Waste Management Plan

West End Mazda Dealership

574 – 584 Church Street, Parramatta, NSW

Prepared for
West End Mazda
3 Ferris Street, North Parramatta, NSW 2151

Report reference
WE Mazda WMP R1

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1. Background, Objectives and Review

WPS Advisory (WPS) was engaged by West End Mazda (Client) to prepare a Waste Management Plan (WMP) for the proposed development of an automotive dealership and service centre (the Development) at 574 – 584 Church Street, Parramatta, NSW.

The objectives of this WMP are to:

- Identify potential waste and recyclables likely to be generated from demolition work, construction work and on-going operation of the Development.
- Provide advice on how such waste and recyclables should be handled, stored, processed and disposed of, in accordance with Council requirements and better practice waste minimisation principles.

This WMP comprises three broad sections:

- Background information, legal framework and waste minimisation targets: Page 1.
- Demolition and construction waste management: Page 7.
- Operational waste management: Page 18.

This WMP is not a static document and should be reviewed and updated

- when changes occur in managing waste and recyclables at the Development
- to remain consistent with changes to waste regulations and guidelines, or
- to take advantage of new methods, technologies, and innovations in waste and recyclables management.

2. About the Development

The Development comprises a new three-storey building to used as an automotive dealership and service centre, and replaces the existing automotive service centres currently operating on the site.

The new building will provide automotive servicing facilities on the lower ground floor, a dealership on the ground floor and administration spaces on the first floor. The ground floor will be a split level, with the dealership and showroom on the ground floor and car storage and demonstrator car parking on the upper ground floor. The Development will include a new laneway connecting Ferris and Barney Streets and provide vehicular access to the north-eastern side of the building.

The Development will be within the local government area of City of Parramatta Council (Council), be bounded by Church Street, Ferris Street and Barney Street (**Figure 1**) and comprise an amalgamation of the following properties:

- Lot 1 of DP 128020
- Lot 181 of DP 997700
- Lot F of DP 363707
- Lot 1 of DP 981422
- Lot 100 of DP 1008491
- Lot B of DP 330106
- Lot 1 of DP 128037
- Lot 1 of DP 800654
- Lot 11 of DP 583409

Figure 1 Location of Development.

3. Legislative Context

Management of waste and recyclables at the Development is subject to NSW State Government legislation and local government requirements:

- **Environmental Planning and Assessment Act 1979**

  Requires planning authorities to consider impacts to the environment and the community when assessing proposals for new developments or changes to land-use.

- **Protection of the Environment Operations (POEO) Act 1997 and Amendment Act 2011**

  Administered by the NSW Environment Protection Authority (EPA) for setting environmental standards, goals, protocols and guidelines. Via these Acts, the EPA sets regulatory requirements for disposal of wastes generated during demolition, construction and operational phases of a development, and a system for licensing waste transport and disposal.

- **Protection of the Environment Operations (Waste) Regulations 2014**

  Contains regulations relating to the waste levy, waste tracking and management requirements for certain waste types, consumer packaging recycling and payment schemes for local government.

- **Product Stewardship Act 2011**

  Sets out mandatory, co-regulatory and voluntary management measures for government, industry and the community to minimise the environmental impact of manufactured, consumed and disposed products.

- **Waste Avoidance and Resource Recovery Act 2001**

  Encourages efficient use of resources, minimising consumption of natural resources, encouraging waste avoidance and reuse and recycling of waste, and ensuring industry and the community share responsibility in managing waste and efficiently funding waste management planning, programs and service delivery.

- **NSW EPA (2014) Waste Classification Guidelines**

  Provides the process for characterising and classifying waste so they are managed in accordance with the *POEO Act 1997*.

- **NSW EPA Resource Recovery Orders and Resource Recovery Exemptions**

  Orders and resource recovery exemptions issued under the *POEO (Waste) Regulation 2014* for a range of wastes that may be beneficially re-used instead of being landfilled.

  - Resource recovery orders present conditions which generators and processors of waste must meet to supply the waste material for beneficial re-use.
  - Resource recovery exemptions contain the conditions which consumers must meet to use waste for beneficial re-use.

- **NSW EPA (2014) NSW Waste Avoidance and Resource Recovery Strategy 2014-21**

  Presents recycling targets and a framework to reduce waste generation, increase recycling, divert more waste from landfill, better manage problem wastes, reduce litter and reduce illegal dumping.

- **Western Sydney Regional Organisation of Councils Western Sydney Waste Avoidance and Resource Recovery Strategy (2017 – 2021)**

  Council is a member of the Western Sydney Regional Organisation of Councils (WSROC). The *Western Sydney Waste Avoidance and Resource Recovery Strategy* presents seven themes promoting waste avoidance, reduction and recycling:

  - Avoid and reduce waste generation.
  - Increase recycling.
  - Divert more waste from landfill.
  - Manage problem wastes better.
  - Reduce litter.
  - Reduce illegal dumping.
  - Improve regional governance.

- Council's **Parramatta Development Control Plan 2011**

  Council's *Parramatta Development Control Plan 2011* (DCP) provides best practice standards for developments within the Council local government area, supports provisions of Council's *Parramatta Local Environment Plan 2011* and was prepared in accordance with Section 79C of the *Environmental Planning and Assessment Act 1979*.

