporary structure can be integrated as part of design	 may require retrofitting of existing structure but narrow width of lane can help conceal built external walkways	 may require retrofitting of existing structure but narrow width of lane can help conceal built external walkways	 may require retrofitting of existing structure but narrow width of lane can help conceal built external walkways	 may require retrofitting of existing structure but narrow width of lane can help conceal built external walkways	 may require retrofitted structure on existing building may be visible/ unsightly in the public domain.
<b>C. Over Boundary</b>		 New sky bridge/ temporary structure can be integrated as part of design	 may require retrofitting of existing structure but can be concealed within the building fabric	 may require retrofitting of existing structure but can be concealed within the building fabric	 may require retrofitting of existing structure but can be concealed within the building fabric	 may require retrofitting of existing structure but can be concealed within the building fabric	 may require retrofitting of existing structure but adjacency of buildings can help conceal built external walkways
<b>D. Over Public Space</b>		 New sky bridge/ temporary structure can be integrated as part of design	 may require retrofitted structure on existing building may be visible/ unsightly in the public domain.	 may require retrofitted structure on existing building may be visible/ unsightly in the public domain.	 Bridges and walkways over the road may impact the integrity of the heritage item	 Bridges and walkways over the road may impact the integrity of the heritage item	 Bridges and walkways over the road may impact the integrity of the heritage item
<b>E. Over Light Rail Line</b>		 New sky bridge/ temporary structure can be integrated as part of design	 may require retrofitted structure on existing building may be visible/ unsightly in the public domain.	 may require retrofitted structure on existing building may be visible/ unsightly in the public domain.	 Required clearances for bridges and walkways over the PLR may impact the integrity of the heritage item	 Bridges and walkways over the road may impact the integrity of the heritage item	 Bridges and walkways over the road may impact the integrity of the heritage item

# Civic Link Testing

## Top of Podium

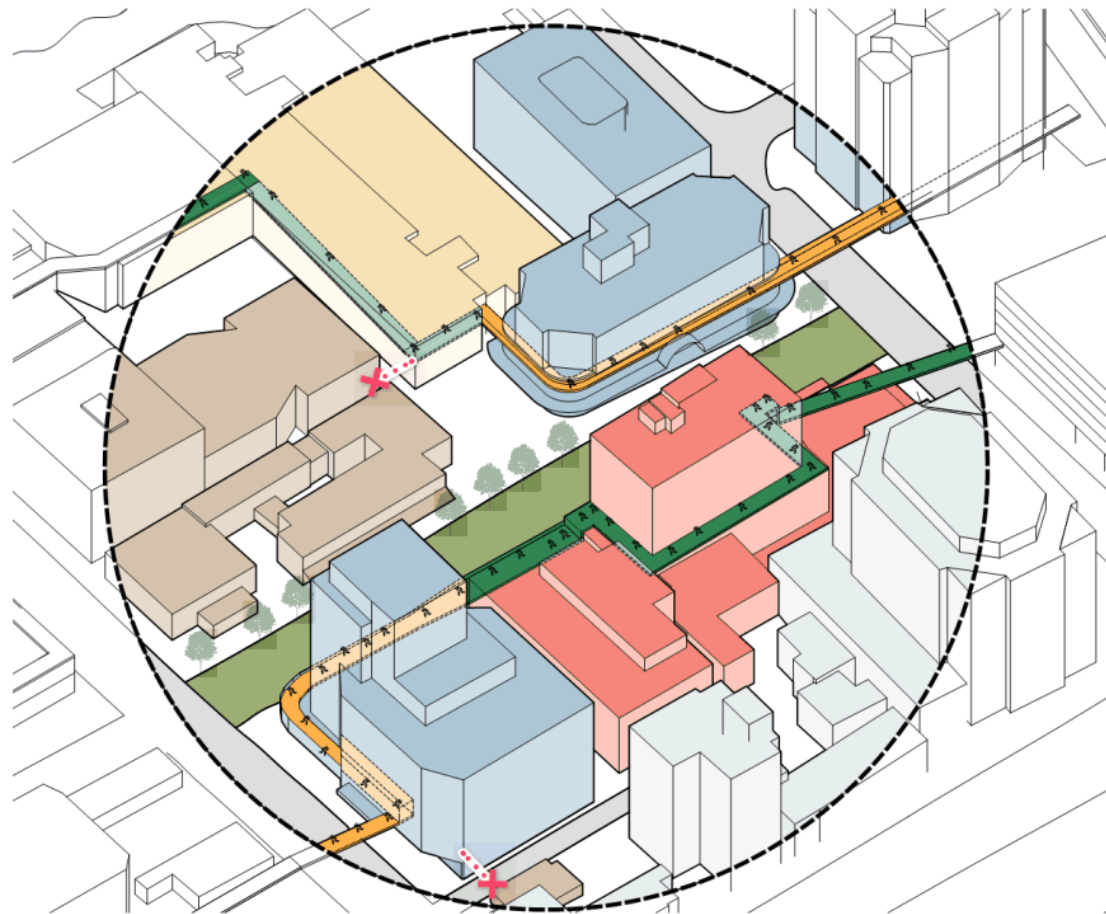
- Heritage Item
- Unlikely to Change
- Under Consideration for Redevelopment
- High Likelihood of Change



# Discussion

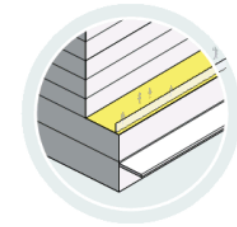
## Top of Podium

- Possible to create a route well above the PMF.
- Most adjacent buildings can be connected either via the podium or podium to a rooftop via a staircase.
- Will require coordination between city blocks as to crossing point over a road or lane, should that be required.
- Lifting the path of travel will remove a number of hazards including floating or submerged and moving objects crashing into awnings.
- Hazards may include slips and falls as well as security of buildings.
- Hazard during a thunderstorm with lightning.



# Evacuation Strategies

## Top of Podium



### Challenges

#### Feasibility

The cost of retrofitting walkways between the tops of podiums or buildings is relatively minor, and could be required as standard for all new buildings.

#### Heritage value

Due to the height of existing heritage items, this solution may require a walkway that sits above the roof of the building, which would dramatically impact the heritage item. Due to the difficulties involved with evacuating occupants to the rooftop of a heritage item such as new access ways, increased structure required and likely pitched rooves, it is unlikely that this option would be an appropriate solution for heritage items, and thus the heritage items would remain a "low flood island" risk.

#### Visual impact

When retrofitting an existing building, lightweight materials such as aluminium and expanded steel may be utilised to connect to other buildings, or to provide one safe path of access across a rooftop or podium that may otherwise be inaccessible.

#### Adjacent levels

The various developments occurring around the CBD will provide a range of challenges when connecting between them. Connecting over the top of buildings that vary in height should be able to be managed as lightweight stairs are able to be provided and retrofitted into the system.

#### Safety

Appropriate safety measures should be able to be employed via handrails and signage. This solution will provide numerous situations for hazards including:

- slipping and falling from walkway
- moving off walkway and onto areas of buildings that are not usually accessible to the public
- hazard of being exposed to downpours of rain.

Additional safety measures to ensure that an evacuation route does not enable people to break into, or inappropriately access, areas of a building that are privately owned.

#### Wayfinding

Appropriate signage within the building is to be provided to inform occupants that the most appropriate strategy is to Shelter in Place, however if this is no longer safe, to evacuate to the podium or rooftop. Clear descriptions and wayfinding would need to be provided to ensure that evacuees are travelling towards a marshalling area or collection point, or more appropriately into the adjacent building to Shelter in Place. If evacuees are simply moving to an adjacent building, a plan for alerting SES as to the whereabouts of these occupants is crucial.

#### Structural integrity

Adequate structure will need to be provided if retrofitting existing buildings, and to ensure that these areas are trafficable and safe.

#### Continuous Path of Travel

This strategy is likely to be able to create a continuous path, however not one that is level. The continuous path will be formed of stairs, ramps and walkways, and can easily connect over the top of roads and public spaces if needed.

If the mechanisms are not permanently set up on the buildings, the way in which these are set up in an emergency event will need to be coordinated by both the CoP and building occupants.

However if evacuees are simply moving from one building to an adjacent building bridges to connect across roads and public spaces will not be required in most cases.

### Opportunities

#### Feasibility

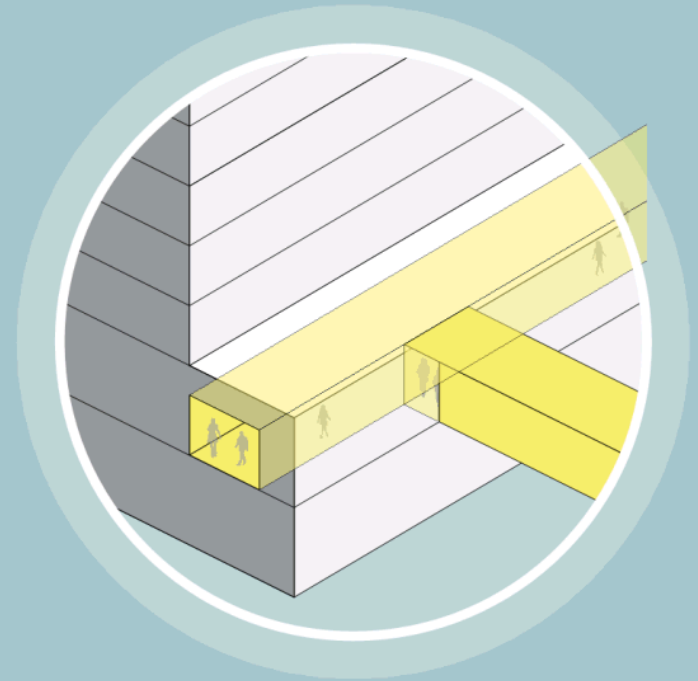
The cost of providing expanded metal walkways to existing buildings is minor, and can be incorporated throughout the city in a reasonably short period of time.

#### Implementation

If providing lightweight walkways to the buildings around the city, this could be funded by Council and other public sources, and implemented in a reasonable short period of time.

#### Design

New buildings would be able to incorporate a more permanent option within their design, as well as being better able to navigate security concerns from the design phase.

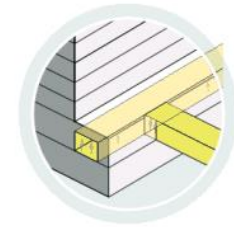


# Indoor Strategies



# Evacuation Strategy

## Indoor Evacuation

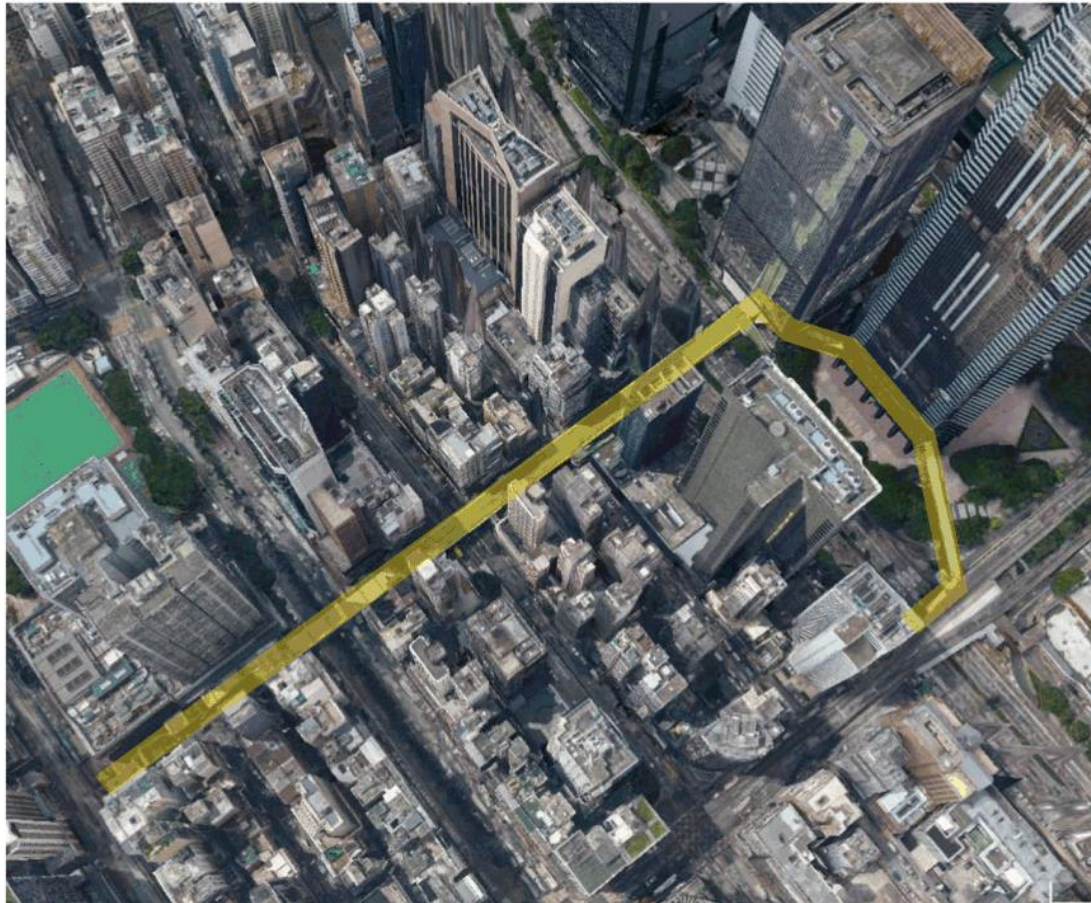


Indoor evacuation relies on the creation of a two tier city, connecting the upper levels of the city with public walkways providing a secondary address to buildings. This strategy assumes that the proposed connection will be internal publicly accessible privately owned space that is accessible 24hours a day. These spaces can be both passive and active, fronted by levels of double height retail spaces, commercial offices suites or planting.



