

SITE CONTEXT ANALYSIS

1:3000



LANDMARKS

- Ⓐ Otto Losco Reserve
- Ⓑ Tartoola Reserve
- Ⓒ Northmead Child Care
- Ⓓ Parramatta Baptist Church
- Ⓔ Integricare Early Learning
- Ⓕ Northmead Uniting Church
- Ⓖ Scout Camp

- Bus Stop
- Train Station

..... Pedestrian links

Proposed development

ZONING

- RE1 Public Recreation
- RE2 Private Recreation
- W1 Natural Waterways
- E1 Local Centre
- C2 Environmental Conservation
- R2 Low Density Residential
- R3 Medium Density Residential
- R4 High Density Residential
- Heritage
- 9m Max Height of Building

issue k:	23/05/2023
issue j:	18/04/2023
issue i:	03/04/2023
issue h:	03/04/2023
issue g:	16/03/2023
issue f:	19/12/2022
issue e:	15/11/2022
issue d:	01/11/2022

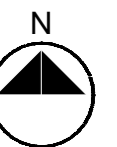
drawing:	SITE ANALYSIS
project:	PROPOSED CHILD CARE CENTRE @ 52 HAMMERS RD NORTHMEAD
client:	Northmead Pty Ltd ATF Northmead P Discretionary Trust
drawn:	E.K.
checked:	J.E.
scale:	as shown
date:	MAY 23
sheet size:	A3
ref:	2022-197
Council:	COP

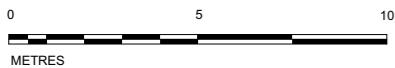


DESIGN CORP ARCHITECTS

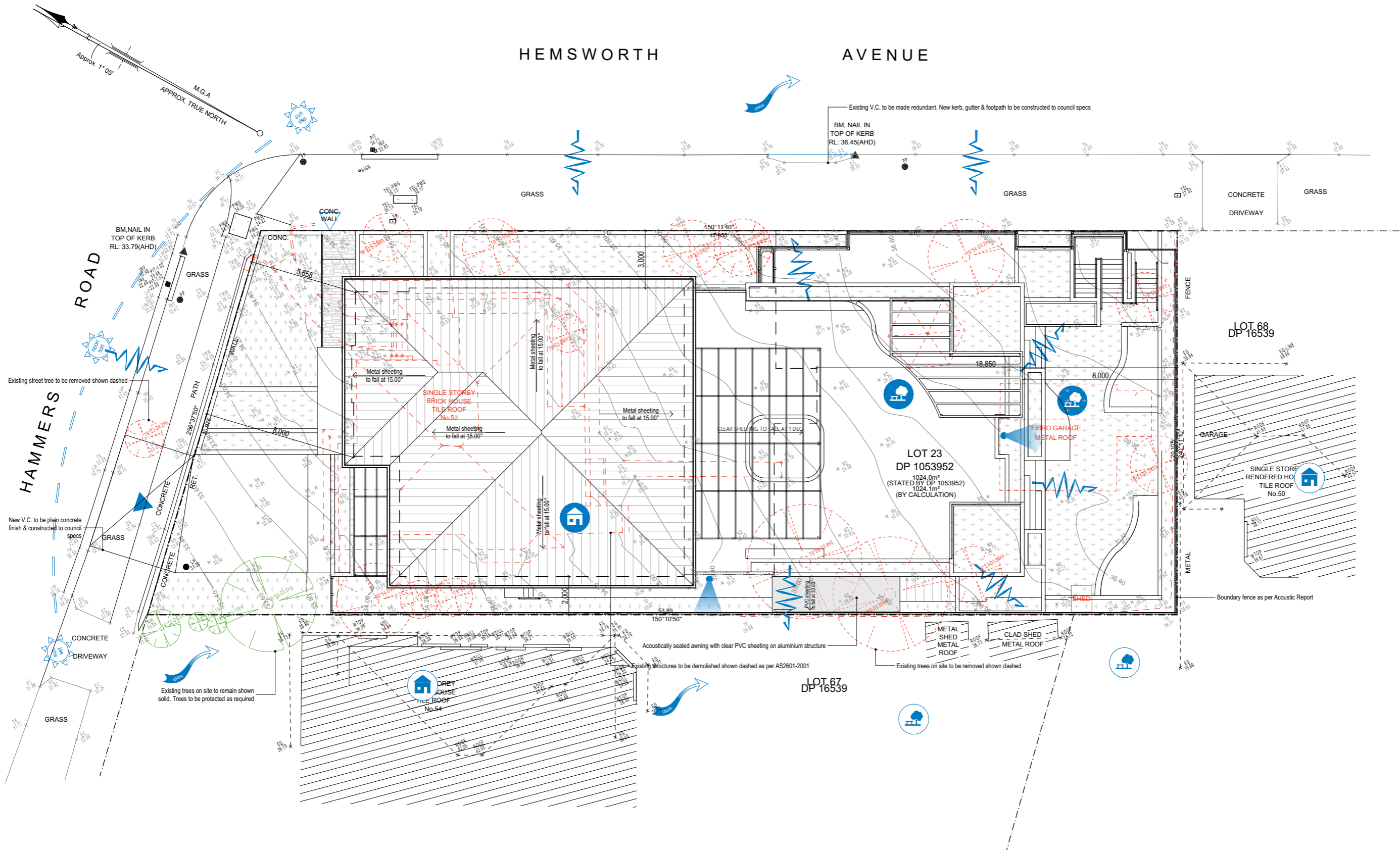
16 dunlop street
north paramatta nsw 2151
ph: +61 2 9630 9911
mob: 0431 111 777
admin@designcorp.com.au
www.designcorp.com.au
nominated architect - joe el-sabbagh 8707

This document is COPYRIGHT and the property of DESIGNCORP ARCHITECTS Pty. Ltd. It is not to be retained, copied or used without the prior written permission of the author. All dimensions must be checked on-site prior to the commencement of any works. Any discrepancies are to be brought to the attention of DESIGNCORP ARCHITECTS.





ISSUE K:	23/05/2023
ISSUE J:	18/04/2023
ISSUE I:	03/04/2023
ISSUE H:	16/03/2023
ISSUE G:	03/04/2023
ISSUE F:	16/03/2023
ISSUE E:	19/12/2022
ISSUE D:	15/11/2022
ISSUE C:	01/11/2022
ISSUE B:	
ISSUE A:	



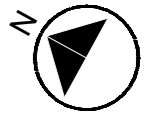
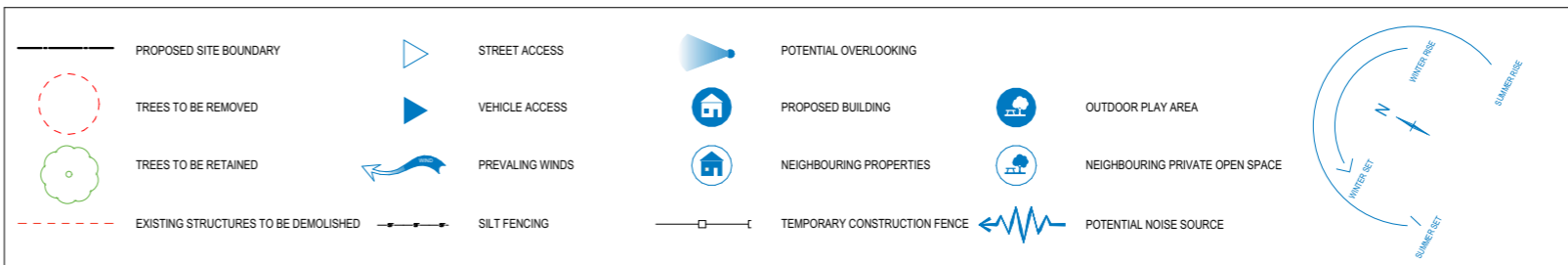
drawing: **ROOF/SITE ANALYSIS PLAN**
 project: **PROPOSED CHILD CARE CENTRE @ 52 HAMMERS RD NORTHMEAD**
 client: **Northmead Pty Ltd ATF Northmead P Discretionary Trust**
 draw: E.K. scale: as shown sheet size: A3 Council
 checked: J.E. date: MAY 23 ref: 2022-197 COP



16 dunlop street
 north parramatta nsw 2151
 ph: +61 2 9630 9911
 mob: 0431 111 777
 admin@designcorp.com.au
 www.designcorp.com.au
 nominated architect - joe el-sabbagh 8707

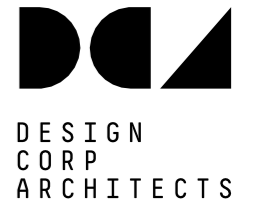
This document is COPYRIGHT and the property of DESIGNCORP ARCHITECTS Pty. Ltd. It is not to be retained, copied or used without the prior written permission of the author. All dimensions must be checked on-site prior to the commencement of any works. Any discrepancies are to be brought to the attention of DESIGNCORP ARCHITECTS.

ROOF/SITE ANALYSIS PLAN
1:200



ISSUE k:	
ISSUE j:	
ISSUE i:	
ISSUE h:	
ISSUE g:	23/05/2023
ISSUE f:	18/04/2023
ISSUE e:	03/04/2023
ISSUE d:	16/03/2023
ISSUE c:	19/12/2022
ISSUE b:	15/11/2022
ISSUE a:	01/11/2022

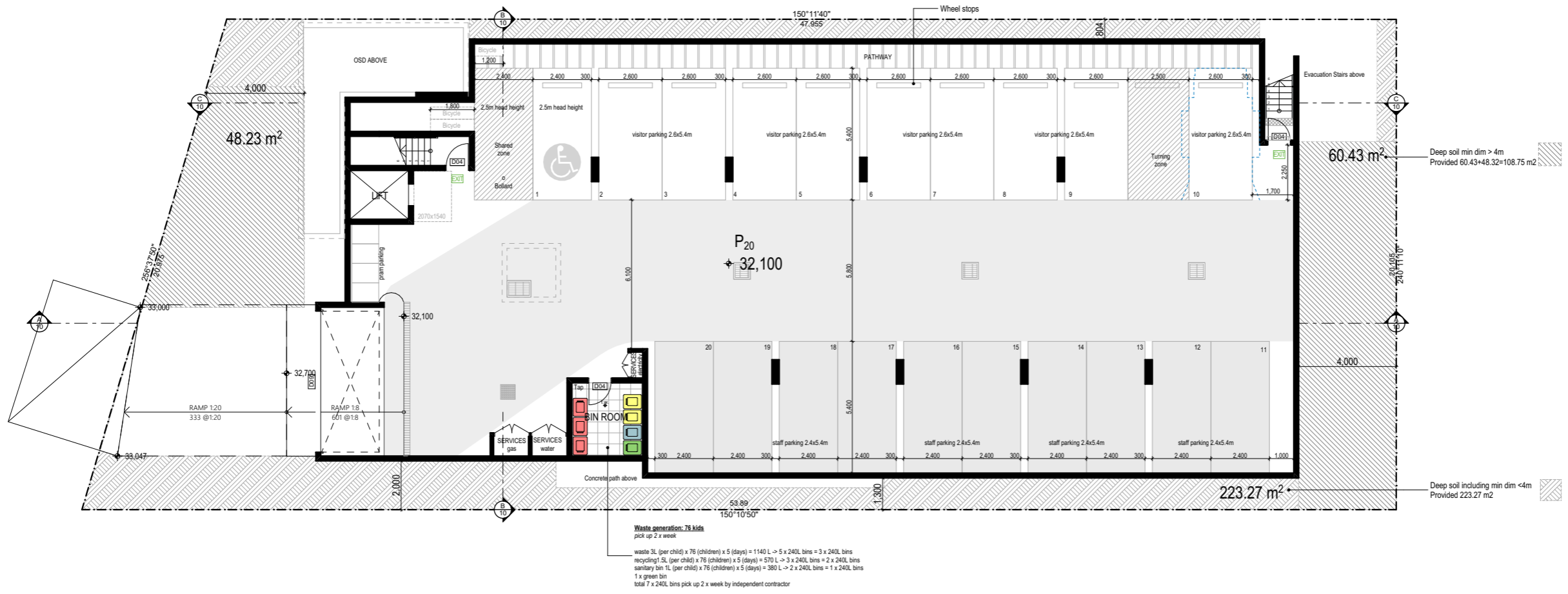
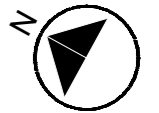
drawing: BASEMENT FLOOR PLAN
 project: PROPOSED CHILD CARE CENTRE @ 52 HAMMERS RD NORTHMEAD
 client: Northmead Pty Ltd ATF Northmead P Discretionary Trust
 drawn: E.K. scale: as shown sheet size: A3 Council
 checked: J.E. date: MAY 23 ref: 2022-197 COP



16 dunlop street
 north paramatta nsw 2151
 ph: +61 2 9630 9911
 mob: 0431 111 777
 admin@designcorp.com.au
 www.designcorp.com.au
 nominated architect - joe el-sabbagh 8707

This document is COPYRIGHT and the property of DESIGNCORP ARCHITECTS Pty. Ltd. It is not to be retained, copied or used without the prior written permission of the author. All dimensions must be checked on-site prior to the commencement of any works. Any discrepancies are to be brought to the attention of DESIGNCORP ARCHITECTS.

rev: 6 page: 5



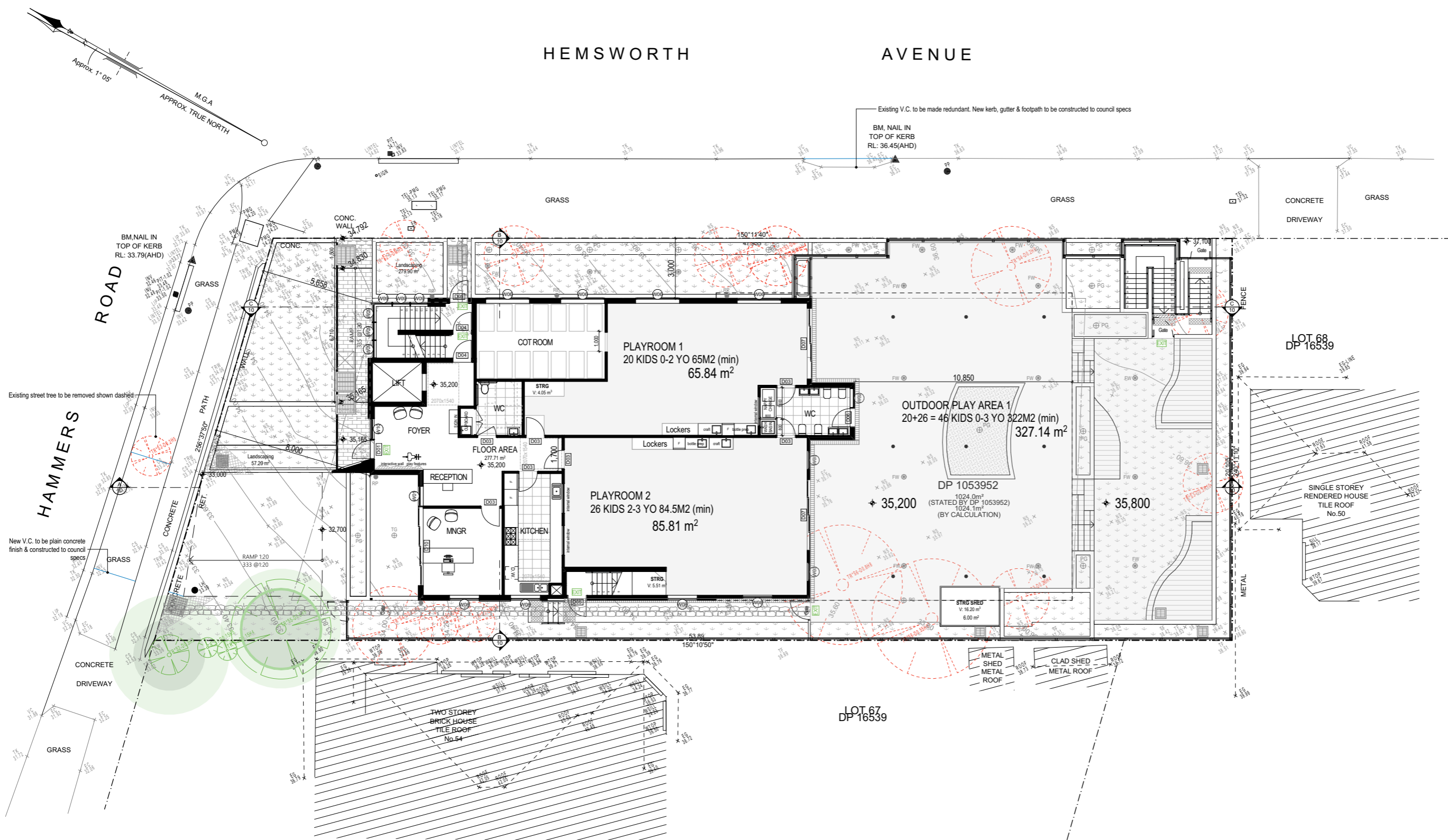
SITE DATA	
SITE AREA	1024.00
CHILD CARE CENTRE	
Ground Floor Area	283.71
First Floor Area	205.43
Total	489.14
FSR	1 = 0.478

	Number of children	Age group (years)	Indoor Play area min 3.25m2 per child		Outdoor Play area min 7m2 per child		Staff		Storage req m3		Storage provided m3	
			Required	Provided	Required	Provided	Required	Provided	indoor	outdoor	indoor	outdoor
Playroom 01	20	0-2	65	65.84	140	327.14	5	5	4	6	4	16
Playroom 02	26	2-3	84.5	85.81	182		5.2	6	5.2	7.8	5.5	
Playroom 03	30	3-6	97.5	98.66	210	215.97	3	3	6	9	8.3	
Total	76		247	250.31	532	543.11	13.2	14	15.2	22.8	17.8	25

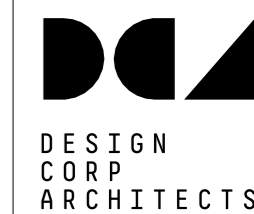
COMPLIANCE TABLE		
CONTROL	REQUIRED	PROPOSED
Site Area (m²) R2	N/A	1024.00
Building Height	max 9m	8.0
Floor Space Ratio (0.5:1)	512.00	489.14
Transition area	min 4m	2.5-7.8
Outdoor play area	532	543.11
Indoor play area	247	250.31
Front Setback	Average	5.5-8
Side Setback	2m	2
Rear Setback	7.19	8
Staff requirement	13.2	14
Parking 1 per 4 children	19	20

BASEMENT FLOOR PLAN
1:200

ISSUE K:	23/05/2023
ISSUE J:	18/04/2023
ISSUE I:	03/04/2023
ISSUE H:	16/03/2023
ISSUE G:	16/03/2023
ISSUE F:	03/04/2023
ISSUE E:	03/04/2023
ISSUE D:	16/03/2023
ISSUE C:	19/12/2022
ISSUE B:	15/11/2022
ISSUE A:	01/11/2022

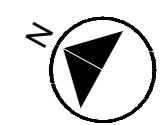


drawing: GROUND FLOOR PLAN
 project: PROPOSED CHILD CARE CENTRE @ 52 HAMMERS RD NORTHMEAD
 client: Northmead Pty Ltd ATF Northmead P Discretionary Trust
 draw: E.K. scale: as shown sheet size: A3 Council
 checked: J.E. date: MAY 23 ref: 2022-197 COP

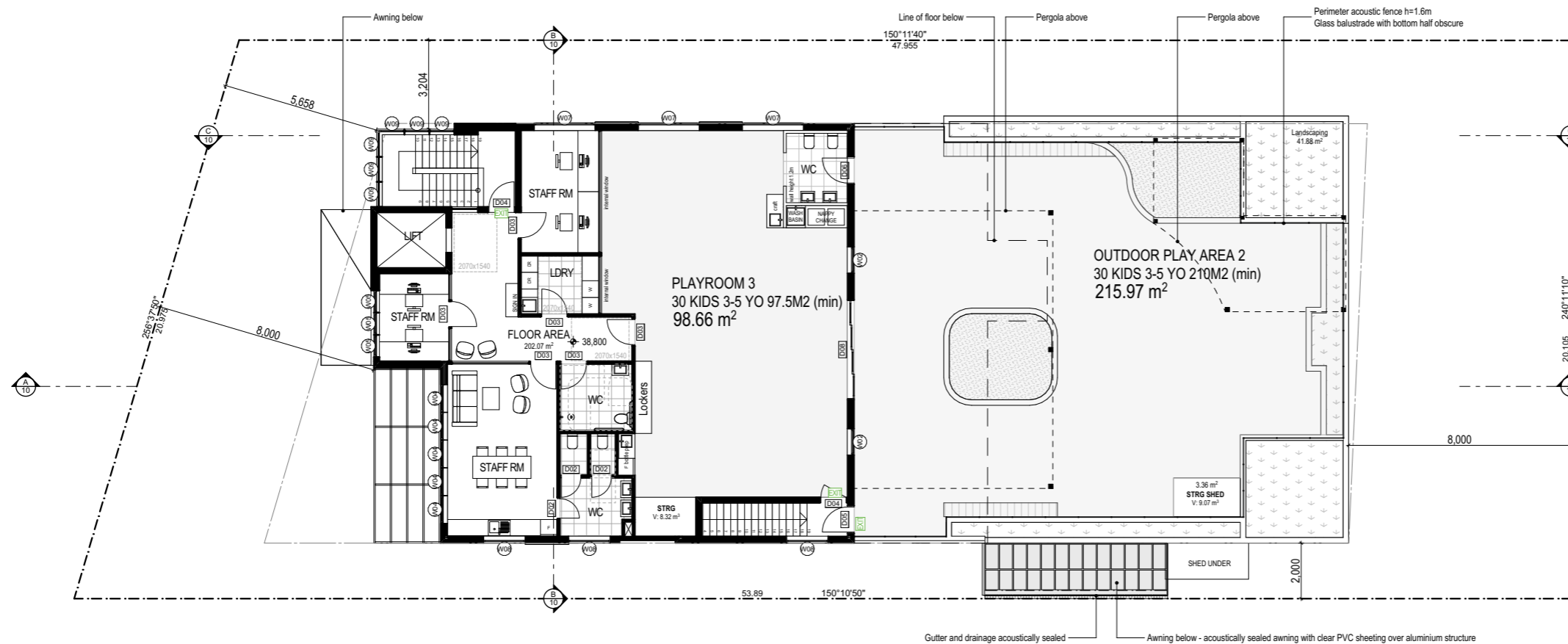


DESIGN CORP ARCHITECTS
 16 dunlop street
 north parramatta nsw 2151
 ph: +61 2 9630 9911
 mob: 0431 111 777
 admin@designcorp.com.au
 www.designcorp.com.au
 nominated architect - joe el-sabbagh 8707

This document is COPYRIGHT and the property of DESIGNCORP ARCHITECTS Pty. Ltd. It is not to be retained, copied or used without the prior written permission of the author. All dimensions must be checked on-site prior to the commencement of any works. Any discrepancies are to be brought to the attention of DESIGNCORP ARCHITECTS.



ISSUE K:	
ISSUE J:	
ISSUE I:	
ISSUE H:	
ISSUE G: DA	23/05/2023
ISSUE F: Facade options	18/04/2023
ISSUE E: DA coordination	03/04/2023
ISSUE D: Redesign	16/03/2023
ISSUE C: Coordination	19/12/2022
ISSUE B: Client changes	15/11/2022
ISSUE A: Schematic	01/11/2022



drawing: **FIRST FLOOR PLAN**
 project: **PROPOSED CHILD CARE CENTRE @ 52 HAMMERS RD NORTHMEAD**
 client: **Northmead Pty Ltd ATF Northmead P Discretionary Trust**
 drawn: **E.K.** scale: as shown sheet size: **A3** Council
 checked: **J.E.** date: **MAY 23** ref: **2022-197** COP



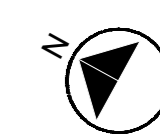
**DESIGN
CORP
ARCHITECTS**

16 dunlop street
 north paramatta nsw
 2151
 ph: +61 2 9630 9911
 mob: 0431 111 777
 admin@designcorp.com.au
 www.designcorp.com.au

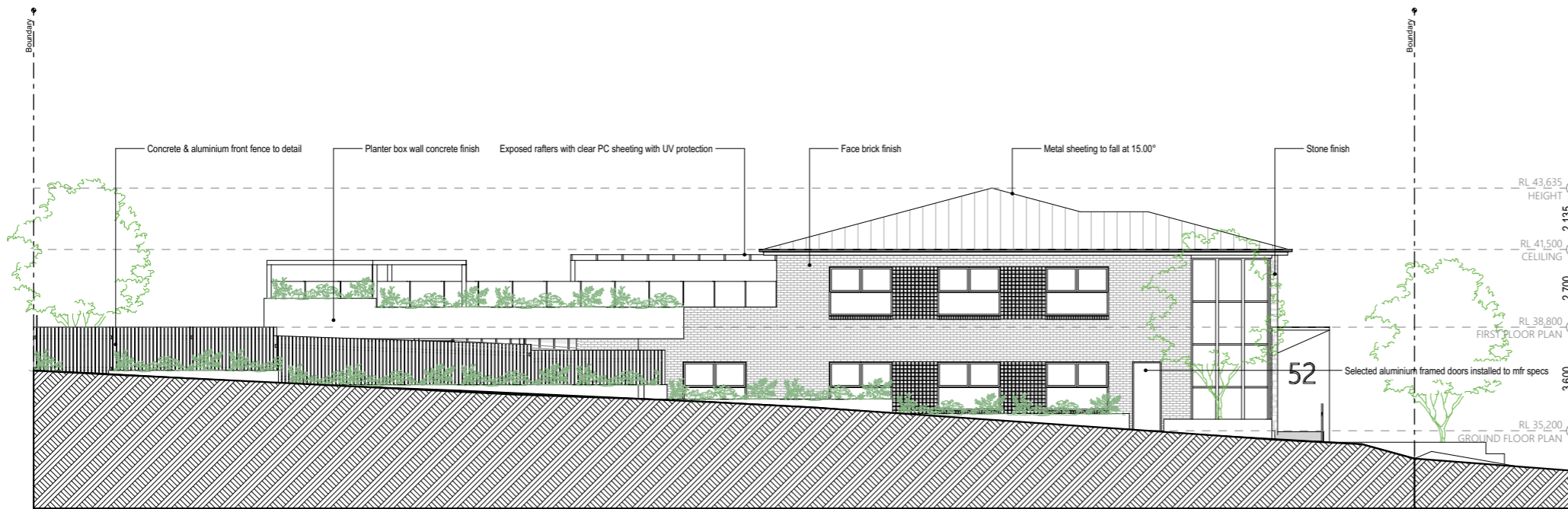
nominated architect - joe el-sabbagh 8707

This document is COPYRIGHT and the property of DESIGNCORP ARCHITECTS Pty. Ltd. It is not to be retained, copied or used without the prior written permission of the author. All dimensions must be checked on-site prior to the commencement of any works. Any discrepancies are to be brought to the attention of DESIGNCORP ARCHITECTS.

rev: 6 page: 7

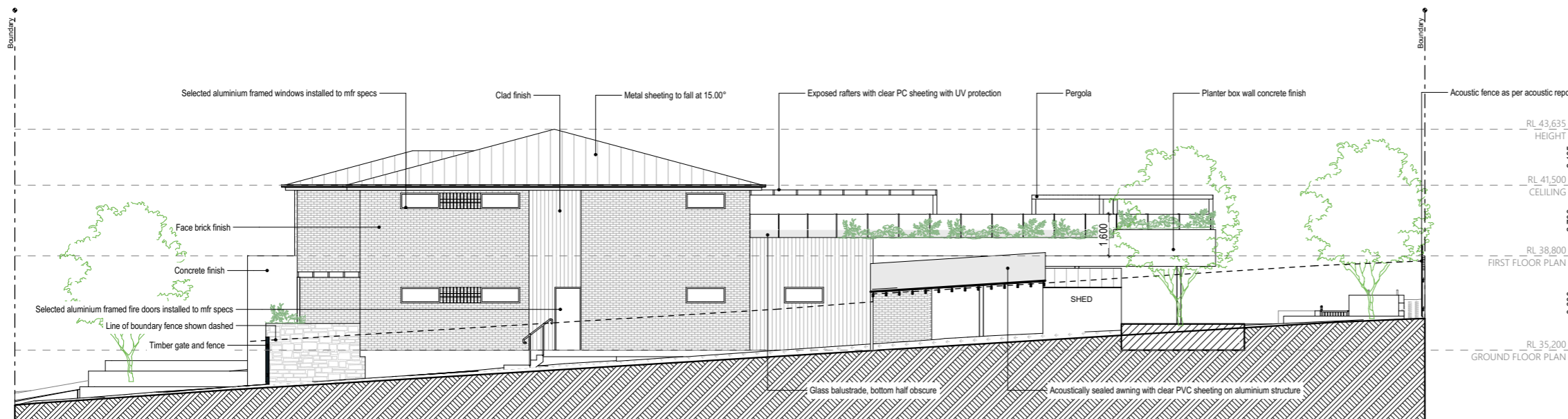


ISSUE k:	
ISSUE j:	
ISSUE i:	23/05/2023
ISSUE h:	18/04/2023
ISSUE g:	03/04/2023
ISSUE f:	16/03/2023
ISSUE e:	19/12/2022
ISSUE d:	15/11/2022
ISSUE c:	01/11/2022
ISSUE b:	
ISSUE a:	



EAST ELEVATION

1:200



WEST ELEVATION

1:200

drawing: **ELEVATIONS 1**
 project: **PROPOSED CHILD CARE CENTRE @ 52 HAMMERS RD NORTHMEAD**
 client: **Northmead Pty Ltd ATF Northmead P Discretionary Trust**
 drawn: **E.K.** scale: as shown sheet size: **A3** Council
 checked: **J.E.** date: **MAY 23** ref: **2022-197** COP



DESIGN CORP ARCHITECTS

16 dunlop street
 north paramatta nsw 2151
 ph: +61 2 9630 9911
 mob: 0431 111 777
 admin@designcorp.com.au
 www.designcorp.com.au
 nominated architect - joe el-sabbagh 8707

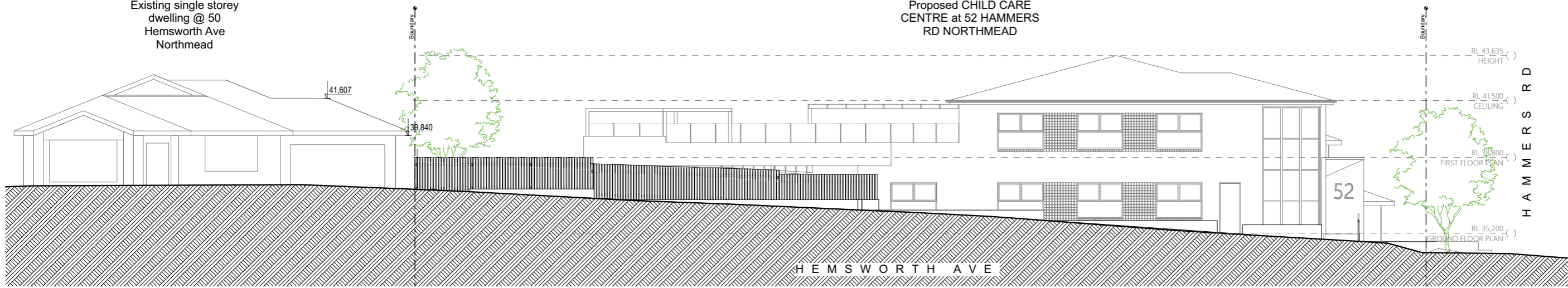
This document is COPYRIGHT and the property of DESIGNCORP ARCHITECTS Pty. Ltd. It is not to be retained, copied or used without the prior written permission of the author. All dimensions must be checked on-site prior to the commencement of any works. Any discrepancies are to be brought to the attention of DESIGNCORP ARCHITECTS.