Among other considerations, Section 3.3.7 and Appendix A8.1 of the DCP set out Council's expectations with respect to waste management:

- Reduce the quantity of waste and encourage the recycling of waste generated during demolition and construction work for the new development.
- Ensure that the disposal of waste generated by a building's occupants over its lifetime is managed appropriately, efficiently and provides for maximum recovery, recycle or reuse.
- Ensure that waste storage facilities are located appropriately and do not impact negatively on the streetscape.
- Ensure that waste can be effectively collected and managed.
- Assist in achieving Federal and State Government waste minimisation and resource recovery (landfill diversion) targets.
- Minimise the overall environmental impacts of waste, in line with the principles of Ecologically Sustainable Development.

4. Waste Hierarchy and Waste Minimisation Targets

4.1 Waste hierarchy

Advice in this WMP is aligned with the waste hierarchy (**Figure 2**). The waste hierarchy comprises the currently possible approaches to waste management, ranked from most to least preferred, in the context of promoting waste minimisation, sustainability and environmental stewardship. Avoidance/reduction, re-use, recycling and disposal (via landfilling) of waste are the most feasible approaches in Australia at this time.

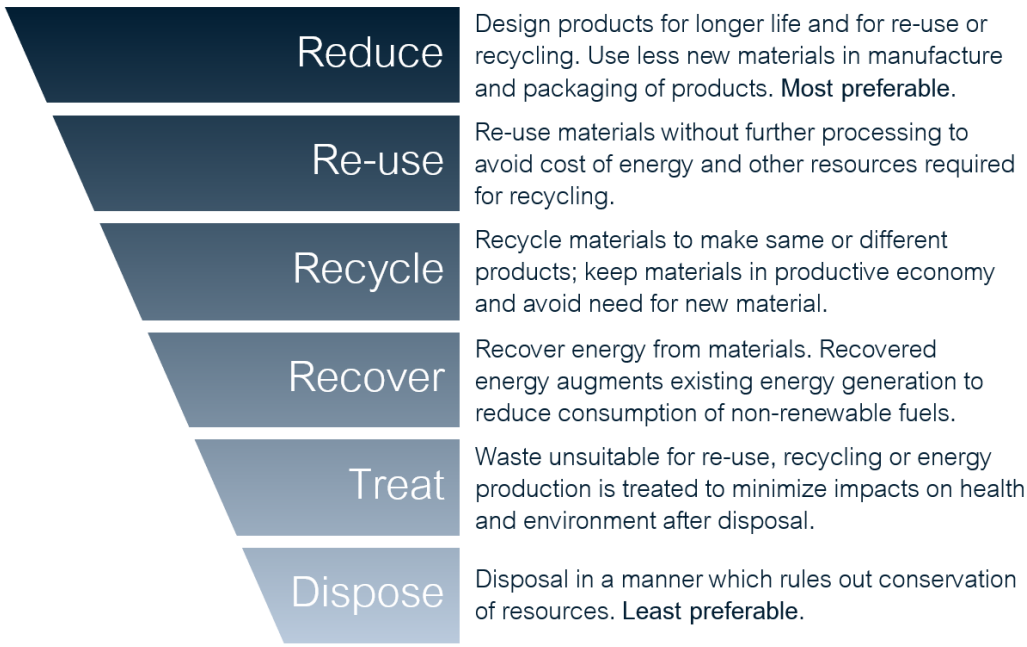

Figure 2 Waste hierarchy for waste minimisation and management.

4.2 Waste minimisation and sustainability targets

Advice in this WMP is intended to assist Council achieve the targets set by the *NSW Waste Avoidance and Resource Recovery Strategy 2014-21* for recycling and landfill diversion.

The targets are, by 2021-22:

- 80% of demolition and construction waste recycled.
- 70% of municipal, commercial and industrial waste recycled.
- 75% of all waste diverted from landfill.

5. Demolition and Construction Waste Management

5.1 Demolition waste types and quantities

5.1.1 Overview of demolition work

Demolition work at the site will involve removal of existing brick buildings, concrete slabs, asphalt hardstands and underground services. The buildings requiring demolition appear to be relatively modern, with most being of concrete or red/brown brick construction, and are presently being used as automotive service centres, workshops and warehousing.

5.1.2 Types and quantities of demolition waste

In the absence of information from a demolition quantities survey, the main anticipated types and estimated quantities of waste generated from demolition work (**Table 1**) were derived from the following considerations:

- Building dimensions and materials as indicated on site survey plans of existing buildings and built features.
- Demolition waste generation rates for "Office Block" from Appendix A of The Hills Shire Council's *The Hills Development Control Plan 2012*.

Table 1 Demolition waste types and estimated quantities.

Type	**Quantity** (tonnes)	**Disposal Method**		
		Re-use on site	Recycle	Landfill
Concrete	27,920	0 %	100 %	0 %
Bricks	5,450	0 %	100 %	0 %
Timber & plasterboard	460	0 %	50 %	50 %
Steel	110	0 %	75 %	25 %
Road-base	620	0 %	100 %	0 %
			Estimated diverted from landfill: 99 %	

Notes for Table 1
Estimated quantities rounded up to the nearest ten tonnes.
Estimated quantities for concrete and road-base assume an average thickness of 100 mm for concrete and 50 mm for underlying road-base.
Precise information on types and quantities of demolition waste will require a Demolition Bill of Quantities prepared by an appropriately qualified and experienced quantities surveyor.