## Case Study

Indoor Evacuation



GJB Architects

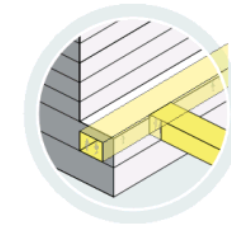


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# Strategy Evaluation

## Indoor Evacuation

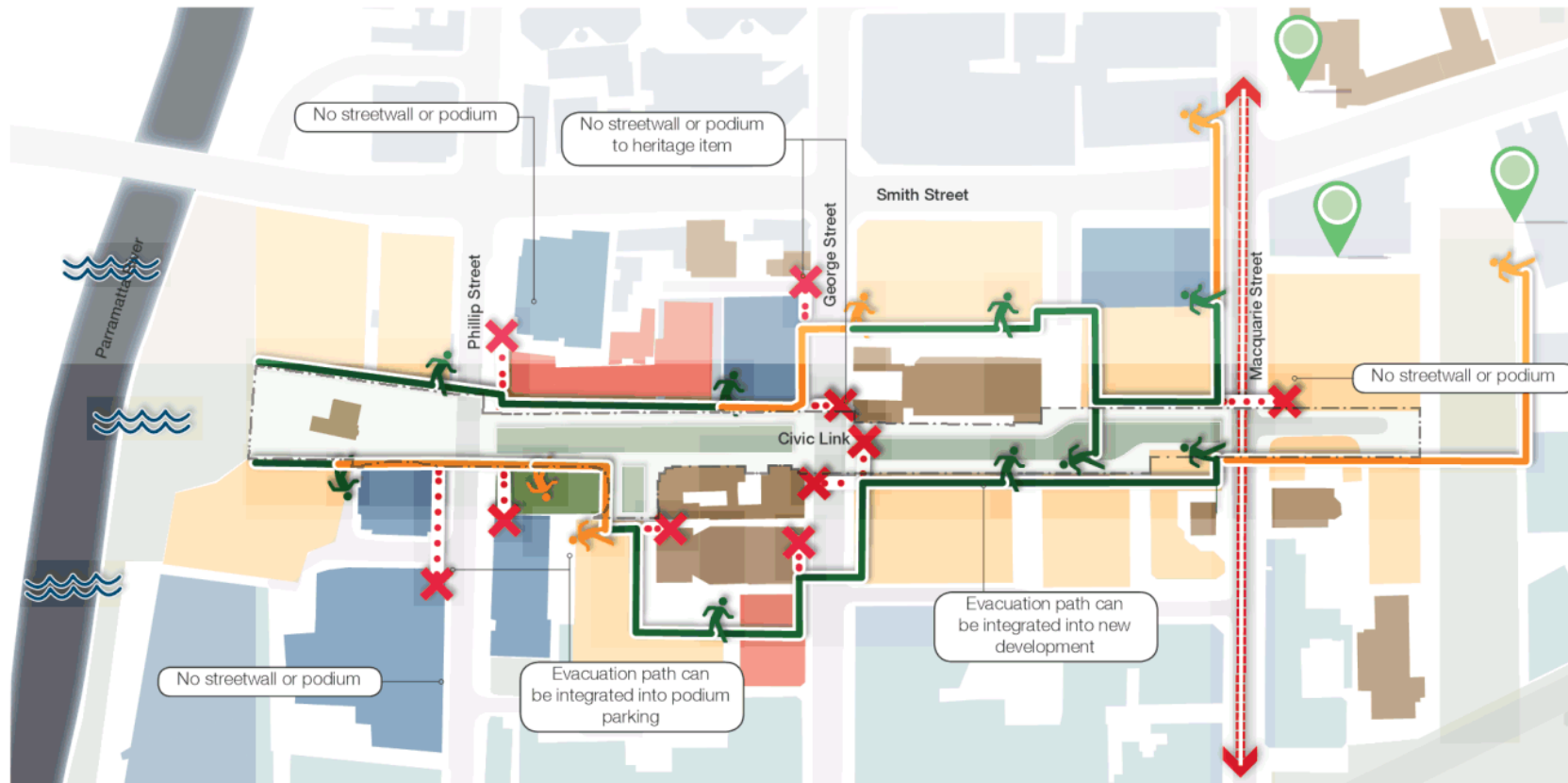


Conditions	Interface	1. New Building - New Building	2. New Building - Existing Building 'Unlikely to Change'	3. Existing Building - Existing Building	4. Heritage - New Building	5. Heritage - Existing Building 'Unlikely to Change'	6. Heritage - Heritage
A. Over Road		✓ · New sky bridge/ internal walkways can be integrated as part of design	■ · will require retrofitted structure of existing building to allow for continued walkway. Dependant on exiting use	■ · will require retrofitted structure of existing building to allow for continued walkway. Dependant on exiting use	✗ · May have significant impact the structural of heritage items	✗ · May have significant impact the structural of heritage items	✗ · May have significant impact the structural of heritage items
B. Over Lane		✓ · New sky bridge/ internal walkways can be integrated as part of design	■ · will require retrofitted structure of existing building to allow for continued walkway. Dependant on exiting use	■ · will require retrofitted structure of existing building to allow for continued walkway. Dependant on exiting use	✗ · May have significant impact the structural of heritage items	✗ · May have significant impact the structural of heritage items	✗ · May have significant impact the structural of heritage items
C. Over Boundary		✓ · New sky bridge/ internal walkways can be integrated as part of design	■ · will require retrofitted structure of existing building to allow for continued walkway. Dependant on exiting use	■ · will require retrofitted structure of existing building to allow for continued walkway. Dependant on exiting use	✗ · May have significant impact the structural of heritage items	✗ · May have significant impact the structural of heritage items	✗ · May have significant impact the structural of heritage items
D. Over Public Space		✓ · New sky bridge/ internal walkways can be integrated as part of design	■ · will require retrofitted structure of existing building to allow for continued walkway. Dependant on exiting use	■ · will require retrofitted structure of existing building to allow for continued walkway. Dependant on exiting use	✗ · May have significant impact the structural of heritage items	✗ · May have significant impact the structural of heritage items	✗ · May have significant impact the structural of heritage items
E. Over Light Rail Line		■ · New sky bridge/ internal walkways can be integrated as part of design. Height clearance	■ · will require retrofitted structure of existing building to allow for continued walkway. Dependant on exiting use	■ · may require retrofitted structure on existing building may be visible/ unsightly in the public domain.	✗ · May have significant impact the structural of heritage items	✗ · May have significant impact the structural of heritage items	✗ · May have significant impact the structural of heritage items

# Civic Link Testing

## Indoor Evacuation

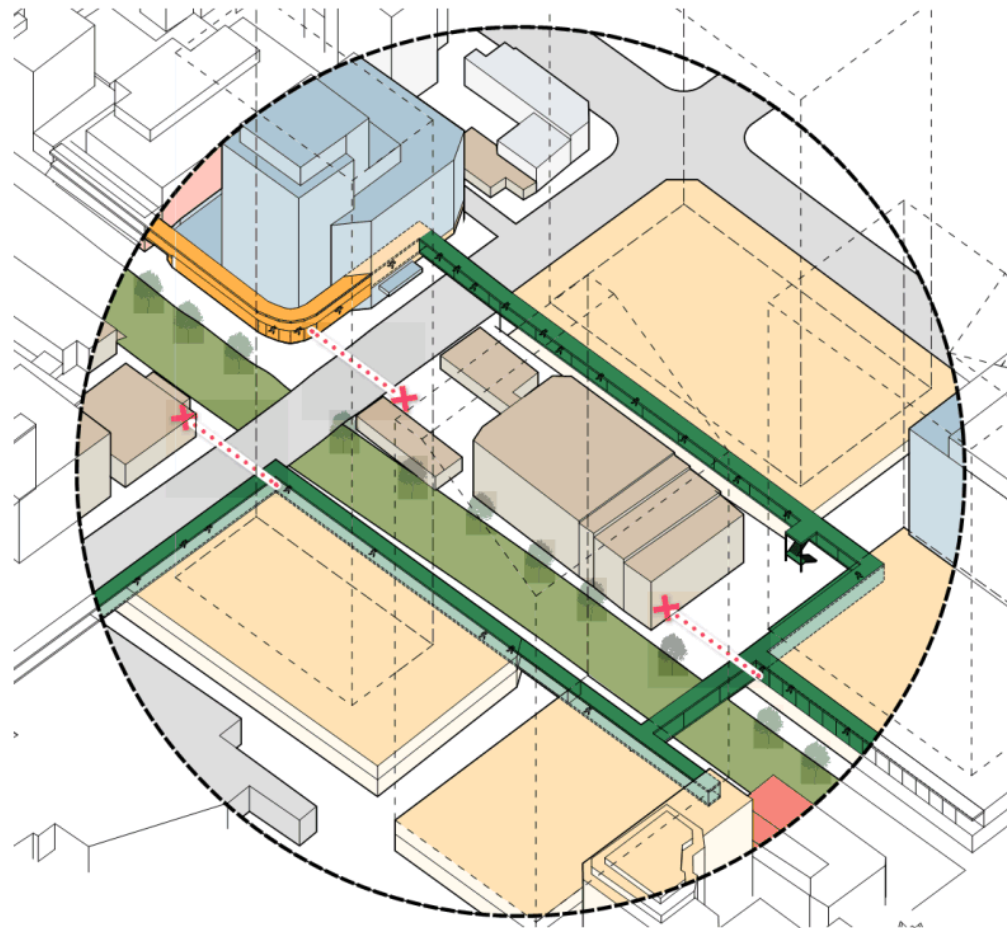
- Heritage Item
- Unlikely to Change
- Under Consideration for Redevelopment
- High Likelihood of Change



# Discussion

## Indoor Evacuation

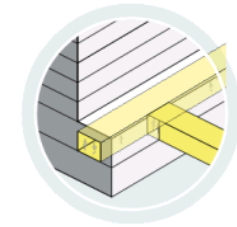
- Possible to create a route above the PMF, however this will take many years to implement.
- Most adjacent buildings can be internally connected.
- This strategy is costly and will require extensive coordination between land owners. It is unclear who would cover what costs.
- Will require coordination between city blocks as to crossing point over a road or lane, should that be required.
- This option provides a safe path of travel.
- Potential to connect the city and create new two-tiered city.





# Strategy Evaluation

## Indoor Evacuation



### Challenges

#### Feasibility

This evacuation option is likely to be more expensive due to the cost of integration into the existing fabric of the building. Walkways spanning between buildings also need to be structurally sound, and create a complete seal to the building where they enter.

#### Heritage value

Creating a walkway that connects into a heritage building would significantly damage or compromise the integrity of the item.

#### Adjacent levels

Due to the rapid development underway in the CBD, it is likely that there will be existing and new buildings constantly changing. New buildings now have to address flood levels through elevated floor levels, whilst many existing buildings will have floor levels that do not align. Hence the connection of various floors between buildings will pose a challenge to creating a path of access, and an appropriate architectural solution.

#### Integrity

This is a more complicated approach as the walkways connecting between buildings have not been accounted for in the original design of a building (in the case of retrofitting). This requires additional cost to ensure the structural integrity of the walkway, as well as the cost to the architectural integrity of the building.

#### Safety

The risk to evacuees moving between buildings is greatly reduced in this option, as the path of travel is sheltered from the weather, and is less likely to create a slip hazard, or allow access to areas that occupants should not travel to. In the case that occupants are evacuating because of a fire in a building, this option will not be safe, as appropriate fire measures would need to be in place to separate the buildings. As such, in the case of a fire, these internal walkways would either need to be treated in the same manner as a fire escape, or alternatively, provide separation between the buildings and create an inaccessible area. In the later case, the walkway can no longer serve its purpose for evacuation. In the first case, the walkway takes up valuable space within a building envelope that is only used in the case of an emergency.

#### Implementation

This strategy would have a lengthier time frame than the other two strategies, and would require extensive negotiations between land owners, Council, and other government organisations. A holistic strategy could take years to deliver, and in the meantime a more appropriate strategy may need to be implemented to reduce the levels of risk within the CBD. This would suggest that a more appropriate response may be to address the immediate needs of the CBD. Existing uses will also need to be renegotiated to allow public access to parts of the building as a permanent solution.

#### Continuous Path of Travel

This strategy is unlikely to be able to provide a continuous path of travel due to the private nature of many of the buildings in the CBD. Connecting to different levels between the buildings will cause the main problem for connectivity, as well as some building operators not wishing to create an internal and permanent connection. As this strategy assumes that there is a new 24 hour public space running above the city, there will be no issues with the need to instigate the emergency response such as connecting bridges over roads. The walkways are permanent and already in place.

### Opportunities

#### Visual impact

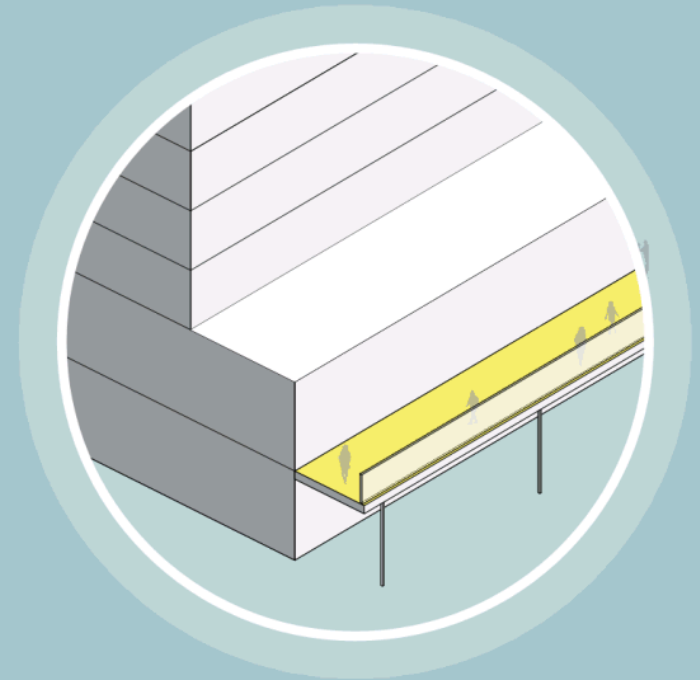
The impact upon the city of this strategy will only be seen between buildings, and could potentially be dealt with in an attractive manner.

#### Wayfinding

A wayfinding strategy within internal paths of travel would be easier to manage and implement, as the walkways can be clearly signed within the buildings.

#### Design

A number of cities around the world have indoor pathways that connect large sections of the city, whether through raised walkways or underground arcades. These can be designed to become the 'second tier' of the city, and provide retail or public amenity to these walkways.



## Above Awnings

# Evacuation Strategy

Evacuation via Awnings and external walkways



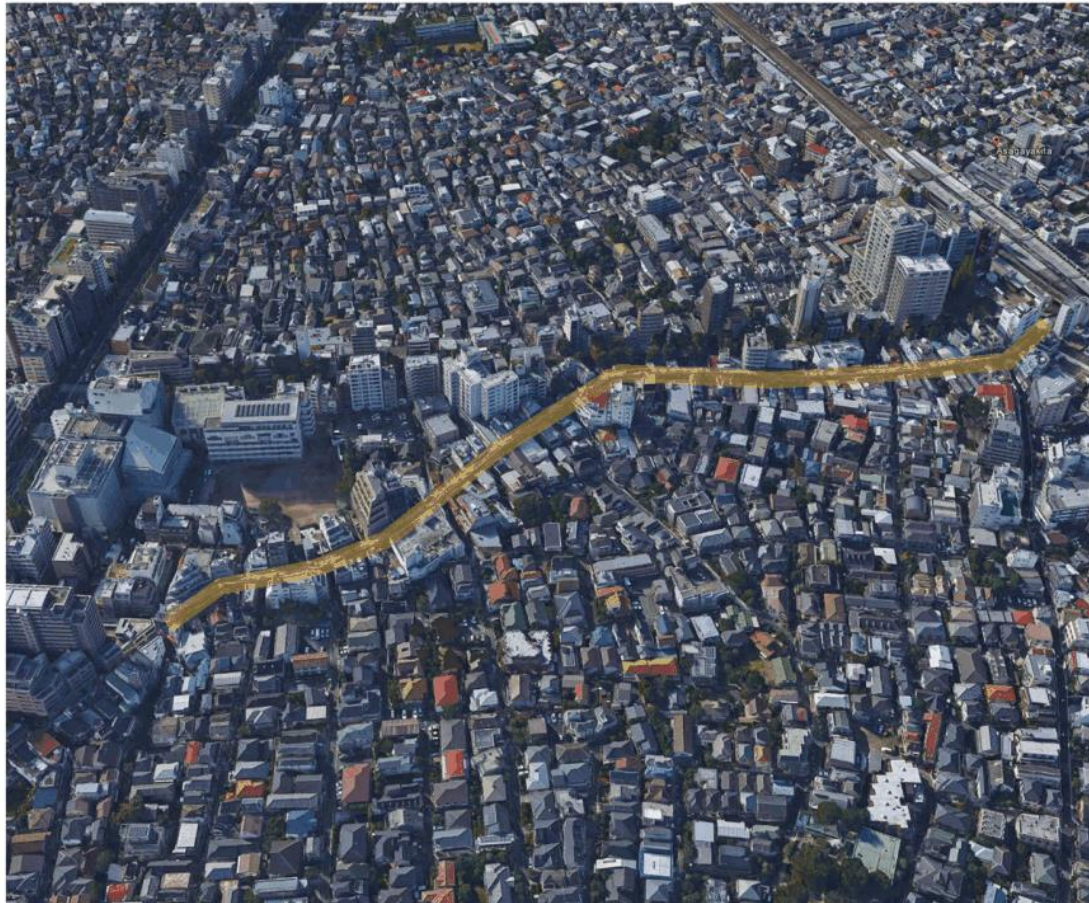
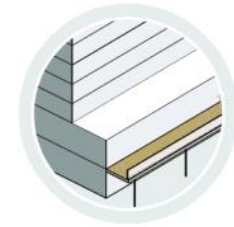
This strategy relies on the construction of trafficable awnings to provide access to refuge in the event of a flood within the CBD. Awnings typically only extend to the front of the building and do not cross streets and lanes, and would require a bridge to cross should evacuees need to move to a public marshalling area. A continuous awning can be delivered by individual developments or as a single public domain element delivered by the Civic Link.