rev: 6 page: 8



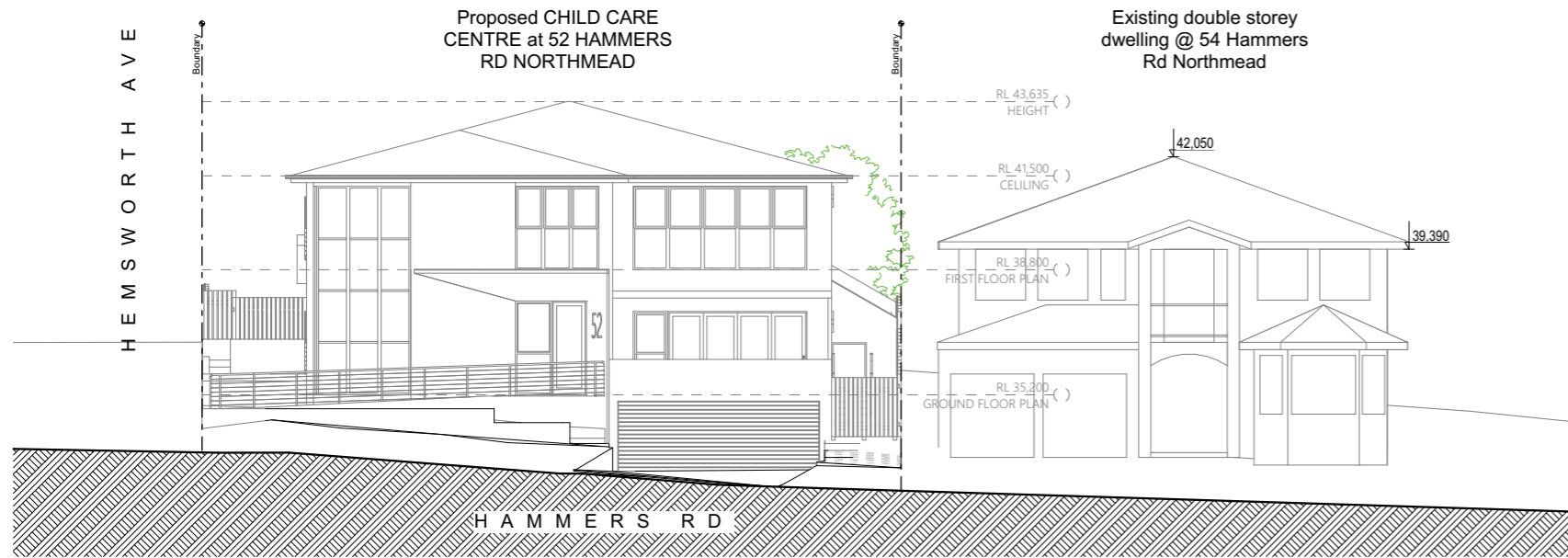
Existing single storey dwelling @ 50 Hemsworth Ave Northmead

Proposed CHILD CARE CENTRE at 52 HAMMERS RD NORTHMEAD



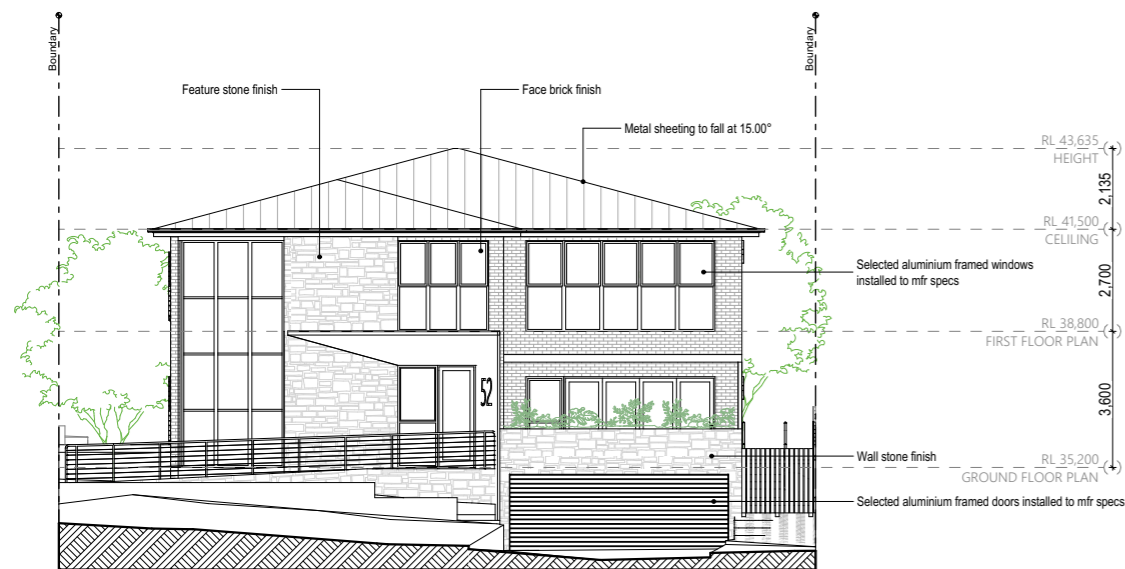
STREETSCAPE - HEMSWORTH AVE

1:200



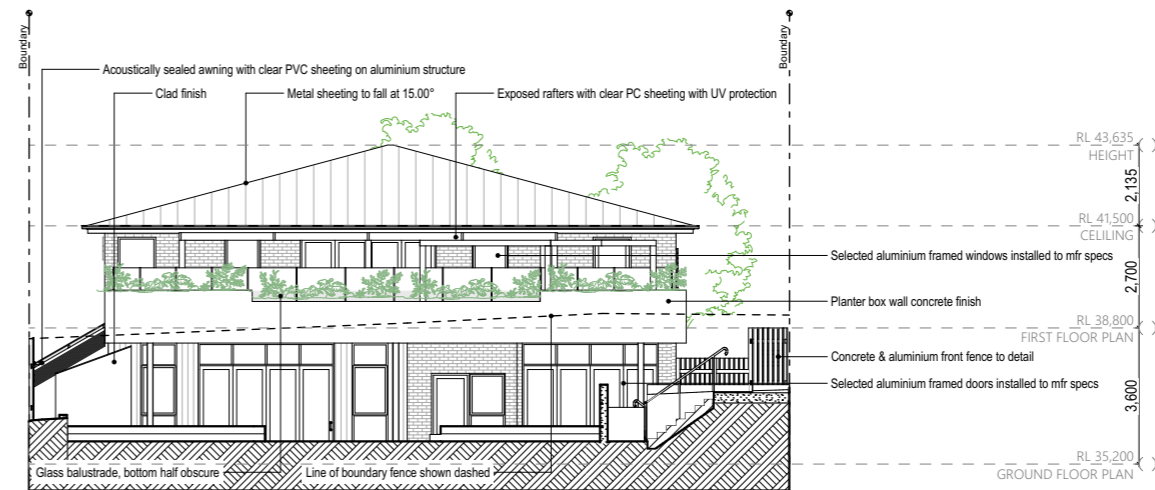
STREETSCAPE - HAMMERS RD

1:200



NORTH ELEVATION

1:200



SOUTH ELEVATION

1:200

WINDOW SCHEDULE							
ID	TYPE	SILL	WIDTH	HEIGHT	PLAN	ELEVATION	Q
W01	DOUBLE HUNG	0	1,000	2,400	[Symbol]	[Symbol]	1
W02	SINGLE HUNG	0	950	2,400	[Symbol]	[Symbol]	3
W03	AWNING/FIXED	0	950	3,200	[Symbol]	[Symbol]	2
W04	SINGLE HUNG	0	1,000	2,400	[Symbol]	[Symbol]	5
W05	SINGLE HUNG	0	800	2,400	[Symbol]	[Symbol]	3
W06	SLIDING/FIXED	700	2,200	1,700	[Symbol]	[Symbol]	4
W07	SLIDING/FIXED	400	2,200	1,700	[Symbol]	[Symbol]	3
W08	FIXED	1,800	1,500	600	[Symbol]	[Symbol]	7
W09	FIXED	0	900	6,000	[Symbol]	[Symbol]	6
W10	AWNING/FIXED	0	1,050	2,700	[Symbol]	[Symbol]	1
							35

DOOR SCHEDULE						
ID	TYPE	HEIGHT	WIDTH	PLAN	ELEVATION	Q
D01	SWING DOOR	2,700	1,000	[Symbol]	[Symbol]	1
D02	SWING DOOR	2,360	720	[Symbol]	[Symbol]	3
D03	SWING DOOR	2,360	920	[Symbol]	[Symbol]	13
D04	SWING DOOR	2,060	920	[Symbol]	[Symbol]	7
D05	SWING DOOR	2,400	1,000	[Symbol]	[Symbol]	3
D06	SWING DOOR	2,400	1,000	[Symbol]	[Symbol]	2
D07	SLIDING DOOR	3,200	3,600	[Symbol]	[Symbol]	2
D08	SLIDING DOOR	2,400	3,600	[Symbol]	[Symbol]	1
D09	GARAGE DOOR	2,400	5,800	[Symbol]	[Symbol]	1
D10	SLIDING DOOR	2,400	4,000	[Symbol]	[Symbol]	1
						34

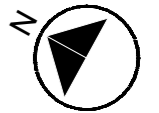


ISSUE K:	23/05/2023
ISSUE J:	18/04/2023
ISSUE I:	03/04/2023
ISSUE H:	16/03/2023
ISSUE G:	19/12/2022
ISSUE F:	15/11/2022
ISSUE E:	01/11/2022

drawing: ELEVATIONS 2
 project: PROPOSED CHILD CARE CENTRE @ 52 HAMMERS RD NORTHMEAD
 Northmead Pty Ltd ATF Northmead P
 client: Discretionary Trust
 drawn: E.K. scale: as shown sheet size: A3 Council
 checked: J.E. date: MAY 23 ref: 2022-197 COP



16 dunlop street
 north paramatta nsw 2151
 ph: +61 2 9630 9911
 mob: 0431 111 777
 admin@designcorp.com.au
 www.designcorp.com.au
 nominated architect - joe el-sabbagh 8707
 This document is COPYRIGHT and the property of DESIGNCORP ARCHITECTS Pty. Ltd. It is not to be retained, copied or used without the prior written permission of the author. All dimensions must be checked on-site prior to the commencement of any works. Any discrepancies are to be brought to the attention of DESIGNCORP ARCHITECTS.
 rev: 6 page: 9



ISSUE k:	
ISSUE j:	
ISSUE i:	
ISSUE h:	
ISSUE g:	DA
ISSUE f:	Facade options
ISSUE e:	DA coordination
ISSUE d:	Redesign
ISSUE c:	Coordination
ISSUE b:	Client changes
ISSUE a:	Schematic

drawing:	SECTIONS
project:	PROPOSED CHILD CARE CENTRE @ 52 HAMMERS RD NORTHMEAD
client:	Northmead Pty Ltd ATF Northmead P Discretionary Trust
drawn:	E.K.
checked:	J.E.
scale:	as shown
sheet size:	A3
date:	MAY 23
ref:	2022-197
Council:	COP

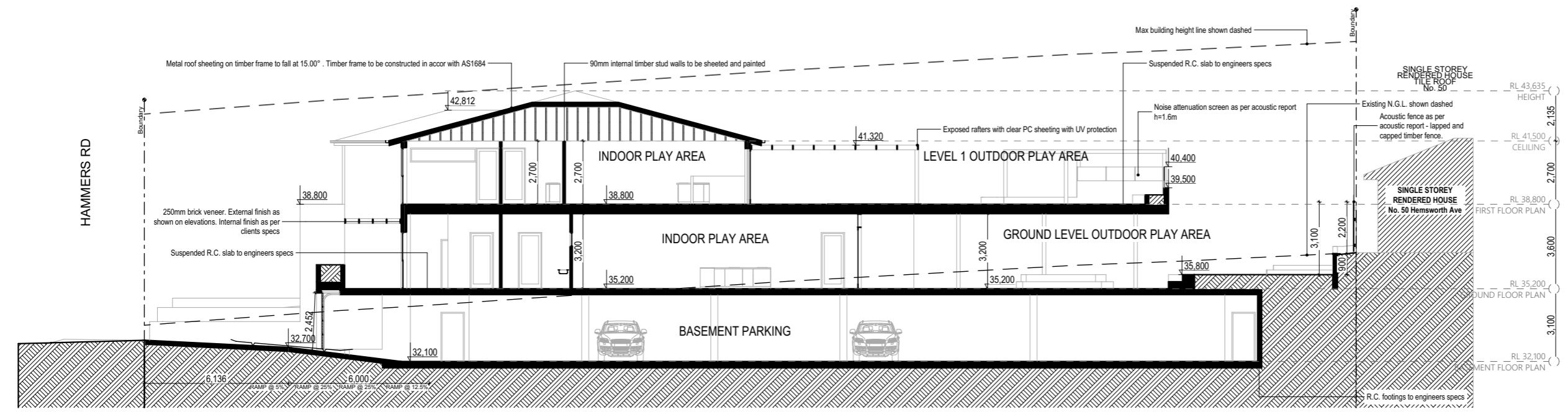
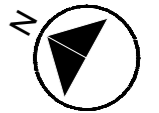


DESIGN CORP ARCHITECTS

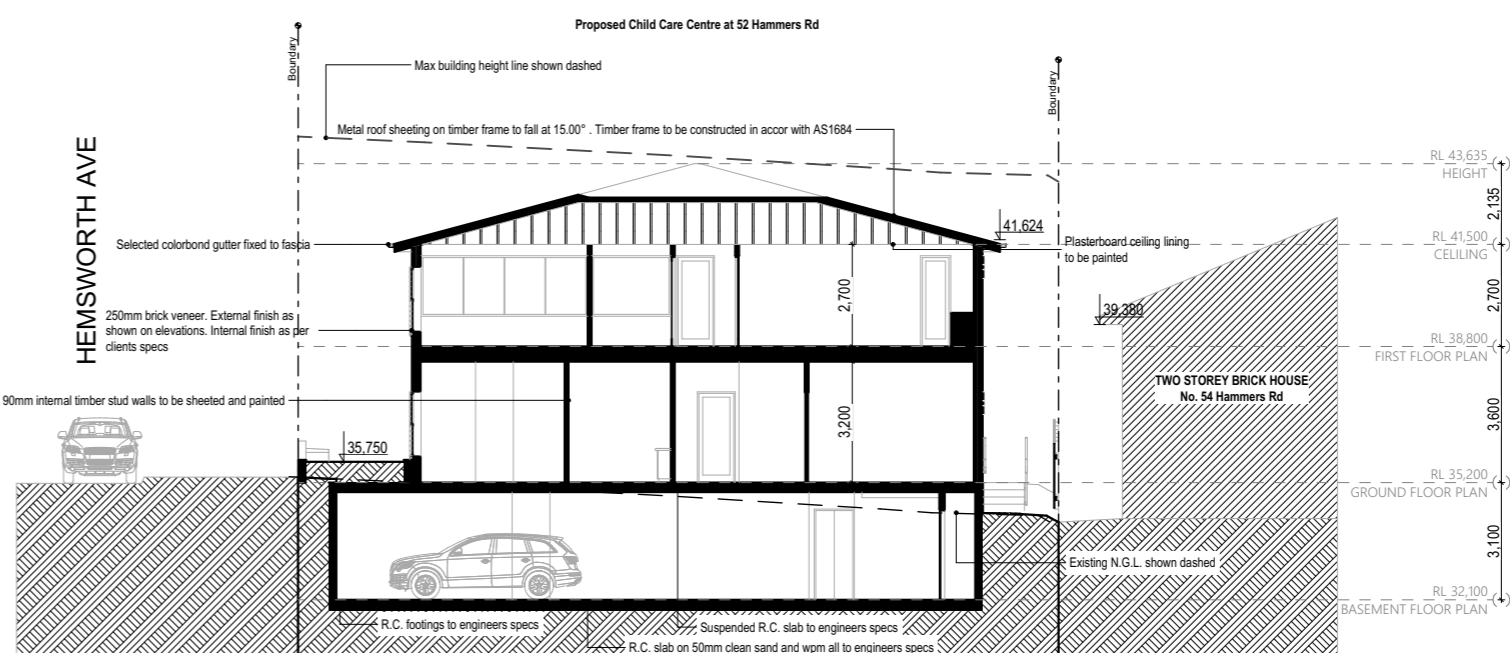
16 dunlop street
north paramatta nsw 2151
ph: +61 2 9630 9911
mob: 0431 111 777
admin@designcorp.com.au
www.designcorp.com.au

nominated architect - joe el-sabbagh 8707
This document is COPYRIGHT and the property of DESIGNCORP ARCHITECTS Pty. Ltd. It is not to be retained, copied or used without the prior written permission of the author. All dimensions must be checked on-site prior to the commencement of any works. Any discrepancies are to be brought to the attention of DESIGNCORP ARCHITECTS.

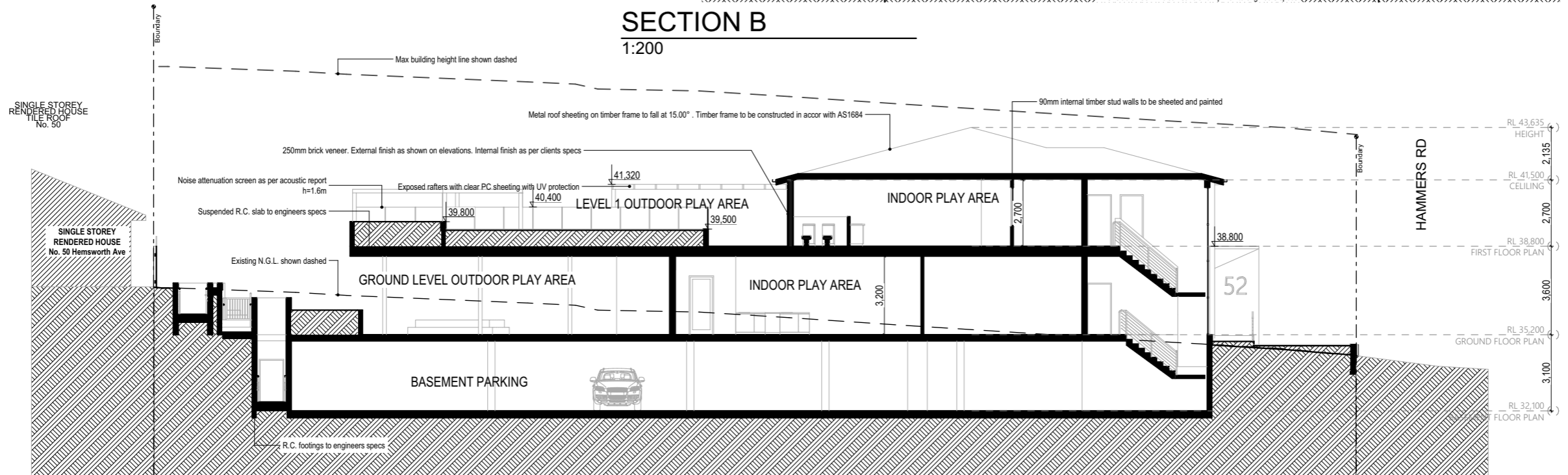
rev: 6 page: 10



SECTION A
1:200



SECTION B
1:200



SECTION C
1:200



CORNER VIEW



WEST VIEW

issue k:		
issue j:		
issue i:		
issue h:		23/05/2023
issue g:	DA	18/04/2023
issue f:	Facade options	03/04/2023
issue e:	DA coordination	16/03/2023
issue d:	Redesign	19/12/2022
issue c:	Coordination	15/11/2022
issue b:	Client changes	
issue a:	Schematic	01/11/2022

drawing:	3D PERSPECTIVES
project:	PROPOSED CHILD CARE CENTRE @ 52 HAMMERS RD NORTHMEAD
client:	Northmead Pty Ltd ATF Northmead P Discretionary Trust
drawn:	E.K.
checked:	J.E.
scale:	as shown
sheet size:	A3
date:	MAY 23
ref:	2022-197
Council	COP

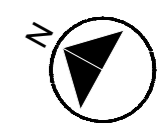


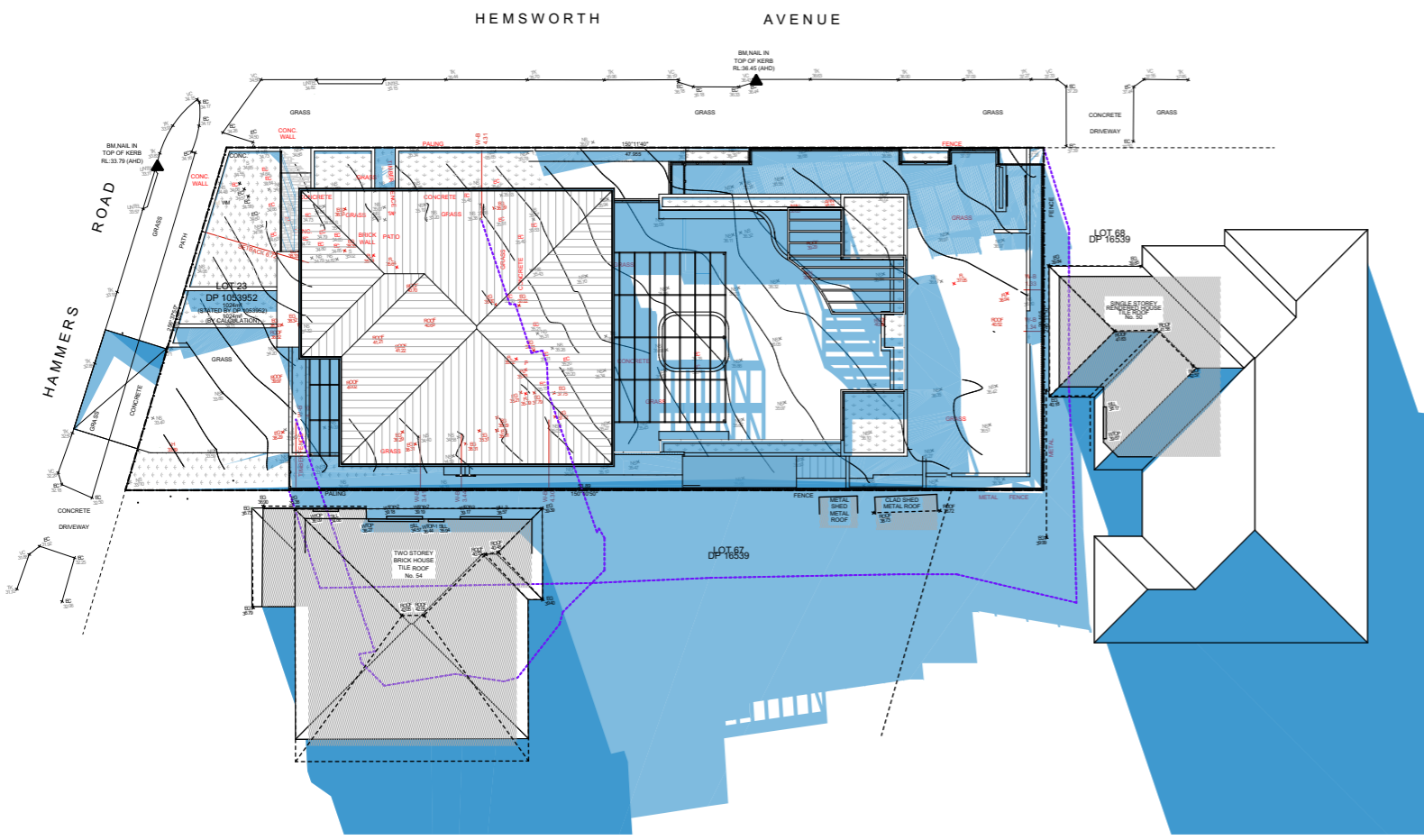
**DESIGN
CORP
ARCHITECTS**

16 dunlop street
north parramatta nsw
2151
ph: +61 2 9630 9911
mob: 0431 111 777
admin@designcorp.com.au
www.designcorp.com.au
nominated architect - joe el-sabbagh 8707

This document is COPYRIGHT and the property of DESIGNCORP ARCHITECTS Pty. Ltd. It is not to be retained, copied or used without the prior written permission of the author. All dimensions must be checked on-site prior to the commencement of any works. Any discrepancies are to be brought to the attention of DESIGNCORP ARCHITECTS.

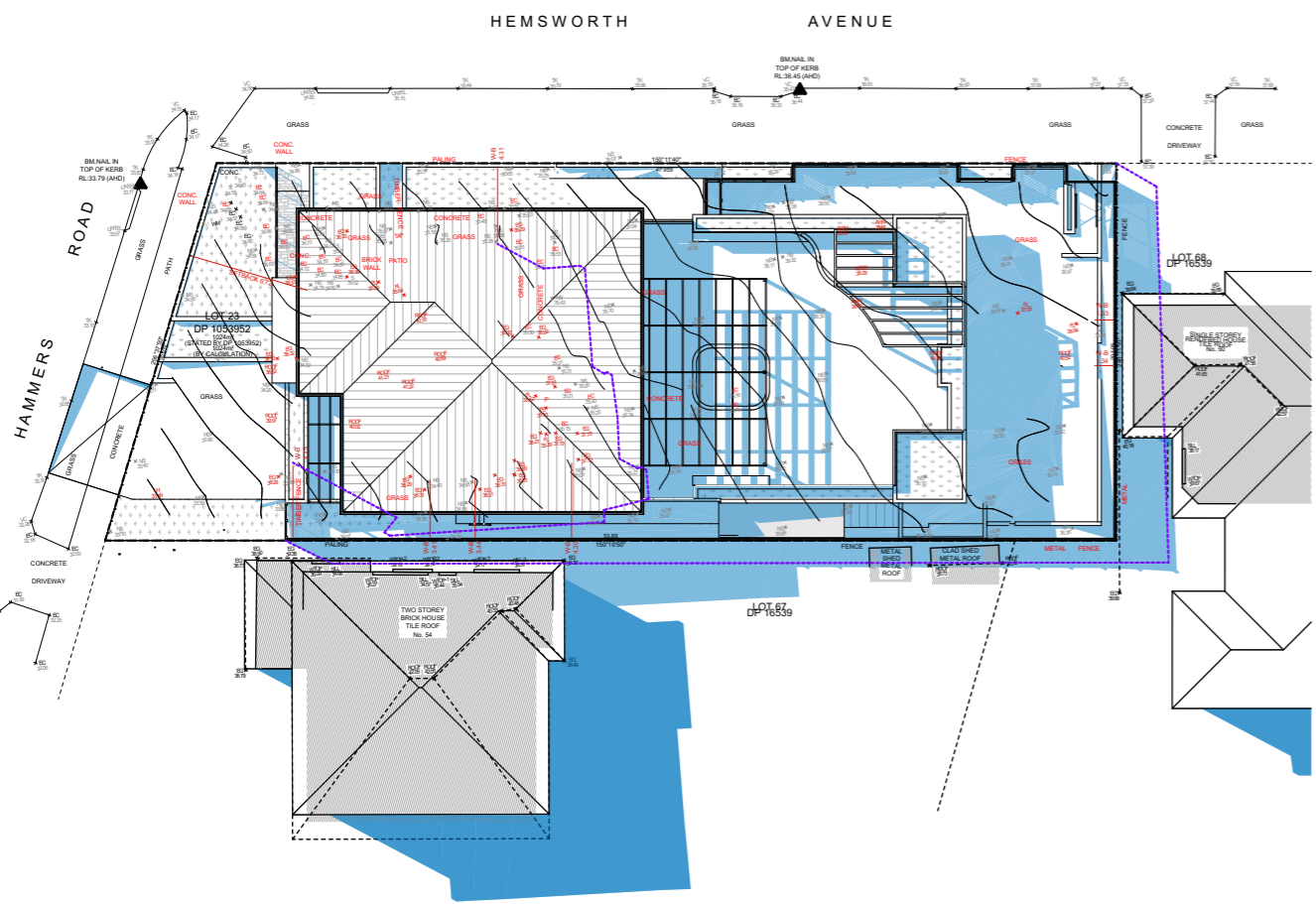
rev: 6 page: 11



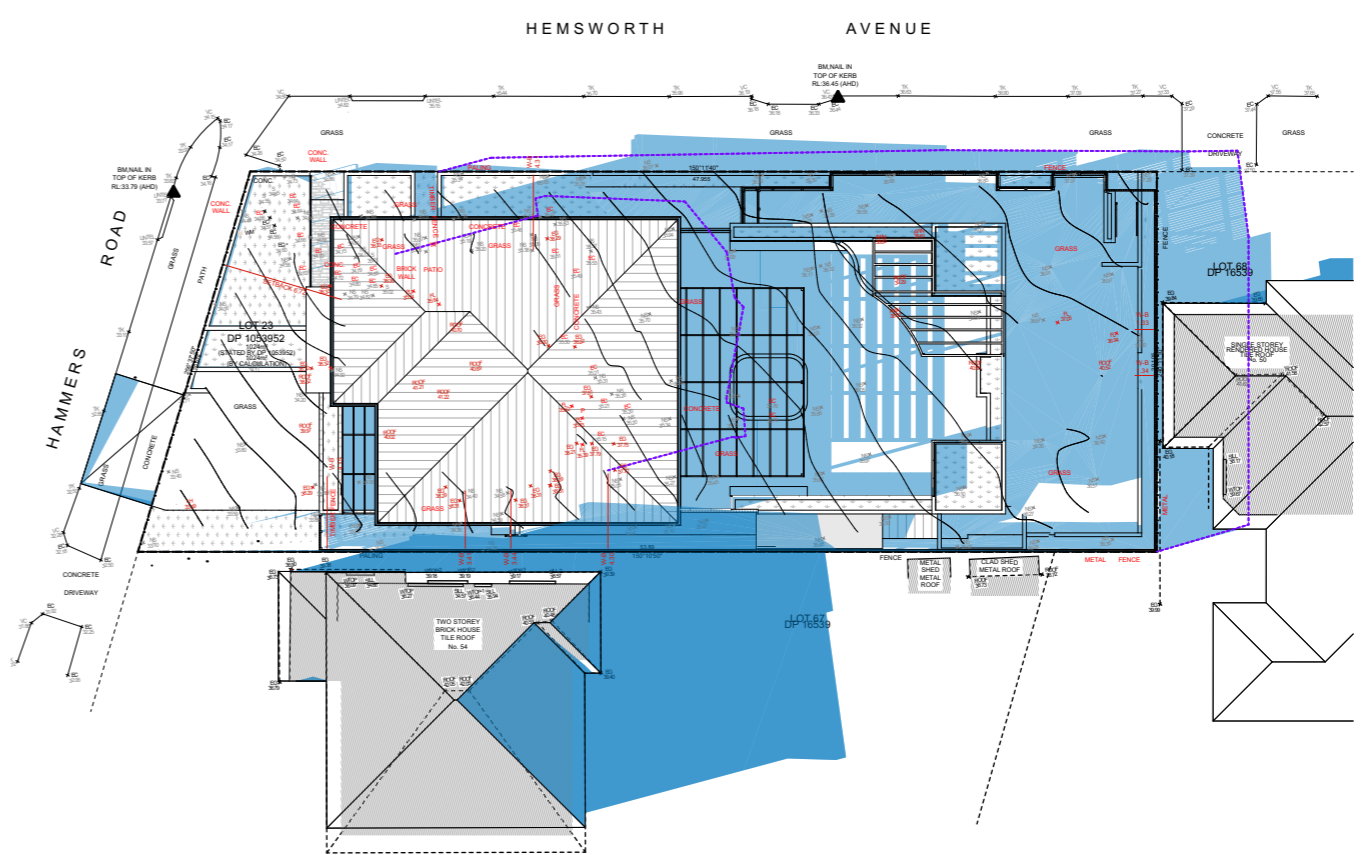


- EXISTING SHADOWS
- PROPOSED SHADOWS
- NEIGHBOUR'S SHADOWS

SHADOW ANALYSIS 9am
1:400



SHADOW ANALYSIS 12pm
1:400



SHADOW ANALYSIS 3pm
1:400



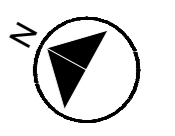
ISSUE k:	23/05/2023
ISSUE j:	18/04/2023
ISSUE i:	03/04/2023
ISSUE h:	16/03/2023
ISSUE g:	03/04/2023
ISSUE f:	19/12/2022
ISSUE e:	15/11/2022
ISSUE d:	01/11/2022
ISSUE c:	
ISSUE b:	
ISSUE a:	

drawing: SHADOWS - JUN
 project: PROPOSED CHILD CARE CENTRE @ 52
 HAMMERS RD NORTHMEAD
 Northmead Pty Ltd ATF Northmead P
 client: Discretionary Trust
 drawn: E.K. scale: as shown sheet size: A3 Council
 checked: J.E. date: MAY 23 ref: 2022-197 COP



16 dunlop street
 north paramatta nsw 2151
 ph: +61 2 9630 9911
 mob: 0431 111 777
 admin@designcorp.com.au
 www.designcorp.com.au
 nominated architect - joe el-sabbagh 8707
 This document is COPYRIGHT and the property of DESIGNCORP ARCHITECTS Pty. Ltd. It is not to be retained, copied or used without the prior written permission of the author. All dimensions must be checked on-site prior to the commencement of any works. Any discrepancies are to be brought to the attention of DESIGNCORP ARCHITECTS.