5.2 Construction waste types and quantities

5.2.1 Overview of construction work

Main construction activities at the site will involve:

- Bulk excavation and filling to achieve subgrade design levels. The Development has been designed to achieve, among other aims, a balanced cut and fill which allows all excavation spoil to be re-used on site as engineered fill.
- Installation of underground services and building slab.
- Construction of new dealership and service centre building. The new building is anticipated to be of pre-cast concrete, with reinforced concrete floors and metal roofing.
- Construction of laneway servicing the north-eastern side of the new building. The laneway is anticipated to be of asphalt, concrete or permeable paving construction.

5.2.2 Types and quantities of construction waste

In the absence of information from a construction quantities survey and cut-fill calculations, the main anticipated types and estimated quantities of waste generated from construction work (**Table 2**) were derived from the following considerations:

- Dimensions of built features as indicated on architectural drawings of the Development.
- Construction waste generation rates for "Factory" and "Office Block" from Appendix A of The Hills Shire Council's *The Hills Development Control Plan 2012*, modified according to the anticipated types of building material. Rates for "Factory" were used for under-cover parking and service bay areas; rates for "Office" were used for office and dealership areas.
- 'Rule of thumb' estimates for construction waste as per Appendix B of DECC NSW's *Model Waste Not DCP Chapter 2008*, as recommended in Section 3.3.7 of the DCP.

Table 2 Construction waste types and estimated quantities.

Type	Quantity (tonnes)	Disposal Method		
		Re-use on site	Recycle	Landfill
Timber	17	0 %	100 %	0 %
Concrete	123	0 %	100 %	0 %
Plasterboard	33	0 %	100 %	0 %
Sand	145	0 %	100 %	0 %
Metal	21	0 %	100 %	0 %
Road-base	19	0 %	100 %	0 %
			Estimated diverted from landfill: 100 %	
Excavation spoil	unknown	100 %	0 %	0 %

Notes for Table 2
Estimated quantities rounded to the nearest tonne.
Estimated Total Recovered percentage applies to wastes where tonnages have been estimated.
Estimated quantities for concrete and road-base assume an average thickness of 100 mm for foundation slab and 50 mm of bedding.
Excavation spoil is anticipated to comprise fill material, natural soil material and bedrock. It assumed, for the purposes of this WMP, up to 100 % of the excavation spoil is suitable for re-use on site.
Precise information on types and quantities of construction waste will require a Construction Bill of Quantities and cut-fill calculation prepared by an appropriately qualified and experienced quantities surveyor.

5.3 Management and disposal of demolition and construction waste

Recommendations for managing and disposing of demolition and construction waste are presented in **Table 3**. While **Table 3** provides overall guidance for managing and disposing of waste, it remains the responsibility of the contractor to ensure all waste is managed appropriately, assessed or classified in accordance with NSW EPA waste requirements and disposed of at EPA licensed facilities.

Waste contractors and off-site waste management facilities that may receive waste and recyclables from demolition and construction work for the Development are presented in **Table 4**.

Table 3 Management and disposal of demolition and construction waste.

Waste type and (*classification*)	**Management and preferred disposal method**	**Notes**
Excavation spoil (*to be assessed*)	Store separate from other waste. Excavation spoil should be re-used on site as engineered fill. Should off-site disposal of spoil be required, the following options should be considered: • Classify natural soils and bedrock, prior to excavation, as virgin excavated natural material (VENM) for beneficial re-use off-site. There are strict requirements for VENM classification: see Notes column. • Where VENM classification is not feasible, assess spoil for suitability for beneficial re-use off-site in accordance with the NSW EPA The excavated natural material order 2014. • Otherwise, classify in accordance with the NSW EPA Waste Classification Guidelines for off-site disposal to landfill.	Assessments for re-use and waste classification can be carried out concurrently and prior to excavation. NSW EPA requirements for VENM classification: www.epa.nsw.gov.au/your-environment/waste/classifying-waste/virgin-excavated-natural-material See **Table 4** for disposal contractors / facilities.
Timber (*General solid waste non-putrescible*)	Treated and untreated timber should be stored on site separate from each other and from other wastes. Treated timber should be resold or disposed to an EPA licensed landfill facility. Untreated timber should be resold (if in good condition) or recycled at a timber recycling facility.	See **Table 4** for disposal contractors / facilities.
Concrete, sand, road base (*General solid waste non-putrescible*)	Store together, and separate from other waste. Dispose by reprocessing into construction products at EPA licensed 'construction and demolition waste' recycling facilities.	See **Table 4** for disposal contractors / facilities.
Plasterboard (*General solid waste non-putrescible*)	Store separate from other waste. Dispose by recycling at plasterboard recycling facilities.	See **Table 4** for disposal contractors / facilities.

Waste type and (*classification*)	**Management and preferred disposal method**	**Notes**
Metal (*General solid waste non-putrescible*)	Store separate from other waste. Dispose by recycling at scrap metals recycling facilities.	See **Table 4** for disposal contractors / facilities.
Mixed containers, paper, cardboard (*General solid waste non-putrescible*)	Stored and collected separately, or together as comingled recycling. Store separated from residual waste.	Eligible glass, aluminium and plastic bottles can be recycled via the NSW Return and Earn container deposit scheme. More information on this scheme: www.epa.nsw.gov.au/your-environment/recycling-and-reuse/return-and-earn
Soft plastics (*General solid waste non-putrescible*)	Separate from other recyclables and recycle via a specialist soft plastics recycling service.	More information: www.redcycle.net.au businessrecycling.com.au
Residual waste (*General solid waste non-putrescible*)	Store separated from other wastes on site and dispose to landfill.	See **Table 4** for disposal contractors / facilities.