## Case Study

Evacuation via Awnings and external walkways



SJB Architects

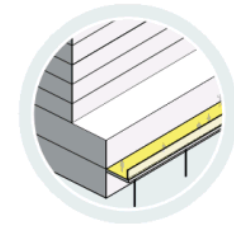


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# Strategy Evaluation

## Evacuation via Awnings and external walkways

 Can be achieved  
 Difficult to achieve - requires further consultation  
 Cannot be achieved



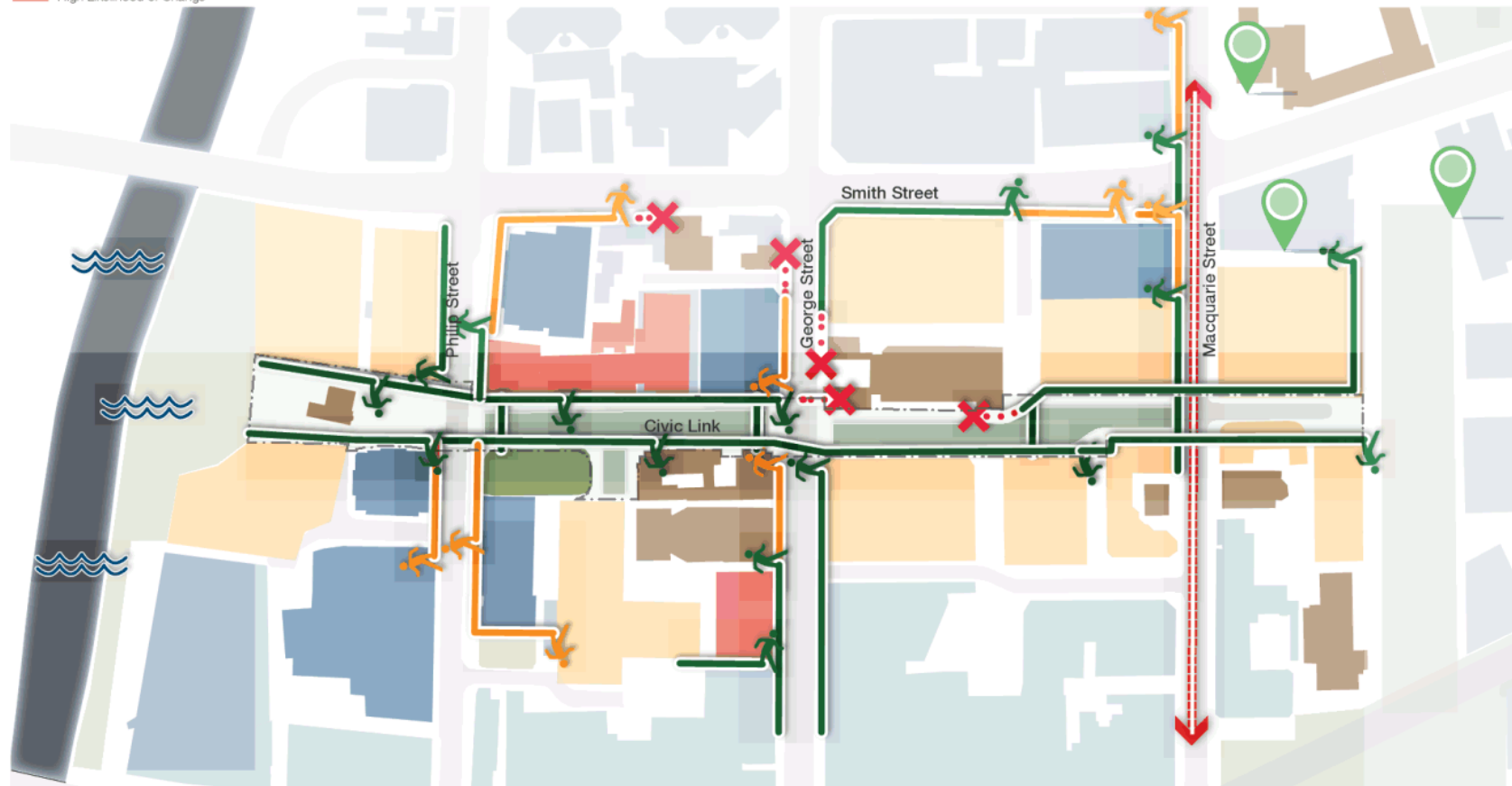
Conditions	Interface	1. New Building - New Building	2. New Building - Existing Building 'Unlikely to Change'	3. Existing Building - Existing Building	4. Heritage - New Building	5. Heritage - Existing Building 'Unlikely to Change'	6. Heritage - Heritage
A. Over Road		 · will require independent structure to cross the road	 · will require independent structure to cross the road	 · will require retrofitted structure of existing building to allow for continued walkway. Dependant on existing use	 · will require independent structure to cross the roads	 · will require independent structure to cross the road	 · will require independent structure to cross the road
B. Over Lane		 · will require independent structure to cross the road	 · will require independent structure to cross the road	 · will require independent structure to cross the road	 · will require independent structure to cross the road	 · will require independent structure to cross the road	 · will require independent structure to cross the road
C. Over Boundary		 · Awnings can be made to align with adjoining properties	 · Awnings can be made to align with adjoining properties	 · Awnings can be made to align with adjoining properties	 · May have significant impact the integrity and structural of heritage item	 · May have significant impact the integrity and structural of heritage item	 · May have significant impact the integrity and structural of heritage item
D. Over Public Space		 · will require independent structure to cross the road	 · will require independent structure to cross the road	 · will require independent structure to cross the road	 · will require independent structure to cross the road	 · will require independent structure to cross the road	 · will require independent structure to cross the road
E. Over Light Rail Line		 · Required height to clear PLR will mean awning is ineffective	 · Required height to clear PLR will mean awning is ineffective	 · Required height to clear PLR will mean awning is ineffective	 · Required height to clear PLR will mean awning is ineffective	 · Required height to clear PLR will mean awning is ineffective	 · Required height to clear PLR will mean awning is ineffective



# Civic Link Testing

Evacuation via Awnings and external walkways

- Heritage Item
- Unlikely to Change
- Under Consideration for Redevelopment
- High Likelihood of Change



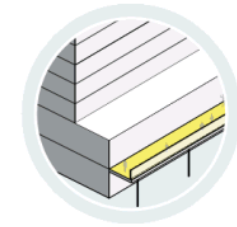
## Discussion

### Evacuation via Awnings and external walkways

- Possible to create a route, however this is not always above the PMF and hence does not lower the risk of developments.
- Does not create a safe path of travel, with submerged objects moving underwater and crashing into awnings.
- Most adjacent buildings can be connected.
- This strategy is costly due to most awnings needing to be replaced to carry the load of people walking during an emergency.
- Will require coordination between city blocks as to crossing point over a road or lane, should that be required. This would create a permanent fixture in the public domain which is unlikely to be desirable as an urban design feature.

# Strategy Evaluation

## Evacuation via Awnings and external walkways



### Challenges

#### Feasibility

There may be challenges in getting a unified roll out of this strategy through the city. Owners of buildings with recently completed awnings will not wish to replace the awnings with new, more structurally sound awnings. Whilst more feasible than the Indoor strategy, it will still be more expensive than the Above Podium option.

#### Heritage value

Heritage items that have flat and trafficable awnings would need to replace them to ensure their structural integrity. However a number of items have bull-nose awnings which would not be trafficable. Replacing these with a different style would damage the integrity of the item. In the case where an item has no awning, the addition of an awning would again damage the integrity of the item.

#### Adjacent levels

The creation of a continuous and level awning throughout the city is a fairly straightforward task, however the PMF level throughout the CBD varies significantly. It is crucial to an effective evacuation strategy that the evacuation route is above the PMF. As such, this strategy will not be applicable through some areas of the CBD, where the PMF is above typical awning height.

#### Wayfinding

Wayfinding would be challenging due to the discontinuous path of travel, and having to place signage on the exterior of buildings.

#### Integrity

To appropriately provide a safe and effective route of travel, the awnings must be structurally sound and able to carry a heavy temporary load. This will require additional cost to a typical awning, and dependant on the size of the building and the number of occupants, may even require structural posts to the street frontage. Awnings of this style can be troublesome due to RMS requirements, and may not be appropriate within the city.

#### Safety

Travelling along an awning provides the greatest number of risks to an evacuee including exposure to heavy rain and potential storm conditions. A number of floating objects are also likely to threaten evacuees, such as cars that are floating at or just below awning height. Safety railing is recommended to be provided to avoid slips and falls, which could pose an unpleasant addition to the built form. Powerlines from the streets or Parramatta Light Rail may potentially be active and fall, creating additional hazards.

#### Implementation

This strategy would be reasonably straightforward to implement throughout the city in terms of providing a continuous awning and requiring additional safety measures for them, however creating a continuous path of travel around the city would be challenging, and would require a combination of strategies.

#### Continuous Path of Travel

It will not be possible to have a continuous path of travel through the city, as some awnings are under the PMF height. When the path of travel comes to a road, lane or public open space, a bridge would be required to connect to the other side. As such, in any application of travel on the awning, a combination of strategies will be required. If the mechanisms are not permanently set up on awnings, the way in which these are set up in an emergency event will need to be coordinated by both the CoP and building occupants. Allowing time for bridges to be set up throughout the city is something that is unlikely to have time in an emergency event, however simply moving from one building to the adjacent building should not require a bridge in most cases.

### Opportunities

#### Visual impact

This strategy will have minimal visual impact, provided that any additional safety measures are able to be hidden when not in use (i.e. hand rails to prevent slipping and falling).

#### Design

A continuous awning of this nature could be designed and delivered as part of the Civic Link project.

# Discussion & Recommendations

## Heritage Items

- Evacuating heritage items will always be an issue. Retrofitting any of the three solutions to a heritage item is likely to severely compromise the integrity of the item. As such, any heritage item within the 1 in 100 year flood level will remain a "low flood island" (high risk), and should have a specific evacuation strategy. Occupants of heritage items should evacuate the city in the same way as a pedestrian in the public domain.

## Strategies

### Indoor

- The indoor evacuation scheme could potentially provide a good outcome for the city, and architecturally could be made to become an asset to the city. However, this strategy is likely to take upwards of 10 years to deliver a city-wide scheme, and will not help the evacuation of the city in a flood event before its implementation.

### Above Awning

- The above awning strategy poses a significant cost to the city, without a truly safe evacuation route, or a route that is continuous through the city.

### Above Podium

- The above podium provides the most immediate strategy that can be implemented city-wide by the CoP, and has the opportunity to develop into a more permanent and designed solution over time. This solution not only immediately lowers the societal risk within the city, but can also provide safe access to evacuees through the city.
- The nature of the temporary walkway response above podiums will also convey a sense of caution within an emergency event, and minimise the amount of travel that an evacuee will be comfortable to take. This will encourage occupants to remain within a building unless it is necessary that they evacuate.

## Recommendations - Above Podium/Elevated Walkways

- It is recommended that Council continue to work with the SES to educate occupants as to a building or **city block emergency management plan** as follows:
  - The emergency response to a flood event for an occupant is to **Shelter in Place** as the first and most preferable response.
  - In the case that occupants must evacuate their building, they are advised to move to the **adjacent building to Shelter in Place**.
  - In the extreme event of all buildings in a city block being unsafe to Shelter in Place, evacuees are permitted to **move between city blocks via the walkways across the podiums or rooftops**. This would require coordination between city blocks to establish the most appropriate crossing point between buildings across a road or laneway.
  - **Clear signage and wayfinding** will be required to ensure that the most efficient route is travelled by evacuees, and that evacuees are made aware that Sheltering in Place is the safest option.
  - **Communication devices** should be made available and clearly marked within all buildings to contact the SES and alert them of the number of people Sheltering within a building.
  - **Flotation Devices and Personal Flotation Devices** may be considered as part of an emergency response, to be made available to evacuees on the way out of a building in the case of evacuation.
  - Given that the natural response of occupants within an emergency may be to evacuate via the fire stairs, it is important that the **fire stairs are clearly signed** to indicate that exiting at the ground or first floor may be hazardous due to flood waters outside the building. The evacuation route for buildings during a flood event will be different to the evacuation route during a fire event. This is important to educate occupants about in the same way a fire drill is conducted, a **flood drill** should also be conducted, and coordinated between city blocks.
- A **city-wide emergency communication system** should also be implemented by Council to inform occupants within the city about the flood event, and provide regular updates.

SJB Architects



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www.sjb.com.au



## Review of International and Local Practice

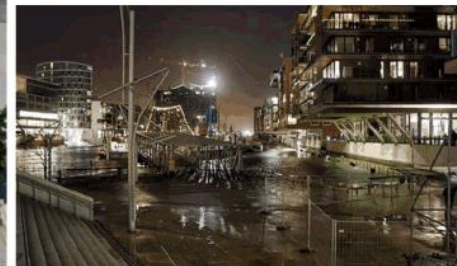
## 1.1 HafenCity, Hamburg

## Key principles

- Hafen uses a high dike which provides a continuous protection along a distance of 100km to protect lower lying areas against flooding.
- Retains access to the water whilst guaranteeing protection from floods
- The first floor of every building on the promenade is dedicated to retail outlets, and exhibition spaces, that are sealed off in times of flooding.
- Buildings behind the promenade are built on "warts" (elevated mounds) 8-9 meters above mean sea level. The streets are also on this higher level and not effected by the neighborhood's annual flood.

## Risks and Challenges

- Three eastern neighbourhoods are more isolated and less integrated in the city
- Large amounts of built landscape in comparison to green space, in particular in the western part of the district which is due to the fact that the surface of HafenCity is the result of the artificial soil during the construction of the port, it is evident in the lack of trees and other natural elements.
- Dikes are very expensive device for flood management and prevention however warts and sealed off first floor are a relatively inexpensive solution
- Elevated mounds and sealed off first floors would be difficult to implement in existing buildings



## Review of International and Local Practice

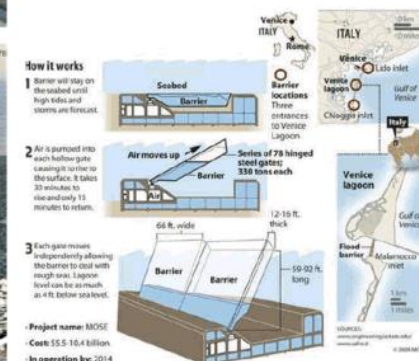
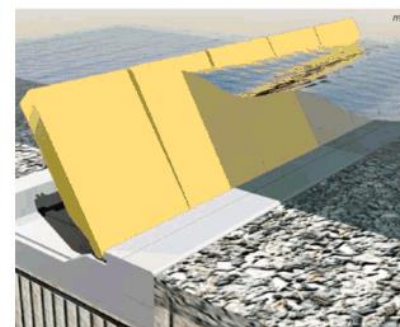
## 1.2 Piazza San Marco, Venice

## Key Principles

- The city installs a network of walkways along the main pedestrian paths, generally at 120cm above the standard sea level
- Water transport becomes available all across all weather routes
- Flood information is provided in real time and usually lasts for 2.5 hours
- Currently underway is a new flood management system called MOSE (Modulo Sperimentale Elettromeccanico, Experimental Electromechanical Module) a project intended to protect the city of Venice, Italy, and the Venetian Lagoon from flooding. The project is an integrated system consisting of rows of mobile gates installed at the Lido, Malamocco and Chioggia inlets that are able to temporarily isolate the Venetian Lagoon from the Adriatic Sea during high tides. Together with other measures such as coastal reinforcement, the raising of quaysides, and the paving and improvement of the lagoon, MOSE is designed to protect Venice and the lagoon from tides of up to 3 metres (9.8 ft).