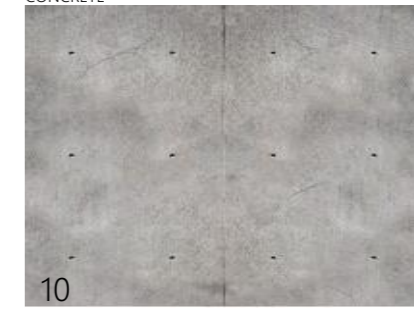
rev: 6 page: 17



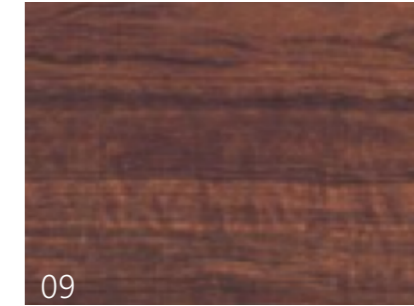
MATERIALS & FINISHES SCHEDULE @ 52 HAMMERS RD NORTHMEAD



DRIVEWAY
CONCRETE



PRIVACY SCREEN, FENCE
ALUMINIUM TIMBER LOOK FINISH



GUTTERS
COLORBOND BASALT



DOORS & WINDOWS
ALUMINIUM - COLORBOND BASALT



issue k:	23/05/2023
issue j:	18/04/2023
issue i:	03/04/2023
issue h:	16/03/2023
issue g:	19/12/2022
issue f:	15/11/2022
issue e:	01/11/2022
issue d:	
issue c:	
issue b:	
issue a:	

drawing: MATERIALS & FINISHES
 project: PROPOSED CHILD CARE CENTRE @ 52 HAMMERS RD NORTHMEAD
 Northmead Pty Ltd ATF Northmead P
 client: Discretionary Trust
 drawn: E.K. scale: as shown sheet size: A3 Council
 checked: J.E. date: MAY 23 ref: 2022-197 COP



DESIGN
CORP
ARCHITECTS

16 dunlop street
north parramatta nsw
2151
ph: +61 2 9630 9911
mob: 0431 111 777
admin@designcorp.com.au
www.designcorp.com.au
nominated architect - joe el-sabbagh 8707

This document is COPYRIGHT and the property of DESIGNCORP ARCHITECTS Pty. Ltd. It is not to be retained, copied or used without the prior written permission of the author. All dimensions must be checked on-site prior to the commencement of any works. Any discrepancies are to be brought to the attention of DESIGNCORP ARCHITECTS.

rev: 6 page: 18



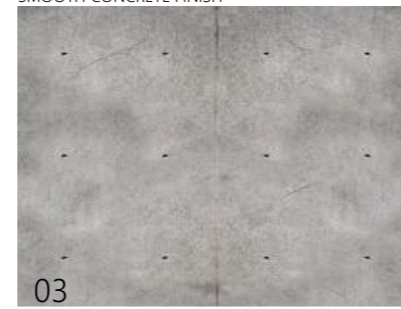
EXTERNAL BRICK WALLS
FACE BRICK - PHG MAWSON WHITE OR SIMILAR



EXTERNAL STONE WALLS
NATURAL SANDSTONE TILES



EXTERNAL WALLS
SMOOTH CONCRETE FINISH



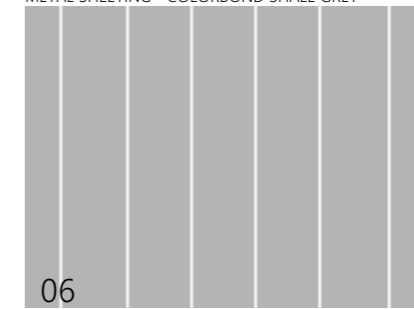
EXTERNAL CLADDING
INNOWOOD OR SIMILAR TIMBER LOOK

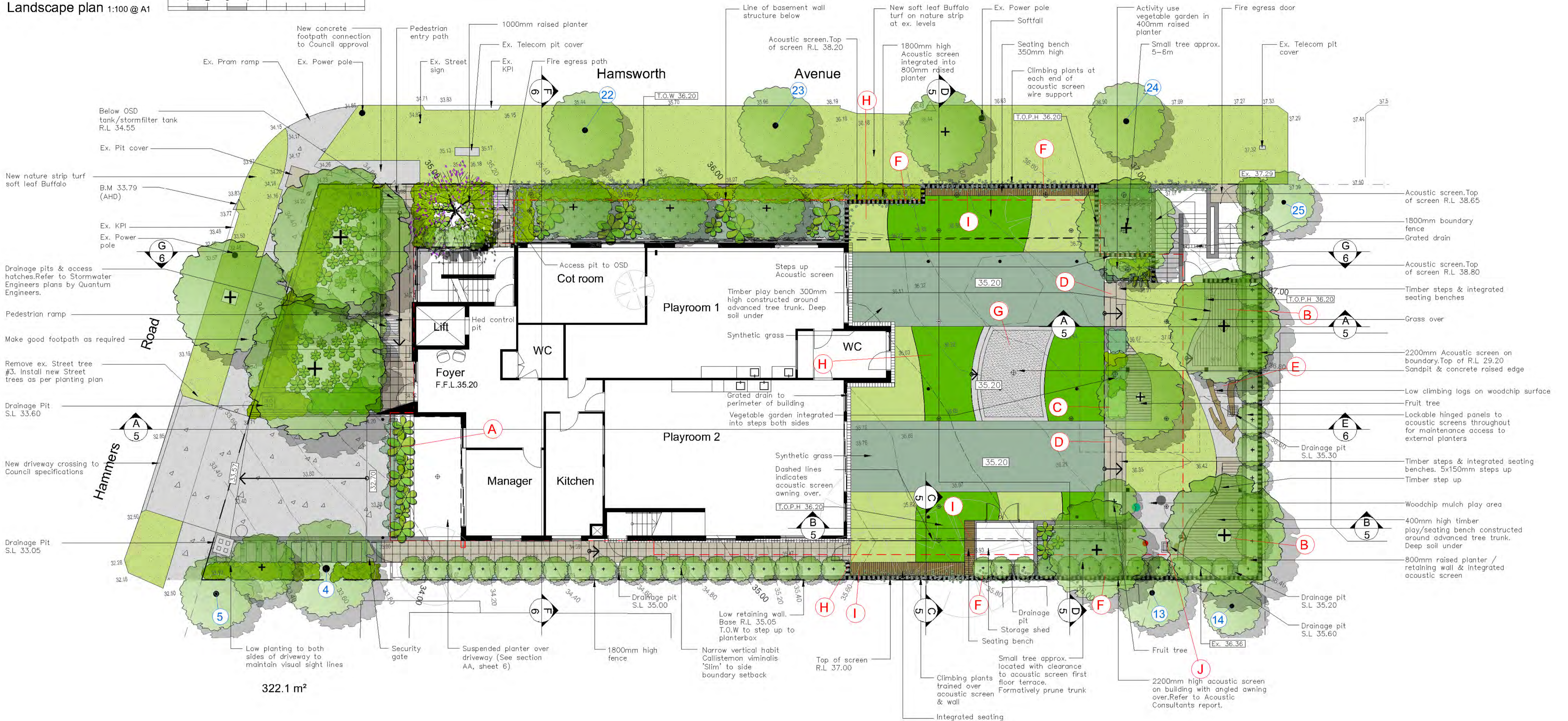
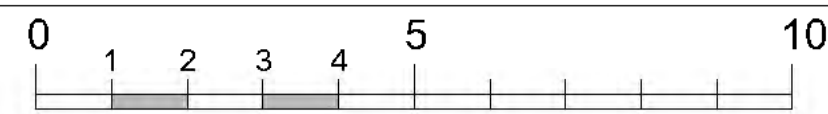


FASCIA & SOFFIT
INNOWOOD OR SIMILAR TIMBER LOOK



ROOF MATERIAL
METAL SHEETING - COLORBOND SHALE GREY





Typical design images



Typical planting images



Legend

	Existing trees to be removed		Proposed evergreen trees		Strappy leaved understorey plants		Screen plants		Turf		Synthetic grass		Softfall (See detail sheet 3)
	Existing trees		Proposed Deciduous tree		Low shrubs / ornamental grasses		Paving		Walls		Woodchip		Acoustic screen. Refer to Acoustic Consultants report
							Groundcovers		Concrete		Timber seat/deck		

Amendments

E	25.5.23	For DA
D	19.5.23	
C	18.5.23	
B	11.5.23	
A	3.5.23	Prelim Review



PO Box 4050. ACT 2602
 ABN: 16 949 100 279
 Phone: 02 9907 8011
 www.scrivener-design.com
 Email: paul@scrivener-design.com

Project: Proposed Child Care Centre
 52 Hammers rd Northmead

DWG: Landscape site plan

Scale: 25.5.23
 Scale: 1:100 @A1
 Job Ref: 2522/23

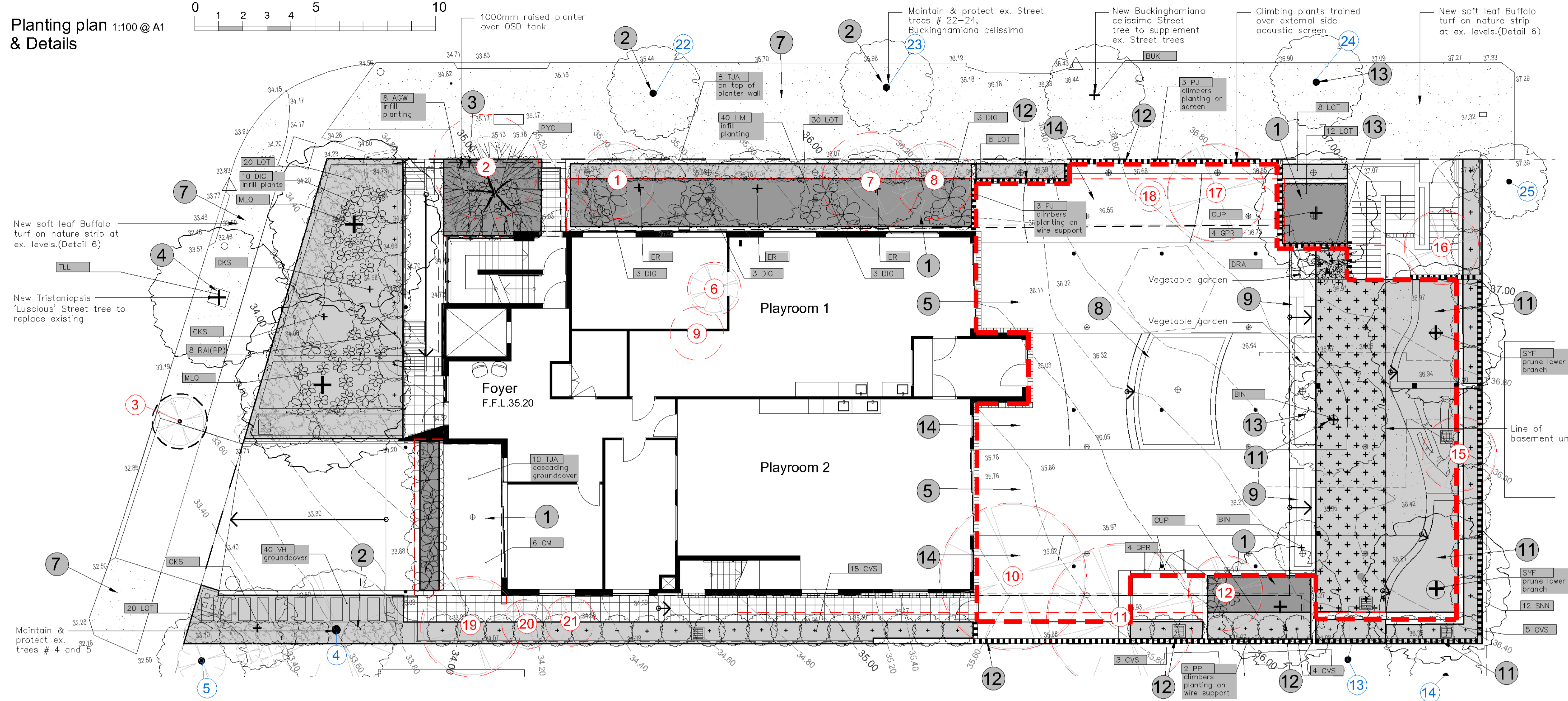
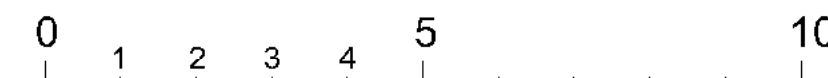
Builder must verify all dimensions of the site before work commences. Figured dimensions should be used in preference to those scaled off.

Copyright is the property of Paul Scrivener Landscape. All rights reserved. The concepts, design, details and information described in this drawing are copyright. Other than for the purpose prescribed under the Copyright Act, no part of it may in any form or by any means be used or reproduced without prior written permission.

1 of 7
DA
ISSUE-E

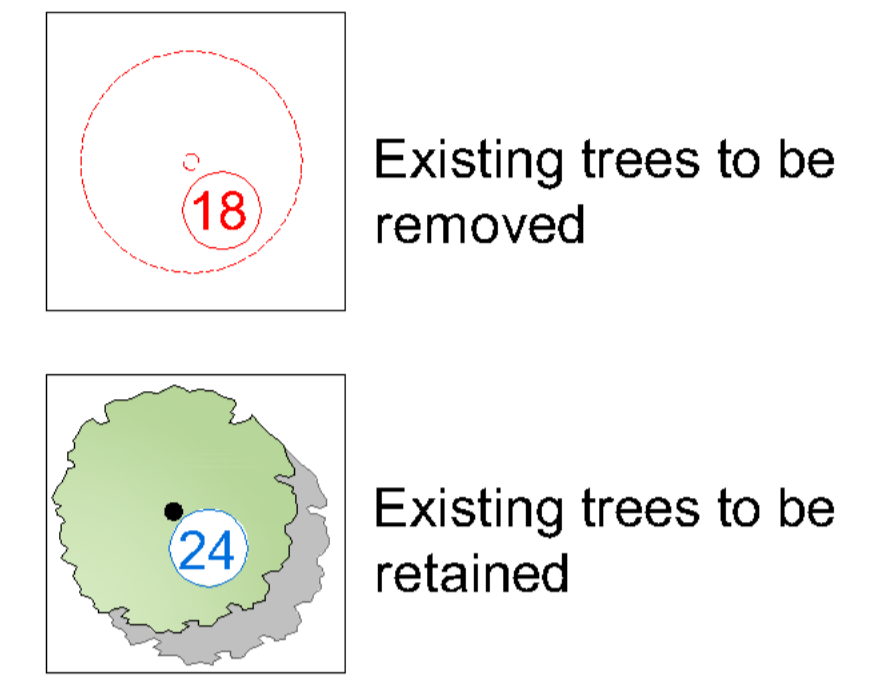
NORTH

Planting plan 1:100 @ A1 & Details

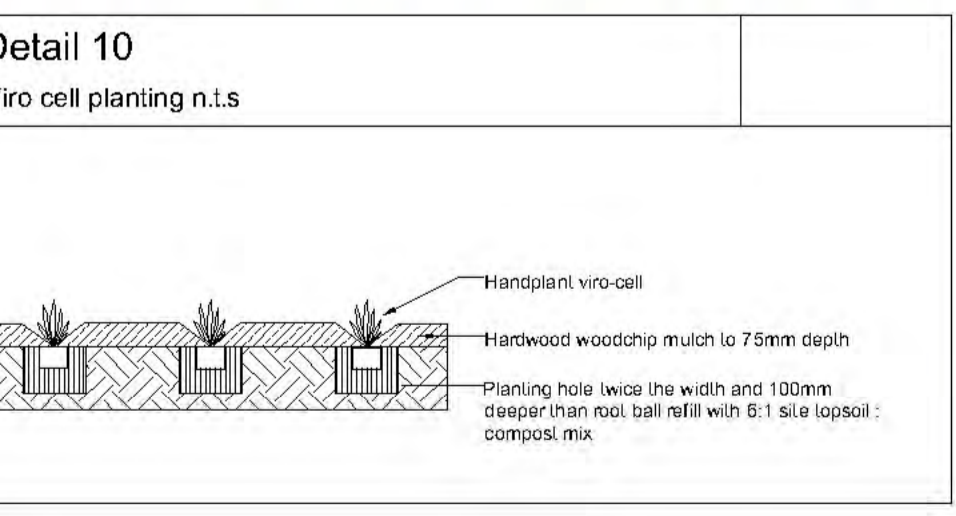
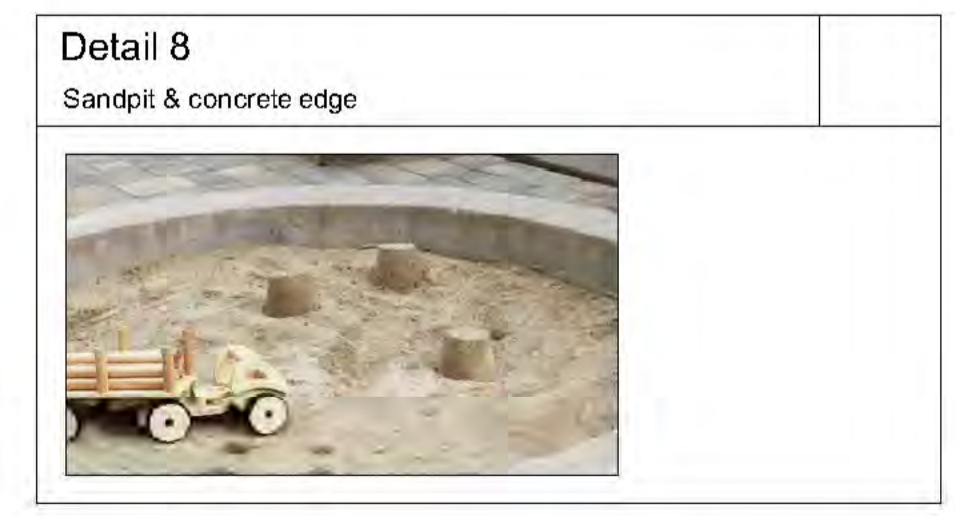
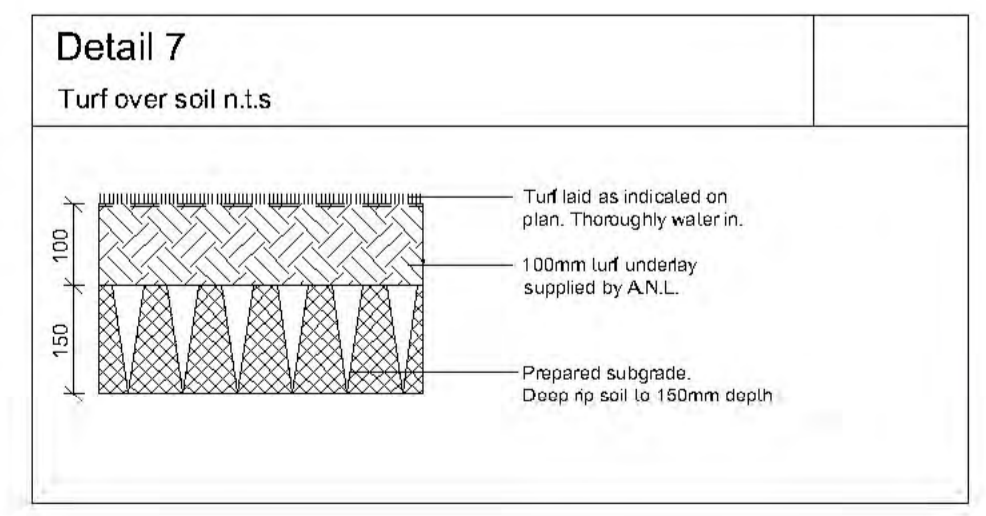
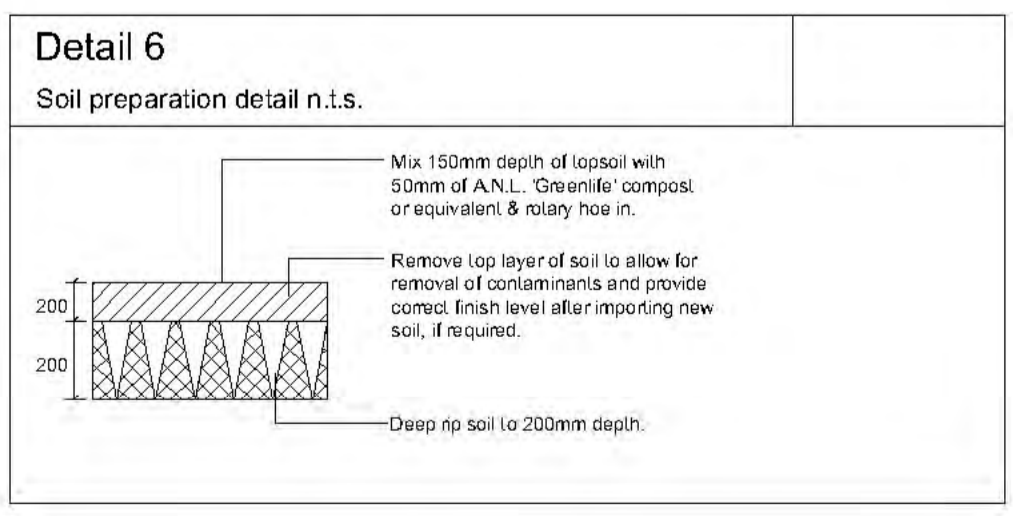
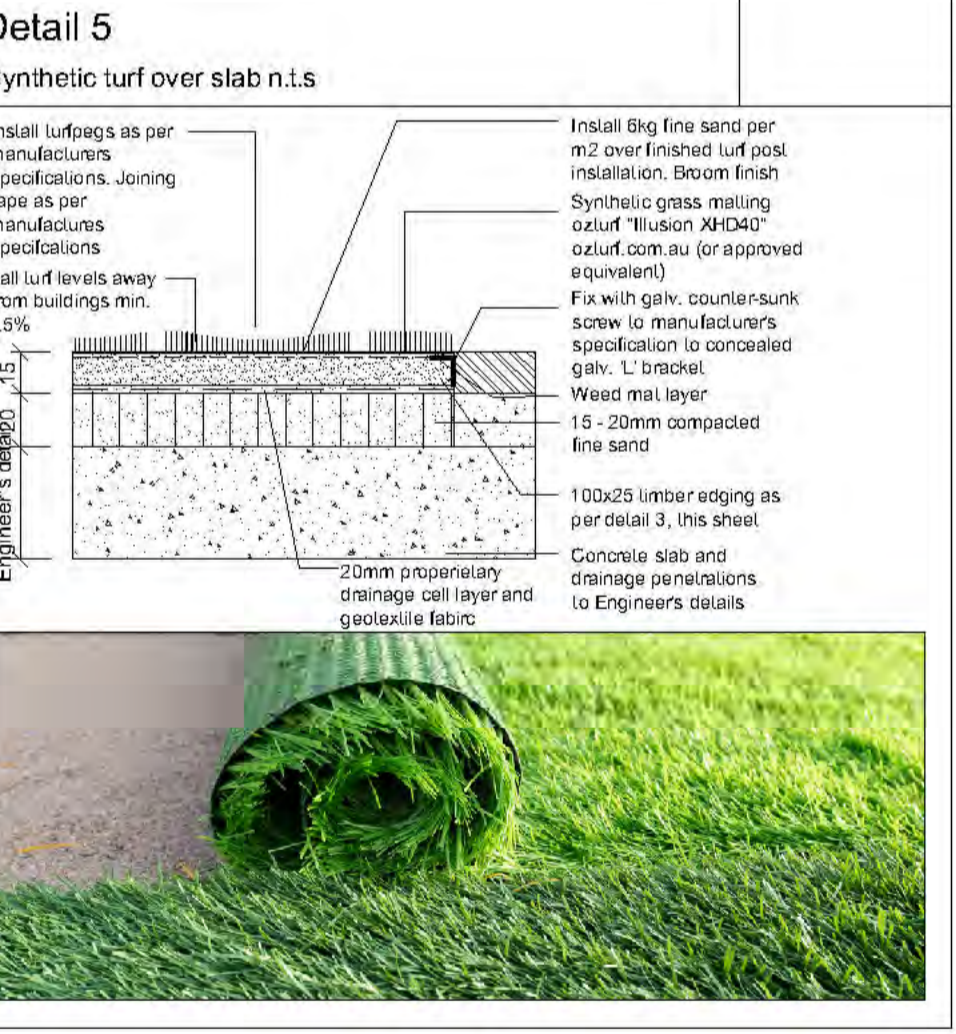
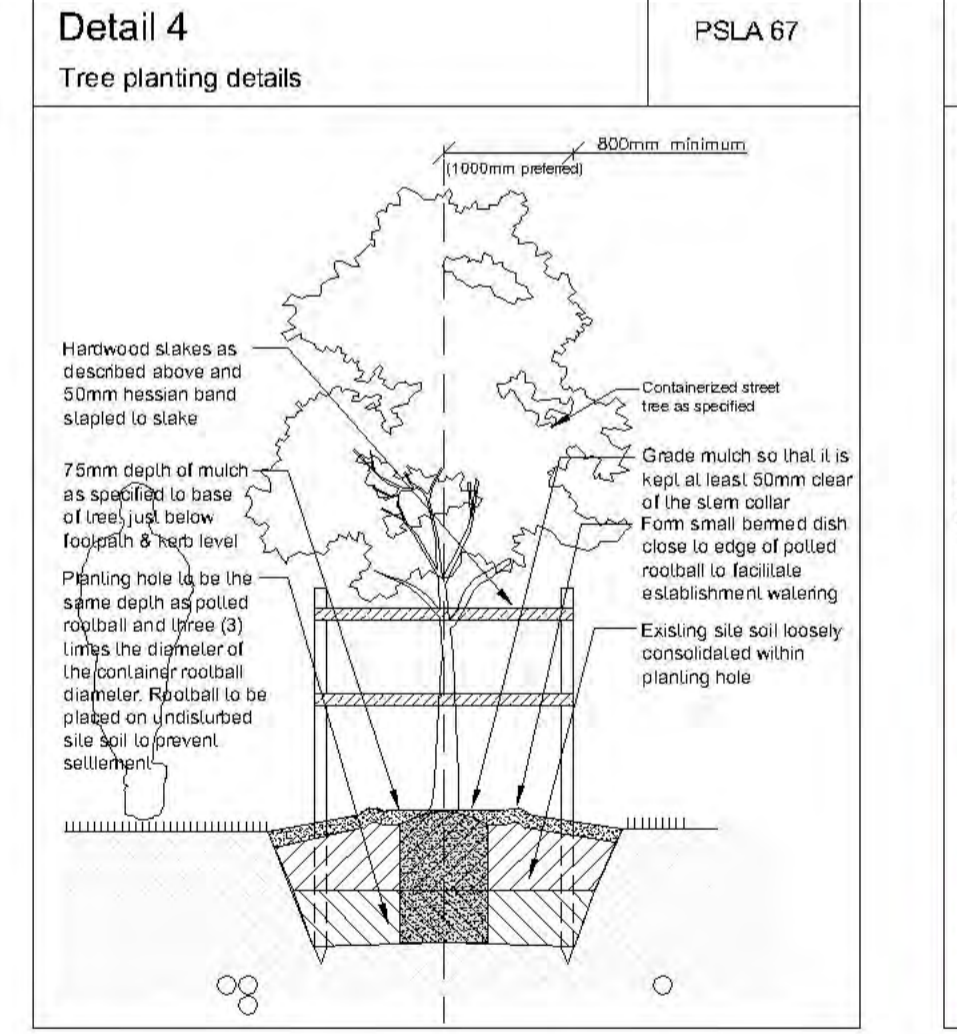
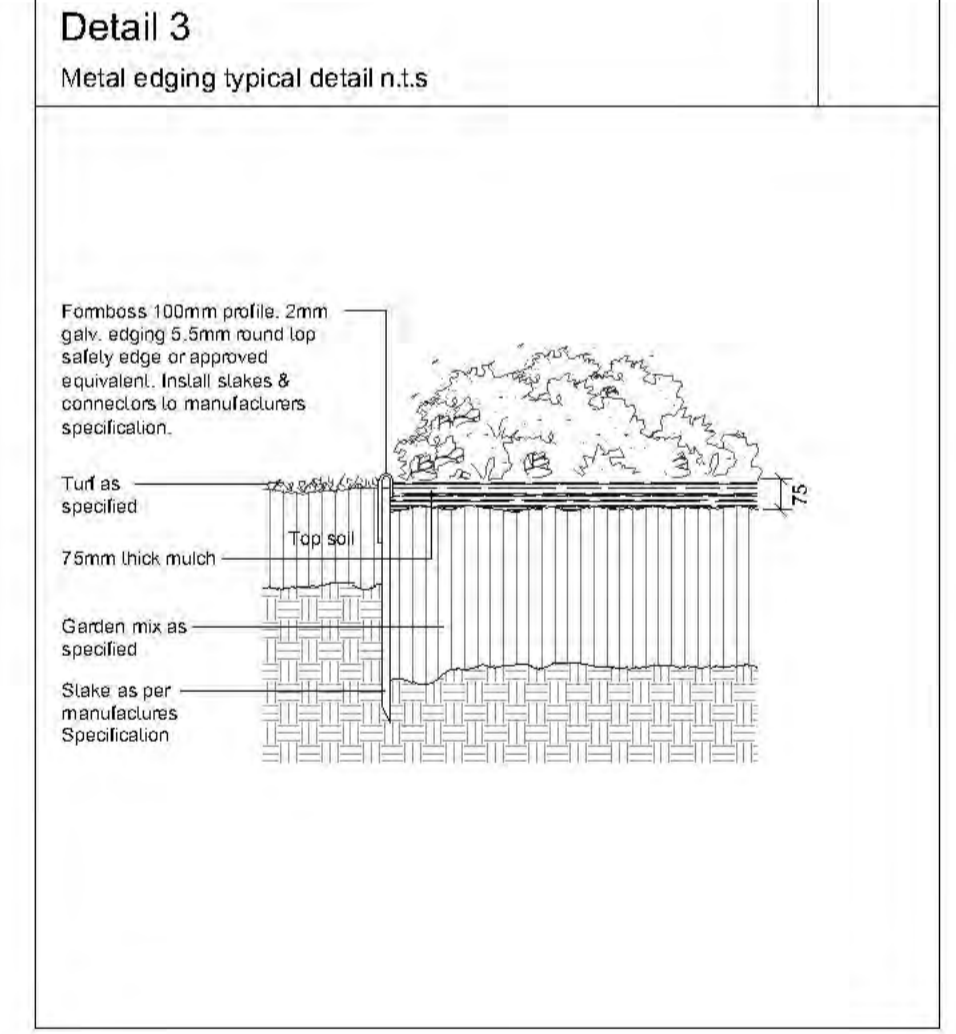
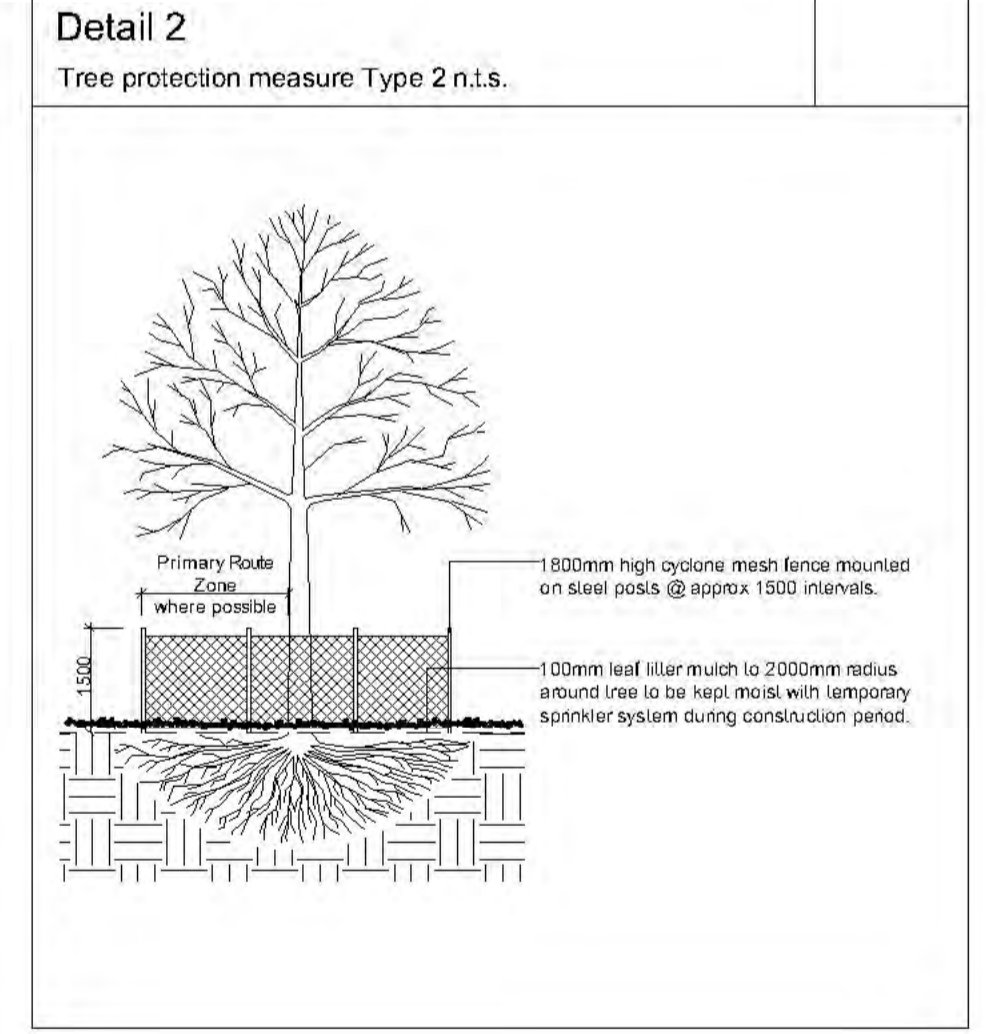
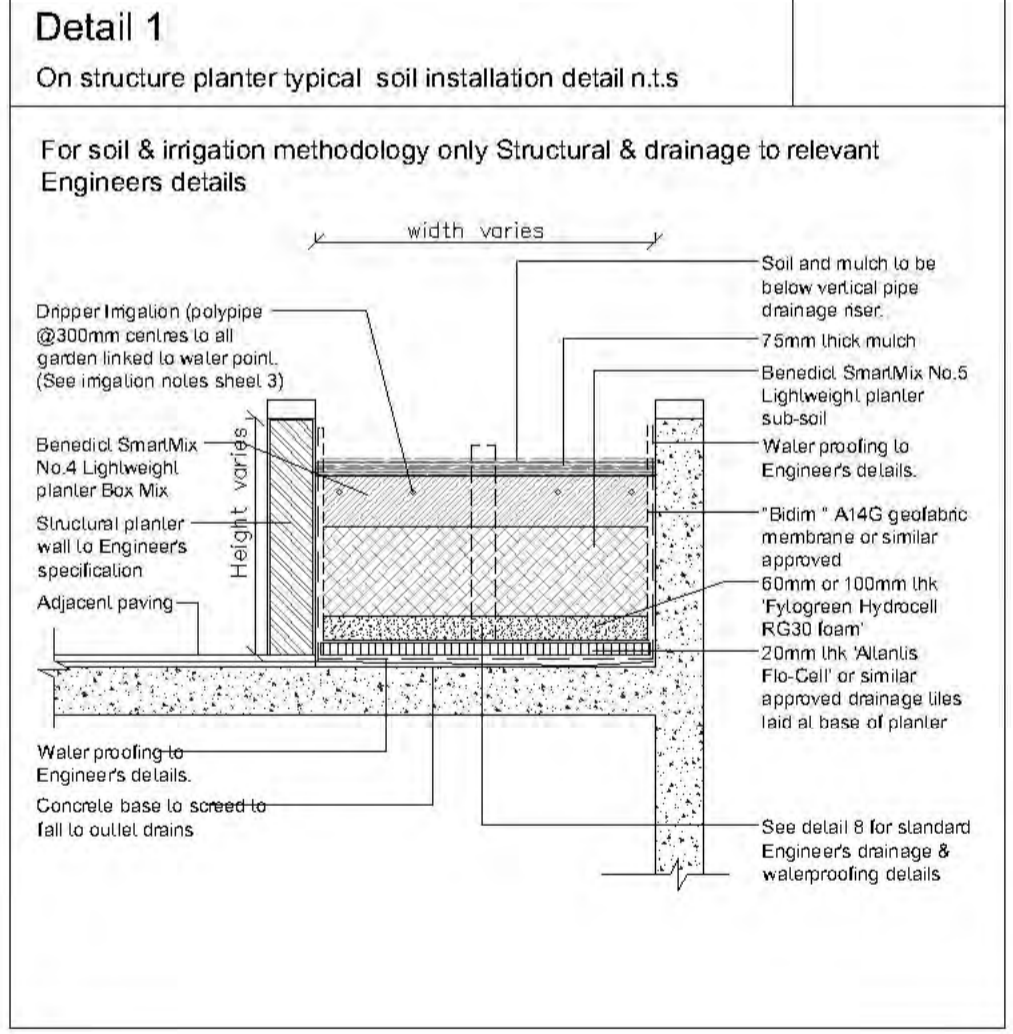


Area of unencumbered play

Ground floor	321.78 m ²
First floor	213.73 m ²
Total unencumbered play area	535.51 m²



See planting schedule sheet 7



	Natural deep soil (Detail 6)	168.5 m ²		Area of unencumbered play space	321.78 m ²		Planting symbol (See schedule, sheet 7)
	Raised planter over slab (Detail 6)	84.8 m ²		Reinstated soil over basement slab. Connected to adjacent deep soil (See Section AA-BB, sheet 4)	43.2 m ²		Detail 2 & 3

Amendments

E	25.5.23	For DA
D	19.5.23	
C	18.5.23	
B	11.5.23	
A	3.5.23	Prelim Review



PO Box 4050, ACT 2602
 ABN: 16 949 100 279
 Phone: 02 9907 8011
 www.scrivener-design.com
 Email: paul@scrivener-design.com

Project: Proposed Child Care Centre
 52 Hammers rd Northmead

DWG: Planting plan & details

Scale: 25.5.23 Scale: 1:100 @A1

Job Ref: 2522/23

2 of 7

DA

ISSUE-E

NORTH

Copyright is the property of Paul Scrivener Landscape. All rights reserved. No part of this drawing may be reproduced or transmitted in any form or by any means electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without prior written permission.