Waste type and (*classification*)	**Management and preferred disposal method**	**Notes**
Contaminated or hazardous waste	Contaminated or hazardous materials, if any, to be removed by appropriately licensed contractors and transported to facilities licensed to accept such materials for treatment and/or disposal in accordance with NSW EPA regulations. Where unexpected materials are encountered which are, or are suspected of being, contaminated or hazardous: • Work in the vicinity of the suspect material is to stop immediately and access to the area restricted. • Site manager is to contact a qualified hazardous materials assessor and/or environmental consultant (as necessary) to arrange an assessment of the suspect material and advise on subsequent management procedures. • The contractor's Unexpected Finds Protocol be implemented. It is anticipated that management of contaminated or hazardous waste will also be subject to relevant requirements as set out in the contractor's Environmental Management Plan.	NSW EPA information concerning hazardous and liquid waste: www.epa.nsw.gov.au/your-environment/waste/industrial-waste/hazardous-and-liquid-wastes

Waste type and (*classification*)	**Management and preferred disposal method**	**Notes**
Liquid waste	Liquid waste, including waste water from dewatering of excavations, is not to be arbitrarily discharged to the sewerage or stormwater. Liquid waste is to be • collected by a suitably licensed liquid waste contractor for off-site disposal, or • discharged to sewer in accordance with a Liquid Trade Waste Agreement with Council or Sydney Water.	Trade waste: ablis.business.gov.au/service/nsw/approval-to-dispose-of-trade-waste-into-a-public-sewer-city-of-parramatta-council/11869 NSW EPA information concerning hazardous and liquid waste: www.epa.nsw.gov.au/your-environment/waste/industrial-waste/hazardous-and-liquid-wastes

Notes for Table 3
Waste classifications, where provided, are based on Steps 1 to 4 of NSW EPA (2014) *Waste Classification Guidelines – Part 1: Classification of waste.*
Unless stated otherwise, waste will be disposed to landfill where the preferred disposal method cannot be implemented.

Table 4 Anticipated demolition and construction waste contractors and off-site waste facilities.

Waste and Recyclables	Contractor	Facility or Head Office Address
Excavation spoil	Cleanaway Erskine Park Landfill	85-87 Quarry Road, Erskine Park, NSW 2759
	SUEZ Ryde Resource Recovery Centre	145 Wicks Road, North Ryde, NSW 2113
	KLF Group	16 Grand Avenue, Camellia, NSW 2142
Concrete, sand and road base	Recycled Building Centre	20 Waterview Street, Putney, NSW 2112
	Concrete Recyclers	14 Thackeray Street, Camellia, NSW 2142
Timber and metal	Recycled Building Centre	20 Waterview Street, Putney, NSW 2112
	All About Batteries and Scrap Metal	172 Golden Valley Drive, Glossodia, NSW 2756
	Veolia	Port Botany Resource Recovery Centre: Military Road, Matraville, NSW 2036
	KLF Group	16 Grand Avenue, Camellia, NSW 2142
Plasterboard	Recycled Building Centre	20 Waterview Street, Putney, NSW 2112
	Regyp	330 Captain Cook Drive, Kurnell, NSW 2231
Containers, paper and cardboard, residual waste	Cleanaway Erskine Park Landfill	85-87 Quarry Road, Erskine Park, NSW 2759
	J. J. Richards & Sons	20 Tucks Road, Seven Hills, NSW 2147
	SUEZ Ryde Resource Recovery Centre	145 Wicks Road, North Ryde, NSW 2113

Notes for Table 4
The information presented does not indicate or imply commercial agreements, endorsements or sponsorships.

5.4 Demolition and construction waste storage, communication and monitoring

5.4.1 Waste bins and storage areas

The site manager should

- provide separate waste bins for recyclable and non-recyclable wastes, as well as for separating among different types of waste as described above
- ensure waste bins are not filled beyond recommended levels, and
- maintain waste storage areas to minimise hazards to human health and the environment, and prevent uncontrolled off-site migration of waste.

Anticipated locations for waste storage are shown in **Figure 3** and are based on their being

- away from major public roads and thoroughfares
- reasonably accessible to site workers, but minimising the need for site workers to cross vehicle traffic routes
- readily accessible by waste servicing vehicles, and
- near the site exit, so as to minimise the distance a loaded waste vehicle is required to travel within the site.

5.4.2 Signage

Signs are to be posted in all waste storage and waste collection areas. All waste containers are to be clearly labelled to identify

- contact details of the contractor's site manager,
- the materials stored in the container, and
- the waste contractor servicing the container, including contact details.