## Risks and challenges

- Storage of temporary devices
- Tidal appropriate
- Preparation time





## Testing Proposed Strategies

## 1.3 Evacuation to Permanent Devices in the Public Domain

Delivery challenges:

- Expensive to build into the public domain
- Durable materials would be required to ensure longevity and high use
- Coordination with building owners to decide how these devices are connected to buildings and manage different building levels
- Access from the street to these devices required
- Retrofitting existing public domain would be difficult and require it to be accessible, withstand vandalism and quickly implemented
- Barrier is created between the streets and public domain and therefore a strong connection would need to be created to ensure no dead space
- Capacity of the space needs to be aligned with future growth of the CBD and needs to be structurally sound to hold a large volume of people.
- Impact on the amenity of the public domain need to be considered.



SJB Architects

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## Testing Proposed Strategies

## 1.4 Evacuation to Temporary Devices in the Public Domain

Delivery challenges:

- Storage requirements for temporary devices would need to be retrofitted into the public domain and/or existing buildings
- Possible vandalism to devices kept in the public domain
- Maintenance to ensure devices are safe and in working condition
- Volume and size of the devices would have to be appropriately designed for to ensure they cater for the estimated number of people that would need it and the amount of water preventing
- Structurally sound to hold people using it
- Time required to setup devices which might always be possible
- Durability of materials to endure weathering, volume of people and possible vandalism
- Would require a coordinated emergency flood management plan



MINUTES OF THE MEETING OF CITY OF PARRAMATTA COUNCIL HELD IN THE COUNCIL CHAMBER AT 5 PARRAMATTA SQUARE, PARRAMATTA ON MONDAY, 12 DECEMBER 2022 AT 6:30PM

**Note: Prior to moving into Closed Session, the Lord Mayor invited members of the public gallery to make representations as to why any item had been included in Closed Session. No member of the gallery wished to make representations.**

1. CLOSED SESSION

4121 RESOLVED (Esber/Green)

**That** members of the press and public be excluded from the meeting of the Closed Session and access to the correspondence and reports relating to the items considered during the course of the Closed Session be withheld. This action is taken in accordance with Section 10A(s) of the Local Government Act, 1993 as the items listed come within the following provisions:-

- 1 Business Case - Riverside Theatres Redevelopment. (D08694567) - *This report is confidential in accordance with section 10A (2) (d) of the Local Government Act 1993 as the report contains commercial information of a confidential nature that would, if disclosed (i) prejudice the commercial position of the person who supplied it.*
- 2 RFP 30/2019 - Smart Parking. (D08771272) - *This report is confidential in accordance with section 10A (2) (c) (d) of the Local Government Act 1993 as the report contains information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business; AND the report contains commercial information of a confidential nature that would, if disclosed (i) prejudice the commercial position of the person who supplied it.*
- 3 LATE REPORT: Maintenance, Management of Multi-level Carparks and Cash Collection Services - Tender Exemption. (D08794997) - *This report is confidential in accordance with section 10A (2) (c) (d) of the Local Government Act 1993 as the report contains information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business; AND the report contains commercial information of a confidential nature that would, if disclosed (i) prejudice the commercial position of the person who supplied it.*

PROCEDURAL MOTION

4122 RESOLVED (Esber/Prociv)



**That** Items 16.1, 16.3 and 16.4 be resolved enbloc.

**16.1**      **SUBJECT**      Business Case - Riverside Theatres Redevelopment

**REFERENCE**   F2022/00105 - D08694567

**REPORT OF**    Riverside Theatre Director

4123      **RESOLVED**    (Esber/Prociv)

- (a) **That** Council approve the Riverside Redevelopment Strategic Business Case (**Attachment 1**) including the updated Project Plan and Development Budget.
- (b) **That** Council notes the Project has an updated cost estimate of \$188.02M, inclusive of a \$12.5M budget provision for riverfront public domain works.
- (c) **That** Council approve the Riverside Redevelopment Project as a major capital works project within Council's Property Development Group Portfolio.
- (d) **That** Council extend the date the \$134.1M, held as ring fenced funds for the Project, made up of the \$34.1M balance held in the Cultural Fund and \$100M from the sale proceeds of the Powerhouse Parramatta site and held exclusively for the Riverside Redevelopment within Council's Property Reserve, from June 30, 2023 until 31 December 2023 to cover the completion period for the future Design Competition.
- (e) **Further, that** Council delegate authority to the Chief Executive Officer to undertake a Design Excellence Competition with a budget of \$1.15M, with the competition to be funded from the ring-fenced funding held within Council's Property Reserve.

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**INNOVATIVE**


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<b>ITEM NUMBER</b>	6.1
<b>SUBJECT</b>	Request for Gateway - Planning Proposal for land at 353A-353C and part of 351 Church Street, Parramatta (Riverside Theatre site)
<b>REFERENCE</b>	F2022/01255 -
<b>APPLICANT/S</b>	City of Parramatta
<b>OWNERS</b>	City of Parramatta
<b>REPORT OF</b>	Land Use Planning Team Leader

**PURPOSE**

The purpose of the report is to seek the Parramatta Local Planning Panel's advice to Council on a request to the Department of Planning and Environment (DPE) for a Gateway Determination for a Planning Proposal for the land at 353A-353C Church Street and part of 351 Church Street, Parramatta (Riverside Theatre site).

**RECOMMENDATION**

The Parramatta Local Planning Panel consider the following Council Officer recommendation in its advice to Council:

- (a) **That** Council approve, for the purposes of seeking a Gateway Determination from the Department of Planning and Environment, the Planning Proposal at **Attachment 1** for the land at 353A-353C Church Street and part of 351 Church Street, Parramatta (Riverside Theatre site) which seeks the following changes to the Parramatta Local Environmental Plan 2011:
    1. increase the Maximum Height of Building (HOB) from 15m to 28m;
    2. introduce a Site-Specific Clause that prevents new development generating any additional overshadowing to the Parramatta River Foreshore between 12pm and 2pm; and
    3. requires active street frontages.
  - (b) **That** the Planning Proposal be forwarded to the Department of Planning and Environment for a Gateway Determination, requesting no public exhibition process for the following reasons:
    1. to support the efficient processing of the Planning Proposal and the redevelopment of the Riverside Theatre;
    2. the CBD PP publicly exhibited controls sought a greater building height, than the subject Planning Proposal;
    3. the subject Planning Proposal seeks to implement the amenity controls from the CBD PP.
  - (c) **That** Council advise the Department of Planning and Environment that the CEO will be seeking to exercise its plan-making delegations for this Planning Proposal, as authorised by Council on 26 November 2012.
- 

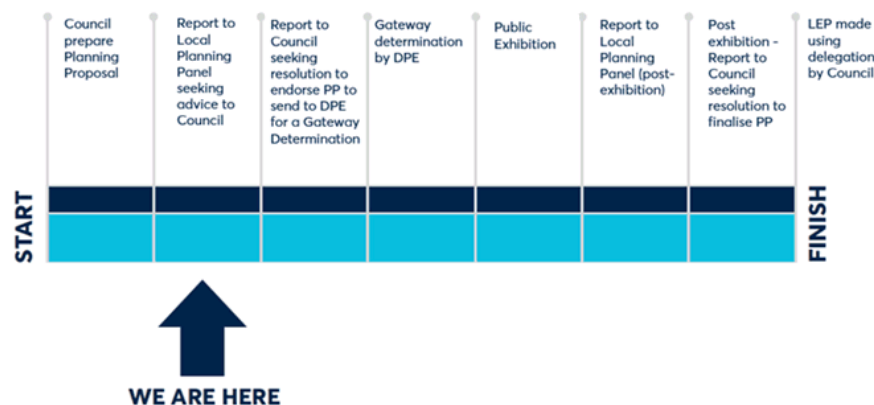
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- (d) **Further, that** Council delegates authority to the CEO to correct any minor anomalies of a non-policy and administrative nature that arise during the plan-making process.

#### PLANNING PROPOSAL TIMELINE



#### SUMMARY

1. The Riverside Theatre is a critical anchor performing arts facility located within the Parramatta CBD. Constructed in 1988, the current Riverside Theatre building is not fit for purpose to serve the growing community.
2. The redevelopment of the Riverside Theatre to deliver a modernised and expanded performance space is an important infrastructure priority reflected in Council's Cultural Plan.
3. Council has progressed with the preparation of a visioning document, concept reference design, and committed funding to redevelop the theatre.
4. The Council endorsed Parramatta CBD Planning Proposal (CBD PP) with regard to this site, among a number of things, sought to increase the height control. This change would enable the redevelopment of the theatre in line with the vision of Council. The concept design was prepared in response to the planning controls within the Council endorsed CBD PP.
5. However, the Department of Planning and Environment deferred the area north of the river from the CBD PP during its finalisation and retained the current height control for this site. The current height control does not enable the redevelopment of the site consistent with the concept reference design.
6. As a result, a site-specific Planning Proposal is needed to implement the necessary height control to allow for the concept design and redevelopment project to progress.

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7. The Planning Proposal found in **Attachment 1** should progress for the following reasons:
- To ensure the necessary planning controls are in place to allow the timely progression and redevelopment of the Riverside Theatre.
  - Waiting for a future review of the land north of the Parramatta River (which is subject to funding being provided by the State Government, is anticipated to commence in 2023 and which would take two to three years to complete) would cause delays to the progression of the Council prepared concept design for the Riverside Theatre.
  - The increase in HOB from 15m to 28m is considered a modest increase (particularly given the current theatre has building elements at 25m) and the 36m building height currently permitted for sites immediately east of the Theatre Site means the 28m height proposed is not out of context with existing controls in the precinct.
  - No change is sought to the existing FSR control.
  - The Site-Specific Clause implements the intent of the solar access protection plane and active frontage controls within the CBD PP.
  - The resulting building controls are considered to have an inconsequential impact on amenity, overshadowing, and overall bulk and scale; and is lower in height than the building height that would have resulted from the Council adopted CBD PP.
8. **Table 1** compares the existing planning controls, proposed controls under the CBD PP as endorsed by Council, the proposed controls within the Planning Proposal, and the existing building height for reference.

Control	PLEP 2011 (existing controls)	Council adopted CBD PP	Planning Proposal	Existing building
Zoning	B4 Mixed Use	B4 Mixed Use	B4 Mixed Use	B4 Mixed Use
Height	15m	Height not nominated – solar access control would allow heights of 50-60m on parts of the site.	28m	25m
FSR	3:1	3:1	3:1	Unknown

**Table 1** - Summary of existing and proposed controls**SITE DESCRIPTION**

9. The Planning Proposal applies to the land at 353A-353C Church Street (Lot 2 DP 740382) and part of 351 Church Street, Parramatta (Lot 1 DP 740382) (the site). The site is bound by Marsden Street to the west; Market Street to the north; Church Street to the east; and the Parramatta River Foreshore to the south (see **Figure 1**). The site has an approximate area of 7,000sqm.

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10. The site is the location of the Riverside Theatre, which is owned and operated by the City of Parramatta Council (Council). The existing building is located on the eastern side of the site, with a frontage to Church Street and the river foreshore. The building contains three separate theatres and event spaces. Above-ground parking is located on the western side of the site on the corner of Market and Marsden Street.
11. Prince Alfred Park is located to the north of the site and plays an important contribution to open space within the Parramatta CBD. The Old King's Parade Ground is located to the west and contributes to Parramatta's unique heritage and river setting. The land to the east of the site on Church Street is developed with approximately 5-6 storey mixed use developments. Land to the south of the site on the opposite side of the river is being redeveloped for a 192m mixed use tower (i.e. 'The Lennox' development).
12. The site is within walking distance to the Parramatta Light Rail stop located at Prince Alfred Square which is currently under construction as part of Stage 1 of the project.



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Figure 1 – Site subject to the Planning Proposal

**EXISTING PLANNING CONTROLS**

13. Under the provisions of the Parramatta Local Environmental Plan 2011, the following planning controls apply:
  - B4 Mixed Use zone;
  - Maximum Height of Building control of 15 metres; and
  - Maximum Floor Space Ratio (FSR) of 3:1.
14. The site itself is not heritage listed; however, it is adjacent to the following heritage items projected under Schedule 5 of the PLEP 2011:
  - Lennox Bridge (State Heritage Item I00750)
  - Alfred Square (and potential archaeological site) (Local Heritage Item I686)

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- Marsden Rehabilitation Centre (and potential archaeological site) (State Heritage Items I00826 and I00771)
15. Other controls relating to flooding and Acid Sulphate Soils are described and mapped in Part 4 of the Planning Proposal in **Attachment 1**.

## BACKGROUND

### Riverside Theatre Redevelopment

#### Role of the Riverside Theatre

16. The Riverside Theatre is a significant cultural and performing arts venue attracting more than 180,000 patrons to 1,000 performances and events every year. For nearly three decades, the Riverside Theatre has been a critical 'anchor' cultural arts asset serving the growing population of Parramatta and Greater Sydney.
17. The provision and expansion of cultural infrastructure is critical in delivering Parramatta as a livable, sustainable, and productive place for the current and future populations of both the City of Parramatta and the Greater Sydney Region. However, the historical imbalance of cultural investment across Greater Sydney presents a challenge for Parramatta to achieve rounded growth and fulfill its role as the Central River City.
18. By 2036 the City of Parramatta will be home to an additional 150,000 people; and the Parramatta CBD will host 20,000 more residents and 83,000 more workers. This growing population and the historic lack of state government investment in cultural infrastructure in Greater Sydney is placing significant pressure on the capacity limitations of the ageing Riverside Theatre.
19. The redevelopment of the Riverside Theatre to modernise its infrastructure and increase its capacity is a leading priority to support the growing population of both Parramatta and Greater Sydney.

#### Riverside Theatre Redevelopment Project

20. Council's 'A Cultural Plan for Parramatta's CBD 2017-2022' (Cultural Plan) recognises the important contribution the Riverside Theatre plays in Parramatta's cultural identity and identifies the redevelopment of the theatre as a leading community priority.
21. The current Riverside Theatre building and facilities:
- do not satisfactorily meet current or expected future demand;
  - do not have a positive and interactive relationship with Church Street, the new Parramatta Light Rail, or the eastern view of the river towards the MAAS development site;
  - space restrictions which limit what populist and commercially viable events can be attracted; and overall
  - does not support Parramatta's transformation into a City enriched by its culture and creativity.

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22. Key milestones and decision making of Council in relation to the redevelopment project are included below in **Table 2**.