East elevation 1:100 @ A1
Hemsworth Ave



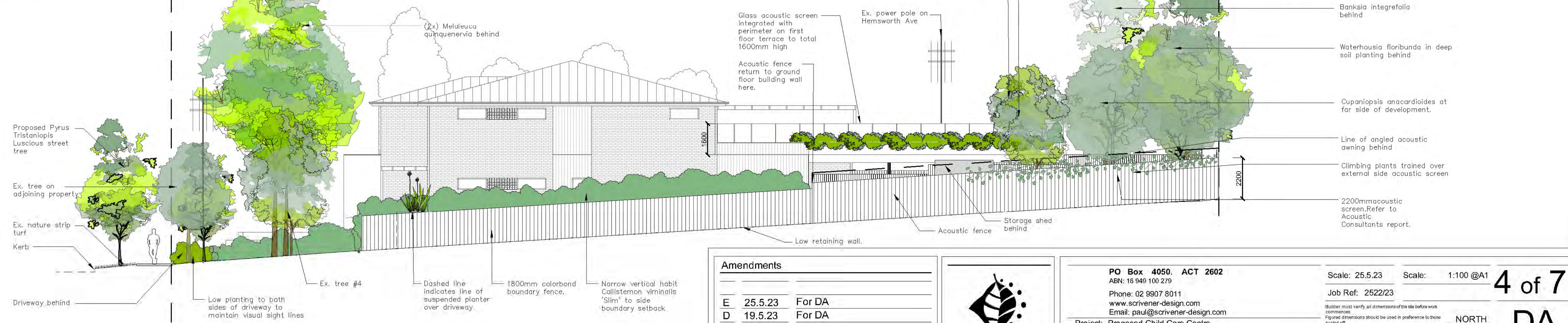
North elevation 1:100 @ A1
Hammers Road



South Sectional elevation 1:100 @ A1



West elevation 1:100 @ A1



Amendments

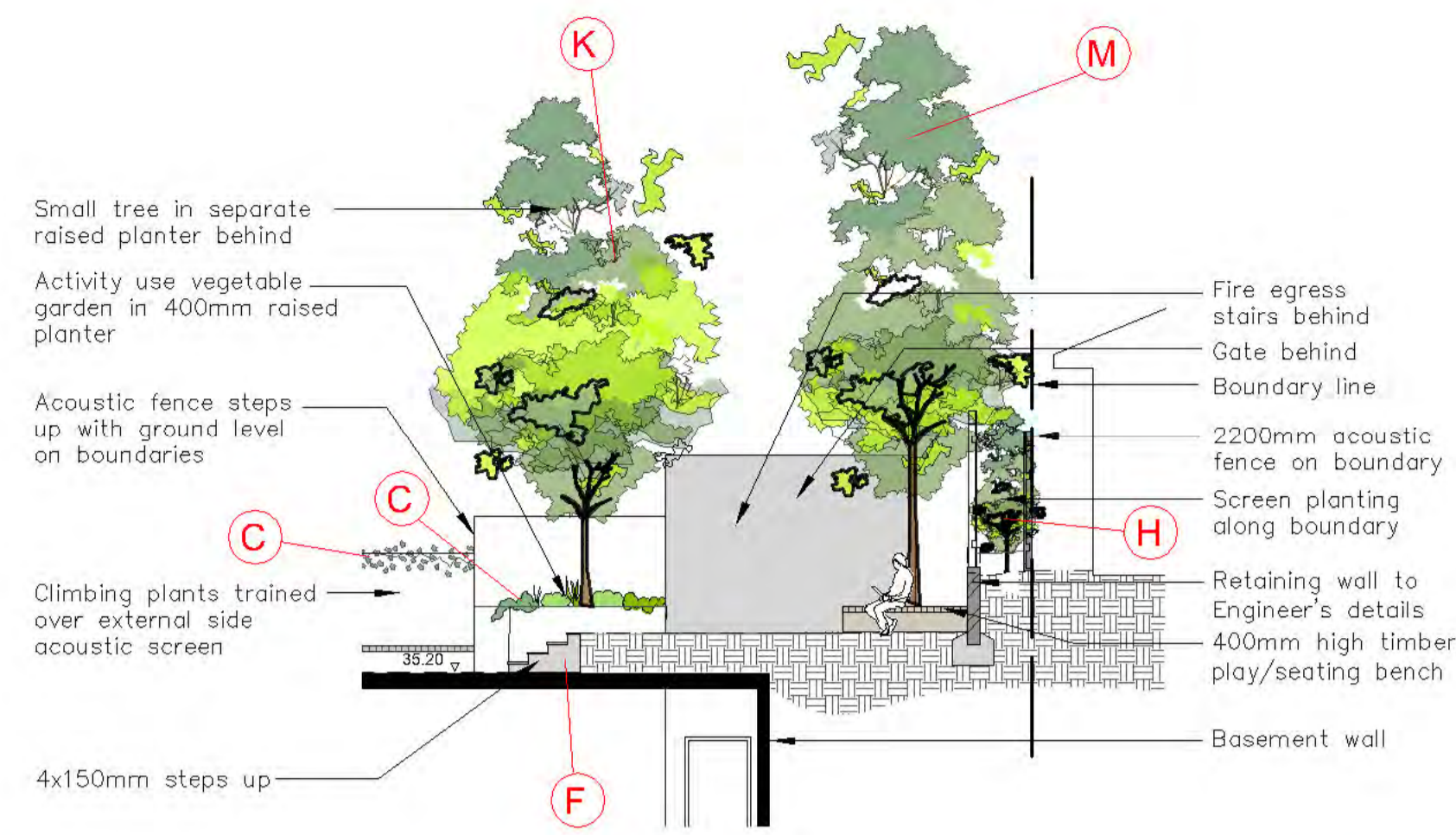
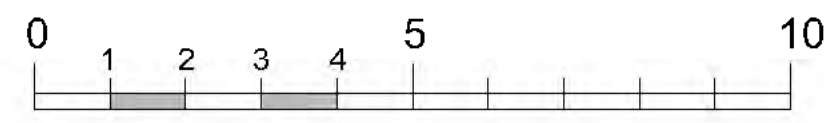
E	25.5.23	For DA
D	19.5.23	For DA
C	18.5.23	
B	11.5.23	
A	3.5.23	Prelim Review



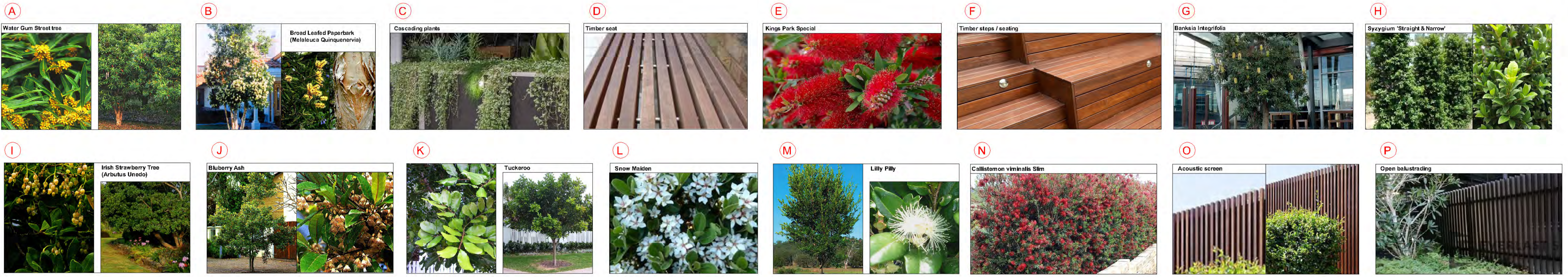
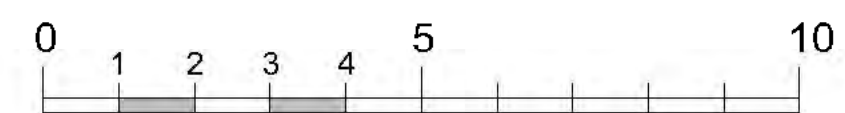
PO Box 4050, ACT 2602
 ABN: 16 949 100 279
 Phone: 02 9907 8011
 www.scrivener-design.com
 Email: paul@scrivener-design.com
 Project: Proposed Child Care Centre
 52 Hammers rd Northmead
 DWG: East, North & South Elevations

Scale: 25.5.23 Scale: 1:100 @ A1
 Job Ref: 2522/23
 Builder must verify all dimensions of the site before work commences. Figured dimensions should be used in preference to those scaled off.
 Copyright is the property of Paul Scrivener Landscape. All rights reserved. The concepts, design, details and information described in the drawing are copyright. Other than for the purpose prescribed under the Copyright Act, no part of it may in any form or by any means be used or reproduced without prior written permission.
 NORTH
4 of 7
DA
ISSUE-E

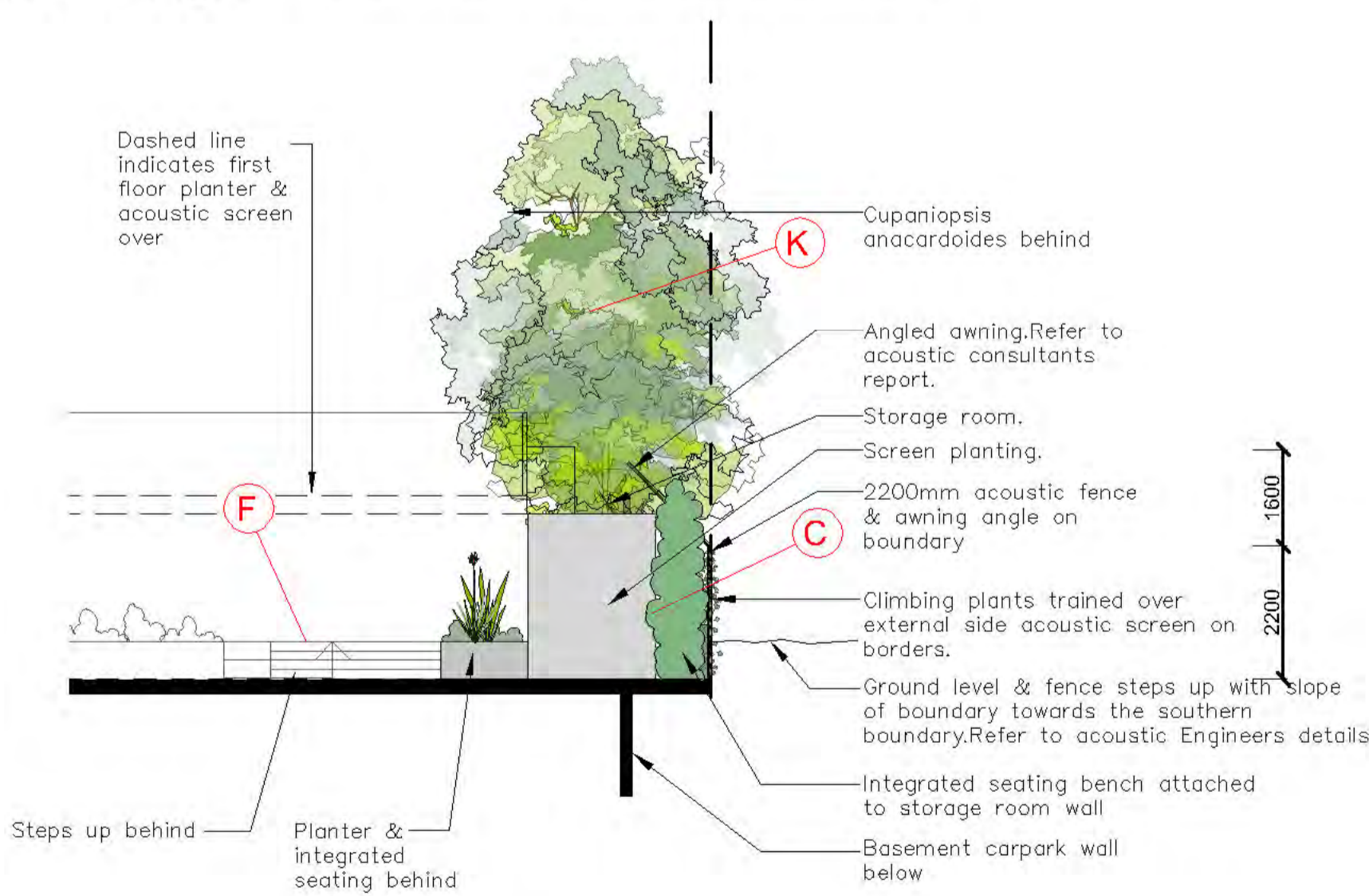
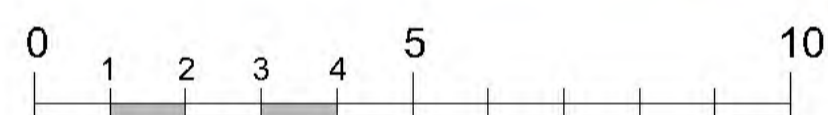
Section AA 1:100 @ A1



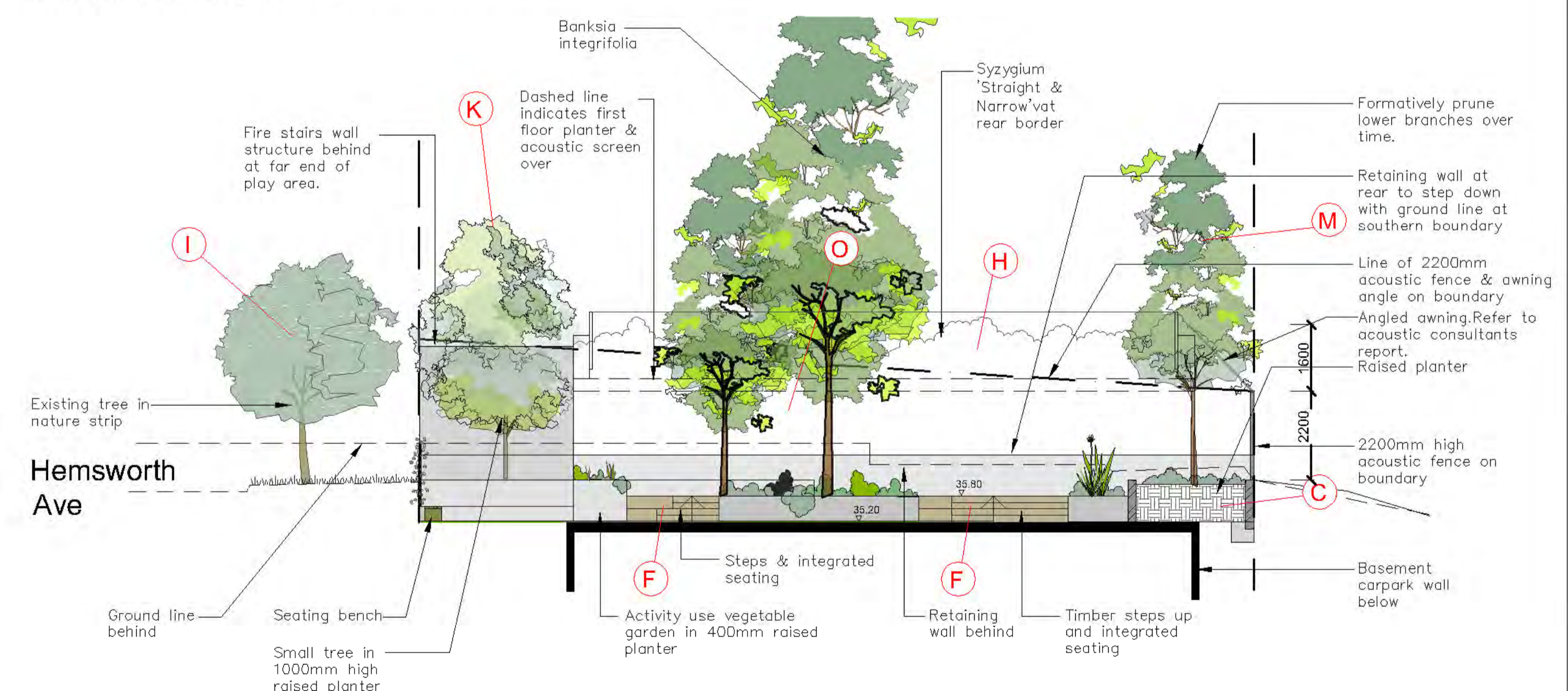
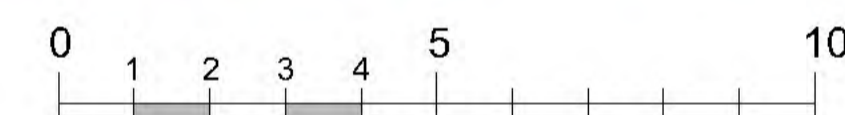
Section BB 1:100 @ A1



Section CC 1:100 @ A1



Section DD 1:100 @ A1



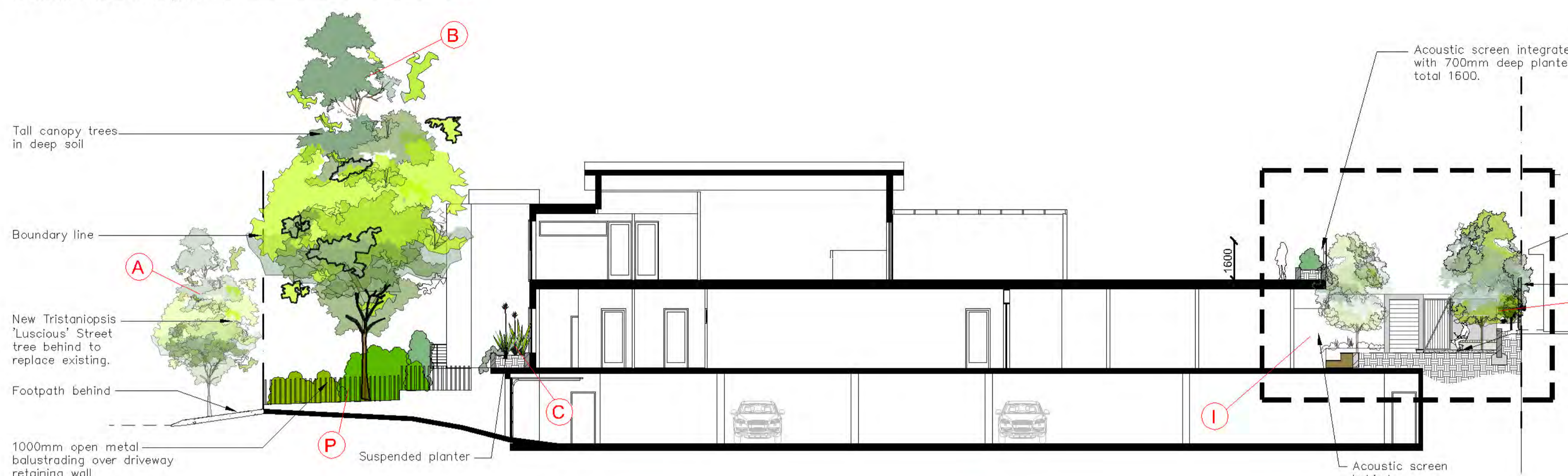
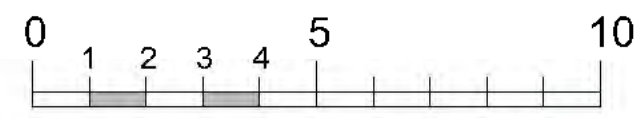
Amendments		
E	25.5.23	For DA
D	19.5.23	
C	18.5.23	
B	11.5.23	
A	3.5.23	Prelim Review



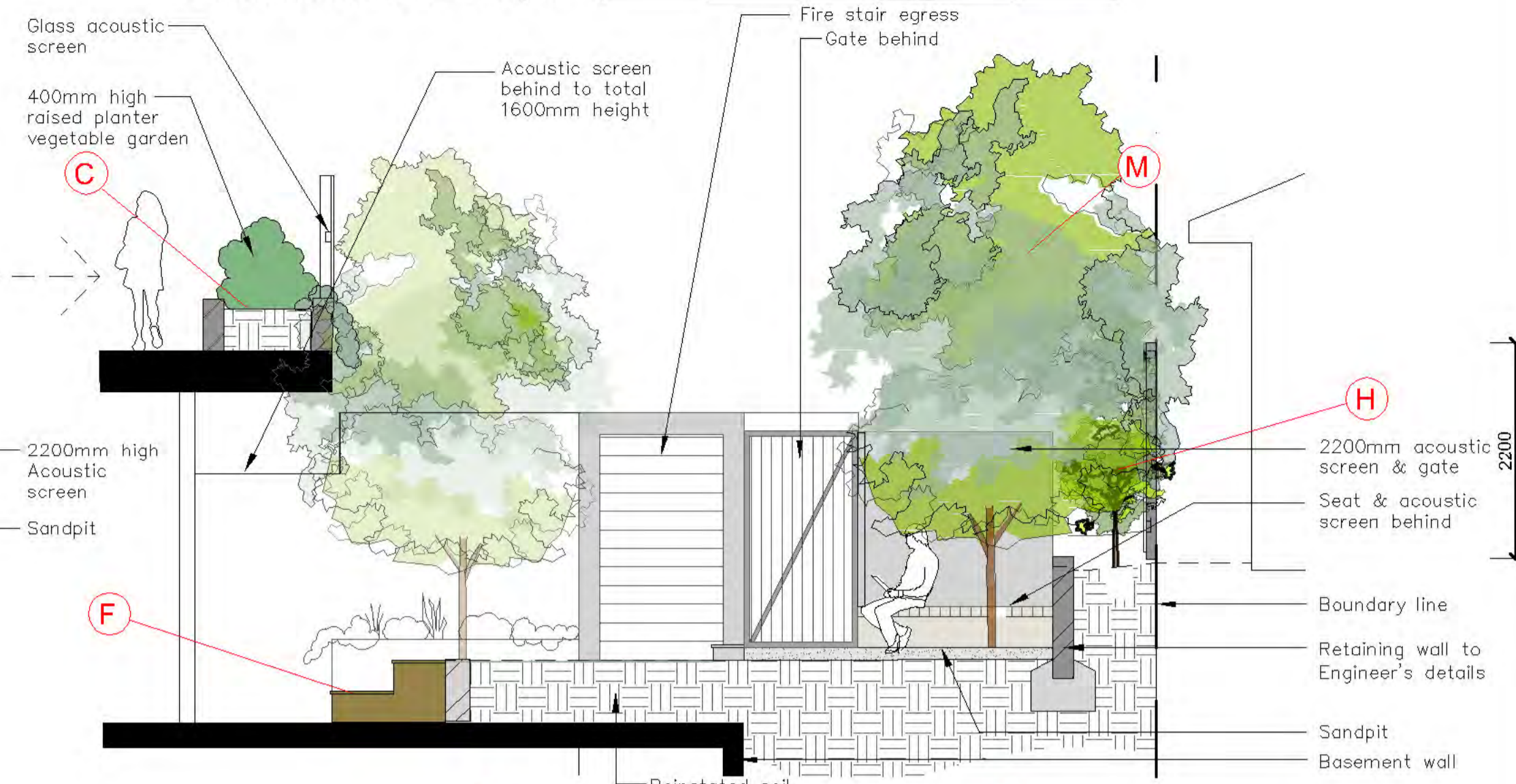
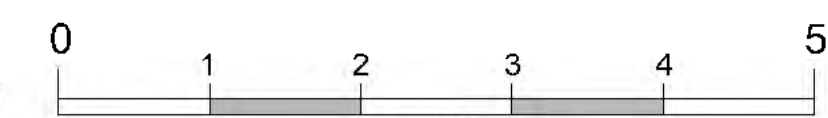
PO Box 4050. ACT 2602
 ABN: 16 949 100 279
 Phone: 02 9907 8011
 www.scrivener-design.com
 Email: paul@scrivener-design.com
 Project: Proposed Child Care Centre
 52 Hammers rd Northmead
 DWG: Sections AA, BB, CC and DD

Scale: 25.5.23 Scale: 1:100 @A1
 Job Ref: 2522/23
 Builder must verify all dimensions of the site before work commences. Figure dimensions should be used in preference to those scaled off.
 Copyright is the property of Paul Scrivener Landscape. All rights reserved. The concepts, design, details and information described in the drawing are copyright. Other than for the purpose prescribed under the Copyright Act, no part of it may in any form or by any means be used or reproduced without prior written permission.
 NORTH
5 of 7
DA
ISSUE-E

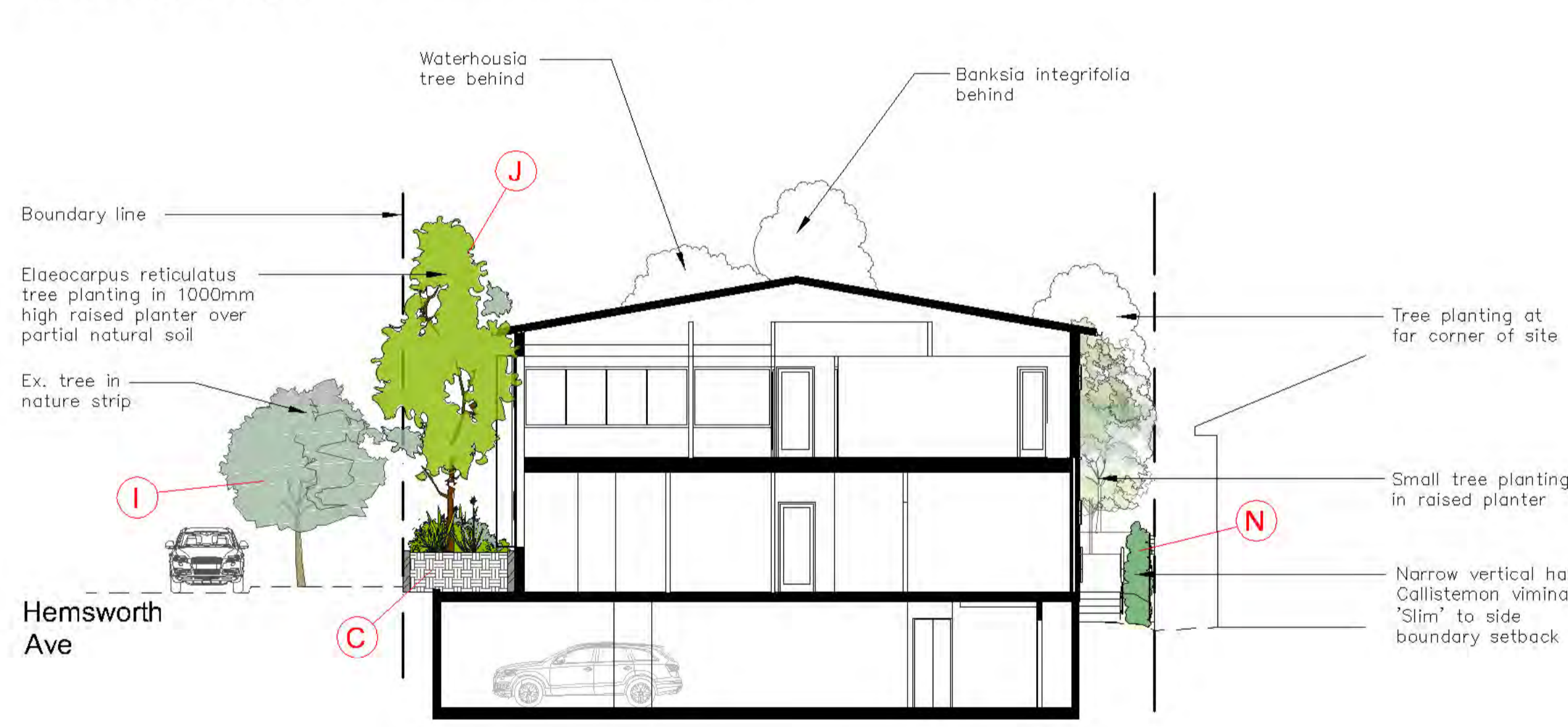
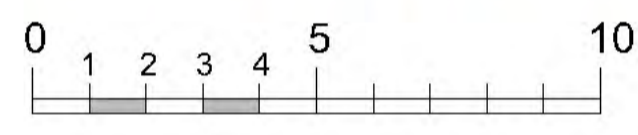
Section EE 1:150 @ A1