Signs approved by EPA for labelling of waste containers are available online:

- www.epa.nsw.gov.au/your-environment/recycling-and-reuse/business-government-recycling/standard-recycling-signs

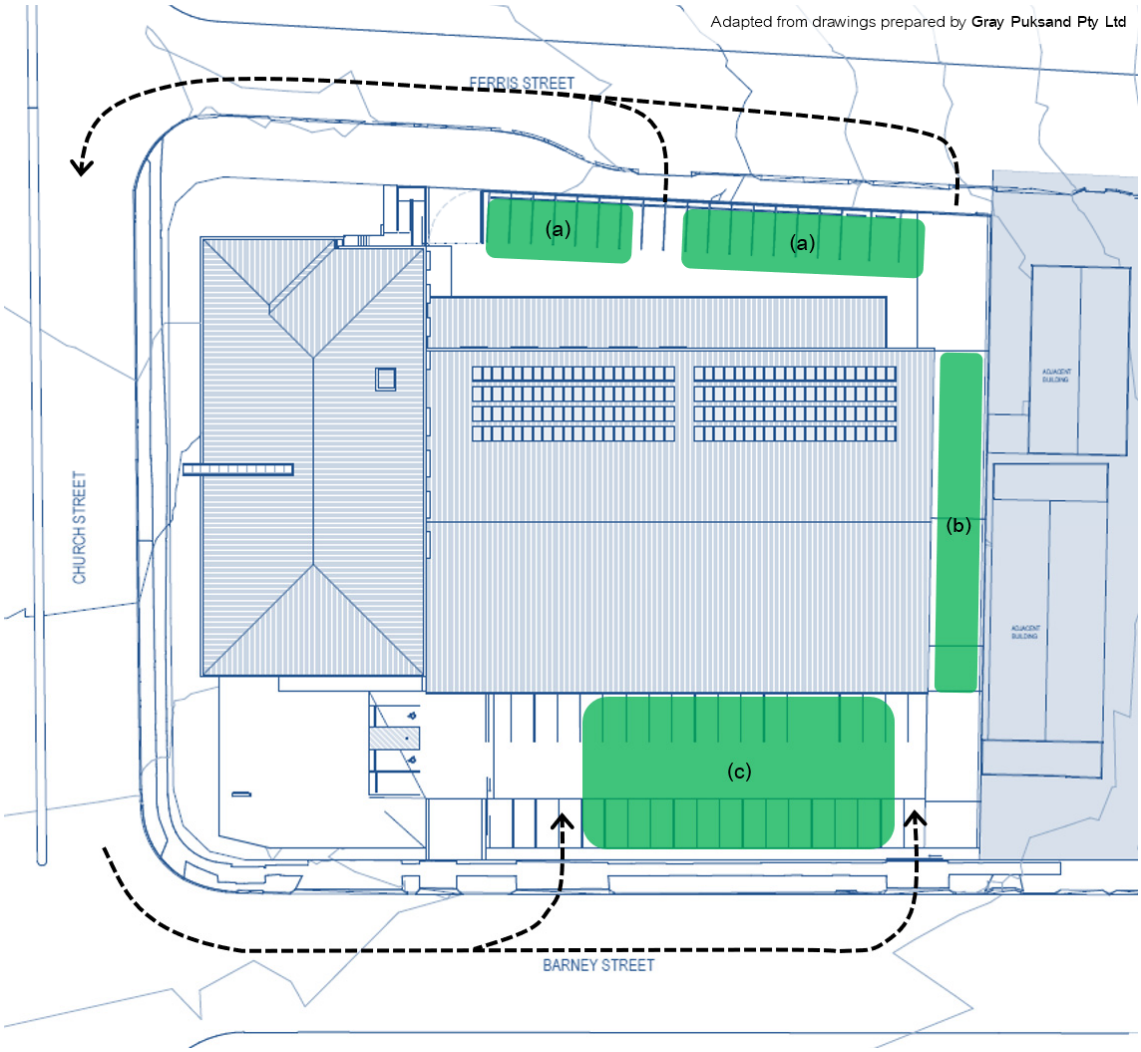

Figure 3 Potential locations, in green, for on-site storage of waste during construction of laneway (a) and main building (b & c). Location (c) will be used to store excavated spoil prior to use as engineered fill. Locations based on anticipated construction vehicle traffic patterns (dashed black lines).

5.4.3 Site inductions

Waste management measures and procedures are to be included in the site induction for all personnel working on the site. The induction is to be of a standard sufficient to ensure all site personnel are aware of provisions, arrangements and their own responsibilities for managing waste and recycling at the site.

5.4.4 Waste disposal documentation

The contractor is to maintain waste disposal records which are available to Council or EPA officers on request. The following details should be recorded as a minimum:

- Descriptions and estimated quantities of waste removed from site.
- Details of the facility receiving the waste.
- Records of receipt of waste issued by the waste facility (e.g. tip dockets, receipts).
- Waste classification documentation.

5.4.5 Monitoring and reporting

Daily inspections of waste storage areas should be done by site personnel to identify and rectify any issues with waste management at the site. A written record of these inspections, which will include observations made and the results of any remedial actions taken, is to be retained by the site manager as part of the site environmental management documentation.

During demolition and construction works, it is the responsibility of the site manager to:

- Implement this WMP with respect to demolition and construction waste.
- Ensure waste materials of different streams are appropriately sorted, separated and stored.
- Ensure waste storage areas are tidy, well-maintained and do not present a hazard to human health or to the environment.
- Ensure site staff and visitors are aware of waste and recycling arrangements.
- Arrange for waste classification assessments.
- Ensure hazardous / contaminated materials are appropriately managed and disposed of.
- Engage appropriate waste servicing contractors.
- Review and approve off-site waste disposal facilities.
- Maintain a record of waste disposal documentation.