Date	Milestone	Description
<b>26 November 2018 Council Meeting</b>	Council adoption of 'Reimagining Riverside' visioning document	Council adopted the 'Reimagining Riverside' visioning document to commence the redesign process and provide a clear vision for the theatre in its role as a hub of performance excellence that attracts talent and investment.
<b>December 2019 – June 2021</b>	Project scoping	Council considered a Joint Venture redevelopment proposal in 2018-9 with Create NSW but ultimately withdrew from the process with an internal Council project team then established to re-scope alternative Council led schemes between January and February 2021.
<b>15 June 2021 Council Meeting</b>	Council endorses the Parramatta CBD Planning Proposal to be submitted to Department of Planning and Environment for finalisation	<p>Council endorsed the Parramatta CBD Planning Proposal (CBD PP) to be submitted to the Department of Planning and Environment for finalisation following the public exhibition process held from 21 September to 2 November 2020.</p> <p>The Council endorsed CBD PP included changes to the building height control for the Riverside Theatre site.</p> <p><i>More detail on the CBD PP is included below under 'Parramatta CBD Planning Proposal'.</i></p>
<b>26 July 2021 Council Meeting</b>	Council considers the Riverside Theatres Redevelopment Concept Proposal, and resolves to prepare concept design and budget commitments.	<p>The Riverside Theatres Redevelopment Concept Proposal was presented to Council and addressed the core elements of the 'Reimagining Riverside' visioning document.</p> <p>Council resolved to progress the next stages of the concept proposal development, which was to explore concept design options, develop functional specifications, and validate cost estimates.</p> <p>Financial decisions were also made by Council at this meeting, including funding be committed to engaging specialist consultants to undertake the work required to progress the development of the Concept Proposal.</p>

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<b>9 May 2022 Council Meeting</b>	Council approves concept design and validation work, and resolves to progress to detailed business case and funding commitments.	<p>Council approved the concept proposal validation work for the redevelopment of Riverside Theatres, which included a concept reference design and functional aspirations, and approved for the Riverside Theatre Redevelopment Project team to proceed with the development of a detailed business case, project plan and budget for Council's review.</p> <p>Council committed to preparing for the launch of a Design Competition process to ensure the future architectural design delivers a world class building.</p> <p>Council also noted the project has a preliminary cost estimate of \$175.4M, and approved a funding strategy to allow the project to proceed.</p>
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**Table 2** – Key milestones in Riverside Theatre Redevelopment Project

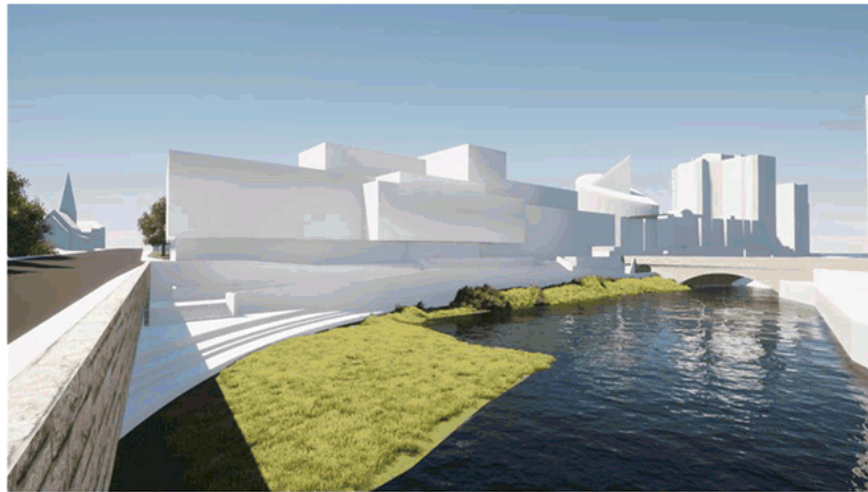
23. Timeframes have also been assigned to funding allocations, and the Riverside Theatre Redevelopment Project team are progressing with a detailed business case and preparing for the next key milestones of the project, including the Design Excellence Competition.

#### Riverside Theatre Concept Reference Design

24. As outlined in **Table 2**, a concept reference design was adopted by Council on 9 May 2022. This concept reference design explored the building envelope needed to deliver on Council's functional aspirations for the redevelopment of the Riverside Theatre, whilst responding to the draft planning controls contained within the Council endorsed Parramatta CBD Planning Proposal (see 'Parramatta CBD Planning Proposal' for more detail).
25. The concept reference design includes a hybrid redevelopment scheme with heights varying from approximately 13m along the riverfront and 28m towards Market Street. The concept includes the retention and upgrade of a portion of the existing facility (primarily the 700-seat riverside space) and demolishes the remainder of the existing site to construct a new state-of-the-art multi venue arts centre that fully integrates with the retained and upgraded theatre elements.
26. The concept reference design will be used as the basis for future detailed architectural design work, with the final detailed design being determined as part of a Design Excellence Competition process.
27. **Figures 2 - 5** show the indicative building envelope from multiple perspectives, noting that the next phase of the redevelopment project will further embellish design features, building articulation, and integration with the public domain along the river foreshore. The perspectives are to provide Council and the community with an indicative form only.

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**Figure 2** – Concept design render looking north-east from Marsden Street bridge, Parramatta



**Figure 3** – Concept design render looking north-west from Lennox bridge, Parramatta



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**Figure 4** – Concept design render looking south-west from corner of Church Street and Market Street, Parramatta



**Figure 5** – Concept design render looking southeast from corner of Marsden Street and Market Street, Parramatta

### **Parramatta CBD Planning Proposal**

#### Background

28. Initiated in 2013, the Parramatta CBD Planning Proposal (CBD PP) was a Council led planning proposal to support Parramatta's transform as Sydney's Central City.
29. The CBD PP proposed changes to the land use mix and built form controls within the PLEP 2011 to deliver 46,000 new jobs and 15,000 new dwellings over the next 40 years. New controls to support this growth and protect key elements that make a city liveable, sustainable, and productive were also proposed.

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Parramatta CBD Planning Proposal (as endorsed by Council on 15 June 2021)

30. On 15 June 2021, Council endorsed the CBD PP to be submitted to the Department of Planning and Environment (DPE) for finalisation following the public exhibition process held from 21 September to 2 November 2020. The Council endorsed CBD PP included the land north of the river (i.e. North Parramatta)
31. The CBD PP proposed changes to the built form controls across the North Parramatta precinct (including the Riverside Theatre site). These changes were informed by specialist studies pertaining to urban design and heritage to help deliver appropriate built form outcomes that allow for new development whilst limiting additional overshadowing to key public spaces (including the Parramatta River Foreshore) and that achieved a suitable transition to sensitive areas such as Heritage Conservation Areas and Prince Alfred Park.

Parramatta CBD Planning Proposal (as finalised by DPE on 6 May 2022)

32. On 6 May 2022, DPE finalised the CBD PP via the making of Amendment No 56 to the Parramatta Local Environmental Plan 2011. The new provisions are not due to take effect until 14 October 2022 to allow for the draft Parramatta CBD Local Infrastructure Contributions Plan to be finalised.
33. As part of the finalisation process, DPE made some key policy changes to the CBD PP as adopted by Council on 15 June 2021. The policy change most relevant to the Riverside Theatre site was the removal of the land north of the Parramatta River (i.e. North Parramatta) from the CBD PP with the existing land use and built form controls to be retained.
34. The redevelopment of the Riverside Theatre as per Council's concept design was contingent on the Council endorsed version of CBD PP being finalised. The Council adopted CBD PP established the height control needed to redevelop the theatre in line with the vision of Council - the removal of North Parramatta from the CBD PP by DPE puts the development timetable at risk.
35. Council considered its position on the changes made to the Council endorsed CBD Planning Proposal when the Minister finalised the plan at its meeting of 25 July 2022. The portion of the Council resolution relevant to North Parramatta and the subject site reads:-

*"North Paramatta**(d) That Council write to the Minister for Planning and the Department:*

- (1) Seeking funding for a Study for North Parramatta that incorporates urban design, heritage and economic analysis and additional temporary staff to manage the project (estimated at up to \$500,000).*
- (2) Advising that Council will not commence the Study until confirmation of funding and in-kind support has been provided.*
- (3) Seeking advice on how Council manage any new SSPPs lodged for sites north of the river prior to completion of the Study and associated plan amendment.*

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**EXCEPTIONS**

(e) Further, that Council note that new SSPPs for sites within any part of the CBD that do not:

- 1 seek any increase in FSR, or
  - 2 seek to amend other planning controls that are being considered in the SEPP process(es) described in (c) above
- will be processed by Council (examples include proposals for minor changes in height with no increase in FSR or changes to parking rates or land reservation acquisitions)."

36. The subject Site Specific Planning Proposal meets the criteria to be considered as an exception. Proceeding with this Planning Proposal ahead of the work proposed to review the controls for North Parramatta is consistent with Council's 25 July 2022 resolution.

**DESCRIPTION OF PLANNING PROPOSAL**

37. The Planning Proposal seeks the following amendments to the PLEP 2011:
- a. Increase the Maximum Height of Building (HOB) from 15m to 28m.
  - b. Introduce a Site-Specific Clause that:
    - i. prevents new development generating any additional overshadowing to the Parramatta River Foreshore;
    - ii. requires active street and river frontages.
38. No changes are proposed to the land use zoning or FSR controls.

**PLANNING PROPOSAL ASSESSMENT**

39. The following section details Council's assessment of the Planning Proposal based on strategic merit and site-specific planning issues. The Planning Proposal detailed in **Attachment 1** provides a full assessment of the proposal's consistency against relevant State Planning Policies and Ministerial Directions.

**Strategic Merit**

40. The redevelopment of the Riverside Theatre, as facilitated by this Planning Proposal, aligns with the overarching policy position across state and local planning frameworks to deliver a '30-minute city' where people can live, work, and recreate within 30 minutes of their home; and to deliver cities that are productive, livable, and sustainable.
41. The Planning Proposal will enable the efficient redevelopment of critical cultural infrastructure that service the local and broader communities. The expanded and diversified cultural offering will support the Parramatta CBD as a destination for entertainment, will help reduce the need for travel to the Sydney CBD, the eastern harbour city.

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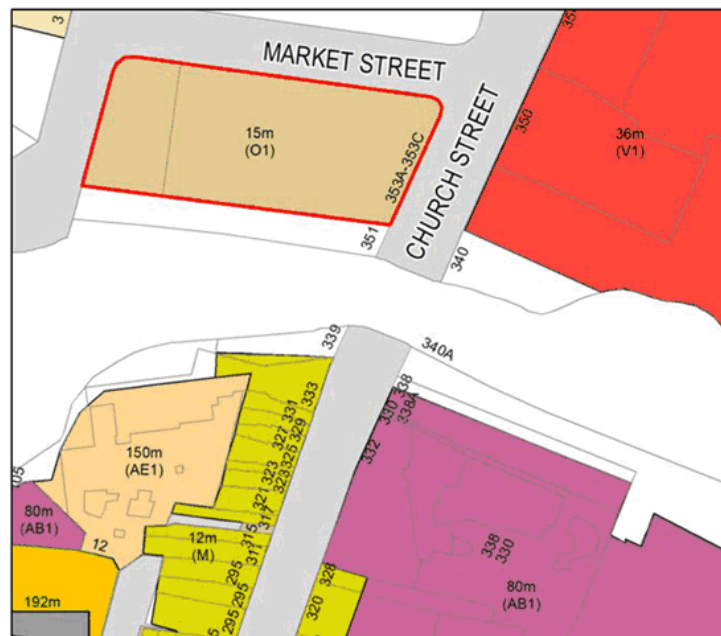
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42. As detailed in **Attachment 1**, Council officers consider the Planning Proposal to be aligned with key state policies including the Greater Sydney Region Plan and the Central City District Plan; and key local policies including the Local Strategic Planning Statement, Cultural Plan, Community Infrastructure Strategy, and Parramatta CBD Planning Strategy.

### Urban Design

#### Height

43. The Planning Proposal seeks an increase in height to provide a more flexible and appropriate building envelope that will enable the design concept for a modernised theatre, fit for purpose and demand, to be achieved.
44. **Figure 6** shows the existing height map from the Parramatta LEP 2011. The increase in height from 15m to 28m is considered a suitable increase in context of the current permitted height of 36m on the eastern side of Church Street. The increase in 28m would result in a gradual stepping down of heights moving west, and as explained within this report, is a modest increase considering the site has existing building elements at 25m.
45. In addition, **Figures 2 - 5** above show the intended building envelope of the concept design the Planning Proposal seeks to deliver. As seen in these figures, the concept design is for a building with taller and shorter elements across the site. In essence, the future built form will not result in a consistent 28m height across the site. The variation in height expression further demonstrates the low impact of the height increase.



**Figure 6 – Existing height map from the Parramatta LEP**

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Floor Space Ratio

46. No changes are sought to the FSR control (i.e. density), therefore, the change will not result in greater yield than what is already permitted on the subject site. The Planning Proposal strictly addresses the envelope constraints of the current site in accommodating key theatre design elements (such as the fly tower) and deliver an upgraded theatre suitable for a diverse range of performing arts.
47. In addition, the prepared concept design that the Planning Proposal seeks to facilitate, has a Gross Floor Area (GFA) (for FSR calculation purposes) of approximately 10,000sqm. This is less than half of the GFA permitted on the site under the existing FSR of 3:1.

Overshadowing

48. The increase in HOB to 28m is considered a modest increase (particularly given the current theatre has building elements at 25m); and would deliver a height less than what would have been permitted under the CBD PP as the Council endorsed CBD PP included changes to the building height control for the Riverside Theatre site.
49. Whilst the existing LEP control contains a maximum building height in metres (i.e. 15m), the CBD PP proposed that a sun access protection clause be applied to govern the distribution of height across the site.
50. As adopted by Council, draft Clause 7.4 'Sun access protection' (and the associated Sun Access Protection Map) required any new development on the site to be designed to prevent additional overshadowing to the southern side of the Parramatta River Foreshore between the hours of 12:00pm and 2pm.
51. The use of such a control would allow for the architectural design process to determine the future building height with the objective of protecting open space from additional overshadowing leading the process versus a prescribed control in metres (i.e. outcome driven design versus numerical control driven design).
52. Preliminary analysis by Council officers indicated that heights between 19m Relative Level (RL) at the riverfront and 60-70m (RL) at the Market St frontage could be achieved under the Sun Access Protection surface control. When the height of the sloping terrain (which approximately ranges between 4m (RL) at the riverfront and 8m (RL) at the Market St frontage) is subtracted from the RL heights an approximate measurement above ground level (existing) can be calculated. Based on the RLs above, a 15m height at ground level at the riverfront and 52-62m height at the Market Street frontage can be approximated.
53. The concept design included in **Figures 2-5** reflect a height of approximately 13m along the riverfront and a height of 28m towards Market Street. Using the calculations above to get an approximate measure above ground level (existing), the concept design at 28m sits comfortably underneath the solar access protection plane (including any bonus from a Design Excellence competition process).

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54. In summary, the CBD PP would have allowed for greater heights across the site (i.e. between 15m and 52-62m) and allowed for a substantially taller building envelope compared to the building envelope of the proposed concept design (where the tallest element is 28m) as shown in **Figures 2-5**.
55. The Planning Proposal seeks to introduce a 28m height control on the site in conjunction with a Site-Specific Clause requiring no additional overshadowing to the southern side of the Parramatta River Foreshore between the hours of 12:00pm and 2:00pm. These hours are consistent with the Council adopted policy position relating to additional overshadowing to the southern side of the river foreshore in the Council endorsed CBD PP.
56. It is important to acknowledge that the concept design to be delivered via the Planning Proposal exceeds the solar access protection requirements of the CBD PP by protecting solar access to the southern side of the river foreshore by an additional three hours compared to the Council adopted CBD PP. The concept design will not cause any additional overshadowing between the hours of 10:00am and 3:00pm. A series of shadow diagrams demonstrating this are included in Planning Proposal at **Attachment 1**.
57. Whilst the Planning Proposal will deliver greater solar access protection to the southern side of the river foreshore, for consistency with the CBD PP, the Planning Proposal seeks to retain what Council previously adopted with the draft wording for the Site-Specific Clause seeking to protect the foreshore from additional overshadowing from 12:00pm to 2:00pm.
58. Draft wording for the Site-Specific Clause is based on the existing Sun Access Protection clause in the PLEP 2011, and is included below:  
  
*Notwithstanding the maximum Height of Building control shown on the Height of Buildings Map, development consent must not be granted to development on land to which this clause applies that results in any part of a building causing additional overshadowing, on 21 June in any year, on the Parramatta River Foreshore (Lot 102 DP 1259228, Lot A DP 333263, Lot 1 DP 788637, and Lot 1 DP 1247122) between 12.00 and 14.00.*
59. The site will also be included on the Key Sites Map to enact the Site-Specific Clause, as explained within Part 4 of the Planning Proposal in **Attachment 1**.
60. The concurrent application of the height control and site-specific clause is the simplest way to update the LEP to implement the intent of the CBD PP, and provide the framework needed for the Riverside redevelopment to progress.
61. As demonstrated in this Council Report, and in Part 3 of the Planning Proposal in **Attachment 1**, the increase in height and resulting building envelope is considered to have an inconsequential impact on amenity, overshadowing, and overall bulk and scale; and is lower than the building height that would have resulted from the Council adopted CBD PP (as explained above in Paragraph 52 – 54).