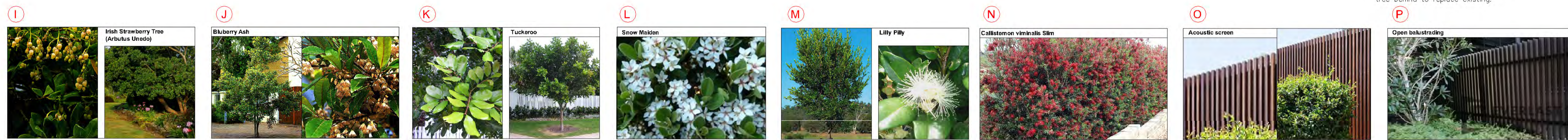
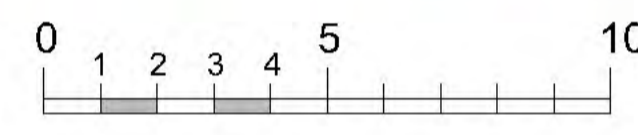
Detail section EE 1:50 @ A1



Section FF 1:150 @ A1



Sectional elevation GG 1:150 @ A1



Amendments		
E	25.5.23	For DA
D	19.5.23	
C	18.5.23	
B	11.5.23	
A	3.5.23	Prelim Review



PO Box 4050. ACT 2602
 ABN: 16 949 100 279
 Phone: 02 9907 8011
 www.scrivener-design.com
 Email: paul@scrivener-design.com
 Project: Proposed Child Care Centre
 52 Hammers rd Northmead
 DWG: Sections EE, FF and GG

Scale: 25.5.23 Scale: 1:150 @A1
 Job Ref: 2522/23
 Builder must verify all dimensions of the site before work commences. Figured dimensions should be used in preference to those scaled off.
 Copyright is the property of Paul Scrivener Landscape. All rights reserved. The concepts design details and information described in the drawing are copyright. Other than for the purpose prescribed under the Copyright Act, no part of it may in any form or by any means be used or reproduced without prior written permission.
 NORTH
6 of 7
DA
ISSUE-E

Planting schedule

Symbol	Botanical name	Common name	Cont. size	Staking	Mature height	
Trees						
BIN	Bankisa integrifolia	Coast Banksia (medium indigenous tree)	75Lt	3x50x50x1800	12-15.0M	2
BUK	Buckinghamiana celsissima	Ivory Curl Tree (small flowering tree)	75Lt	3x50x50x1800	4.0M	1
CKS	Callistemon Kings Park Special	Bottlebrush small (native tree for planterbox)	300mm	2x50x50x1800	3-3.5M	5
CUP	Cupaniopsis anacardoides	Tuckeroo (small to medium native tree. Hardy street tree)	75Lt	3x50x50x1800	5-7.0M	2
ER	Elaeocarpus reticulatus	Blueberry Ash (indigenous small tree)	75Lt	3x50x50x1800	6-8.0M	3
MLQ	Melalueca quinquenervia	Flax Leaf Paperbark (indigenous medium tree)	75Lt	3x50x50x1800	12-15.0M	2
PYC	Pyrus calleryana 'Capital'	Ornamental Pear (medium deciduous narrow tree)	75Lt	2x50x50x1800	7-10.0M	1
SYF	Waterhousia floribundum	Weeping Lilly Pilly (native screen tree)	200Lt	3x38x38x1800	9-12.0M	2
TLL	Tristaniopsis laurina 'Luscious'	Water Gum cultivar (indigenous small-med tree)	100Lt	3x50x50x1800	5-7.0M	1
Shrubs / small feature trees						
CVS	Callistemon viminalis 'Slim'	Slim Culivar Bottlebrush (Hybrid screen hedging bottlebrush)	300mm	nil	2.5-3.0M	29
DRA	Draceana marginata	Draceana (vertical spiky feature plant)	250mm	nil	1.5M	2
RAI (PP)	Raphiolepis indica PP	Pink Pearl (hedging dense flowering plant)	300mm	nil	1.0M	8
RAI (SM)	Raphiolepis indica SM	Snow Maiden (hedging dense flowering plant)	300mm	nil	1.0M	16
SNN	Syzygium 'Straight & Narrow'	Straight & Narrow Lilly Pilly (very narrow and vertical screen)	300mm	hedged to req.height	3-5.0M	12
Groundcovers/Climbers						
DIG	Dietes grandiflora	World Iris	200mm	nil	0.1M	28
GPR	Grevillea 'Poorinda Royal Mantle'	Grevillea Groundcover (native low groundcover)	150mm	nil	0.2M	4
HIS	Hibbertia scandens	Guinea Flower (flowering climber / groundcover)	300mm	nil	0.3M	0
MYP	Myoprum parvifolium	Creeping Boobiala (native cascading groundcover)	140mm	nil	0.2M	24
PJ	Pandorea jasminoides	Bower Plant (native climbing/cascading groundcover)	200mm	wire supports on fence	2.5M	6
PP	Pandorea pandorana	Wonga Wonga Vine (native climbing plant / groundcover)	200mm	wire supports on fence	3.0M	2
SOJ	Solanum jasminoides	Potato Vine (deciduous climber over pergola)	300mm	over pergola	3.5M	3
TJA	Trachelospermum asiaticum	Flatmat Star Jasmine (FT01 Ozbbreed hybrid groundcover)	200mm	nil	0.2M	18
VH	Viola hederacea	Native Violets (native low groundcover)	tubes	nil	0.1M	40
Ornamental grasses/strappy leaved plants						
AGW	Agapanthus orientalis 'Blue'	Blue Lily of the Nile (Hardy strappy leaved groundcover)	200mm	nil	0.5M	8
CM	Clivea miniata	Kaffir Lily (shade tolerant groundcover)	200mm	nil	0.5M	6
LIM	Liriope Evergreen Giant	Turf Lily (shade tolerant groundcover)	150mm	nil	0.4M	40
LOT	Lomandra 'Tanika'	Dwarf Mat Rush (native mass planted groundcover)	140mm	nil	0.4M	98

Planting schedule species to be sourced from local nurseries supplying plants of local provenance wherever possible. Landscape contractor is to check plant numbers on plan against the schedule prior to submitting tender price. Contact landscape architect if any number discrepancies are found. Council compliance controls require that any substitution of species variety or container size MUST be confirmed with landscape architect to ensure a compliance certificate can be issued that's meets the specific development consent conditions of the project.

General installation notes

1. Site preparation

Any existing trees and vegetation to be retained shall be preserved and protected from damage of any sort during the execution of landscape work. In particular, root systems of existing plants must not be disturbed if possible. Any nearby site works should be carried carefully using hand tools. To ensure the survival and growth of existing trees during landscaping works, protect by fencing or armoring where necessary. Trees shall not be removed or lopped unless specific written approval to do so is given or is indicated on plan. Storage of materials, mixing of materials, vehicle parking, disposal of liquids, machinery repairs and refueling, site office and sheds, and the lighting of fires shall not occur within three (3) metres of any existing trees. Do not stockpile soil, rubble or other debris cleared from the site, or building materials, within the dripline of existing trees. Vehicular access shall not be permitted within three (3) metres of any tree.

2. Soil preparation

All proposed planting areas to be deep ripped to 200mm (where possible) and clay soils to be treated with clay breaker. Apply at least 200mm depth good quality garden soil mix to all garden planting areas. To comply with AS 4419. Turfed areas as noted to be laid over 100mm min. good quality turf underlay over existing soil which is to be deep ripped to 200mm depth prior to installation. To be worked in with rotary hoe except where tree root damage would otherwise occur. In such situations care to be taken to hand cultivate in any area where existing tree roots exist to preserve health of trees and to comply with the requirements of the Arborist's report. Where planting is to occur in existing soil profiles ensure soil conditioners and compost worked into the top 200mm profile. To comply with AS 4454:1999.

3. New plantings

Newly planted trees and large shrubs should be secured to stakes with hessian ties to prevent rocking by wind. Planting holes for plant material should be large enough in size to take root ball with additional space to take back filling of good quality planting mix. (Please note mature heights of planting as shown on planting schedule can vary due to site conditions, locations in consolidated deep soil or over slab planters and so forth). Also shallow soils in certain locations may affect planting heights. Nominated heights for plantings in raised planters over slabs are nominated as less than their normal expected heights in acknowledgement of the contained soil environment. For other deep soil trees heights are subject to particular site conditions, and intended hedging or pruning for functional requirements such as available planting width, intended access under branches and solar access.

4. Planter wall waterproofing.

All slab areas to be waterproofed and 'Atlantis' drainage cell installed with geotextile fabric or similar approved. Refer Engineer's details for ALL structural, drainage and installation details whatsoever for wall construction. All raised gardens to have the following soils:

- Benedicts Smart Mix no. 4 Lightweight Planter Mix (or approved equivalent) to min. 400-500mm depth. To comply with AS 4419 and AS 3743
- All planter boxes are to have automatic dripline irrigation system.
- Landscape contractor to install all planter box fill material and plant material after other site works are completed to ensure no deterioration of waterproof membrane behind external walls.

5. Mulching

All planting areas to be mulched with a minimum 75mm thick cover of recycled hard wood chip mulch and then all plant areas to be thoroughly soaked with water. To comply with AS 4454

6. Fertiliser

All planting areas to be fertilised with 9 month 'NPK' slow release fertiliser.

7. Staking

To those plants indicated on the planting schedules provide: hardwood stakes as nominated and driven into ground to a depth able to achieve rigid support. No staking in raised planters to avoid damaging waterproofing installation

8. Turfing

Turfed areas to be to be laid over 100mm good quality turf underlay over existing soil which is to be deep ripped to 200mm depth prior to installation. See details sheet

9. Structural

All structural details whatsoever to Engineer's details.

Irrigation notes

Automatic drip line watering system to be selected. To extend to ALL common area garden and landscape zones in the development including both the deep soil and raised planter wall areas and including all raised planter boxes over slab on all levels. All lawn areas to be excluded.

Water supply tap hosecocks and water supply conduit to be coordinated by Hydraulic and Structural Engineer's details. Dripline supply system only to be incorporated.

Prior to approval by the project manager and prior to installation the Contractor responsible for the irrigation installation is to provide an irrigation design to meet the following requirements.

Generally: Supply an automatic drip line irrigation system. To include all piping to solenoids either PVC lines and/or class 12 pressure pipe or low density, rubber modified polypropylene reticulation as required to provide water supply to the nominated areas. To be coordinated with Hydraulic engineers plans. To include all bends, junctions, ends, ball valves, solenoids and all other ancillary equipment. Backwash valve: An approved backwash prevention valve is to be located at the primary water source for top up valves to rainwater tanks (where applicable).

Ensure rain sensor is installed for common area garden zones connected to timers

Root inhibiting system. Drip lines to be 'Netafim Techline AS XR' drip tubing or approved equivalent

Automatic Controller: For all common area landscape areas provide automatic 2 week timer with hourly multi-cycle operation for each zone as noted on the irrigation area plan on sheet. Battery timers to isolated planter boxes to private terraces.

Performance: It shall be the Landscape Contractor's responsibility to ensure and guarantee satisfactory operation of the irrigation system. The system is to be fit for the purpose and should utilize sufficient solenoids to provide for the varying watering requirements of landscape areas to allow all plants and lawn areas to thrive and attain long term viability.

Testing: After the system has been installed to the satisfaction of the project manager, the installation shall be tested under working conditions. Acceptance of the installed plant and equipment shall be subject to these being satisfactory.

Warranty: A twelve month warranty is to be provided in writing by the Landscape Contractor, which shall commit the Landscape Contractor to rectify the system (the items they have installed) to the satisfaction of the project manager or nominated representative. This will apply should any fault develop, or the capacity or efficiency fall below that guaranteed, or should the discharge or pressure be inadequate, or should defects develop in the filter unit or control heads, or any blockages that may develop in the system.

Approvals: The Landscape Contractor is to liaise as necessary, to ensure that the irrigation system conforms with all Water Board, Council and Australian standards (AS)

Maintenance schedule

The Landscape Contractor shall maintain the contract areas by accepted horticultural practices as well as rectifying any defects that become apparent in the works under normal use. The Landscape Contractor shall maintain the works and make good all defects for a period of twenty six (26) weeks after the date of practical completion. Practical completion of the landscape works shall include but not be limited to the replacement of plants which have failed or been damaged or stolen during work under the contract. Landscape maintenance shall include but not be limited to the following: watering, rubbish removal, spraying and wiping leaf surfaces, replacing failed plants, maintaining mulch, pruning, insect and disease control, cleaning of surrounding areas. Mow the nature strip turf when it is established at regular intervals to maintain an average height of 50mm.

After the completion of the defects period and contractor maintenance period (noted above) has concluded the operators of the development are responsible for the ongoing maintenance and viability of the gardens and ongoing maintenance shall include the following:

- Regular hand watering of gardens if installed drip line irrigation system is turned off. Irrigation to be installed and maintained as per manufacturers specifications including regular checks for function of system, to check for leaks and to ensure general good working operation. Regular maintenance of the irrigation system battery timers (where required) for isolated planter beds in common areas. Battery timers for private terraces are the responsibility of the individual unit owners.
- Mulch is to be regularly topped up every 6 months to ensure an even 75mm coverage in all garden beds
- Regular pruning of plants is to be undertaken to ensure continued uniform growth of canopy and foliage of trees and shrubs. Removal of vegetation over the long term (if and when required) as the garden matures. Subject to the relevant council applications
- Regular assessment of plants for evidence of insect attack or disease. Appropriate pest oil, white oil of industry standard safe to use pest spray is to be employed if required. Care taken by the maintenance contractor that all materials and chemicals are approved childcare safe products and methodologies.
- Garden/lawn edging to be inspected regularly after practical completion to ensure it is maintained in good order. Replace where required if defective sections are discovered
- All garden refuse, rubbish and associated items that arise from the regular garden maintenance procedures are to be collected and stored in appropriate general waste or green waste containers as is appropriate. Excess waste unable to be stored in Council waste containers is to be removed from the site in a timely manner.

Amendments

E	25.5.23	For DA
D	19.5.23	
C	18.5.23	
B	11.5.23	
A	3.5.23	Prelim Review



PO Box 4050. ACT 2602
 ABN: 16 949 100 279
 Phone: 02 9907 8011
 www.scrivener-design.com
 Email: paul@scrivener-design.com

Project: Proposed Child Care Centre
 52 Hammers rd Northmead

DWG: Notes

Scale: 19.5.23

Scale:

Job Ref: 2522/23

Builder must verify all dimensions of the site before work commences. Figured dimensions should be used in preference to those scaled off.

Copyright is the property of Paul Scrivener Landscape. All rights reserved. The concepts, design, details and information described in the drawing are copyright. Other than for the purpose prescribed under the Copyright Act, no part of it may in any form or by any means be used or reproduced without prior written permission.

NORTH

7 of 7

DA

ISSUE-E

STORMWATER MANAGEMENT PLANS

PROPOSED CHILD CARE CENTRE

No.52 HAMMERS ROAD, NORTHMEAD

LOT 23 DP1053952

DRAINAGE NOTES

PIPE SIZE:

THE MINIMUM PIPE SIZE SHALL BE:

- 90mm DIA WHERE THE LINE ONLY RECEIVES ROOFWATER RUNOFF; OR
- 100mm DIA WHERE THE LINE RECEIVES RUNOFF FROM PAVED OR UNPAVED AREAS ON THE PROPERTY

THE MINIMUM PIPE VELOCITY SHOULD BE 0.6 m/s AND A MAXIMUM PIPE VELOCITY OF 6.0 m/s DURING THE DESIGN STORM.

PIPE GRADE:

THE MINIMUM PIPE GRADE SHALL BE:

- 1.0% FOR PIPES LESS THAN 225mm DIA
- 0.5% FOR ALL LARGER PIPES

PIPES WITH A GRADIENT GREATER THAN 20% WILL REQUIRE ANCHOR BLOCKS AT THE TOP AND BOTTOM OF THE INCLINED SECTION; AND AT INTERVALS NOT EXCEEDING 3.0m

ANCHOR BLOCKS ARE DESIGNED ACCORDING TO CLAUSE 7.9 OF AS3500.3:2021

DEPTH OF COVER FOR PVC PIPES:

MINIMUM PIPE COVER SHALL BE AS FOLLOWS:

LOCATION	MINIMUM COVER
NOT SUBJECT TO VEHICLE LOADING	100mm SINGLE RESIDENTIAL 300mm ALL OTHER DEVELOPMENTS
SUBJECT TO VEHICLE LOADING UNDER A SEALED ROAD	450mm WHERE NOT IN A ROAD 600mm
UNSEALED ROAD	750mm
PAVED DRIVEWAY	100mm PLUS DEPTH OF CONCRETE

SEE AS2032 INSTALLATION OF UPVC PIPES FOR FURTHER INFORMATION.

CONCRETE PIPE COVER SHALL BE IN ACCORDANCE WITH AS3725-2007 LOADS ON BURIED CONCRETE PIPES, HOWEVER A MINIMUM COVER OF 450mm WILL APPLY.

WHERE INSUFFICIENT COVER IS PROVIDED, THE PIPE SHALL BE COVERED AT LEAST 50mm THICK OVERLAY AND SHALL THEN BE PAVED WITH AT LEAST:

- 150mm REINFORCED CONCRETE WHERE SUBJECT TO HEAVY VEHICLE TRAFFIC;
- 75mm THICKNESS OF BRICK OR 100mm OF CONCRETE PAVING WHERE SUBJECT TO LIGHT VEHICLE TRAFFIC; OR
- 50mm THICK BRICK OR CONCRETE PAVING WHERE NOT SUBJECT TO VEHICLE TRAFFIC.

CONNECTIONS TO STORMWATER DRAINS UNDER BUILDINGS:

SHALL BE CARRIED OUT IN ACCORDANCE WITH SECTION 6.2.8 OF AS3500.3:2021

ABOVE GROUND PIPEWORK:

SHALL BE CARRIED OUT IN ACCORDANCE WITH SECTION 6 OF AS3500.3:2021

PIT SIZES AND DESIGN:

DEPTH (mm)	MINIMUM PIT SIZE (mm)
UP TO 450mm	450 x 450
450mm TO 600mm	600 x 600
600mm TO 900mm	600 x 900
900mm TO 1500mm	900 x 900 (WITH STEP IRONS)
1500mm TO 2000mm	1200 x 1200 (WITH STEP IRONS)

ALL PIPES SHOULD BE CUT FLUSH WITH THE WALL OF THE PIT.

PITS GREATER THAN 600mm DEEP SHALL HAVE A MINIMUM ACCESS OPENING OF 600 x 600mm

THE GRATED COVERS OF PITS LARGER THAN 600 x 600mm ARE TO BE HINGED TO PREVENT THE GRATE FROM FALLING INTO THE PIT.

THE BASE OF THE DRAINAGE PITS SHOULD BE AT THE SAME LEVEL AS THE INVERT OF THE OUTLET PIPE. RAINWATER SHOULD NOT BE PERMITTED TO POND WITHIN THE STORMWATER SYSTEM

- TRENCH DRAINS:**
CONTINUOUS TRENCH DRAINS ARE TO BE OF WIDTH NOT LESS THAN 150mm AND DEPTH NOT LESS THAN 100mm. THE BARS OF THE GRATING ARE TO BE PARALLEL TO THE DIRECTION OF SURFACE FLOW.

- STEP IRONS:**
PITS BETWEEN 1.2m AND 6m ARE TO HAVE STEP IRONS IN ACCORDANCE WITH AS1657. FOR PITS GREATER THAN 6m OTHER MEANS OF ACCESS MUST BE PROVIDED.

- IN-SITU PITS:**
IN-SITU PITS ARE TO BE CONSTRUCTED ON A CONCRETE BED OF AT LEAST 150mm THICK. THE WALLS ARE TO BE DESIGNED TO MEET THE MINIMUM REQUIREMENTS OF CLAUSE 7.5.5.1 OF AS3500.3:2021. PITS DEEPER THAN 1.8m SHALL BE CONSTRUCTED WITH REINFORCED CONCRETE.

- GRATES:**
GRATES ARE TO BE GALVANISED STEEL GRID TYPE. GRATES ARE TO BE OF HEAVY-DUTY TYPE IN AREAS WHERE THEY MAY BE SUBJECT TO VEHICLE LOADING.

CLASS	USE
A	EXTRA LIGHT DUTY
B	LIGHT DUTY
C	MEDIUM DUTY
D	HEAVY DUTY
E	EXTRA HEAVY DUTY
F	EXTRA HEAVY DUTY
G	EXTRA HEAVY DUTY

GENERAL NOTES

- FINAL LOCATION OF NEW DOWNPIPES TO BE DETERMINED BY BUILDER/ARCHITECT AT TIME OF CONSTRUCTION.
- THESE DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTS AND OTHER CONSULTANTS DRAWINGS. ANY DISCREPANCIES TO BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH WORK.
- ALL MATERIALS AND WORKMANSHIP TO BE IN ACCORDANCE WITH AS/NZS 3500.3:2021 STORMWATER DRAINAGE, BCA AND LOCAL COUNCIL POLICY/CONSENT/REQUIREMENTS.
- ALL DIMENSIONS AND LEVELS TO BE VERIFIED BY BUILDER ON-SITE PRIOR TO COMMENCEMENT OF WORKS. THESE DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS NOR TO BE USED FOR SETOUT PURPOSES.
- ALL SURVEY INFORMATION AND PROPOSED BUILDING AND FINISHED SURFACE LEVELS SHOWN IN THESE DRAWINGS ARE BASED ON LEVELS OBTAINED FROM DRAWINGS BY OTHERS. THESE DRAWINGS DEPICT THE DESIGN OF SURFACE STORMWATER RUNOFF DRAINAGE SYSTEMS ONLY AND DO NOT DEPICT ROOF DRAINAGE OR SUBSOIL DRAINAGE SYSTEMS UNLESS NOTED OTHERWISE. THE DESIGN OF ROOF AND SUBSOIL DRAINAGE SYSTEMS IS THE RESPONSIBILITY OF OTHERS.
- ALL STORMWATER DRAINAGE PIPES ARE TO BE uPVC AT MINIMUM 1% GRADE UNLESS NOTED OTHERWISE.
- IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE AND LEVEL. ALL EXISTING SERVICES OR OTHER STRUCTURES WHICH MAY AFFECT/BE AFFECTED BY THIS DESIGN PRIOR TO COMMENCEMENT OF WORKS.
- ALL PITS WITHIN DRIVEWAYS TO BE 150mm THICK CONCRETE OR EQUAL.
- THIS PLAN IS THE PROPERTY OF QUANTUM ENGINEERS AND MAY NOT BE USED OR REPRODUCED WITHOUT WRITTEN PERMISSION FROM QUANTUM ENGINEERS.

PLAN NOTES

- ROOF DRAINAGE NOTE:** AS 3500 ROOF DRAINAGE REQUIRES EAVES GUTTERS TO BE SIZED FOR 20 YEAR 5 MIN. STORM = 205mm/hr. FOR EAVES GUTTERS, AS 3500.3:2021 THEN HAS THE FOLLOWING REQUIREMENTS:
 - FOR TYPICAL STANDARD QUAD GUTTER WITH $A_e = 6000mm^2$ AND GUTTER SLOPE 1:500 AND STEEPER. THIS REQUIRES ONE DOWNPIPE PER 30m² ROOF AREA.
 - DOWNPIPES TO BE MINIMUM 90mm DIA. OR 100 x 50mm FOR GUTTERS SLOPE 1:500 AND STEEPER.
 - OVERFLOW METHOD TO FIGURE F.1 OF AS 3500.3:2021 IT IS THE RESPONSIBILITY OF THE PLUMBER AND / OR BUILDER TO COMPLY WITH THIS. THIS DRAWING SHOWS PRELIMINARY LOCATIONS / NUMBERS OF DOWNPIPES ONLY WHICH ARE TO BE VERIFIED BY BUILDER / PLUMBER
- TREE PRESERVATION:** IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ANY PRIOR APPROVAL REQUIRED FROM COUNCIL WITH RESPECT TO POTENTIAL IMPACT ON TREES FOR ANY WORKS SHOWN ON THIS DRAWING PRIOR TO THE COMMENCEMENT OF THOSE WORKS
- ALL ROOF GUTTERS TO HAVE OVERFLOW PROVISION IN ACCORDANCE WITH AS 3500.3:2021 AND SECTIONS 3.5, 3.7.7 AND APPENDIX G OF AS 3500.3:2021
- THIS DRAWING IS NOT TO BE USED FOR SET-OUT PURPOSES - REFER TO ARCHITECTURAL DRAWINGS
- LOCATION OF SURFACE STORMWATER GRATED INLET PITS MAY BE VARIED OR NEW PITS INSTALLED AT THE CONSTRUCTION STAGE PROVIDED DESIGN INTENT OF THIS DRAWING IS MAINTAINED

STORMWATER LEGEND

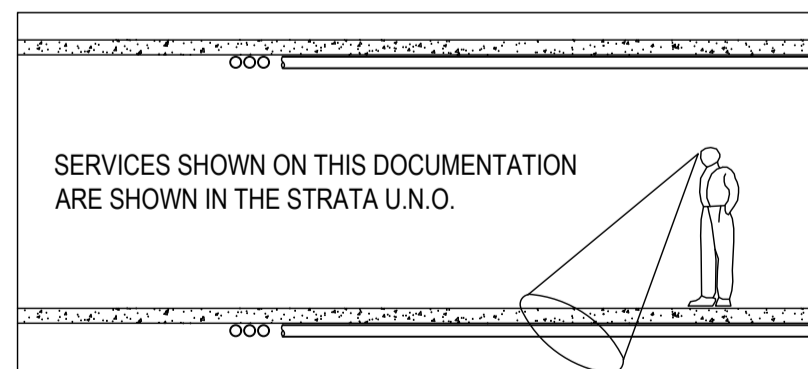
	SURFACE INLET PIT (SIP)		STORMWATER PIPE VIA GRAVITY 100mm DIA (MIN) U.N.O
	SURFACE INLET PIT (WITH 'OCEANGUARD')		STORMWATER PIPE TO RAINWATER TANK 100mm DIA (MIN) U.N.O
	GRATED TRENCH DRAIN MIN 150mm DEEP (U.N.O)		PRESSURE PIPE FROM PUMP-OUT TANK 65mm DIA (MIN) U.N.O
	LINEAR TRENCH DRAIN 100mm WIDE U.N.O		COUNCIL / EASEMENT DRAINAGE SYSTEM. REFER TO PLAN
	FLOOR WASTE TERRACE GRATE PLANTER GRATE FLOOR DRAIN		100mm DIA (MIN) U.N.O SLOTTED PVC WRAPPED IN GEOTEXTILE SLEEVE AT 1% (MIN)
	ABSORPTION/INFILTRATION TRENCH		SURFACE FALL LINES 1% (MIN)
	ON-SITE DETENTION TANK (OSD)		IR INSPECTION RISER WITH SEALED CAP
	RAINWATER RE-USE TANK (RWT)		PROPOSED DOWNPIPE 100mm DIA uPVC
	PUMP-OUT STORAGE TANK		INDICATES DOWNPIPE PENETRATING FLOOR SLAB
	STORMFILTER CHAMBER/WATER QUALITY SYSTEM (REFER TO PLAN)		INDICATES DOWNPIPE COMMENCING BELOW FLOOR SLAB
			INDICATES ROOF FALL DIRECTION
		450SQ	450 x 450 SQUARE INTERNAL PIT DIMENSIONS
		SL 20.00	PIT GRATE SURFACE LEVEL = RL 20.00
		IL 19.50	PIT INVERT LEVEL = RL 19.50

CONSULTANTS COORDINATION LEGEND

	MECHANICAL DUCT SYSTEM (REFER TO MECHANICAL ENGINEERS PLANS)
	STRUCTURAL SLAB TRANSITION (REFER TO STRUCTURAL ENGINEERS PLANS)
	STRUCTURAL SLAB/BEAM THICKNESS (REFER TO STRUCTURAL ENGINEERS PLANS)

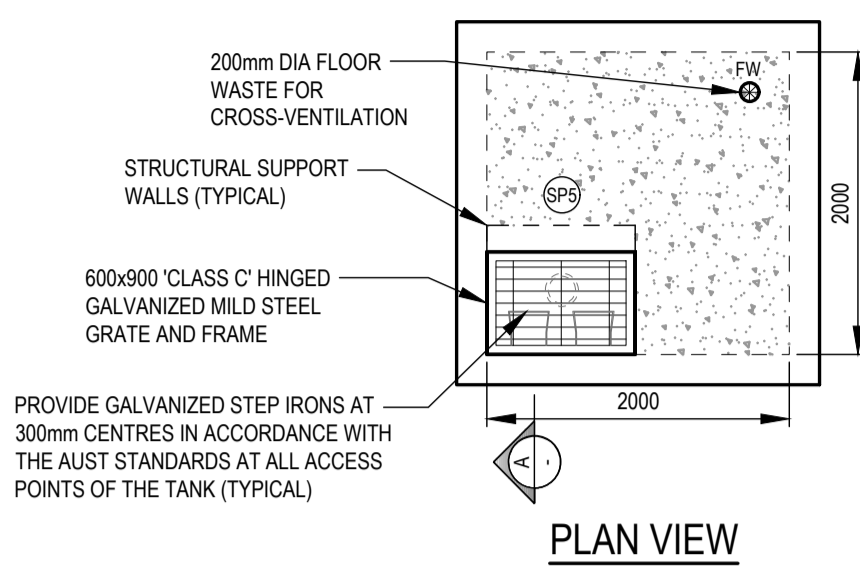
UNDERGROUND SERVICES LEGEND

	UNDERGROUND ELECTRICITY CABLES	} APPROXIMATE POSITION ONLY VIA DIAL BEFORE YOU DIG PLANS. WHERE CRITICAL TO DESIGN UNDERGROUND SERVICES SHOULD BE LOCATED BY GROUND PENETRATING RADAR PRIOR TO DESIGN OR EXCAVATION.
	UNDERGROUND GASMAIN	
	UNDERGROUND NBN NETWORK CABLE	
	UNDERGROUND OPTUS CABLES	
	UNDERGROUND SEWERMAIN	
	UNDERGROUND TELSTRA COMMUNICATIONS CABLES	
	UNDERGROUND SYDNEY WATER LINE	



QUANTUM ENGINEERS	GENERAL NOTES	APPROVED BY	CLIENT	DRAWING TITLE	APPROX TRUE NORTH	REVISION	DATE	DESCRIPTION	DESIGNED BY	CHECKED BY	No. IN SET	JOB NUMBER
	ALL DIMENSIONS SHOWN IN DRAWINGS ARE TO BE CONFIRMED ON SITE BEFORE COMMENCEMENT OF WORKS. DO NOT SCALE OFF DRAWINGS. DRAWING TO BE READ IN CONJUNCTION WITH ARCHITECTS PLANS. ALL EXISTING SERVICES AND UTILITIES ARE APPROXIMATE ONLY TO BE VERIFIED ON-SITE BY BUILDER. ALL WORK IS TO BE UNDERTAKEN IN ACCORDANCE WITH: ALL RELEVANT CURRENT BUILDING ACTS & REGULATIONS IN ALL CURRENT AUSTRALIAN STANDARDS. ALL LOCAL COUNCIL REGULATIONS AS WELL AS ALL DCP & LEP ASSOCIATED. COPYRIGHT INFORMATION: THE DRAWING IS THE COPYRIGHT OF QUANTUM ENGINEERS. COPYING OR USING THIS DRAWING IN WHOLE OR PART WITHOUT WRITTEN CONSENT ARRANGES COPYRIGHT.	ROBERT ELTOBBAGI BE(CIV) ME(AUS) CP(ENG) MEM(105229) RPE(02546) ARC(Engineer Australia)	NORTHMEAD PTY LTD	DETAILS, NOTES & LEGEND		A	25.01.2023	PRELIMINARY ISSUE	A.KUKKEL	R.ELTOBBAGI	7	220534-SW
			ARCHITECT	PROPOSED CHILD CARE CENTRE		B	03.02.2023	PRELIMINARY ISSUE	A.KUKKEL	SCALE - SIZE	REVISION	DRAWING No.
			DESIGN CORP ARCHITECTS	Lot 23, 52 HAMMERS ROAD, NORTHMEAD		C	18.05.2023	PRELIMINARY ISSUE	J.FISHER		D	D1
						D	29.05.2023	ISSUED FOR DA	J.FISHER			