6. Operational Waste Management

6.1 Overview of operational waste management

WPS Advisory visited the Client's existing automotive service centre at the Development site on 14 September 2020 to review the types and quantities of operational waste. Based on advice from the manager of the service centre, WPS Advisory understands the types and quantities of operational waste from the proposed Development will be comparable with those produced by current operations of the service centre.

Operational waste and recyclables at the Development will be managed as follows:

- Source-separation:
  - General waste will be source-separated into comingled recyclables (paper, cardboard and containers) and residual waste.
  - Waste from vehicle service bays, comprising mainly used oil filters, used batteries, waste oil, coolant and worn-out tyres, will be stored separately from each other, from the comingled recyclables and from the residual waste.
  - Residual waste, comingled recyclables, oil filters and batteries will be stored in dedicated 1,100 L mobile bins between collections. The 1,100 L bins will be held in a bin store, located on the Lower Ground floor of the Development (**Figure 4**).
  - Waste oil and coolant will be stored in a 2,000 L capacity on-site tank, permanently located in an oil store on the Lower Ground floor of the Development.
  - Worn-out tyres will be temporary stored on a used-tyre rack, located on the Lower Ground floor of the Development.
  - Water from wash-down bays will be collected in an on-site detention system.
- Waste servicing and transfer:
  - 1,100 L mobile bins will be serviced by private waste and recycling contractors via the laneway, with the waste servicing vehicle (WSV) receiving bins from a bin servicing area along the north-eastern side of the building.
  - 1,100 L mobile bins will be transferred between the bin store and servicing area via a Goods Lift (**Figure 4**).

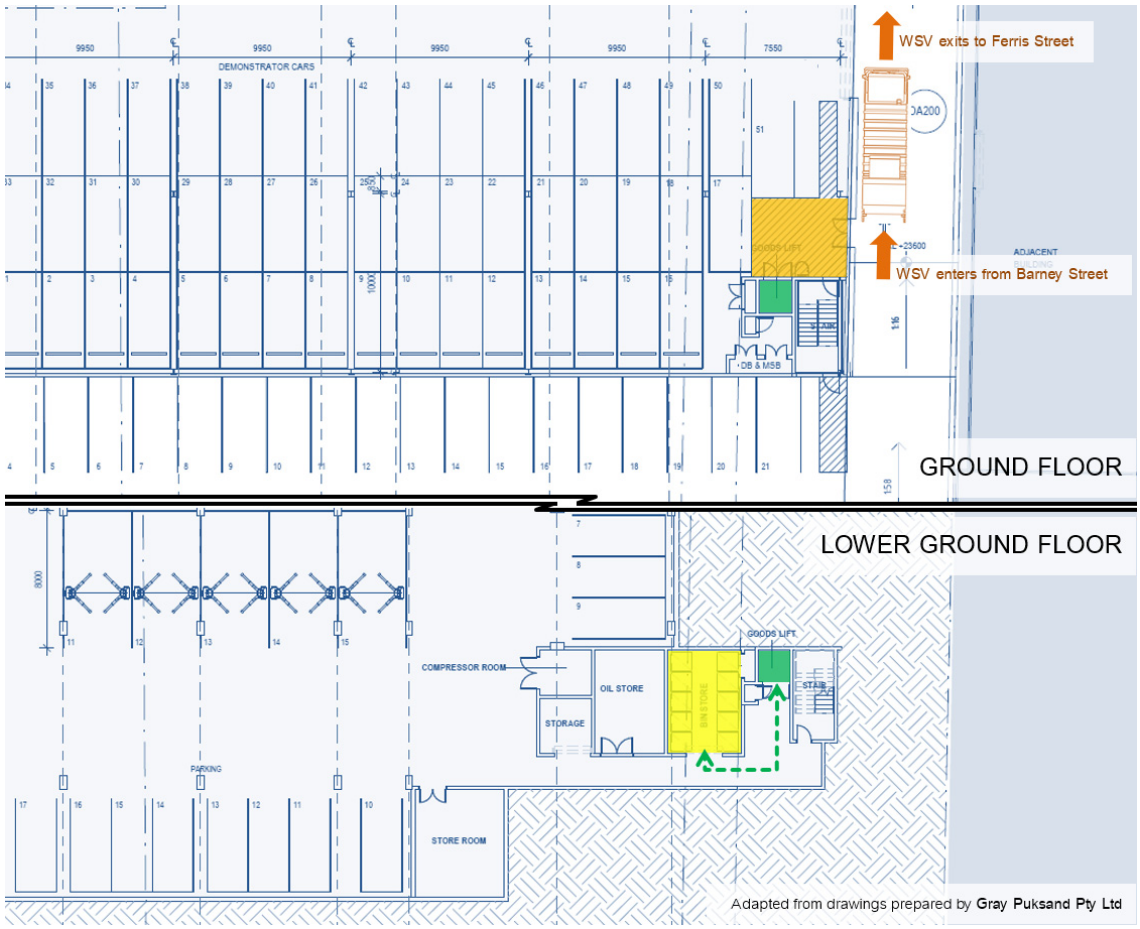

Figure 4 Location of bin store (yellow), bin servicing area (brown) and Goods Lift (green). Bins are moved (dashed green line) between the bin store and servicing area using the goods lift. WSVs enter laneway from Barney Street, service bins directly from the bin servicing area and exit to Ferris Street..