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Active frontages

62. The CBD PP introduced a clause to promote uses that attract pedestrian traffic along certain ground floor street frontages, public space frontages and river foreshore frontages. An Active Frontages Map identified the streets where active frontages were required, and therefore where the clause applied.
63. The site's street frontages of Church, Market, and Marsden Street were included on the Active Frontages Map (as endorsed by Council). However, DPE's removal of North Parramatta from the finalised CBD PP has resulted in the active frontage clause not applying.
64. For consistency with the Council endorsed CBD PP, a site-specific clause requiring active frontages is also proposed to ensure the ground floor of the future development engages with the surrounding streets and public domain. This will also need to be responded to as part of a future Design Excellence process.

Design Excellence

65. A Design Excellence Competition will be facilitated to guide the detailed reference design process for the site. The concept design will be used as the basis of the future design process. A 15% FSR bonus can be awarded to the winning design, bringing the maximum permitted height from 28m to 32m (i.e. 28m + 15%), which is still well below the height that could have been achieved if the CBD PP was finalised as adopted by Council.

Heritage

66. As outlined above under 'Existing Planning Controls', the site is adjacent to local and state heritage items including Lennox Bridge, Prince Alfred Square, and Marsden Rehabilitation Centre. These items were carefully considered as part of the specialist heritage studies completed as part of the preparation of the CBD PP.
67. These studies were carried out to help inform a suite of planning controls to allow renewal and some intensification of development, whilst still achieving a suitable transition to sensitive areas such as Heritage Conservation Areas and Prince Alfred Park and limiting additional overshadowing to key public spaces (including the Parramatta River Foreshore).
68. Specifically, the Hector Abraham heritage study of the interface areas for North Parramatta and the riverbank did not raise objection, or recommend any changes, to the application of the Solar Access Protection control and the likely resulting heights for the Riverside site when assessing the impact of the proposed controls on heritage values. This work formed part of the CBD PP package endorsed by Council on 15 June 2021 and sent to the DPE for finalisation in July 2021.

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69. As the concept reference design has responded to the Solar Access Protection control of the CBD PP, the heritage assessment undertaken as part of the CBD PP is considered applicable and transferrable for this Planning Proposal.
70. As the concept design would deliver a height less than what the CBD PP could have delivered, Council officers consider the proposal to have even less of an impact on the surrounding area and heritage context. In addition, as discussed under 'Urban Design', the proposed height of 28m presents a modest increase given there are existing building elements at 25m, further limiting the heritage implications of the planning proposal.
71. Whilst the Planning Proposal is considered acceptable from a heritage perspective as outlined above, the Design Excellence process will need to respond to the unique heritage and archaeological context of North Parramatta and Old Government House to ensure the heritage values of the city continue to be celebrated and protected.

**Flooding**

72. Reflective of the site's location adjacent to the Parramatta River, the site is flood affected. The entire site is located within the Probable Maximum Flood for the Upper Parramatta River, and the western side of the site is affected by the 100 year flood event
73. As detailed within this report, the Planning Proposal does not seek any changes to the FSR control (therefore, the change will not result in greater yield than what is already permitted on the subject site).
74. As the Planning Proposal is not intensifying development yield, and strictly addressing urban design considerations through the alteration of building height, Council officers consider this Planning Proposal to be consistent with Ministerial Direction 4.1: Flooding (that sits under Direction Focus Area 4: Resilience and Hazards).
75. Any future development on the site will need to respond to the Flood Risk Development Manual and the relevant controls contained within the PLEP 2011 and the Parramatta Development Control Plan 2011.

**PLAN MAKING DELEGATIONS**

76. Plan making delegations were announced by the then Minister for Planning and Infrastructure in October 2012 allowing councils to make LEPs of local significance. On 26 November 2012, Council resolved to accept the delegation for plan making functions, and for these functions be delegated to the Chief Executive Officer.
77. It is recommended that Council request to the Department of Planning and Environment to exercise its plan making delegations for this Planning Proposal. This means that after the Planning Proposal has received a Gateway Determination, complied with any conditions (including any requirements for public exhibition), Council officers can deal directly with the Parliamentary Counsel on the legal drafting and finalisation of the amendment to the LEP facilitated by this Planning Proposal.

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78. This will support the efficient processing of the Planning Proposal, and in turn, the redevelopment of the Riverside Theatre. Council officers consider this suitable due to the nature and unique context of the change which are of local significance.

#### FINANCIAL IMPLICATIONS FOR COUNCIL

79. As discussed within **Table 2**, the redevelopment of the Riverside Theatre has spent Council monies in preparing the concept design and validation work. Council has also allocated funding to the delivery of the project.
80. Should Council wait for any future precinct wide review of North Parramatta, the project will be stalled, and considerations will need to be made in relation to the committed funds.
81. The Planning Proposal will help ensure the efficient progression of the redevelopment process, and the use of the committed funds to deliver this critical piece of infrastructure for the City of Parramatta.

#### CONCLUSION AND NEXT STEPS

82. Council officers recommend Council endorse the Planning Proposal in **Attachment 1** to ensure the necessary planning controls are in place to allow the timely progression and redevelopment of the Riverside Theatre.
83. It is recommended that Council endorse, and forward, the Planning Proposal in **Attachment 1** to the Department of Planning and Environment for a Gateway determination.
84. It is also recommended that Council request no public exhibition process to enable the efficient processing of the Planning Proposal. This is because the CBD PP exhibited controls to allow greater building heights, and as this Planning Proposal seeks a lower height and implements the amenity controls from the CBD PP, a public exhibition process is not considered necessary.

Sonia Jacenko  
**Land Use Planning Team Leader**

Robert Cologna  
**Group Manager, Strategic Land Use Planning**

Jennifer Concato  
**Executive Director City Planning and Design**

#### ATTACHMENTS:

- |   |       |
|---|-------|
| 1  Planning Proposal - Land at 353A-353C Church Street and part of | 53    |
|  351 Church Street, Parramatta (Riverside Theatre Site)            | Pages |

#### REFERENCE MATERIAL



## Department of Planning and Environment

Our ref: IRF22/3944

Mr Bryan Hynes  
Acting Chief Executive Officer  
City of Parramatta Council  
PO Box 32  
PARRAMATTA NSW 2124

Dear Mr Hynes

**Planning proposal PP-2022-3571 to amend Parramatta Local Environmental Plan 2011**

I am writing in response to the planning proposal you have forwarded to the Minister under section 3.34(1) of the *Environmental Planning and Assessment Act 1979* (the Act) which seeks to amend Height of Building (HOB) controls and apply site specific controls to facilitate the redevelopment of the performing arts centre at 353A-353C Church Street and part of 351 Church Street, Parramatta (Riverside Theatre).

As delegate of the Minister for Planning and Homes, I have determined that the planning proposal should proceed subject to the conditions in the enclosed gateway determination.

I have also agreed, as delegate of the Secretary, the inconsistency of the planning proposal with applicable directions of the Minister under section 9.1 of the EP&A Act Direction 1.4 Site Specific Provisions and Direction 4.5 Acid Sulfate Soils are justified in accordance with the terms of the Direction.

Council may still need to obtain the agreement of the Secretary to comply with the requirements of relevant applicable direction of the Minister under section 9.1 of the EP&A Act Direction 4.3 Flooding. Council should ensure this occurs prior to the LEP being made.

I have determined not to authorise Council to be the local plan-making authority for the following reason(s):

- The site is Council owned and operated;
- The site is located within North Parramatta, which was excluded from the finalisation of the Parramatta CBD planning proposal; and
- The Department, in collaboration with Council, is progressing the strategic planning for North Parramatta.

The amending local environmental plan (LEP) is to be finalised on or before 30 June 2023. Council should aim to commence the exhibition of the planning proposal as soon as possible. Council's request for the Department of Planning and Environment to draft and finalise the LEP should be made eight weeks in advance of the date the LEP is projected to be made.

The NSW Government has committed to reduce the time taken to complete LEPs. To meet these commitments, the Minister may appoint an alternate planning proposal authority if Council does not meet the timeframes outlined in the gateway determination.



The Department's categorisation of planning proposals in the *Local Environmental Plan Making Guideline* (Department of Planning and Environment, 2021) is supported by category specific timeframes for satisfaction of conditions and authority and Government agency referrals, consultation, and responses. Compliance with milestones will be monitored by the Department to ensure planning proposals are progressing as required.

Should you have any enquiries about this matter, I have arranged for Peter Pham to assist you. Mr Pham can be contacted on 02 9860 1593.

Yours sincerely



16/11/2022

**Jazmin van Veen**  
**Director Central (GPOP)**  
**Planning and Land Use Strategy**

Encl: Gateway determination



Department of Planning and Environment

## Gateway Determination

**Planning proposal (Department Ref: PP-2022-3571):** to increase height and apply site specific controls to facilitate the redevelopment of the Riverside Theatre (353A-353C Church Street and part 351 Church Street, Parramatta)

I, the Director, Central (GPOP) at the Department of Planning and Environment, as delegate of the Minister for Planning and Homes, have determined under section 3.34(2) of the *Environmental Planning and Assessment Act 1979* (the Act) that an amendment to the Parramatta Local Environmental Plan 2011 to increase height and apply site specific controls to facilitate the redevelopment of the Riverside Theatre should proceed subject to the following conditions:

The LEP should be completed on or before 30 June 2023.

### Gateway Conditions

1. The planning proposal is to be updated to:
  - a) address Section 9.1 Direction 4.1 Flooding by including flooding analysis from the CBD PP;
  - b) clarify the intended design excellence bonus for HOB and update diagrams and modelling as required; and
  - c) include an updated timeline in line with the Gateway determination.
2. Public exhibition is required under section 3.34(2)(c) and clause 4 of Schedule 1 to the Act as follows:
  - (a) the planning proposal is categorised as standard as described in the *Local Environmental Plan Making Guidelines* (Department of Planning and Environment, 2021) and must be made publicly available for a minimum of 20 working days; and
  - (b) the planning proposal authority must comply with the notice requirements for public exhibition of planning proposals and the specifications for material that must be made publicly available along with planning proposals as identified in *Local Environmental Plan Making Guidelines* (Department of Planning and Environment, 2021).

Exhibition must commence within 2 months following the date of the gateway determination.

No consultation is required with public authorities or government agencies under section 3.34(2)(d) of the EP&A Act

3. A public hearing is not required to be held into the matter by any person or body under section 3.34(2)(e) of the EP&A Act. This does not discharge Council from any obligation it may otherwise have to conduct a public hearing (for example, in response to a submission or if reclassifying land).

Dated 16<sup>th</sup> day of November 2022.



**Jazmin van Veen  
Director Central (GPOP)  
Planning & Land Use Strategy  
Department of Planning and Environment**

**Delegate of the Minister for Planning**

PP-2022-3571 (IRF22/3944)

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## PLANNING PROPOSAL

<b>ITEM NUMBER</b>	5.1
<b>SUBJECT</b>	Post Exhibition - Finalisation of the Riverside Theatre Planning Proposal following consideration of submissions received during the public exhibition period.
<b>REFERENCE</b>	F2022/01255 -
<b>APPLICANT/S</b>	City of Parramatta Council
<b>OWNERS</b>	City of Parramatta Council
<b>REPORT OF</b>	Senior Project Officer

## PURPOSE

To seek the Parramatta Local Planning Panel's (LPP) advice on the outcomes of the public exhibition of the Planning Proposal for land at 353A-353C Church Street and part of 351 Church Street, Parramatta (the Riverside Theatre Site).

## RECOMMENDATION

That the Parramatta Local Planning Panel supports the following Council Officer recommendation in its advice to Council:

- (a) **That** Council note that a total number of 31 submissions were made in response to the public exhibition of the Planning Proposal which are summarised at **Attachment 1**.
- (b) **That** Council approve the Planning Proposal at **Attachment 2** for the purposes of it being forwarded to the Department of Planning and Environment (DPE) for finalisation.
- (c) **Further, that** Council delegate authority to the Chief Executive Officer to correct any minor anomalies of a non-policy and administrative nature that may arise during the plan finalisation process, relating to the Planning Proposal.

## REASON FOR REFERRAL

At its meeting of 14 May 2018, Council resolved the following in relation to Planning Proposals after public exhibition:

*(b) That in addition to the requirements of the Local Planning Panels Direction, planning proposals be referred to the City of Parramatta Council Local Planning Panel after exhibition where a request for amendment to the Planning Proposal has been received.*

The Planning Proposal is referred to the LPP as some submissions received supported the progression of the theatre but raised planning related concerns (i.e. carparking, flooding and visual impacts) for Council to consider in the context of the subject site. These submissions are detailed in this report and **Attachment 1**.

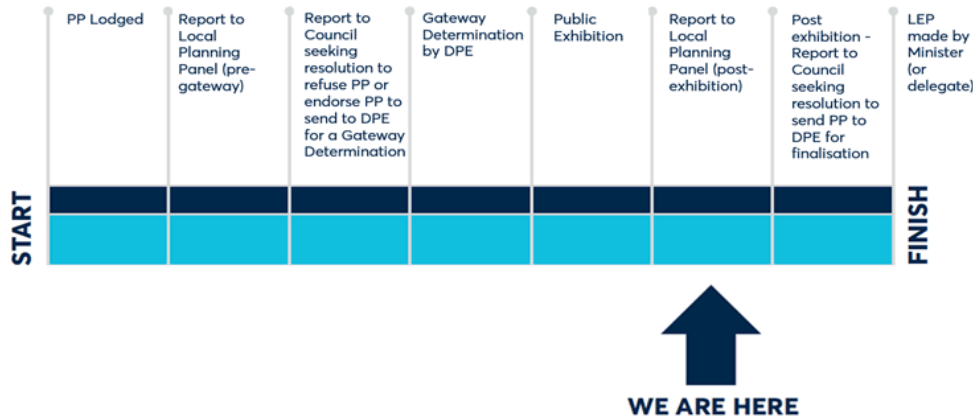
The submissions raised matters that Council Officers consider to be a potential request to amend the Planning Proposal. Therefore, in line with the 14 May 2018 resolution of Council, the outcome of the public exhibition process is being referred to the LPP for consideration.

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## PLANNING PROPOSAL TIMELINE

The timeline below identifies the Riverside Theatre Planning Proposal has now progressed to the finalisation stage.



## SUMMARY

1. The redevelopment of the Riverside Theatre has been a key cultural project under consideration by Council since 2018. Council recently approved the Riverside Theatre redevelopment strategic business case and allocated funding to secure the next phase of the project at its meeting of 12 December 2022. A copy of the meeting minute is provided at **Attachment 3**.
2. Following consideration by the LPP on 18 August 2022, Council at its meeting of 26 September 2022 endorsed a Planning Proposal to implement the necessary planning controls to allow the timely progression and redevelopment of the Riverside Theatre and forwarded it to the Department of Planning and Environment (DPE) for a Gateway Determination.
3. A Gateway Determination was issued on 16 November 2022 advising the Planning Proposal should proceed, subject to conditions which included public exhibition for 20 days and some minor refinements to reflect the intended outcome of the Planning Proposal. Further details are outlined under the heading *Gateway Determination* later in this report.
4. The Planning Proposal was publicly exhibited from 14 December 2022 to 2 February 2023. During the exhibition, Council received a total number of 31 submissions. Of which, 30 submissions were from local residents and 1 was from public agency.
5. Some submissions commented on the detailed design and programming of the theatre which is out of scope of the Planning Proposal. These details would be the subject of public exhibition as part of the future Development approval process which is likely to be a State Significant Development process.
6. Council Officers have reviewed and considered the submissions received. It is proposed to progress the Planning Proposal with no further amendments.