- PUMP-OUT STORAGE TANK**
- SURFACE AREA 2.90m²
 - VOLUME (MIN) 3.62m³
 - AVERAGE DEPTH 1250mm
 - T.W.L. RL 31.10



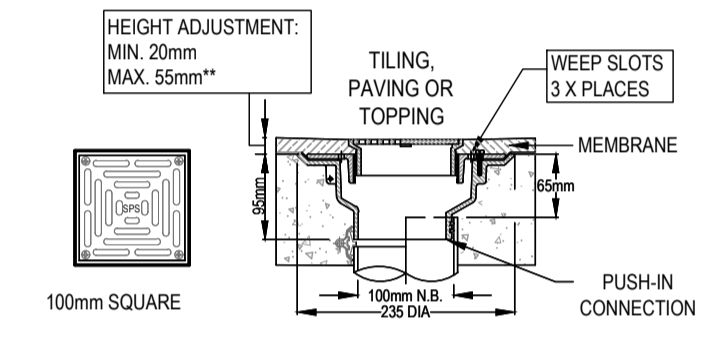
PLAN VIEW

PUMP-OUT STORAGE TANK
1:50

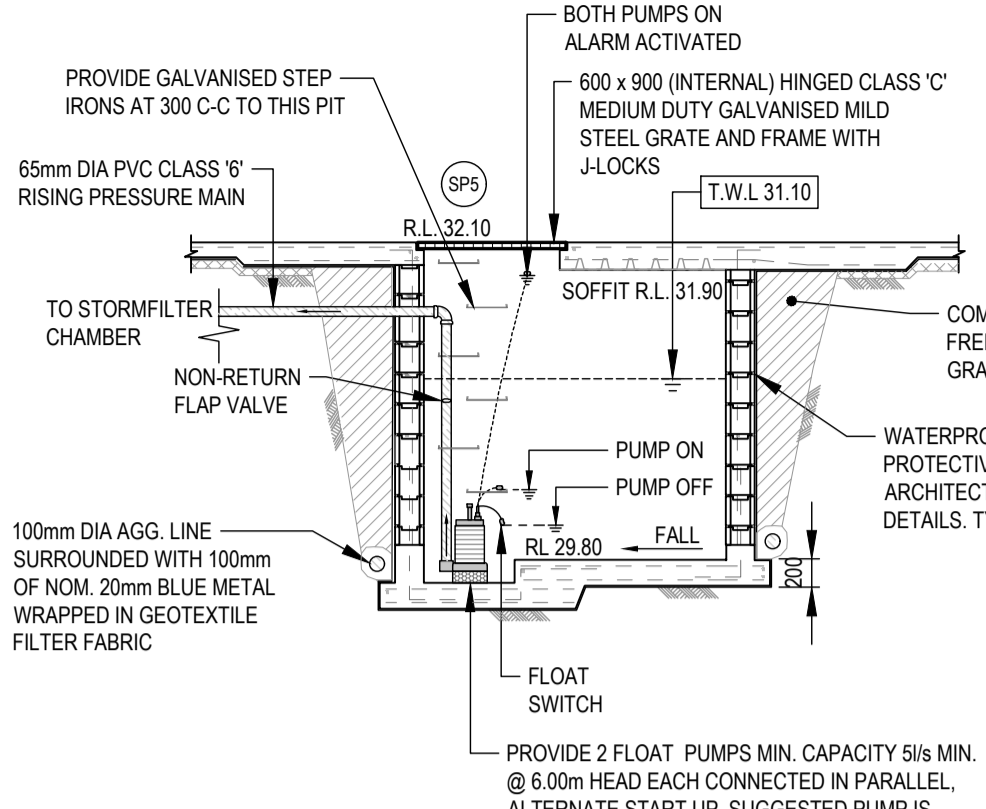
PROVIDE GALVANIZED STEP IRONS AT 300mm CENTRES IN ACCORDANCE WITH THE AJUST STANDARDS AT ALL ACCESS POINTS OF THE TANK (TYPICAL)

SPS 100mm SQUARE VARI-LEVEL VERTICAL DRAIN
65/55mm OUTLET

SPECIFICATION CODES:
Q100S4C (POLISHED 304 STAINLESS STEEL GRATE)
Q100SIC (SATIN 316 STAINLESS STEEL GRATE)
INCLUDES 100MM CAST IRON LOWER BODY



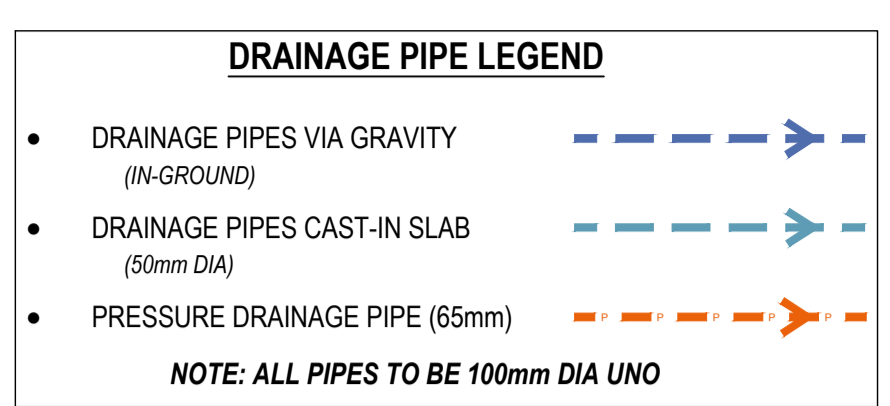
FLOOR GRATE (SPS) - FG
NTS



SECTION 'A'

NOTE:
1. PUMP SHALL BE CONSTRUCTED TO THE STRUCTURAL ENGINEERS DETAILS
2. ALL THE A.G.L. LINES BEHIND THE BASEMENT WALLS ARE TO BE CONNECTED TO PUMP-OUT SYSTEM

STANDARD PUMP OUT DESIGN NOTES:
THE PUMP OUT SYSTEM SHALL BE DESIGNED TO OPERATE IN THE FOLLOWING MANNER:
- THE PUMPS SHALL BE PROGRAMMED TO WORK ALTERNATELY SO AS TO ALLOW BOTH PUMPS TO HAVE AN EQUAL OPERATION LOAD AND PUMP LIFE.
- A LOW LEVEL FLOAT SHALL BE PROVIDED TO ENSURE THAT THE MINIMUM REQUIRED WATER LEVEL IS MAINTAINED WITHIN THE SUMP AREA OF THE BELOW GROUND TANK. IN THIS REGARD THE FLOAT WILL FUNCTION AS AN OFF SWITCH FOR THE PUMPS.
- A SECOND FLOAT SHALL BE PROVIDED AT A HIGHER LEVEL, APPROXIMATELY 300mm ABOVE THE MINIMUM WATER LEVEL, WHEREBY ONE OF THE PUMPS WILL OPERATE AND DRAIN THE TANK TO THE LEVEL OF THE LOW-LEVEL FLOAT.
- A THIRD FLOAT SHALL BE PROVIDED AT A HIGH LEVEL, WHICH IS APPROXIMATELY THE ROOF LEVEL OF THE BELOW GROUND TANK. THIS FLOAT SHOULD START THE OTHER PUMP THAT IS NOT OPERATING AND ACTIVATE THE ALARM.
- AN ALARM SYSTEM SHALL BE PROVIDED WITH A FLASHING STROBE LIGHT AND A PUMP FAILURE WARNING SIGN WHICH ARE TO BE LOCATED AT THE DRIVEWAY ENTRANCE TO THE BASEMENT LEVEL. THE ALARM SYSTEM SHALL BE PROVIDED WITH A BATTERY BACK-UP IN CASE OF POWER FAILURE.



PUMP SYSTEM DESIGN

Project: Proposed Child Care Centre LOT No. 23
Our Job No: 220534_SW DP No. 1053952
Location: No.52 Hammers Road, Northmead

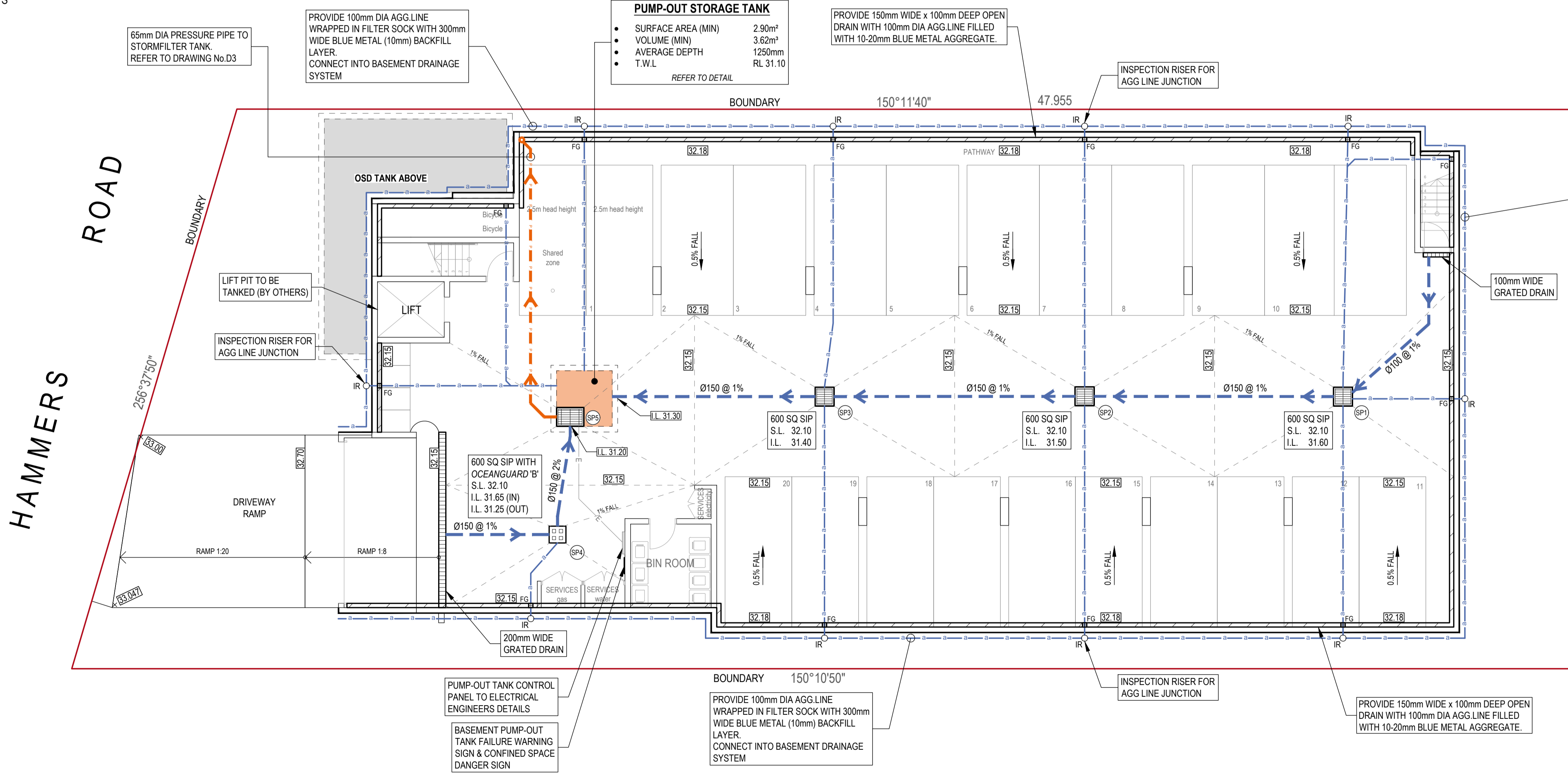
Storage/Discharge Calculation:

Area draining to Pump System = 55.9 m²
Runoff coefficient = 0.9

Note: Rainfall duration data for Sydney

Duration (m in & hr)	Intensity 100yr AR (mm/hr)	Discharge Rate (L/sec)	Volume (m ³)
5	215	2.84	0.85
6	207	2.73	0.98
7	199	2.63	1.10
8	191	2.52	1.21
9	184	2.43	1.31
10	177	2.34	1.40
11	170	2.24	1.48
12	163	2.15	1.55
13	158	2.09	1.63
14	152	2.01	1.69
15	147	1.94	1.75
16	142	1.87	1.80
17	137	1.81	1.84
18	133	1.76	1.90
20	125	1.65	1.98
25	109	1.44	2.16
30	97.3	1.28	2.31
35	87.8	1.16	2.43
40	80.2	1.06	2.54
45	73.9	0.98	2.63
50	68.7	0.91	2.72
55	64.3	0.85	2.80
60	60.6	0.80	2.88
75	52	0.69	3.09
90	46	0.61	3.28
2.0	38.1	0.50	3.62

HEMSWORTH AVENUE



PROVIDE 100mm DIA AGG.LINE WRAPPED IN FILTER SOCK WITH 300mm WIDE BLUE METAL (10mm) BACKFILL LAYER. CONNECT INTO BASEMENT DRAINAGE SYSTEM

WARNING
PUMP OUT SYSTEM FAILURE IN BASEMENT WHEN LIGHT IS FLASHING AND SIREN SOUNDING

BASEMENT PUMP-OUT FAILURE WARNING SIGN

NOTE:
1. SIGN SHALL BE IN CLEAR AND VISIBLE LOCATION WHERE VEHICLES ENTER THE BASEMENT

COLOURS:
WARNING - RED
ALL OTHERS - BLACK

DANGER
CONFINED SPACE
NO ENTRY WITHOUT CONFINED SPACE TRAINING

CONFINED SPACE DANGER SIGN

COLOURS: "DANGER" AND BACKGROUND - WHITE
ELLIPTICAL AREA - RED
RECTANGLE CONTAINING ELLIPSE - RED
OTHER LETTERING AND BORDER - BLACK

A) A CONFINED SPACE DANGER SIGN SHALL BE POSITIONED AT ALL ACCESS POINTS SUCH THAT IT IS CLEARLY VISIBLE TO PERSONS PROGRESSING TO ENTER THE BELOW GROUND RANGE CONFINED SPACE.

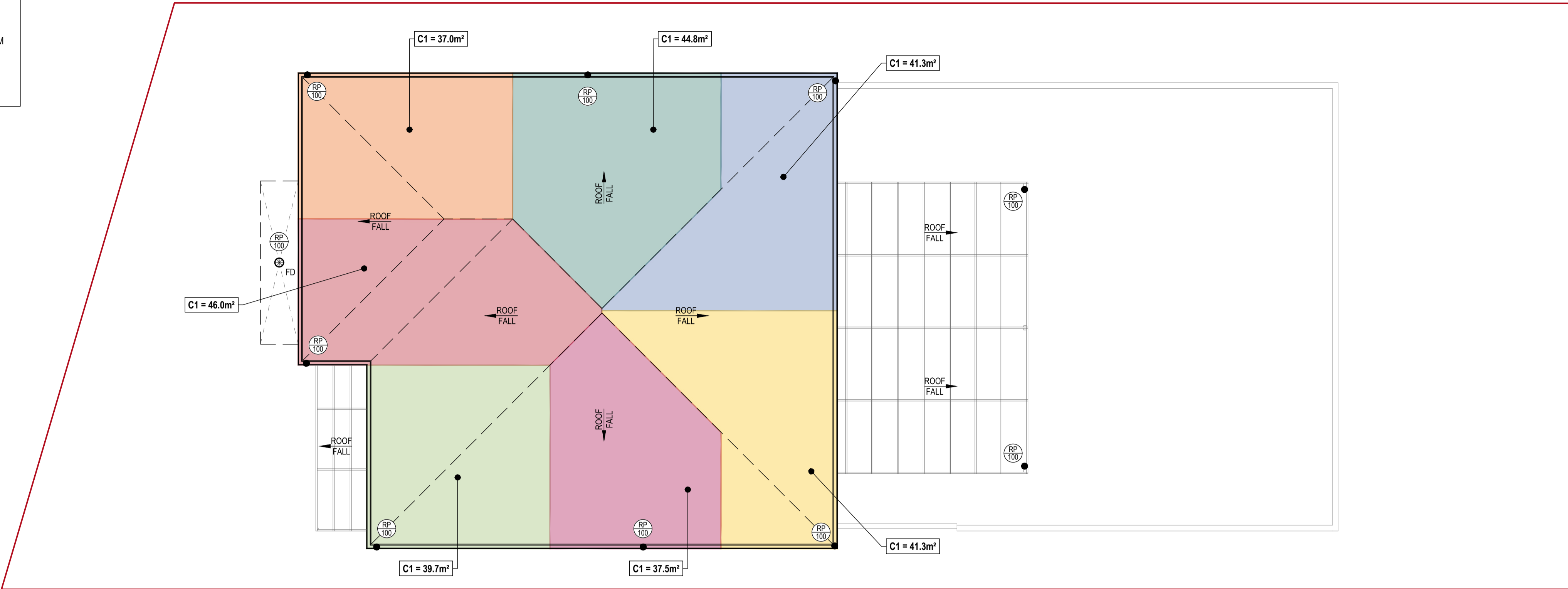
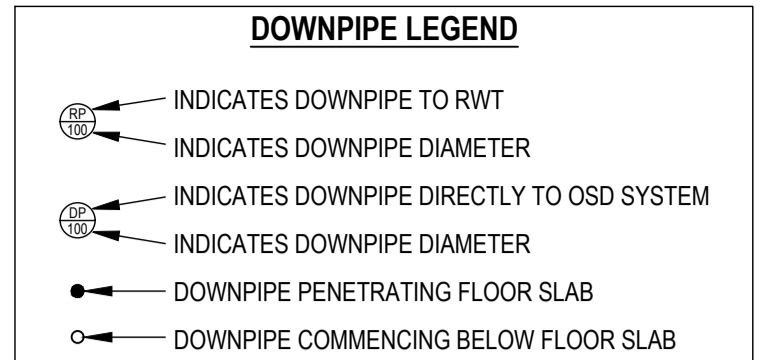
B) MINIMUM DIMENSIONS OF THE SIGN - 300mm x 450mm (LARGE ENTRIES, SUCH AS DOORS) - 300mm x 150mm (SMALL ENTRIES SUCH AS GRATES AND MANHOLES)

C) THE SIGN SHALL BE MANUFACTURED FROM COLOUR BLENDED ALUMINIUM OR POLYPROPYLENE.

D) SIGN SHALL BE AFFIXED USING SCREWS AT EACH CORNER OF THE SIGN.

BASEMENT LEVEL 1 PLAN
1:100 AT A1
1:200 AT A3

<p>QUANTUM ENGINEERS Suite 1A, Level 2, 2 River Street, Eastwood NSW 2122 © 1997-2023 quantumengineers.com.au</p>	<p>GENERAL NOTES</p> <p>ALL DIMENSIONS SHOWN IN DRAWINGS ARE TO BE CONFIRMED ON SITE BEFORE COMMENCEMENT OF WORKS DO NOT SCALE OFF DRAWINGS DRAWING TO BE READ IN CONJUNCTION WITH ARCHITECTS PLANS ALL EXISTING DIMENSIONS & TRENDS ARE APPROXIMATE ONLY TO BE VERIFIED ON-SITE BY BUILDER. ALL WORK IS TO BE UNDERTAKEN IN ACCORDANCE WITH: - ALL RELEVANT & CURRENT BUILDING REGULATIONS AS WELL AS ALL LOCAL & STATE REGULATIONS - ALL CURRENT AUSTRALIAN STANDARDS - ALL LOCAL COUNCIL REGULATIONS AS WELL AS ALL LOCAL & STATE ASSOCIATED.</p> <p>COPYRIGHT INFORMATION: THE DRAWING IS THE COPYRIGHT OF QUANTUM ENGINEERS. COPYING OR USING THIS DRAWING IN WHOLE OR PART WITHOUT WRITTEN CONSENT IS PROHIBITED.</p>	<p>APPROVED BY</p> <p>ROBERT ELTOBAGI BE(CIV) ME(AUS) CP(ENG) MEMBER OF THE ENGINEERING COUNCIL OF AUSTRALIA (Professional Engineer - Mechanical)</p>	<p>CLIENT</p> <p>NORTHMEAD PTY LTD</p>	<p>DRAWING TITLE</p> <p>BASEMENT LEVEL 1 PLAN PROPOSED CHILD CARE CENTRE Lot 23, 52 HAMMERS ROAD, NORTHMEAD</p>	<p>APPROX TRUE NORTH</p>	<p>REVISION</p> <table border="1"> <tr><th>REVISION</th><th>DATE</th><th>DESCRIPTION</th></tr> <tr><td>A</td><td>25.01.2023</td><td>PRELIMINARY ISSUE</td></tr> <tr><td>B</td><td>03.02.2023</td><td>PRELIMINARY ISSUE</td></tr> <tr><td>C</td><td>18.05.2023</td><td>PRELIMINARY ISSUE</td></tr> <tr><td>D</td><td>29.05.2023</td><td>ISSUED FOR DA</td></tr> </table>	REVISION	DATE	DESCRIPTION	A	25.01.2023	PRELIMINARY ISSUE	B	03.02.2023	PRELIMINARY ISSUE	C	18.05.2023	PRELIMINARY ISSUE	D	29.05.2023	ISSUED FOR DA	<p>DESIGNED BY</p> <p>A.KUKIEL A.KUKIEL J.FISHER J.FISHER</p>	<p>ISSUED FOR DA</p>	<p>CHECKED BY</p> <p>R.ELTOBAGI</p>	<p>No. IN SET</p> <p>7</p>	<p>JOB NUMBER</p> <p>220534-SW</p>
	REVISION	DATE	DESCRIPTION																							
A	25.01.2023	PRELIMINARY ISSUE																								
B	03.02.2023	PRELIMINARY ISSUE																								
C	18.05.2023	PRELIMINARY ISSUE																								
D	29.05.2023	ISSUED FOR DA																								
									<p>SCALE - SIZE</p> <p>AS NOTED - A1</p>	<p>REVISION</p> <p>D</p>	<p>DRAWING No.</p> <p>D2</p>															

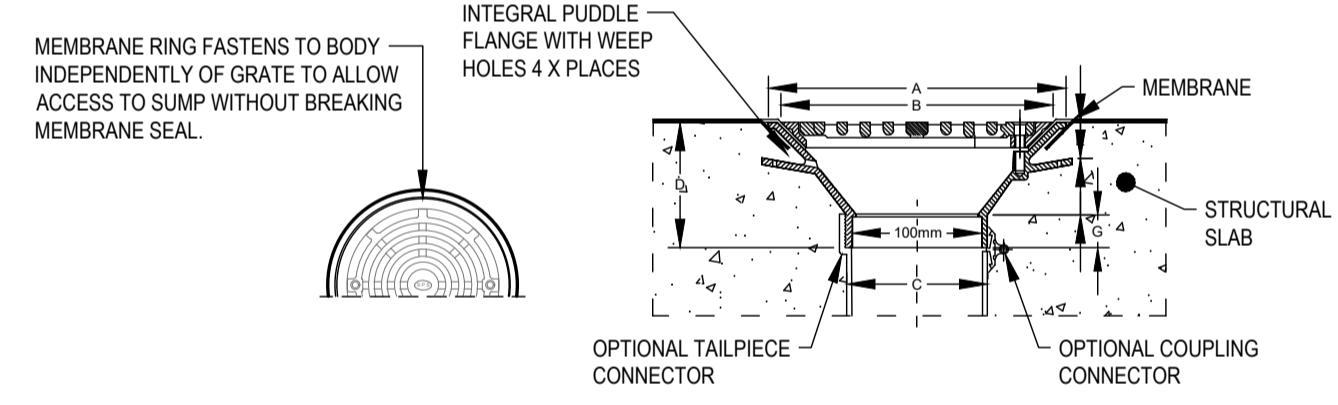


ROOF PLAN
1:100 AT A1
1:200 AT A3

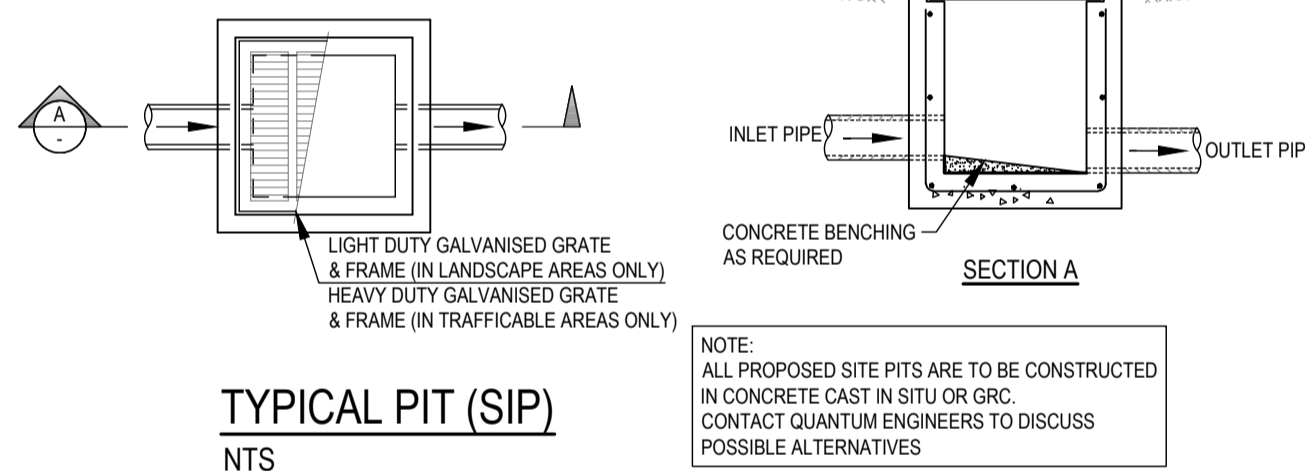
Quantum Engineers Suite 1A, Level 2, 2 Rowe Street Eastwood 2122	JOB No.220534 16.05.2023 Joshua Fisher	
EAVES GUTTER AND DOWN PIPE DESIGN TO AS/NZS 3500.3: 2021 Proposed Child Care Centre No.52 Hammers Road, Northmead NSW 2152		
Horizontal catchment area	Ah = 288	sq.m
Roof Average slope	S = 15	degrees
Intensity ARI 20 (AEP 5%)(5 min)	I = 200	mm/hr
Is Gutter slope steeper than 1:500 ?	No	
Down pipe size selected	dia = 100	mm
Cross referencing From Table 3.5.2 and Fig 3.5.4(A)or(B)		
Theoretical number of DPs required	Tnum = 6.84	
Selected Number of Down pipes	n = 7	
from AS3500 Table 3.4.3.2, C'ment Area Multiplier	f = 1.13	
Roof Area allowing for slope	Ac = Ah*f	sq.m
Catchment Area per DP	A = Ac/n	sq.m
	= 46.5	sq.m
Flow/DP	q = I*A/3600	litres/sec
	= 2.58	litres/sec
from AS/NZS 3500 fig 3.5.4(B), Gutter Area	= 10771	sq.mm
Gutter Area rounded to nearest 100sq.mm	= 10800	sq.mm
From AS/NZS 3500 Table 3.5.2, Down Pipe size	= 100	mm
Down Pipe size selected	= 100	mm
Summary		
This catchment requires :- number of DPs	= 7	
Downpipe size	= 100	mm
minimum eaves gutter cross sectional Area	= 10771	sq.mm
GUTTER SELECTED: Stratco Quad 175 Slotted; Area = 12213 sq.mm		
Notes: Catchment area of each DP to be roughly similar size. Length of any gutter draining to a downpipe to be not longer than 12m.(NCC vol2).		

SPS TRUFLO 200mm RWO WITH FLAT GRATE & MEMBRANE CLAMP

Specification codes:
T1A100F2 (C1 body, aluminium flat grate & membrane ring)
T1B100F2 (C1 body, bronze flat grate & membrane ring)
TBA100F2 (all-bronze assembly)
- for 150mm outlet, use "150" instead of "100"



FLOOR DRAIN (SPS) - FD
(OR SIMILAR)
NTS



TYPICAL PIT (SIP)
NTS

NOTE:
ALL PROPOSED SITE PITS ARE TO BE CONSTRUCTED IN CONCRETE CAST IN SITU OR GRC
CONTACT QUANTUM ENGINEERS TO DISCUSS POSSIBLE ALTERNATIVES

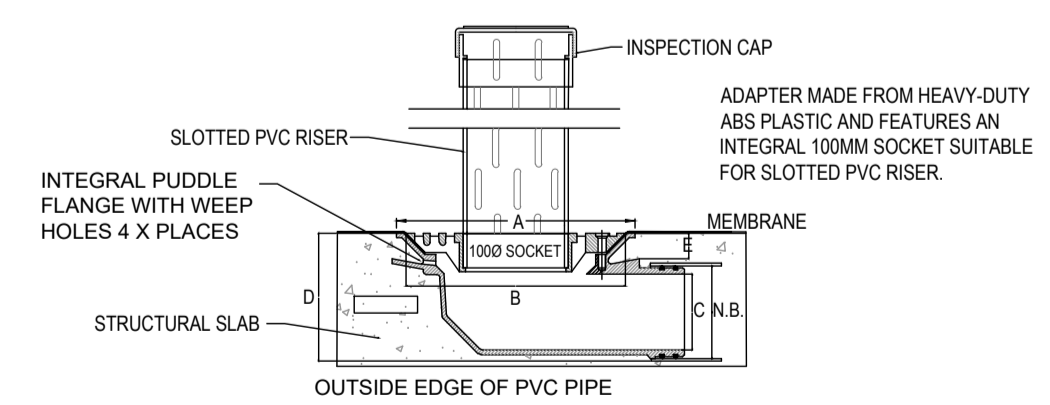


TYPICAL WARNING SIGN

NTS
EVERY EXTERNAL SUPPLY OUTLET FROM RAINWATER RE-USE TANK TO BE LABELLED WITH METALLIC WARNING SIGN

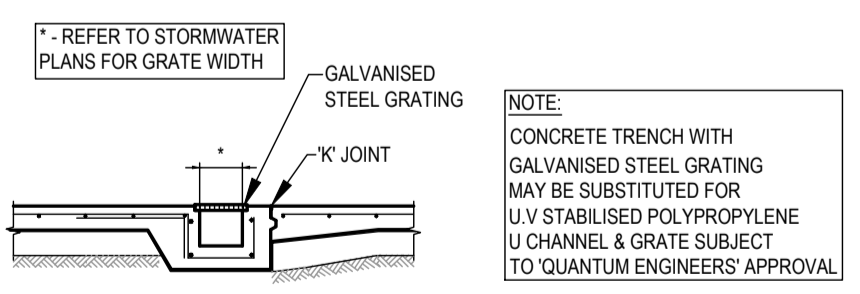
SPS TRUFLO 80MM & 100MM 90° RWO WITH ALL-PURPOSE PLANTER BOX ADAPTER

SPECIFICATION CODE:
T1A80/90PB (80MM CI BODY WITH PLANTER BOX INSERT)
T1A100/90PB (100MM CI BODY WITH PLANTER BOX INSERT)



N.B.	A	B	C	D	E	FLOW RATE L/S
80	260	240	62	115	28	N/A
100	260	240	83	140	28	N/A

PLANTER GRATE (SPS) - PG
NTS



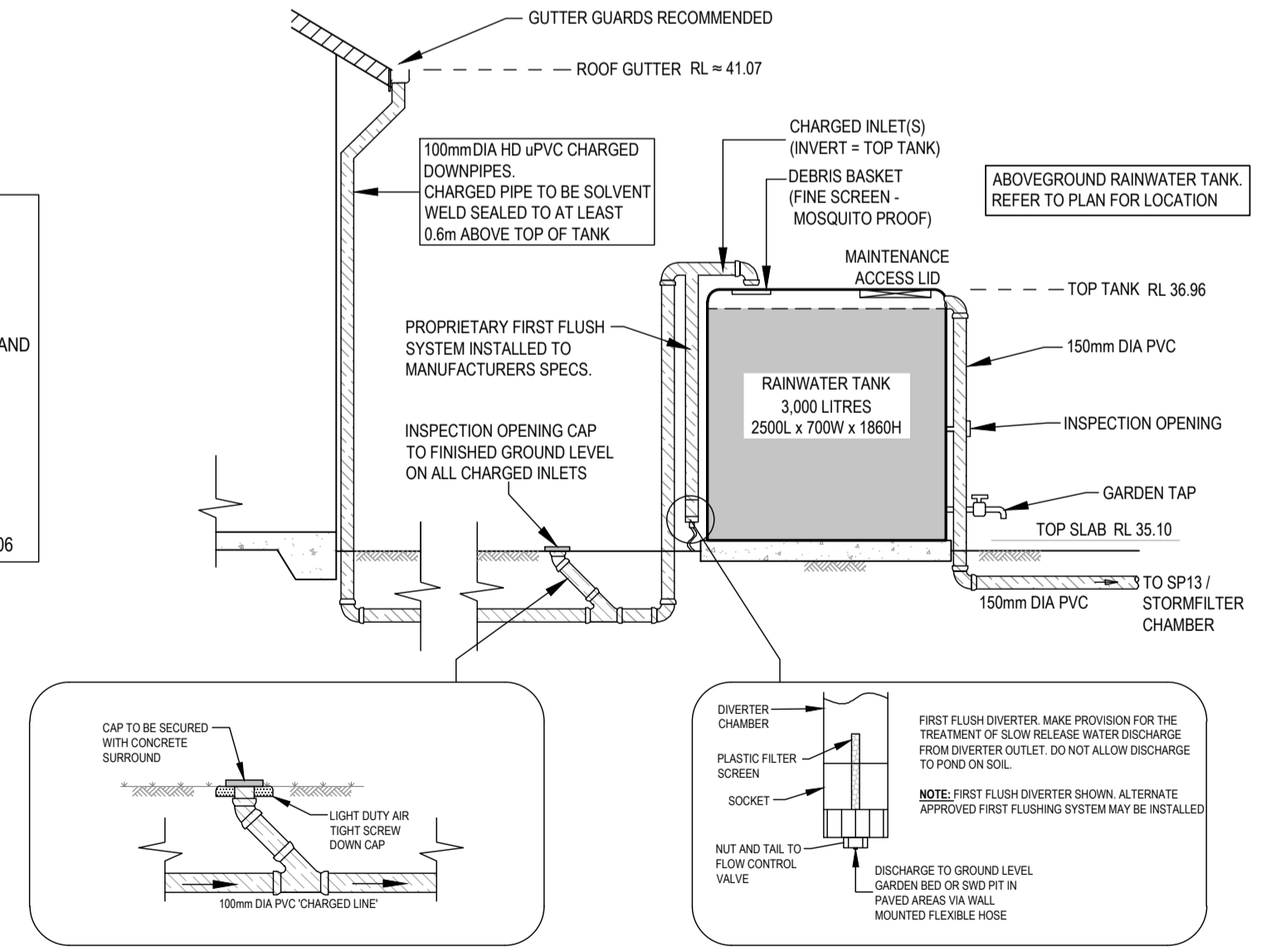
GRATED DRAIN
NTS

NOTE:
CONCRETE TRENCH WITH GALVANISED STEEL GRATING MAY BE SUBSTITUTED FOR U/V STABILISED POLYPROPYLENE U CHANNEL & GRATE SUBJECT TO QUANTUM ENGINEERS' APPROVAL