- The waste oil tank will be emptied on a weekly basis by a private, licensed liquid waste disposal contractor by means of a vacuum truck temporarily stopped in the laneway. The waste oil tank will be equipped with outlets to enable direct connection to the vacuum truck.
- Tyres will be collected directly from the used-tyre rack via a vehicle-towed trailer.
- Waste water in the on-site detention system is to be removed as needed by a private, licensed liquid waste disposal contractor or treated prior to discharge to meet Sydney Water or Council Trade Waste Agreement conditions.

6.2 Types and quantities of operational waste

The main types, quantities and management of waste anticipated from on-going operation of the Development are presented in **Table 5**. The information presented in **Table 5** is based on:

- Types and quantities of operational waste and recyclables observed during the site visit on 14 September 2020.
- Advice from the service centre manager that operational waste and recyclables for the Development will be consistent with current types and quantities.
- Residual waste and comingled recyclables serviced twice per week.
- Oil filters and batteries serviced approximately every ten weeks and every four weeks, respectively.
- Waste oil and coolant removed from the tank every week.
- Worn tyres collected on an as-needed basis.
- Waste water collected or discharged on an as-required basis.

Table 5 Types, quantities and management of operational waste.

Waste Type	**Quantity** (equivalent L/week)	**Management Provisions**
Residual	6,000	Three 1,100 L mobile bins in bin store, serviced twice weekly.
Comingled recyclables	6,000	Three 1,100 L mobile bins in bin store, serviced twice weekly.
Oil filters	320	Three 1,100 L mobile bins in bin store, serviced approximately every ten weeks.
Car batteries	265	One 1,100 L mobile bin in bin store, serviced monthly.
Tyres	varies	Used-tyre rack, then collected on request.
Oil & coolant	1,500 to 2,000	Stored in waste oil tank. Tank emptied weekly.
Waste water	varies	Store in on-site detention tank/s, to be emptied as required.

6.3 Bin storage

6.3.1 Features

The bin store will be constructed in accordance with the Council of Australian Governments *National Construction Code 2019* and equipped with the following features:

- Lockable roller door which can be opened from the inside as well as from the outside.
- Bump rails.
- Smooth and impermeable finishing on ceiling, walls and floor.
- Floor graded towards a Sydney Water approved floor drain.
- Water tap, or be reachable by a hose connected to a tap.
- Adequate artificial lighting and adequate mechanical, ventilation.
- Safety signs as appropriate and complying with Australian Standard *AS1319 Safety signs for occupational environments*.
- Signs showing how to correctly separate waste and recyclables into the provided bins and the contact details for the Facility Manager.

6.3.2 Size

The 6 m x 4 m bin store provides a floor area of 24 m^2. This is sufficient to accommodate the ten 1.24 m x 1.07 m 1,100 L bins and a 1.2 m wide aisle within the room (**Figure 5**).

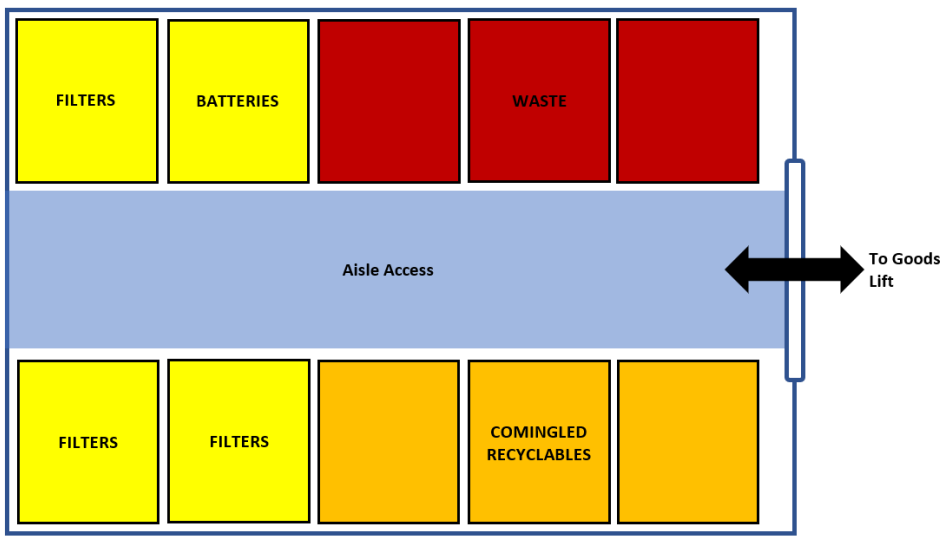

Figure 5 Anticipated arrangement of 1,100 L bins in the bin store on the Lower Ground floor. Blue shading shows 1.2 m wide aisle for access to bins.

6.4 Waste servicing

Bins will be serviced via a WSV temporarily stopped in the laneway between Ferris and Barney Streets. Mobile bins requiring servicing will be moved between the bin store to the bin servicing area via the Goods Lift (**Figure 4**). The path-of-travel for mobile bins between the bin store and WSV is on concrete, has no gradients steeper than 3 % and contains no steps or kerbs. Because the path between the bin store and goods lift is approximately 10 m long, bins will be moved with the aid of an electric bin mover.