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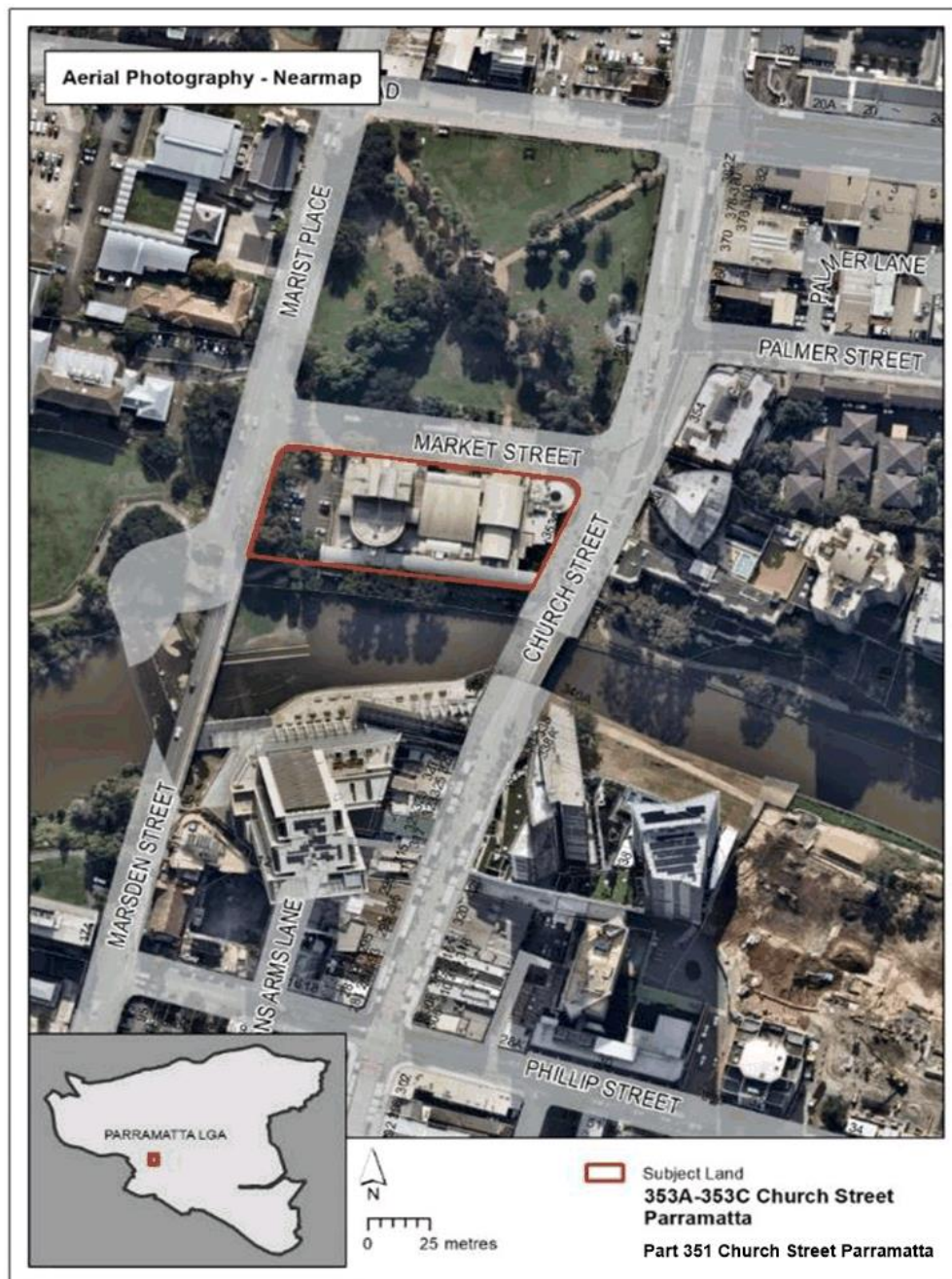
7. This report is consistent with the LPP report and advice of 18 August 2022. As outlined above, the Planning Proposal is being referred to the LPP as some submissions are considered to have made a request to amend the Planning Proposal. A copy of the LPP report and advice is provided at **Attachment 4**.

#### **SITE DESCRIPTION**

8. The Planning Proposal applies to the land at 353A-353C Church Street (Lot 2 DP 740382) and part of 351 Church Street, Parramatta (Lot 1 DP 740382) (the site). The site has an approximate area of 7,000sqm (see **Figure 1**). The site is the location of the Riverside Theatre, which is owned and operated by the City of Parramatta Council (Council). Further information on the site is available in the Planning Proposal contained in **Attachment 2**.

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**Figure 1 – Site subject of the Planning Proposal**

## DESCRIPTION OF PLANNING PROPOSAL

9. The Planning Proposal (**Attachment 2**) seeks the following amendments to the Parramatta Local Environmental Plan 2011 (PLEP):
  - a. Increase the Maximum Height of Building (HOB) from 15m to 28m.

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- b. Introduce a Site-Specific Clause that:
- i. prevents new development generating any additional overshadowing to the southern side of the Parramatta River Foreshore between 12pm and 2pm;
  - ii. requires active street frontages;
  - iii. specifies a maximum Design Excellence bonus of 15% (included as a result of the Gateway Determination conditions).
10. No changes are proposed to the land use zoning or FSR controls.
11. **Table 1** compares the existing planning controls, proposed controls under the Parramatta CBD Planning Proposal (CBD PP) as endorsed by Council, the proposed controls within the subject Planning Proposal, and the existing building for reference. Further details on the site's context, strategic positioning within the Parramatta CBD, and other planning controls are contained within the Planning Proposal found in **Attachment 2**.

Control	PLEP 2011 (existing controls)	Council adopted CBD PP	Planning Proposal	Existing building
<b>Zoning</b>	B4 Mixed Use	B4 Mixed Use	B4 Mixed Use	B4 Mixed Use
<b>Height</b>	15m	Height not nominated – solar access control would allow heights of 50-60m on parts of the site.	28m	25m
<b>FSR</b>	3:1	3:1	3:1	Unknown
<b>Design Excellence Bonus</b>	25%	15%	15%	n/a

Table 1 – Comparison of existing and proposed controls

## BACKGROUND

### Redevelopment of the Riverside Theatre

12. The redevelopment of the Riverside Theatre to deliver a modernised and expanded performance space is an important infrastructure priority reflected in Council's cultural plan titled 'Culture and Our City – A Cultural Plan for Parramatta's CBD 2017-2022' (Cultural Plan).
13. At its meeting of 15 June 2021, Council endorsed the Parramatta CBD Planning Proposal (CBD PP) that sought to increase the height of building control for the Riverside Theatre site (among a number of things). This change would enable the redevelopment of the theatre in line with Council's vision and the Cultural Plan.
14. Council has progressed with the preparation of the concept design to redevelop the theatre consistent with the planning controls within the Council endorsed

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CBD PP. **Attachment 2** includes further details on the indicative building envelopes of the concept design.

15. However, the Department of Planning and Environment (DPE) deferred the area north of the river from the CBD PP during its finalisation process and retained the current planning controls for this site. The current height control does not enable the redevelopment of the site consistent with the concept reference design.
16. As a result, this Planning Proposal was prepared to implement the necessary height control to allow for the concept design and redevelopment project to progress.
17. At its meeting of 12 December 2022, Council approved the Riverside Theatre redevelopment business case and allocated funding to secure the next phase of the project, including a design excellence competition for the project. A copy of the Council resolution is provided at **Attachment 3**.
18. Whilst Council has approved the detailed business case and project plan, this Planning Proposal process is separate and is needed to ensure the necessary planning controls are implemented to allow for the redevelopment project for the Riverside Theatre to progress.

#### **Previous LPP Advice and Council Resolution**

19. On 18 August 2022, the LPP considered the Planning Proposal and supported the Council Officer's recommendation to progress the Planning Proposal except in relation to the request for no public exhibition process (see LPP report at **Attachment 4** for more detail).
20. Council Officers recommended to the LPP that no public exhibition process be required in order to support the efficient procession of the Planning Proposal, given the Council endorsed CBD Planning Proposal included the site and publicly exhibited controls that sought a greater building height than the subject Planning Proposal. However, contrary to the Council Officer recommendation, the LPP recommended that the Planning Proposal should be publicly exhibited in the standard manner. Further details of LPP report and advice is available at **Attachment 4**.
21. At its meeting of 26 September 2022, Council adopted the Planning Proposal and resolved to forward it to DPE for a Gateway Determination. Council also adopted the advice of the LPP to progress the Planning Proposal with a public exhibition process as per standard LEP plan making practice. The Planning Proposal was updated to reflect the resolution of Council and forwarded to DPE on 12 October 2022. Further information on the Council report and resolution is provided at **Attachment 5**.

#### **GATEWAY DETERMINATION**

22. A Gateway Determination was issued by DPE on 16 November 2022 indicated the Planning Proposal should proceed subject to conditions. A copy of the Gateway Determination (with conditions) is provided at **Attachment 6** and summarised below.

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**Public Exhibition**

23. The Gateway conditions specified that a public exhibition process is required under section 3.34(2)(c) and clause 4 of Schedule 1 to the Environmental and Planning Act and must be made publicly available for a minimum of 20 working days.

**Design Excellence Bonus**

24. A Gateway condition sought for clarification on the intended design excellence bonus in the Planning Proposal that can be awarded to the site specified under Clause 7.13 of the Parramatta LEP 2011. As the site was removed from the finalisation of the CBD PP by DPE, the existing LEP would allow for a Design Excellence bonus of up to 25% for the site, while the Council endorsed CBD PP intended a 15% bonus.
25. For consistency with the Council endorsed position on the CBD PP, the Planning Proposal was updated prior to public exhibition to reflect the intended 15% Design Excellence bonus under the CBD PP to respond this Gateway condition. Further information of the intended design excellence bonus is outlined in the Planning Proposal at **Attachment 2**.

**Flooding**

26. A Gateway condition requested Council to further address the Section 9.1 Flooding Direction by incorporating flooding analysis undertaken as part of the CBD PP. The Planning Proposal was updated prior to the exhibition to include refined details on flooding assessment. This further clarified that the Planning Proposal will not worsen flooding compared to the current planning controls on the site (see Part 3 of the Planning Proposal at **Attachment 2**). A copy of the flooding analysis was also included as part of the public exhibition document.

**PUBLIC EXHIBITION OF THE PLANNING PROPOSAL**

27. The Planning Proposal was exhibited from 14 December 2022 to 2 February 2023. Council received 31 submissions including thirty (30) community submissions and one (1) submission from Public Agency. A summary of the exhibition process and engagement activities is provided at the beginning of the **Attachment 1**.
28. While all submissions supported the intended outcome to redevelop the Riverside Theatre site, some submissions raised planning related concerns in relation to car parking, visual impacts and flood management. These submissions are considered to be requests for Council to investigate whether they warrant the Planning Proposal to be amended.
29. Council Officers have reviewed these submission requests and considered none of the submissions warrant any changes to the Planning Proposal. Further details of the submissions are outlined in the following section of this report and provided at **Attachment 1**.

**Summary of Key Issues and Council Officer's Response**



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30. *Concerns raised that the Planning Proposal does not include detailed parking provisions for the proposed redevelopment of the theatre and the current car park is insufficient for the theatre visitors in the future.*

Council Officer response

The Planning Proposal will not result in greater development yield than what is already permitted on the subject site under the provisions of the current PLEP 2011 (i.e. no change to the existing FSR 3:1). The site is well serviced by existing public transport infrastructure including the western train line, bus network and ferry service. These services are currently utilised by theatre patrons. In addition, the site is within walking distance to the future Parramatta Light Rail stop located at Prince Alfred Square, which is expected to open in 2023, prior to the redevelopment of the Riverside Theatre. The completion of this infrastructure in advance of the new theatre opening will result in the site being more accessible to visitors across Greater Parramatta and assist in providing active public transport options.

As such a detailed parking consideration is not required as part of this Planning Proposal. Detailed car park design will be prepared as part of future design and Development Application process. Any proposed parking provision will need to comply with relevant controls for the CBD contained within the Parramatta LEP and Development Control Plan.

As a result of the above assessment, changes to the Planning Proposal in response to this submission are not necessary.

31. *Concerns raised in relation to the lack of detailed flooding protection measurement for the site, as the Riverside Theatre is located within a flood prone area.*

Council Officer response

The Planning Proposal has been assessed against the Planning Ministerial Direction and is consistent with its flooding requirements (See Part 3 of the Planning Proposal at **Attachment 2**). The Planning Proposal is not intensifying development yield, and strictly addressing urban design considerations only through the alteration of building height from 15m to 28m – no changes to FSR are proposed. Therefore, it is considered the Planning Proposal will not generate greater flooding risks than what is currently allowed on the subject site.

In addition, the Design Excellence process will need to respond to the flood affectation of the site. Detailed flooding protection is required for future development and will be assessed at Development Application stage. Any future development will need to comply with the Flood Risk Development Manual and relevant controls contained within the PLEP 2011.

As a result of the above assessment, changes to the Planning Proposal in response to this submission are not necessary.

32. *The Planning Proposal needs to ensure no overshadowing to the Parramatta River and its foreshore area.*

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Council Officer response

Agreed. The Planning Proposal seeks to protect the solar access to the Parramatta River by introducing a site-specific clause requiring new development to not generate additional overshadowing to the southern side of the river foreshore between the hours of 12:00pm and 2:00pm. Noting the northern side of the river is already overshadowed by the existing building. These hours are consistent with the Council adopted policy position relating to additional overshadowing in the CBD PP.

It is also important to note that the proposed concept design to be delivered by the Planning Proposal exceeds the solar access protection to the Parramatta River and its foreshore area by an additional three hours compared to the CBD PP. This further ensures that the Planning Proposal will not generate overshadowing to the Parramatta River and its foreshore area.

As a result of above assessment, changes to the Planning Proposal in response to this submission are not necessary.

33. *The Planning Proposal needs to ensure no significant impacts on the view corridor of residents living in the Lennox building.*

Council Officer response

Noted. The Lennox building is located directly opposite to the Riverside Theatre on the southern bank of Parramatta River and is the tallest building in the surrounding built environment with a building height of 157m.

The Planning Proposal seeks to increase building height from 15m to 28m is considered to have inconsequential impacts on the view corridor, given the existing building has the height elements at 25m and the eastern side of the Church Street has the height of building control at 36m. In addition, the theatre concept design indicates that the proposed 28m is the highest building element which slowly descends towards the western side of the subject site.

The 3m increase in height will not have any significant impact on the views from the Lennox building and detailed building design and impacts on surrounding built environment will be further examined at design and Development Application process.

As a result of the above assessment, changes to the Planning Proposal in response to this submission are not necessary.

34. *Submitter is in the view of the car park and Market St area contains highly sensitive archaeological value and the subject site contains extensive aboriginal, colonial and post-colonial history. It is recommended that future new development retain and potentially display the archaeological area.*

Council Officer response

The Riverside Theatre site is neither a heritage listed item nor known as a potential archaeological site. The Planning Proposal has taken into consideration of the heritage studies prepared as part of the Parramatta CBD PP (including the theatre site) which concluded that the proposed planning

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controls in the CBD PP will not generate significant heritage impacts within the study area. (See detailed discussion in **Attachment 2** and **Attachment 4**)

A detailed archaeology study for the site is not required at Planning Proposal stage, as the site is not currently listed as an archaeological site under the Parramatta LEP 2011 and not known as a potential archaeological site.

Whilst the Planning Proposal is considered acceptable from a heritage and archeology perspective as outlined above, further consideration of any potential archaeological implications will be considered at Development Application stage if and where required.

35. *Issues related to the facilities that should form part of the future Theatre and its design.*

A number of submissions commented on the theatre design parameters and programming (i.e. theatre capacity design, show types and 24/7 hours theatre etc) which is considered out of scope of the Planning Proposal project as it does not relate to the planning controls (refer to Attachment 1 for details of these submissions). Detailed building design including building articulation and integration with public domain along the riverside foreshore will be explored further through the design excellence competition and assessed at Development Application stage.

36. The Riverside Theatre Advisory Committee has been the forum for Council obtaining community input on the concept design and the facilities that should be included in the design. Council will continue to work with the Committee to finalising the design brief that will guide the design competition and subsequent State Significant Development application that must be lodged to gain approval for the new theatre. Public consultation will also occur as part of the future State Significant Development application.