RAINWATER RE-USE TANK - RWT
(AS PER COUNCIL REQUIREMENTS)

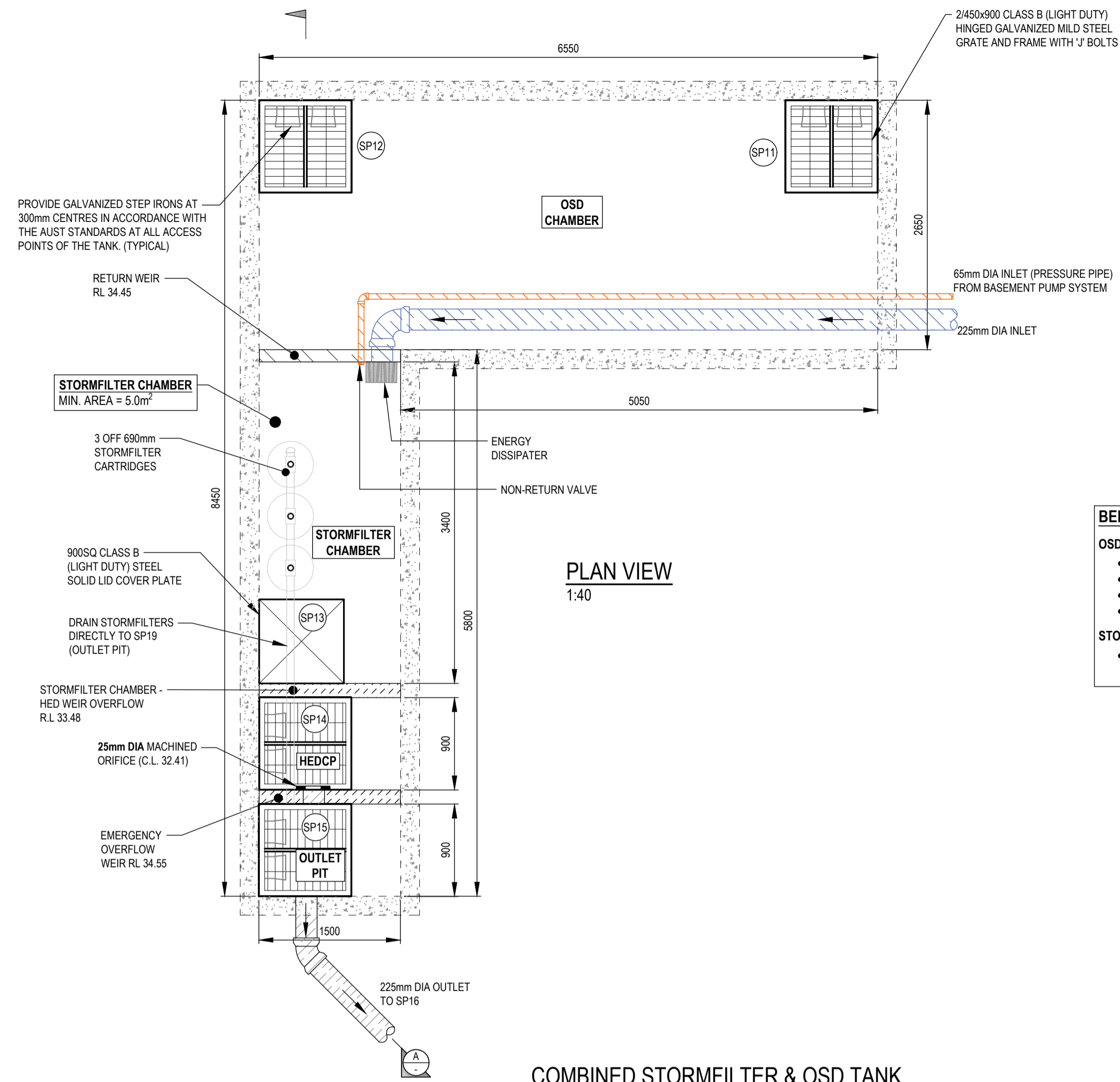
SIZE: 3,000 LITRES (MIN)
SLIMLINE TANK BY 'KINGSPAN WATER' OR SIMILAR (2500L x 700W x 1860H)
INSTALL TO MANUFACTURERS SPECIFICATIONS, AS3500 AND COUNCIL REQUIREMENTS

- FOR RE-USE AS SPECIFIED BY BASIX CERTIFICATE
- ENSURE TOP OF TANK IS MIN 0.6m BELOW ROOF GUTTERS TO ENSURE SUFFICIENT HEAD FOR THE SYSTEM
- TANK TO BE INSTALLED BY LICENSED PLUMBER IN ACCORDANCE WITH AS/NZS 3500:2021 AND NSW CODE OF PRACTICE PLUMBING AND DRAINAGE 2006



RAINWATER RE-USE TANK - ABOVE GROUND
NTS

<p>QUANTUM ENGINEERS Suite 1A, Level 2, 2 Rowe Street, Eastwood NSW 2122 02 9807 7850 027818@quantumengineers.com.au quantumengineers.com.au</p>	<p>GENERAL NOTES</p> <p>ALL DIMENSIONS SHOWN IN DRAWINGS ARE TO BE CONFIRMED ON SITE BEFORE COMMENCEMENT OF WORKS DRAWING TO BE READ IN CONJUNCTION WITH ARCHITECTS PLANS ALL EXISTING DIMENSIONS & TIES ARE APPROXIMATE ONLY TO BE VERIFIED ON SITE BY BUILDER ALL WORK IS TO BE UNDERTAKEN IN ACCORDANCE WITH: NATIONAL BUILDING REGULATIONS AS WELL AS ALL ACTS & REGULATIONS NATIONAL CURRENT AUSTRALIAN STANDARDS NATIONAL LOCAL, STATE, TERRITORY AND FEDERAL ACTS & LEGISLATION COPYRIGHT INFORMATION: THE DRAWING IS THE COPYRIGHT OF QUANTUM ENGINEERS. COPYING OR USING THIS DRAWING IN WHOLE OR PART WITHOUT WRITTEN CONSENT IS STRICTLY PROHIBITED.</p>	<p>APPROVED BY</p> <p>ROBERT ELTOBBAGI REG(ARCH) M(ARCH) CP(ENG) MEMBER OF THE ARCHITECTS BOARD OF NSW ARCHITECT</p>	<p>CLIENT</p> <p>NORTHMEAD PTY LTD</p> <p>ARCHITECT</p> <p>DESIGN CORP ARCHITECTS</p>	<p>DRAWING TITLE</p> <p>ROOF PLAN & DETAILS</p> <p>PROPOSED CHILD CARE CENTRE</p> <p>Lot 23, 52 HAMMERS ROAD, NORTHMEAD</p>	<p>APPROX TRUE NORTH</p>	<table border="1"> <thead> <tr> <th>REVISION</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>25.01.2023</td> <td>PRELIMINARY ISSUE</td> </tr> <tr> <td>B</td> <td>03.02.2023</td> <td>PRELIMINARY ISSUE</td> </tr> <tr> <td>C</td> <td>18.05.2023</td> <td>PRELIMINARY ISSUE</td> </tr> <tr> <td>D</td> <td>29.05.2023</td> <td>ISSUED FOR DA</td> </tr> </tbody> </table>	REVISION	DATE	DESCRIPTION	A	25.01.2023	PRELIMINARY ISSUE	B	03.02.2023	PRELIMINARY ISSUE	C	18.05.2023	PRELIMINARY ISSUE	D	29.05.2023	ISSUED FOR DA	<p>DESIGNED BY</p> <p>A.KURKEL A.KURKEL J.FISHER J.FISHER</p>	<p>ISSUED FOR DA</p>	<table border="1"> <thead> <tr> <th>CHECKED BY</th> <th>No. IN SET</th> <th>JOB NUMBER</th> </tr> </thead> <tbody> <tr> <td>R.ELTOBBAGI</td> <td>7</td> <td>220534-SW</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>SCALE - SIZE</th> <th>REVISION</th> <th>DRAWING No.</th> </tr> </thead> <tbody> <tr> <td>AS NOTED - A1</td> <td>D</td> <td>D4</td> </tr> </tbody> </table>	CHECKED BY	No. IN SET	JOB NUMBER	R.ELTOBBAGI	7	220534-SW	SCALE - SIZE	REVISION	DRAWING No.	AS NOTED - A1	D	D4
	REVISION	DATE	DESCRIPTION																																	
	A	25.01.2023	PRELIMINARY ISSUE																																	
	B	03.02.2023	PRELIMINARY ISSUE																																	
C	18.05.2023	PRELIMINARY ISSUE																																		
D	29.05.2023	ISSUED FOR DA																																		
CHECKED BY	No. IN SET	JOB NUMBER																																		
R.ELTOBBAGI	7	220534-SW																																		
SCALE - SIZE	REVISION	DRAWING No.																																		
AS NOTED - A1	D	D4																																		



PLAN VIEW
1:40

COMBINED STORMFILTER & OSD TANK
1:40

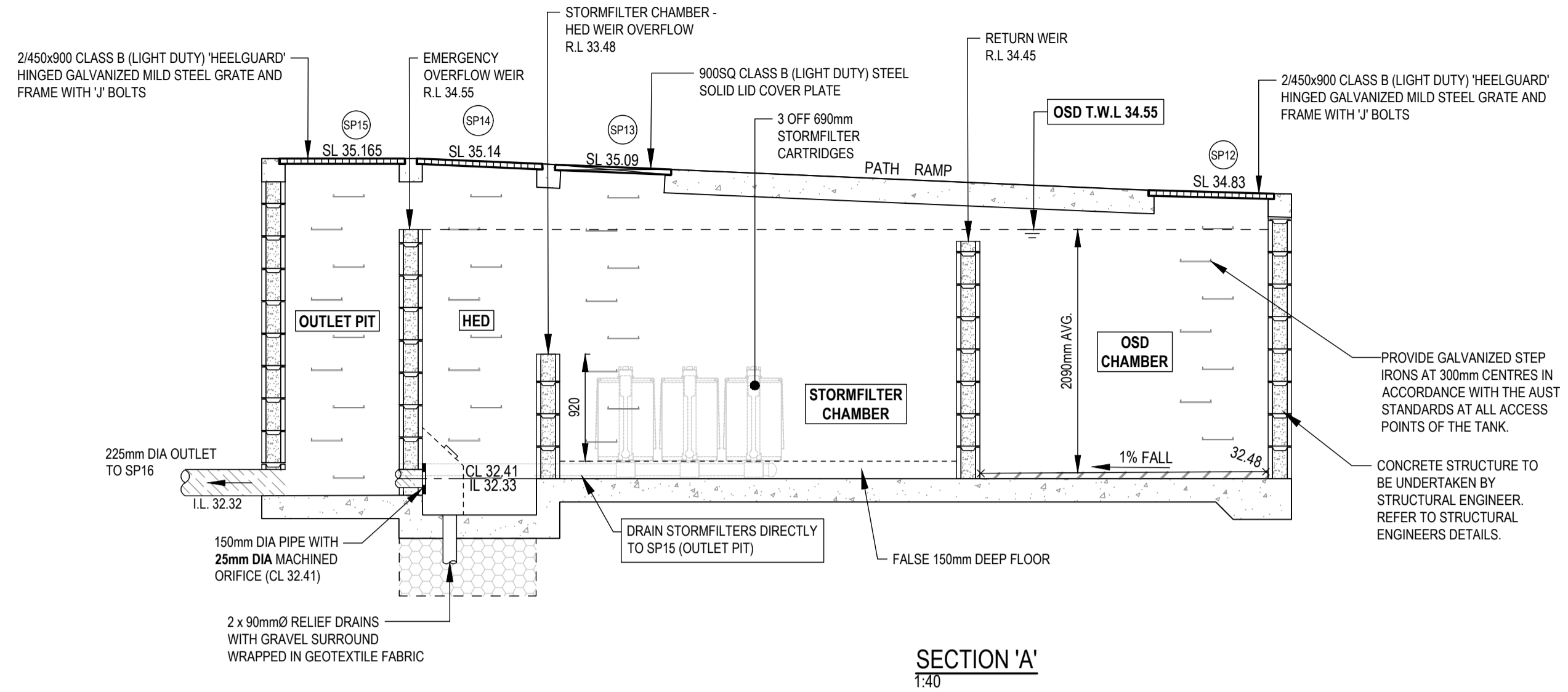
BELOW GROUND OSD / STORMFILTER TANK

OSD TANK:

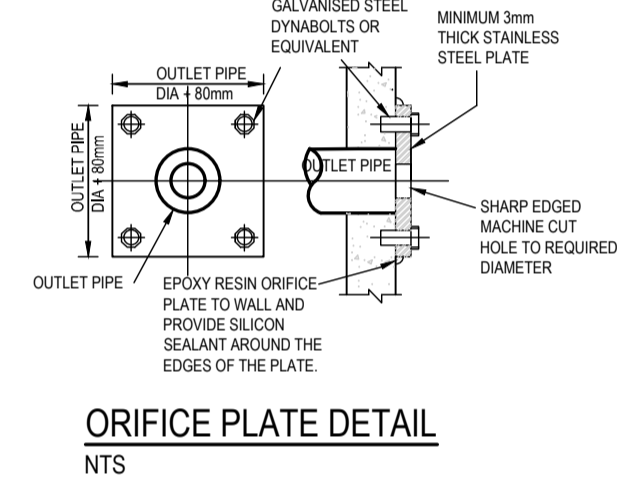
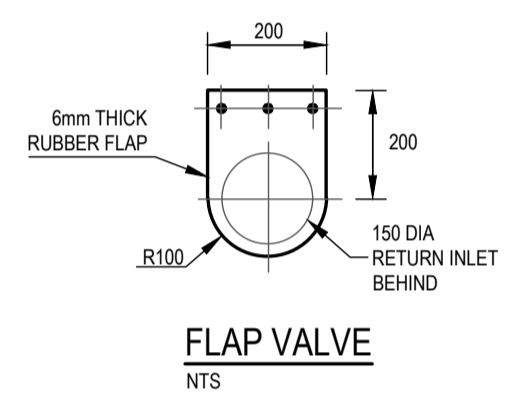
- SURFACE AREA (MIN) 23.35m²
- AVERAGE DEPTH 2.09mm
- STORAGE VOLUME (MIN) 48.82m³
- T.W.L. RL 34.55

STORMFILTER CHAMBER:

- PROVIDE 3 STORMFILTERS (690mm CARTRIDGES)



SECTION 'A'
1:40



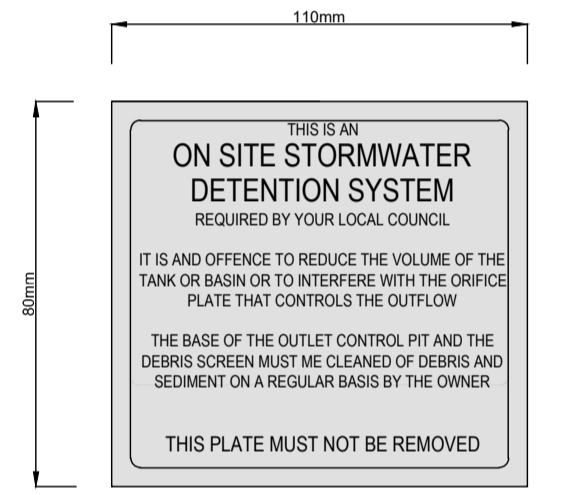
COLOURS: "DANGER" AND BACKGROUND - WHITE
 ELLIPTICAL AREA - RED
 RECTANGLE CONTAINING ELLIPSE - BLACK
 OTHER LETTERING AND BORDER - BLACK

A) A CONFINED SPACE DANGER SIGN SHALL BE POSITIONED AT ALL ACCESS POINTS, SUCH THAT IT IS CLEARLY VISIBLE TO PERSONS PROPENDING TO ENTER THE BELOW GROUND TANKS CONFINED SPACE.

B) MINIMUM DIMENSIONS OF THE SIGN -
 - 300mm x 400mm (LARGE ENTRIES, SUCH AS DOORS)
 - 200mm x 100mm (SMALL ENTRIES, SUCH AS GRATES AND MANHOLES)

C) THE SIGN SHALL BE MANUFACTURED FROM COLOUR BONDED ALUMINUM OR POLYPROPYLENE.

D) SIGN SHALL BE AFFIXED USING SCREWS AT EACH CORNER OF THE SIGN.



CORNERS: SQUARE
 COLOUR: ETCHED AND FILLED BLACK LEGEND ON NATURAL SILVER BACKGROUND
 MATERIAL: ALUMINIUM 0.9mm MILL

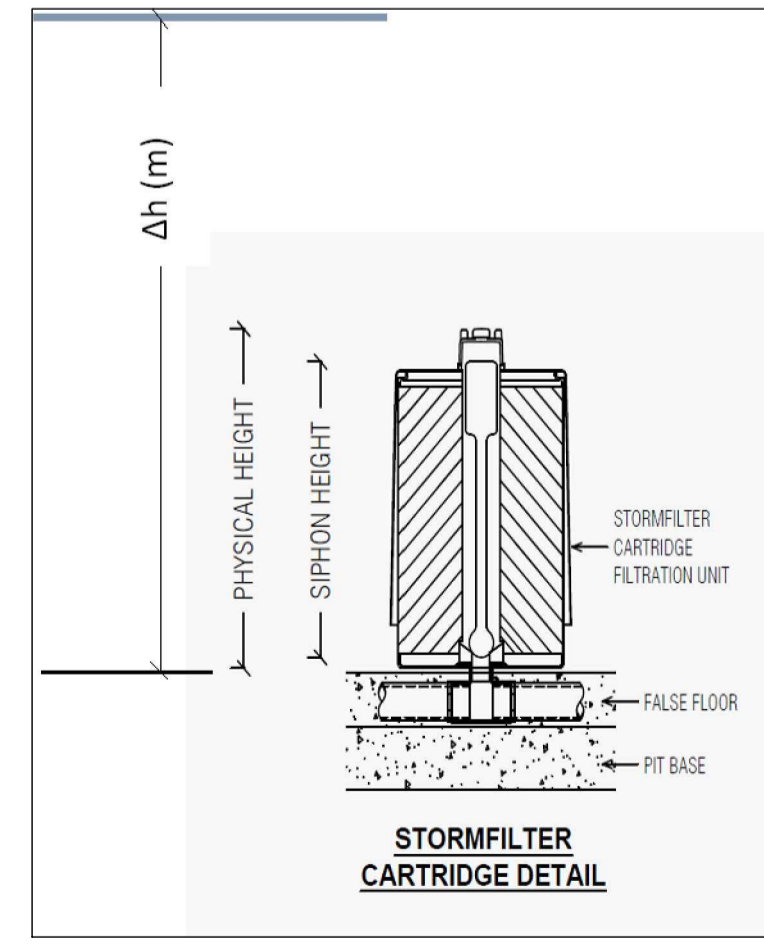
OSD PLAQUE
NTS

CALCULATIONS (WEIR BETWEEN HED & EMERGENCY OVERFLOW PIT):

CATCHMENT AREA TO OSD TANK = 906.7 m²
 MAX FLOW TO OSD TANK (0.86 x 215 x 0.09/360) = 0.046 m³/s
 CAPACITY OF WEIR (1.86 x 0.98 x 0.4^{1.5}) = 0.46 m³/s

CALCULATIONS (WEIR BETWEEN STORMFILTER & HED):

CATCHMENT AREA TO OSD TANK = 906.7 m²
 MAX FLOW TO OSD TANK (0.86 x 215 x 0.09/360) = 0.046 m³/s
 CAPACITY OF WEIR (1.86 x 0.98 x 1.4^{1.5}) = 3.01 m³/s



Q = (0.111d² * 2.06h^{0.5}) / 60
 where d = Restrictor Disc Diameter
 Δh = head

Cartridge Name 690
 Cartridge Quantity 3
 Δh (m) 2.04

Total Q at head 4.40

PARRAMATTA CITY COUNCIL - OSD CALCULATIONS

Project: Proposed Child Care Centre Lot No. 23
 Location: No. 52 Hammers Road, Northmead DP No. 1053952
 Phone: 02 9807 7800

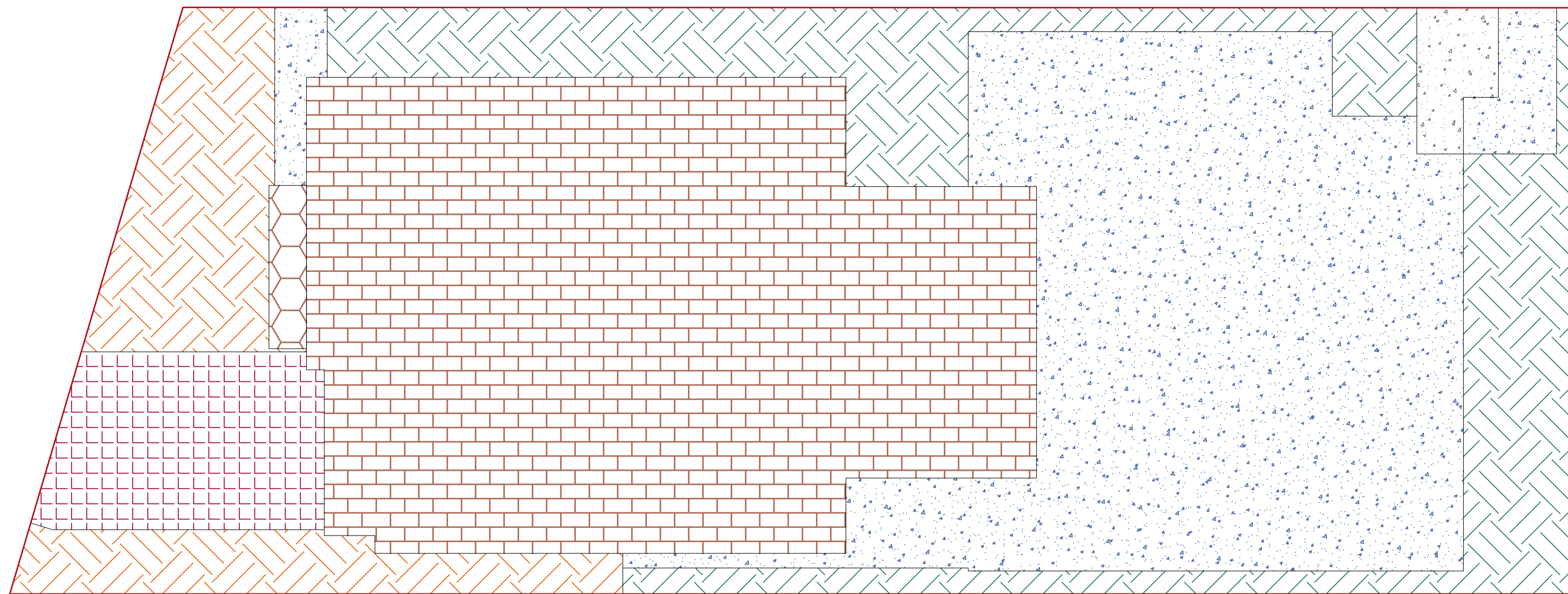
OSD Catchment	UPRCT	
Site Area	0.1024	
Basic Storage Volume	48.13	
Basic Discharge	8.19	
Area of Site to Storage	0.09171	90%
Percentage of Site	89.56	
Storage per ha of contributing area	524.78	
Volume/PSD Adjustment	68.85	
PSD for site	6.313	
Maximum Head to Orifice Centre	2.140	
Calculated Orifice Diameter	0.045	
Maximum discharge	6.318	
Head for high early discharge	2.040	
High Early Discharge	6.169	98%
Mean Discharge	6.243	
Average Discharge per Hectare	68.076	
Final Site Storage Ratio	532	
Site Storage Volume	48.82	
Volume Provided	53.06	109%

Checked By: Robert Eltobbagi
 Date Checked: 15-May-23

REVISED ORIFICE CALCULATIONS

PSD for site	6.109
Flow Rate Through Stormfilter Cartridge	4.400
Discharge Via Orifice	1.709
Maximum Head to Orifice Centre	2.140
Calculated Orifice Diameter	0.023

MINIMUM ORIFICE DIAMETER = 25mm

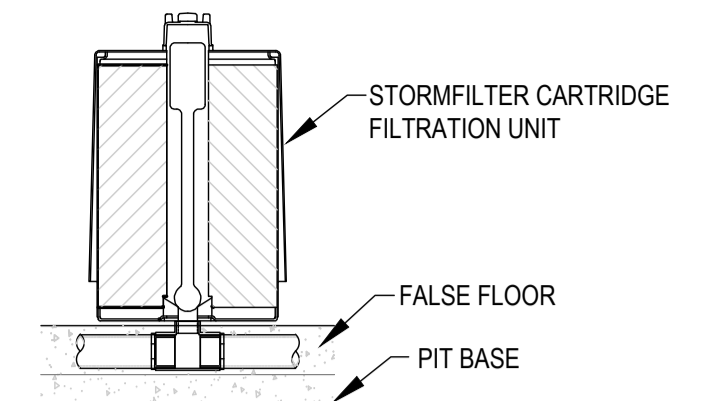


WSUD CATCHMENT PLAN PLAN

1:100 AT A1
1:200 AT A3

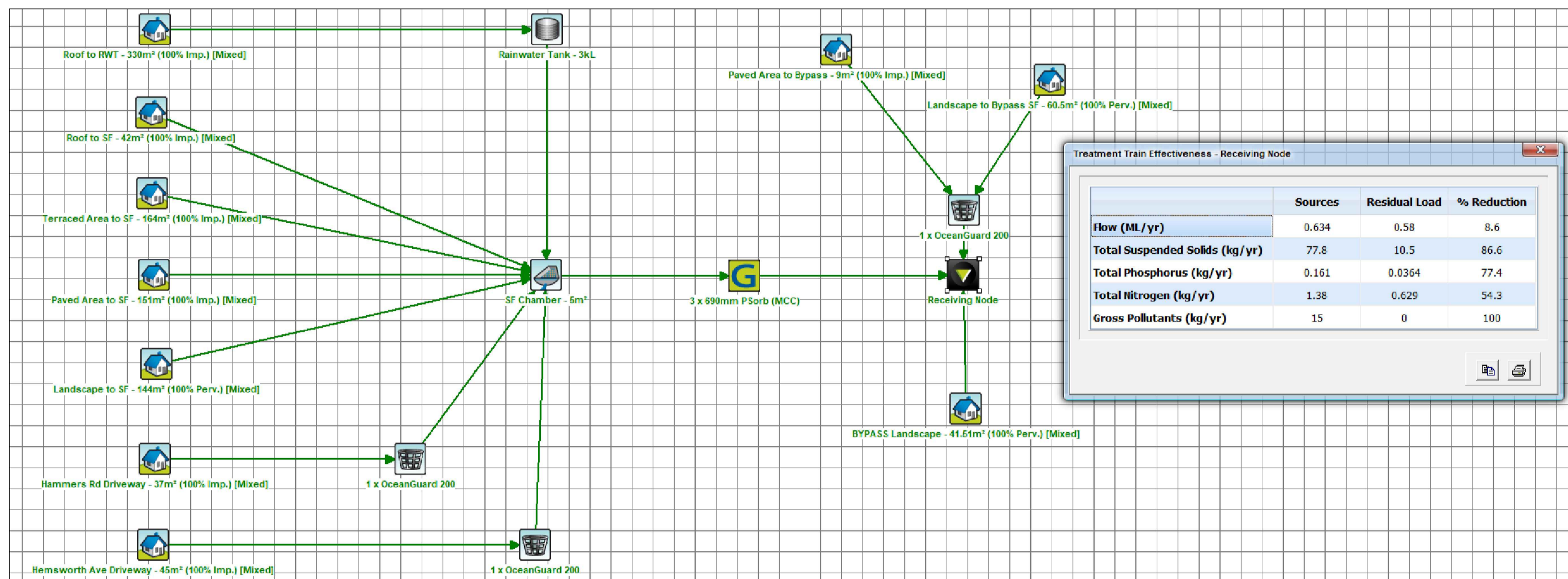
LEGEND SITE AREA: 1024.0m²

- ROOF AREA TO RWT TANK = 363.0m²
- ROOF AREA TO STORMFILTER TANK = 7.2m²
- PAVED AREA TO STORMFILTER TANK = 313.4m²
- PAVED AREA TO BY-PASS STORMFILTER TANK = 11.6m²
- LANDSCAPE AREA TO STORMFILTER TANK = 177.6m²
- LANDSCAPE AREA TO BY-PASS STORMFILTER TANK = 95.3m²
- DRIVEWAY AREA TO STORMFILTER TANK = 55.9m²



STORMFILTER CARTRIDGE DETAIL
NTS

- GENERAL NOTES**
- THE MINIMUM CLEARANCE DEPENDS ON THE CONFIGURATION (SEE NOTE 2) AND THE LOCAL COUNCIL REQUIREMENTS.
 - CLEARANCE FOR ANY PIT WITHOUT AN INLET PIPE (ONLY USED FOR SURFACE FLOW) CAN BE AS LOW AS 50mm. FOR OTHER PITS, THE RECOMMENDED CLEARANCE SHOULD BE GREATER OR EQUAL TO THE PIPE OVERTURN SO AS NOT TO INHIBIT HYDRAULIC CAPACITY.
 - OCEAN PROTECT PROVIDES TWO FILTRATION BAG TYPES: 200 MICRON BAGS FOR HIGHER WATER QUALITY FILTERING AND A COARSE BAG FOR TARGETING GROSS POLLUTANTS.
 - DRAWINGS NOT TO SCALE.