6.5 Liquid waste

Liquid waste is anticipated to comprise waste oil, coolants and waste water from wash bays. For practical purposes, it is anticipated that waste oil, coolants and waste water will be collected by the same bunded areas constructed for the service and wash bays and held in the waste oil tank on the Lower Ground floor.

No liquid waste is permitted to be arbitrarily discharged to sewerage or stormwater.

All liquid waste must be

- collected from the Development by a licensed liquid waste disposal contractor, or
- treated and discharged to sewer in accordance with a Liquid Trade Waste Agreement with Council or Sydney Water.

6.6 Operational waste servicing contractors

Based on discussions with the Client, the contractors shown in **Table 6** are likely to continue servicing operational waste and recyclables from the Development.

6.7 Signage and communication

6.7.1 Colours and signage

Australian Standards *AS 4123.7-2006 (R2017) Mobile waste containers Part 7: Colours, markings, and designation requirements* provides designated colours for mobile bins depending on the type of waste a bin is to receive.

Colours anticipated to apply for bins at the Development are:

- Yellow: Recyclables, including containers, filters and batteries.
- Red: Residual waste.

Table 6 Anticipated operational waste servicing contractors

Waste Type	Contractor	Facility or Head Office Address
Residual	J. J. Richards & Sons	20 Tucks Road, Seven Hills, NSW 2147
Comingled recyclables	J. J. Richards & Sons	20 Tucks Road, Seven Hills, NSW 2147
Oil filters	J. J. Richards & Sons	20 Tucks Road, Seven Hills, NSW 2147
Car batteries	All About Batteries and Scrap Metal	172 Golden Valley Drive, Glossodia, NSW 2756
Tyres	Bridgestone North Parramatta	cnr Church Street and Barney Street, North Parramatta, NSW 2151 (current address: will be relocating due to Development)
Oil & coolant	Southern Waste Oil Collection	11 Kurrajong Road, North St Marys, NSW 2760
Waste water	Southern Waste Oil Collection	11 Kurrajong Road, North St Marys, NSW 2760

Notes for Table 6
The information presented does not indicate or imply commercial agreements, endorsements or sponsorships.

As there are several streams of recyclables, clearly-visible labels are to be affixed to each bin to designate one of the following waste or recyclables types:

- Yellow bin: Comingled recycling (paper, cardboard and containers).
- Yellow bin: Oil filters.
- Yellow bin: Batteries.
- Red bin: Residual waste.

The bin store is to be clearly signed, display safety signage in accordance with Australian Standard *AS1319 Safety signs for occupational environments*, have posted instructions on how to correctly separate wastes into the bins provided and present the contact details for the Facility Manager.

6.7.2 Communication

Waste management initiatives and management measures are to be clearly communicated by the Facility Manager to staff, contractors and visitors via on-going communications such as site inductions (for staff and contractors), notices on noticeboards, signage and labelling.

Details for a contact person for information about recycling and/or other resource recovery services provided by the Development should be displayed in communal areas.

Communications are to

- be consistent in their message, and
- be understood effectively by a linguistically diverse audience.

6.8 Monitoring and reporting

Regular and on-going monitoring of waste management provisions and arrangements are to be undertaken by the Facility Manager.

A review of the waste management provisions and arrangements at the Development should be done:

- Weekly, within the first two months of operation, to assess if waste management provisions are sufficient and to identify any issues to be addressed.
- Every six months, to ensure waste and recyclables continue to be managed appropriately.

Any deficiencies identified in the waste management provisions or arrangements are to be rectified by the Facility Manager as soon as practicable.

To assist Council in measuring progress against waste minimisation targets, the Facility Manager is encouraged to retain a record of waste disposal, including types of waste generated, approximate quantities of waste (e.g. weights and/or numbers of bins), disposal methods and dates for waste generation and disposal.

6.9 Responsibilities

Responsibilities for managing operational waste and recyclables at the Development are outlined in **Table 7**.

Table 7 Responsibilities for management of operational waste and recyclables.

Responsible Person/s	Responsibilities
Facility Manager	Implement WMP and follow operational waste and recyclables management procedures as per this WMP.
	Review and update WMP when appropriate.
	Arrange for bins to be serviced.
	Arrange for collection of tyres, waste oil and waste water when required.
	Organise for monitoring and maintenance of mobile bins, bin store and oil tank.
	Ensure all waste and recyclables management provisions are operating adequately, are in good working order and serviced as per manufacturer's requirements.
	Address feedback received about waste and recycling management at the Development.
Facility Staff	Follow operational waste and recyclables management procedures as directed by the Facility Manager and as per this WMP.
	Transfer residual waste and comingled recycling from receptacles to 1,100 L mobile bins in bin store.
	Transfer bins between Lower Ground floor bin store and Ground floor bin servicing area.
	Monitor and maintain mobile bins, bin store and waste oil tank.
	Report any issues related to waste and recyclables management to the Facility Manager.
Contractors	Follow operational waste and recyclables management procedures as directed by the Facility Manager.
	Report any issues related to waste and recyclables management to the Facility Manager.
Visitors	Follow operational waste and recyclables management procedures as directed by the Facility Manager.
	Report any issues related to waste and recyclables management to the Facility Manager.

7. About this WMP

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