## PLANNING PROPOSAL ASSESSMENT

37. The Planning Proposal has been assessed against relevant State and local strategic planning policies. A copy of detailed assessment is available in the Planning Proposal at **Attachment 2**. It is noted the Planning Proposal is reflective of the requirements and conditions of the Gateway Determination.
38. It is considered that the Planning Proposal has demonstrated both strategic and site - specific planning merits and should proceed to finalisation for the following reasons:
- The Proposal proposed to ensure the necessary planning controls in place to allow the timely progression and redevelopment of the riverside theatre that is consistent with Council's Cultural Plan and the business case endorsed by Council on 12 December 2022;
  - The proposed building height increase from 15m to 28m is considered to have an inconsequential impact on amenity, flooding, overshadowing, and overall bulk and scale particular when it is noted that the existing building has a component that is already 25m tall despite the current 15m height controls; and

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- c. The proposed site - specific provisions is consistent with the objectives and intents of solar access protection, design excellence bonus and active street frontage within the Council endorsed CBD PP.
39. Council Officers have reviewed the submissions received and proposed to progress the Planning Proposal with no further amendments as detailed in this report and **Attachment 1**.

#### **PLAN MAKING DLEGATIONS**

40. Council is not the plan making authority as specified in the Gateway Determination. Subject to Council endorsement, the Planning Proposal will be forwarded to DPE for finalisation. Council Officers will work with DPE to finalise the Planning Proposal.

#### **FINANCIAL IMPLICATIONS FOR COUNCIL**

41. The decision being made to endorse this Planning Proposal will have no direct impacts on the budget. Any cost of processing this Planning Proposal will be funded from the existing City Planning and Design budget.
42. Council has allocated funding for the Riverside Theatre redevelopment through a separate project. The finalisation of this Planning Proposal will allow timely progress of the redevelopment project.

#### **CONCLUSION AND NEXT STEPS**

43. This report has summarised and considered the submissions received as part of the public exhibition process for the Planning Proposal. As explained, the submissions do not warrant any amendment to the Planning Proposal. It is proposed to progress the Planning Proposal with no further amendments.
44. It is recommended that Council forward the Planning Proposal at **Attachment 2** to the Department of Planning and Environment for finalisation to ensure necessary planning controls are in place to allow the timely progression and redevelopment of the Riverside Theatre.
45. Notifications will be sent out to all submitters advising the outcome of the LPP and Council meetings.

Joyce Jiang  
**Senior Project Officer**

Sonia Jacenko  
**Team Leader Strategic Land Use Planning**

Robert Cologna  
**Group Manager, Strategic Land Use Planning**

#### **ATTACHMENTS:**

Local Planning Panel 15 February 2023

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 1	Submission Response Table - Riverside Theatre Planning Proposal	17 Pages
 2	Planning Proposal Riverside Theatre Site	328 Pages
 3	Council Meeting Resolution 12 December 2022 - Business Case Riverside Theatre Redevelopment	2 Pages
 4	Local Planning Panel Report & Resolution 16 August 2022	26 Pages
 5	Council Report and Resolution 26 September 2022	12 Pages
 6	Gateway Determination 16 November 2022	4 Pages

## REFERENCE MATERIAL

Further information of the LPP report and its attachments can be found at Council website via:

[https://businesspapers.parracity.nsw.gov.au/RedirectToDoc.aspx?URL=Open/2023/02/LPP\\_15022023\\_AGN\\_879\\_AT.PDF](https://businesspapers.parracity.nsw.gov.au/RedirectToDoc.aspx?URL=Open/2023/02/LPP_15022023_AGN_879_AT.PDF)





**REPORTS TO COUNCIL - FOR COUNCIL DECISION**

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**ITEM NUMBER** 13.3A  
**SUBJECT** LATE REPORT : Post Exhibition - Finalisation of the Riverside Theatre Planning Proposal following consideration of submissions received during the Public Exhibition Period  
**REFERENCE** F2022/00105 - D08872657  
**REPORT OF** Senior Project Officer

**CSP THEME:** Innovative

**WORKSHOP/BRIEFING DATE:**

**PURPOSE:**

**RECOMMENDATION**

**That** Council note that a late report will be included in a supplementary agenda and distributed to Councillors prior to the Council Meeting.

**BACKGROUND****ISSUES/OPTIONS/CONSEQUENCES****CONSULTATION & TIMING**

Stakeholder Consultation

Councillor Consultation

**LEGAL IMPLICATIONS FOR COUNCIL****FINANCIAL IMPLICATIONS FOR COUNCIL**

Joyce Jiang  
**Senior Project Officer**

Sonia Jacenko  
**Team Leader Strategic Land Use Planning**

Robert Cologna  
**Group Manager, Strategic Land Use Planning**

John Angilley  
**Chief Financial and Information Officer**

Bryan Hynes  
**Acting Chief Executive Officer**

**ATTACHMENTS:**

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There are no attachments for this report.

## **REFERENCE MATERIAL**

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## **NOTICES OF MOTION**

**27 FEBRUARY 2023**

14.1	NOTICE OF MOTION: WestInvest Funding .....	602
14.2	NOTICE OF MOTION: Accelerated Infrastructure Funding.....	605



**NOTICE OF MOTION**

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<b>ITEM NUMBER</b>	14.1
<b>SUBJECT</b>	NOTICE OF MOTION: WestInvest Funding
<b>REFERENCE</b>	F2022/00105 - D08868685
<b>FROM</b>	Councillor Georgina Valjak

**MOTION**

- (a) **That** Council acknowledges the continued investment and support by the State Government in awarding \$170 million dollars from the WestInvest Community round and \$29.7 million from the Local Government round to City of Parramatta which will be delivered regardless of the State election outcome.
- (b) **That** Council note that the Westinvest funding follows over \$4 billion invested by the State government over the past 12 years in infrastructure investment.
- (c) **That** Council brings back a report to Council on the impact of the \$199.7M WestInvest funding to City of Parramatta.
- (d) **Further, that** Council thanks all staff for their work in submitting high calibre business cases that contributed to the successful projects being awarded – this is an outstanding achievement for City of Parramatta Council which will be able to deliver these transformational projects across our LGA for our Community.

**BACKGROUND**

1. More than 680 applications worth \$7.9 billion were received for the \$1.6 billion WestInvest Community Project Grants – Competitive Round.
2. Applicants were advised on a rolling basis split into four geographical areas in Western Sydney grouped as follows:
  - North – Blacktown, The Hills, Hawkesbury
  - Central – Parramatta, Cumberland, Canterbury Bankstown, Burwood, Strathfield, Fairfield
  - West – Penrith, Blue Mountains
  - South – Campbelltown, Wollondilly, Camden, Liverpool
3. City of Parramatta were successful in securing the following projects to a total of \$170million in the Competitive Round. The community projects announced via the competitive round are as follows:
  - Strengthening the Heart of Play - \$8,700,000
  - Carter Street Precinct Community Centre Cold Shell Fit-Out - \$6,127,000
  - Parramatta CBD to Sydney CBD Cycleway - \$10,696,366
  - Riverside Theatres Redevelopment - \$40,000,000

- Western Parramatta River and CBD Precinct Connections - \$26,098,272
  - Eastern Parramatta River and CBD Precinct Connections - \$9,034,530
  - North Granville Community Open Space Upgrade - \$5,643,102
  - Lake Parramatta Swimming Area Upgrade Stage 2 - \$971,300
  - Don Moore Multi-Purpose Community Hub - \$20,627,918
  - Epping Town Centre: Oxford Street Urban Amenity & Reinvigoration Project - \$5,393,625
  - Finlaysons Creek Regional Cycleway - \$9,784,009
  - Duck River Nature Trail - \$26,941,047
4. Projects announced in first round of WestInvest Local Government projects a total of \$29.7million include:
- Doyle Ground sports facility improvements Stage 1 North Parramatta \$8,317,000.00
  - Active Youth are Healthy Youth Dundas \$1,500,000.00
  - Let's play @ Kilpack! Carlingford \$1,409,890.00
  - Somerville Park Improvement Project Eastwood Epping \$4,570,103.00
  - West Epping Park Dog Off-Leash Area Epping \$354,725.00
  - Max Ruddock Reserve Amenities Modernisation with Viewing Platform Winston Hills \$3,843,184.00
  - Sue Savage Reserve Multigenerational Recreational Facilities Toongabbie \$3,650,370.00
5. Refurbish Rydalmere Bowling Club Into a New Multi-Purpose Community Facility Rydalmere \$ 5,530,193.15

## **EXECUTIVE DIRECTOR CITY STRATEGY RESPONSE**

1. [\*\*<Staff to provide a response to the Notice of Motion. >\*\*](#)

## **FINANCIAL AND RESOURCE IMPLICATIONS**

2. If Council resolves to approve this Notice of Motion in accordance with the proposed resolution, the financial impact on the budget are set out in the table below.
3. The financial impacts to the budget, as set out in this section, will be included in the next Quarterly Budget Review for endorsement by Council.

4. The table below summarises the financial impacts on the budget arising from approval of this Notice of Motion.

	FY 20/21	FY 21/22	FY 22/23	FY 23/24
<b>Operating Result</b>				
External Costs				
Internal Costs				
Depreciation				
Other				
<b>Total Operating Result</b>				
<b>Funding Source</b>				
<b>CAPEX</b>				
CAPEX				
External				
Internal				
Other				
<b>Total CAPEX</b>				
<b>Funding Source</b>				

Georgina Valjak  
**Councillor**

Nicole Carnegie  
**Director City Strategy**

John Angilley  
**Chief Financial and Information Officer**

Bryan Hynes  
**Acting Chief Executive Officer**

#### **ATTACHMENTS:**

There are no attachments for this report.

## NOTICE OF MOTION

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<b>ITEM NUMBER</b>	14.2
<b>SUBJECT</b>	NOTICE OF MOTION: Accelerated Infrastructure Funding
<b>REFERENCE</b>	F2022/00105 - D08868775
<b>FROM</b>	Councillor Georgina Valjak

### MOTION

- (a) **That** Council acknowledges the continued investment and support by the State Government in awarding six projects through the Accelerated Infrastructure Fund (AIF) – Round 3 at \$27.54 million dollars to the City of Parramatta Council.
- (b) **That** Council brings back a report to Council on the impact of the \$27.54 million dollar AIF funding to City of Parramatta.
- (c) **Further, that** Council thanks staff for their work in submitting high calibre business cases that contributed to the successful projects being awarded – this is an outstanding achievement for Council.

### BACKGROUND

1. City of Parramatta had secured \$29.72 million in the Local Government Round, \$170 million in the WestInvest Community round and have now been awarded an additional \$27.54 million taking the investment by the State Government to over \$227million to date.
2. The Department received an overwhelming number of applications (92) for the \$300 million allocated for the AIF round of the program. All applications received were rigorously assessed against the program criteria through a multi-stage process that involved an independent technical consultant and the Department's strategic review panel.
3. In relation to City of Parramatta Council's specific applications the following project/s have been successful in receiving funding – total of \$27.54 million

Project	Project Cost (\$M's)	Agency Investment (\$M's)	AIF3 (\$M's)
Connecting Granville	1.00	0.34	0.66
FS Garside Park Upgrade	21.48	16.48	5.00
Epping Town Centre (East Upgrades)	2.10	0.55	1.55
Carter Street Bridges & Cycleway	14.67	6.55	8.11
Parramatta CBD Southern Precinct Upgrades	5.00	2.20	2.80
Granville Town Centre	13.02	3.60	9.42

### EXECUTIVE DIRECTOR CITY STRATEGY RESPONSE

1. [<Staff to provide a response to the Notice of Motion. >](#)

**FINANCIAL AND RESOURCE IMPLICATIONS**

2. If Council resolves to approve this Notice of Motion in accordance with the proposed resolution, the financial impact on the budget are set out in the table below.
3. The financial impacts to the budget, as set out in this section, will be included in the next Quarterly Budget Review for endorsement by Council.
4. The table below summarises the financial impacts on the budget arising from approval of this Notice of Motion.

	FY 20/21	FY 21/22	FY 22/23	FY 23/24
<b>Operating Result</b>				
External Costs				
Internal Costs				
Depreciation				
Other				
<b>Total Operating Result</b>				
<b>Funding Source</b>				
<b>CAPEX</b>				
CAPEX				
External				
Internal				
Other				
<b>Total CAPEX</b>				
<b>Funding Source</b>				

Georgina Valjak  
**Councillor**

Nicole Carnegie  
**Director City Strategy**

John Angilley  
**Chief Financial and Information Officer**

Bryan Hynes  
**Acting Chief Executive Officer**

**ATTACHMENTS:**

There are no attachments for this report.



## **QUESTIONS WITH NOTICE**

**27 FEBRUARY 2023**

15.1 Questions Taken on Notice - 13 February 2023 Council Meeting .....608

## QUESTIONS WITH NOTICE

<b>ITEM NUMBER</b>	15.1
<b>SUBJECT</b>	Questions Taken on Notice - 13 February 2023 Council Meeting
<b>REFERENCE</b>	F2022/00105 - D08869828
<b>REPORT OF</b>	Governance Manager

## QUESTIONS TAKEN ON NOTICE FROM THE COUNCIL MEETING OF 12 DECEMBER 2022

Item	Subject	Councillor	Question
13.8	Administration of the City of Parramatta September 2024 Local Government Elections	Esber	By September this year, Council has to submit to the NSW Electoral Commission Council's new boundaries. Will Council be able to make a submission of where the pre-poll would be?
13.8	Administration of the City of Parramatta September 2024 Local Government Elections	Bradley	Could staff provide the details to the cost estimate given by the NSW Electoral Commission?
13.8	Administration of the City of Parramatta September 2024 Local Government Elections	Bradley	It is possible to argue for a one-week pre-poll and rather than two weeks pre-poll. What saving could Council make through a one-week pre-poll?
13.8	Administration of the City of Parramatta September 2024 Local Government Elections	Bradley	Where would the pre-poll locations be and the polling places on election day?
16.1	Legal Status Report as at 25 December 2022	Darley	Could officers get back to Council on what cases Council is allowed to report publicly and the format it would be in?

## BACKGROUND

- Paragraph 9.23 of Council's Code of Meeting Practice states:

*"Where a councillor or council employee to whom a question is put is unable to respond to the question at the meeting at which it is put, they may take it on notice and report the response to the next meeting of the Council."*

## STAFF RESPONSE

### Item 13.8 - Administration of the City of Parramatta September 2024 Local Government Elections

During discussion on Item 13.8 - Administration of the City of Parramatta September 2024 Local Government Elections, Councillor Esber asked the following question:

*By September this year, Council has to submit to the NSW Electoral Commission Council's new boundaries. Will Council be able to make a submission of where the pre-poll would be?*

*Chief Financial and Information Officer*

Item 13.8 - Administration of the City of Parramatta September 2024 Local Government Elections

During discussion on Item 13.8 - Administration of the City of Parramatta September 2024 Local Government Elections, Councillor Bradley asked the following question:

*Could staff provide the details to the cost estimate given by the NSW Electoral Commission?*

*Chief Financial and Information Officer*

Item 13.8 - Administration of the City of Parramatta September 2024 Local Government Elections

During discussion on Item 13.8 - Administration of the City of Parramatta September 2024 Local Government Elections, Councillor Bradley asked the following question:

*It is possible to argue for a one-week pre-poll and rather than two weeks pre-poll. What saving could Council make through a one-week pre-poll?*

*Chief Financial and Information Officer*

Item 13.8 - Administration of the City of Parramatta September 2024 Local Government Elections

During discussion on Item 13.8 - Administration of the City of Parramatta September 2024 Local Government Elections, Councillor Bradley asked the following question:

*Where would the pre-poll locations be and the polling places on election day?*

*Chief Financial and Information Officer*

Item 16.1 – Legal Status Report as at 25 December 2022

During discussion on Item 16.1 - Legal Status Report as at 25 December 2022, Councillor Darley asked the following question:

*Could officers get back to Council on what cases Council is allowed to report publicly and the format it would be in?*

*Chief Financial and Information Officer*

Bryan Hynes

**Acting Chief Executive Officer**

**ATTACHMENTS:**