Treatment Train Effectiveness - Receiving Node

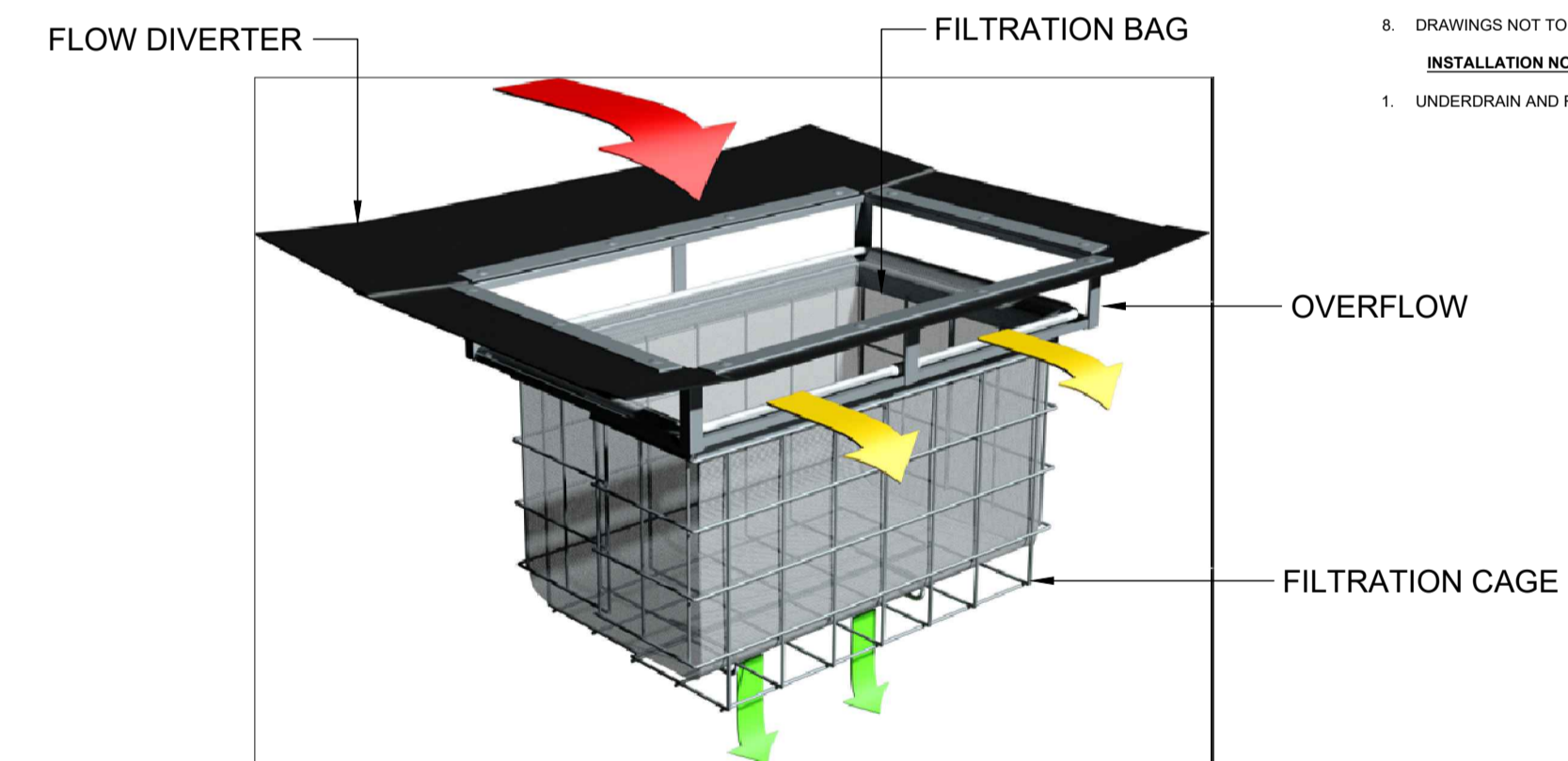
	Sources	Residual Load	% Reduction
Flow (ML/yr)	0.634	0.58	8.6
Total Suspended Solids (kg/yr)	77.8	10.5	86.6
Total Phosphorus (kg/yr)	0.161	0.0364	77.4
Total Nitrogen (kg/yr)	1.38	0.629	54.3
Gross Pollutants (kg/yr)	15	0	100

STORMFILTER DESIGN TABLE

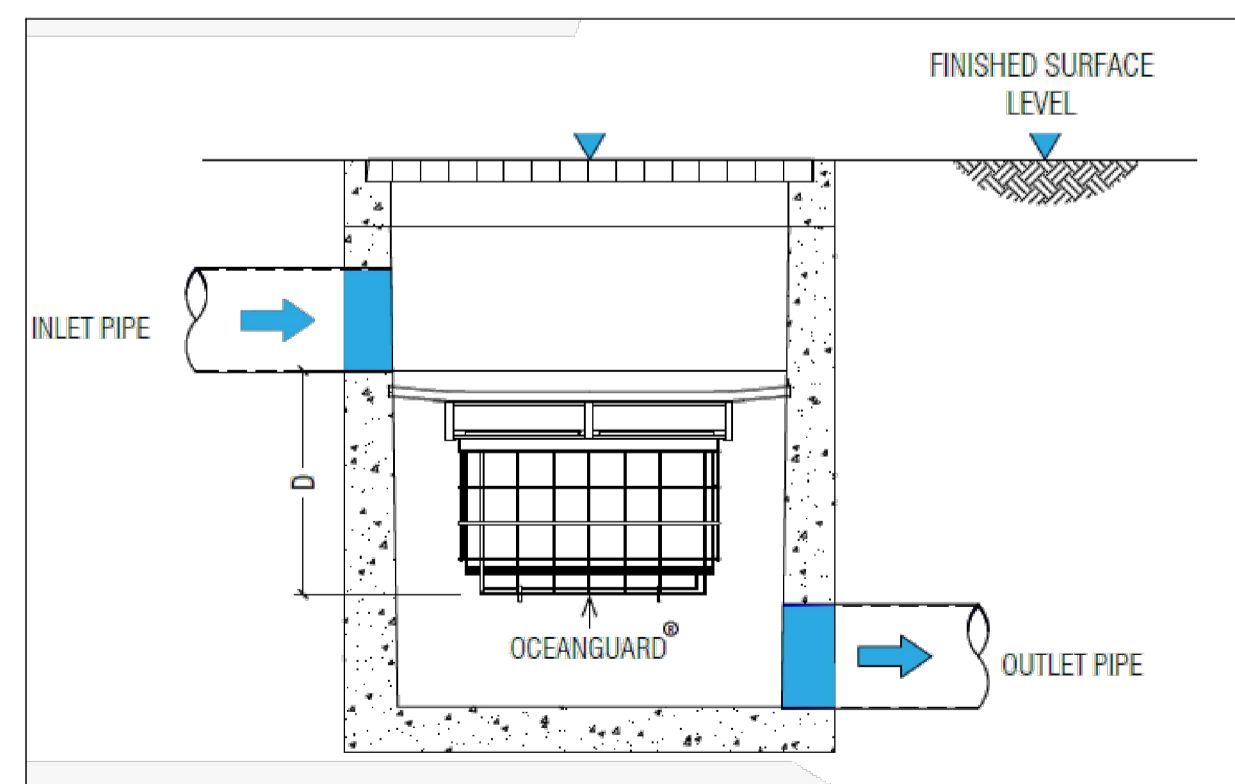
STORMFILTER TREATMENT CAPACITY VARIES BY NUMBER OF FILTER CARTRIDGES INSTALLED. THE STANDARD CONFIGURATION IS SHOWN. ACTUAL CONFIGURATION OF THE SPECIFIED STRUCTURE(S) PER CERTIFYING ENGINEER WILL BE SHOWN ON SUBMITTAL DRAWINGS. FILTER CARTRIDGES SHALL BE MEDIA FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF-CLEANING. RADIAL MEDIA DEPTHS SHALL BE 170mm.

CARTRIDGE NAME / SIPHON HEIGHT (mm)	690	460	310
CARTRIDGE PHYSICAL HEIGHT (mm)	840	600	600
TYPICAL WEIR HEIGHT [H] (mm)	920	690	540
CARTRIDGE FLOW RATE FOR ZPG MEDIA (L/s)	1.6	1.1	0.7
CARTRIDGE FLOW RATE FOR PSORB MEDIA (L/s)	0.9	0.46	0.39

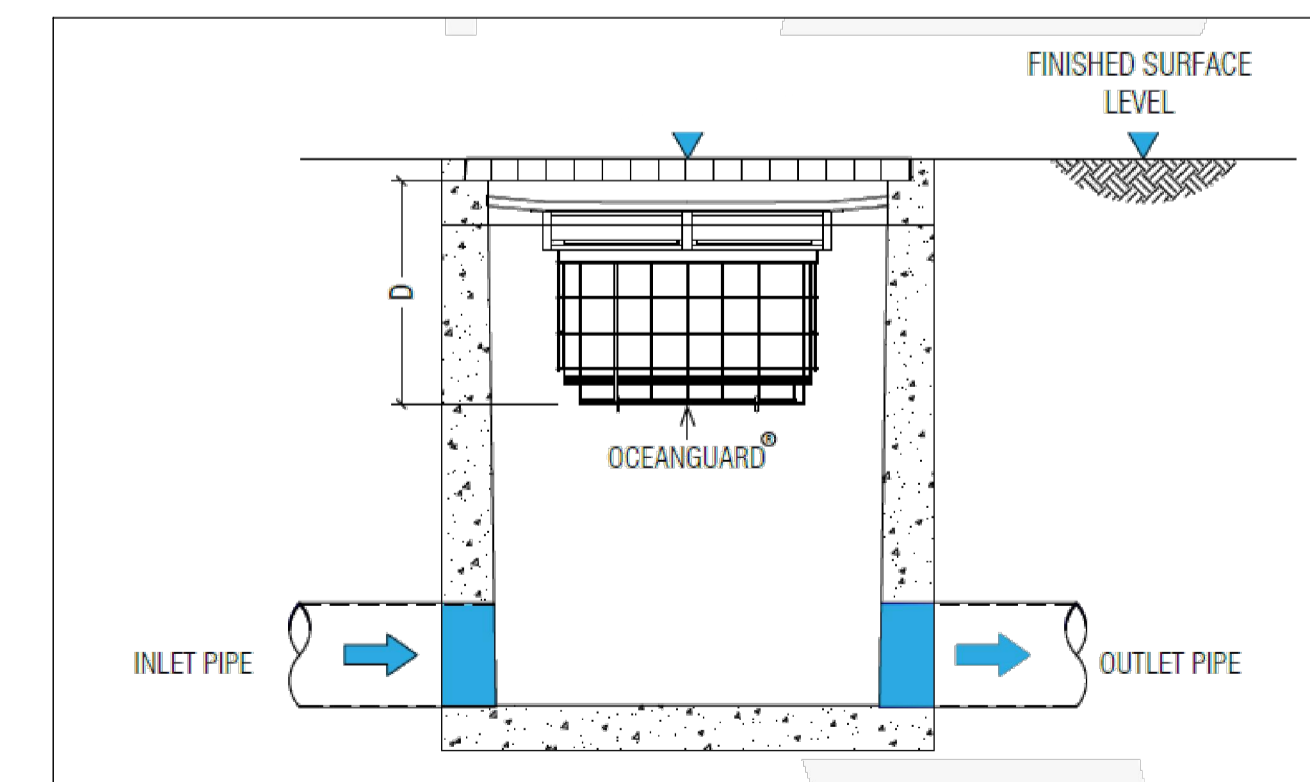
- GENERAL NOTES**
- INLET AND OUTLET PIPES TO BE IN ACCORDANCE WITH APPROVED PLANS.
 - A HIGH FLOW BYPASS ARRANGEMENT OR DISSIPATION STRUCTURE MAY BE REQUIRED TO MINIMISE RE-SUSPENSION OF SOLIDS OR ANY SIGNIFICANT INERTIAL FORCES ON THE CARTRIDGES.
 - ALL WATER QUALITY TREATMENT DEVICES REQUIRE PERIODIC MAINTENANCE. REFER TO OPERATION AND MAINTENANCE MANUAL FOR GUIDELINES AND ACCESS REQUIREMENTS.
 - SITE SPECIFIC PRODUCTION DRAWING WILL BE PROVIDED ON PLACEMENT OF ORDER.
 - THE INVERT LEVEL OF THE INLET PIPE MUST BE GREATER THAN THE RL OF THE FALSE FLOOR WITHIN THE CARTRIDGE CHAMBER.
 - CONCRETE STRUCTURE AND ACCESS COVERS DESIGNED AND PROVIDED BY OTHERS. ACCESS COVERS TO BE A MINIMUM 900 X 900 ABOVE CARTRIDGES. CHAS REGARDING ACCESS COVERS AND TANK ACCESS TO BE ASSESSED BY OTHERS ON SITE.
 - THE STRUCTURE THICKNESSES SHOWN ARE FOR REPRESENTATIONAL PURPOSES.
 - DRAWINGS NOT TO SCALE.
- INSTALLATION NOTES**
- UNDERDRAIN AND FALSE FLOOR INSTALLED BY OCEAN PROTECT.



'OCEANGUARD' DETAIL



'OCEANGUARD' DETAIL 'B'
NTS



'OCEANGUARD' DETAIL 'A'
NTS

DUST CONTROL:
 • NOTE: DURING EXCAVATION, DEMOLITION AND CONSTRUCTION, ADEQUATE MEASURES SHALL BE TAKEN TO PREVENT DUST FROM AFFECTING THE AMENITY OF THE NEIGHBOURHOOD.

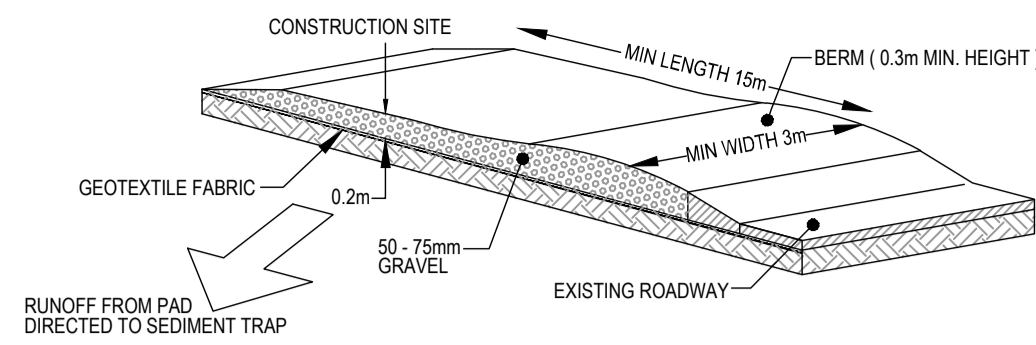
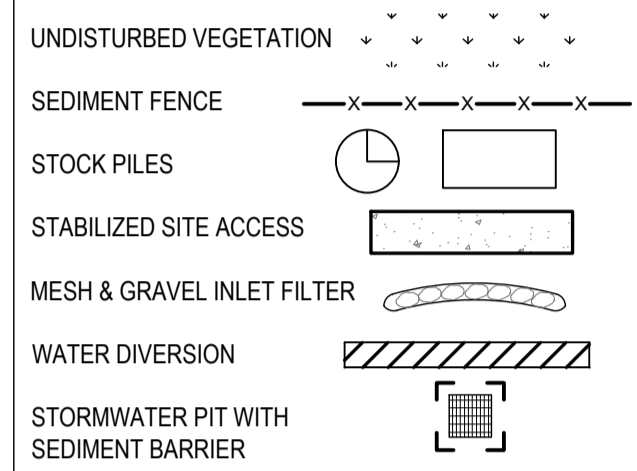
THE FOLLOWING MEASURES MUST BE ADOPTED:

1. PHYSICAL BARRIERS SHALL BE ERECTED AT RIGHT ANGLES TO PREVENT WIND DIRECTION OR SHALL BE PLACED AROUND OR OVER DUST SOURCES TO PREVENT WIND OR ACTIVITY FROM GENERATING DUST.
2. EARTHWORKS AND SCHEDULING ACTIVITIES SHALL BE MANAGED TO COINCIDE WITH THE NEXT STAGE OF DEVELOPMENT TO MINIMISE THE AMOUNT OF TIME THE SITE IS LEFT TO CUT OR EXPOSED.
3. ALL MATERIALS SHALL BE STORED OR STOCKPILED AT THE BEST LOCATIONS.
4. THE GROUND SURFACE SHOULD BE DAMPENED SLIGHTLY TO PREVENT DUST FROM BECOMING AIRBORNE BUT SHOULD NOT BE WET TO THE EXTENT THAT RUN-OFF OCCURS.
5. ALL VEHICLES CARRYING SOIL OR RUBBLE TO OR FROM THE SITE SHALL AT ALL TIMES BE COVERED TO PREVENT THE ESCAPE OF DUST.
6. ALL EQUIPMENT WHEELS SHALL BE WASHED BEFORE EXISTING THE SITE USING MANUAL OR AUTOMATED SPRAYERS AND DRIVE - THROUGH WASHING BAYS.
7. GATES SHALL BE CLOSED BETWEEN VEHICLE MOVEMENTS SHALL BE FITTED WITH SHADE CLOTH.
8. CLEANING OF FOOTPATHS AND ROADWAYS SHALL CARRIED OUT DAILY.
9. ALL BUILDERS REFUSE, SPOIL AND/OR MATERIAL UNSUITABLE FOR USE IN LANDSCAPE AREAS SHALL BE REMOVED FROM SITE ON COMPLETION OF THE BUILDING WORKS.

NOTES:

1. ALL EROSION AND SEDIMENT CONTROL MEASURES TO BE INSPECTED AND MAINTAINED DAILY BY SITE MANAGER IN ACCORDANCE WITH COUNCIL REQUIREMENTS.
2. ALL STOCKPILES TO BE CLEAR FROM DRAINS, GUTTERS AND FOOTPATHS.
3. DRAINAGE IS TO BE CONNECTED TO STORMWATER SYSTEM AS SOON AS POSSIBLE.
4. ROADS AND FOOTPATH TO BE SWEEP DAILY AS REQUIRED BY COUNCIL.
5. IF YOU DO NOT COMPLY WITH COUNCIL REQUIREMENTS & DOCUMENTATION, YOU MAY BE LIABLE TO PROSECUTION FROM GOVERNMENT AUTHORITIES.

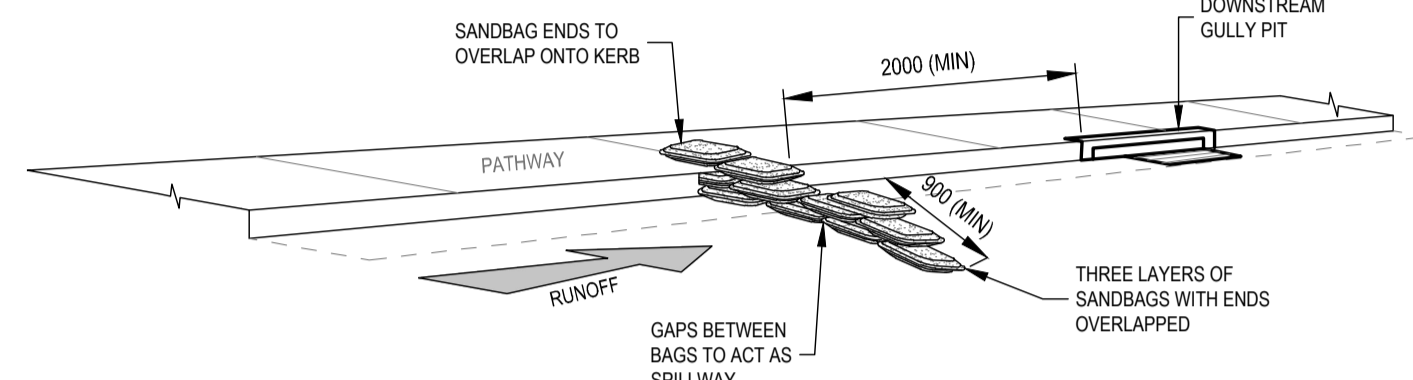
LEGEND:



STABILIZED SITE ACCESS

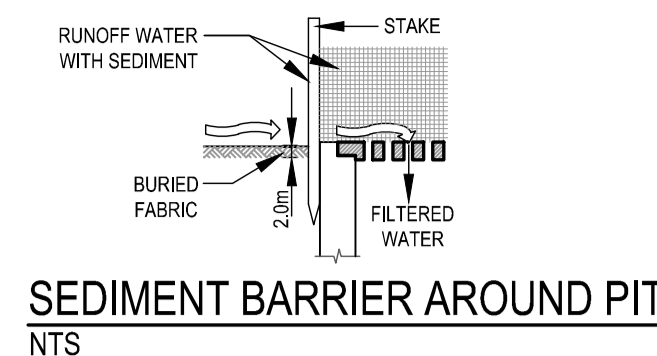
NTS

- CONSTRUCTION NOTES:**
1. STRIP THE TOPSOIL, LEVEL THE SITE AND COMPACT THE SUBGRADE
 2. COVER THE AREA WITH NEEDLE-PUNCHED GEOTEXTILE
 3. CONSTRUCT A 200mm THICK PAD OVER THE GEOTEXTILE USING ROAD BASED OR 30mm AGGREGATE
 4. ENSURE THE STRUCTURE IS AT LEAST 15m LONG OR TO BUILD ALIGNMENT AND AT LEAST 3 METRES WIDE
 5. WHERE A SEDIMENT FENCE JOINS ONTO THE STABILIZED ACCESS, CONSTRUCT A HUMP IN THE STABILIZED ACCESS TO DIVERT WATER TO THE SEDIMENT FENCE.



SANDBAG - KERB SEDIMENT TRAP

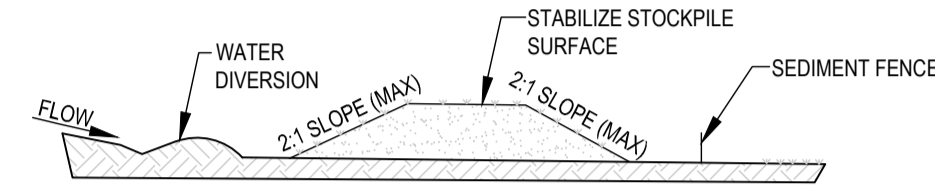
NTS



SEDIMENT BARRIER AROUND PIT

NTS

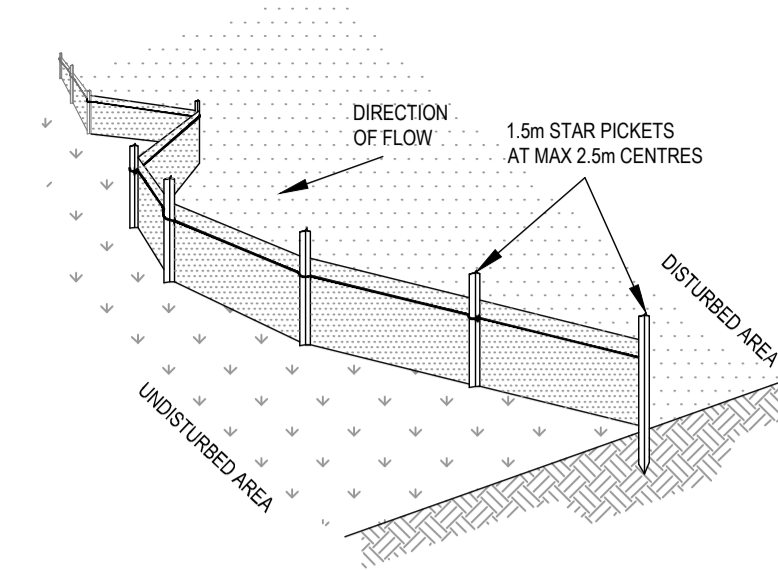
- CONSTRUCTION NOTES:**
1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
 2. FOLLOW STRAW FILTER AND SEDIMENT FENCE FOR INSTALLATION PROCEDURES FOR THE STRAW BALES OR GEOTEXTILE. REDUCE THE PICKET SPACING TO 1 METRE CENTRES.
 3. IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING.
 4. DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.



STOCKPILE

NTS

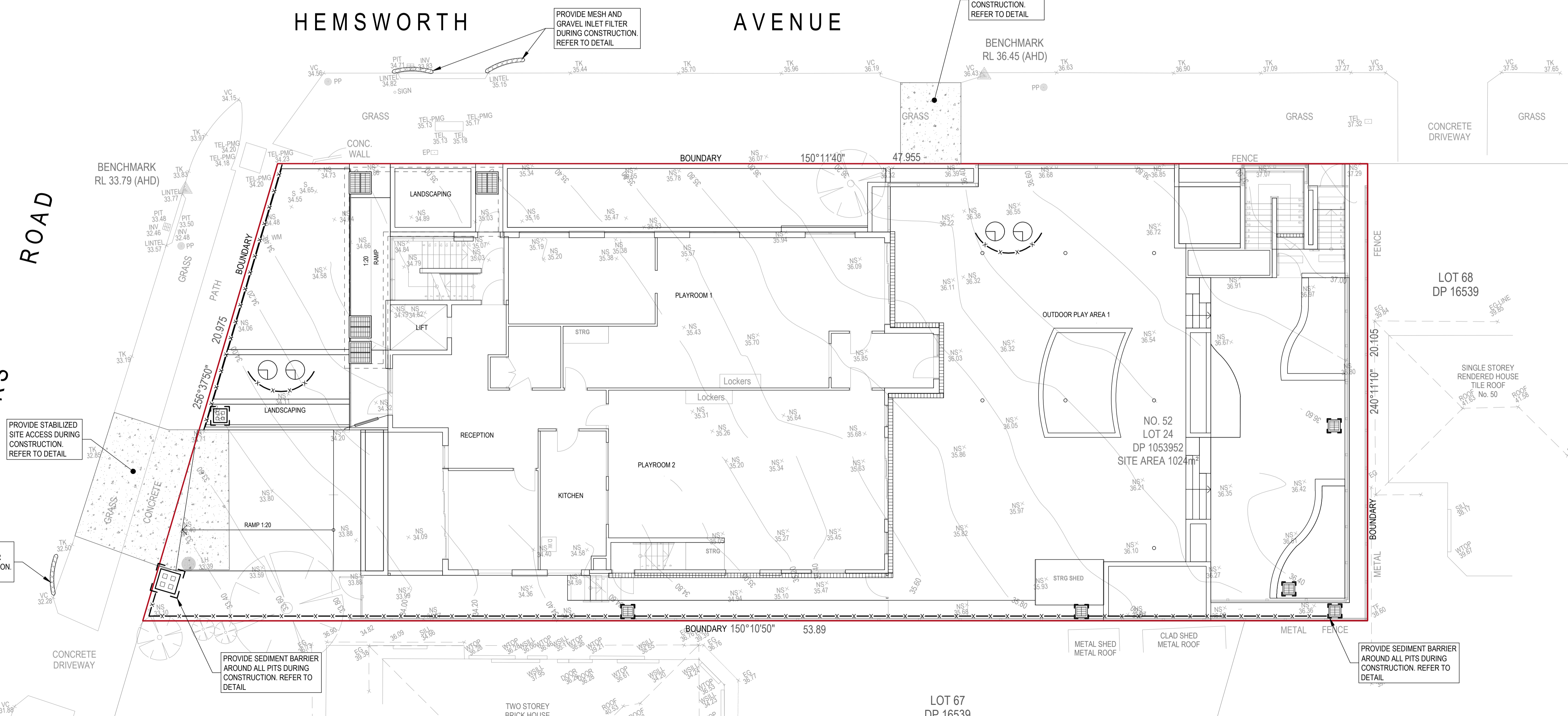
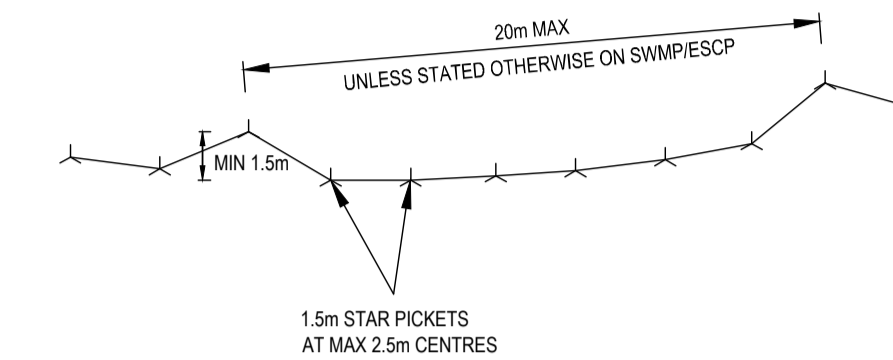
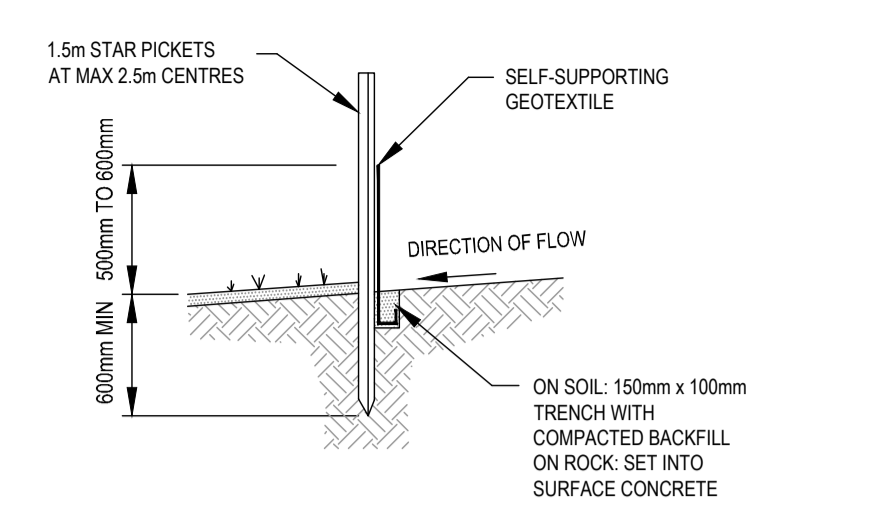
- NOTE:**
1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METERS FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARDOUS AREAS.
 2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
 3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METERS IN HEIGHT.
 4. WHERE THEY ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, STABILIZE FOLLOWING THE APPROVED ESCP OR SWMP TO REDUCE THE C-FACTOR TO LESS THAN 0.10.
 5. CONSTRUCT EARTH BANKS (LOW FLOW) ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES 1 TO 2 METERS ON THE DOWNSLOPE.



SEDIMENT FENCE DETAIL

NTS

- CONSTRUCTION NOTES:**
1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENTS AREA OF ANY ONE SECTION. THE CATCHMENTS AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10 YEAR EVENT.
 2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
 3. DRIVE 1.5m LONG STAR PICKETS INTO GROUND AT 2.5m INTERVALS (MAX) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
 4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
 5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH 150mm OVERLAP. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.



<p>QUANTUM ENGINEERS Suite 1A, Level 2, 2 Howard Street, Eastwood NSW 2122 02 9807 7850 0076@quantumengineers.com.au quantumengineers.com.au</p>	<p>GENERAL NOTES</p> <p>ALL DIMENSIONS SHOWN IN DRAWINGS ARE TO BE CONFIRMED ON SITE BEFORE COMMENCEMENT OF WORKS. DO NOT SCALE OFF DRAWINGS. DRAWING TO BE READ IN CONJUNCTION WITH ARCHITECTS PLANS. ALL EXISTING CONDITIONS AND UTILITIES ARE APPROXIMATE ONLY TO BE VERIFIED ON-SITE BY BUILDER. ALL WORK IS TO BE UNDERTAKEN IN ACCORDANCE WITH: ALL RELEVANT COMMONWEALTH, STATE AND LOCAL ACTS & REGULATIONS. ALL CURRENT AUSTRALIAN STANDARDS. ALL LOCAL COUNCIL REGULATIONS AS WELL AS ALL LEP & LIP ASSOCIATED. COPYRIGHT WORKS/TOWN PLANNING IS THE COPYRIGHT OF QUANTUM ENGINEERS. COPYING OR USING THIS DRAWING IN WHOLE OR PART WITHOUT WRITTEN CONSENT IS PROHIBITED.</p>	<p>APPROVED BY</p> <p>ROBERT ELTOBAGGI BE(CIVIL) ME(AUS) CP(ENG) MEM(102020) RP(ENG)S(40) APEC Engineer (NSW/ACT)</p>	<p>CLIENT</p> <p>NORTHMEAD PTY LTD</p>	<p>ARCHITECT</p> <p>DESIGN CORP ARCHITECTS</p>	<p>DRAWING TITLE</p> <p>SEDIMENT CONTROL PLAN & DETAILS</p> <p>PROPOSED CHILD CARE CENTRE</p> <p>Lot 23, 52 HAMMERS ROAD, NORTHMEAD</p>	<p>APPROX TRUE NORTH</p>	<table border="1"> <thead> <tr> <th>REVISION</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>25.01.2023</td> <td>PRELIMINARY ISSUE</td> </tr> <tr> <td>B</td> <td>03.02.2023</td> <td>PRELIMINARY ISSUE</td> </tr> <tr> <td>C</td> <td>18.05.2023</td> <td>PRELIMINARY ISSUE</td> </tr> <tr> <td>D</td> <td>29.05.2023</td> <td>ISSUED FOR DA</td> </tr> </tbody> </table>	REVISION	DATE	DESCRIPTION	A	25.01.2023	PRELIMINARY ISSUE	B	03.02.2023	PRELIMINARY ISSUE	C	18.05.2023	PRELIMINARY ISSUE	D	29.05.2023	ISSUED FOR DA	<p>DESIGNED BY</p> <p>A.KUKJEL A.KUKJEL J.FISHER J.FISHER</p>	<p>ISSUED FOR DA</p>	<table border="1"> <thead> <tr> <th>CHECKED BY</th> <th>No. IN SET</th> <th>JOB NUMBER</th> </tr> </thead> <tbody> <tr> <td>R.ELTOBAGGI</td> <td>7</td> <td>220534-SW</td> </tr> </tbody> </table>	CHECKED BY	No. IN SET	JOB NUMBER	R.ELTOBAGGI	7	220534-SW	<table border="1"> <thead> <tr> <th>SCALE - SIZE</th> <th>REVISION</th> <th>DRAWING No.</th> </tr> </thead> <tbody> <tr> <td>AS NOTED - A1</td> <td>D</td> <td>D7</td> </tr> </tbody> </table>	SCALE - SIZE	REVISION	DRAWING No.	AS NOTED - A1	D	D7
	REVISION	DATE	DESCRIPTION																																			
A	25.01.2023	PRELIMINARY ISSUE																																				
B	03.02.2023	PRELIMINARY ISSUE																																				
C	18.05.2023	PRELIMINARY ISSUE																																				
D	29.05.2023	ISSUED FOR DA																																				
CHECKED BY	No. IN SET	JOB NUMBER																																				
R.ELTOBAGGI	7	220534-SW																																				
SCALE - SIZE	REVISION	DRAWING No.																																				
AS NOTED - A1	D	D7																																				

