

Construction Environmental Management Plan

Resource Recovery and Recycling Facility

SSD-7401-MOD-1

24 Davis Road Wetherill Park, NSW

Borg Property Pty Ltd

27 July 2021

Document Control

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1	27/07/2021	Brad Deane Environmental Services Coordinator	Updated following MOD1 of SSD 7401	Shaun Smith Principal Environmental Planner	

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1 Introduction

1.1 Background

1.1.1 Project Approval

This Construction Environmental Management Plan (CEMP), including sub-plans, has been prepared by Borg Property Pty Ltd (Borg) on behalf of Bettergrow Pty Ltd (Bettergrow) for the construction phase of the Resource Recovery and Recycling Facility (the facility) located at 24 Davis Road Wetherill Park, NSW (the site).

Consent for State Significant Development 7401 (SSD-7401) was initially granted by the then NSW Department of Planning and Environment (DPE) on 22 December 2017. Consent for Modification 1 (Mod1) of SSD-7401 (SSD-7401-Mod-1) was approved by the NSW Department of Planning, Industry and Environment (DPIE) on 21 April 2021.

Approval for SSD-7401 permitted the construction and operation of a resource recovery facility to process up to 160,000 tonnes per year of waste comprising of:

- 60,000 tonnes per annum (tpa) of hydro-excavation, drill muds and fluids.
- 70,000 tpa of food and garden organics.
- 30,000 tpa of packaged and bulk food and liquids.

In addition, the approval for SSD-7401 allowed for the operation of a landscaping material supplies facility for the storage and sale of up to 40,000 tpa of landscaping supplies.

Approval of SSD-7401-Mod-1 allowed for the increase of processing capacity to 350,000 tpa in conjunction with the following:

- Introduction of additional waste streams.
- Demolition of existing structures.
- Construction of a partially enclosed shed.
- Increase of permitted hours of operation to 24 hours a day, 7 days per week.

See Section 2.2 for further information relating to the final facility design approved under SSD-7401-Mod-1.

1.1.2 Project Description

The main waste types and materials to be accepted at the site will include:

- Hydro-excavation and drill muds;
- Garden organics, commingled food and garden organics, and food waste; and
- Bulk landscape materials and growing media.

The recovered resources will be transferred either directly to end use markets or to other facilities or processors for value adding to achieve maximum value for the beneficial use. The facility is also proposed to act as a distribution centre for the consolidation and distribution of bulk landscape supplies including barks, soils, sands and aggregates.

The operation has been designed to utilise existing site infrastructure and buildings where possible to minimise encroachment on the remaining vegetation on the property, noting that the increased development throughput approved under SSD-7401-Mod-1 requires the replacement of some existing site infrastructure to contain site machinery and reduce environmental impacts during operation of the facility. The existing benching of the site has allowed the operations to be separated into individual process areas and assist with the management of clean and dirty water catchments.

It is proposed the undertake construction at the site in two stages. **Stage 1** will include drill mud processing area while **Stage 2** will include the bulk landscape area and the organics processing area.

1.2 CEMP Scope

The purpose of this CEMP is to provide a structured approach to the management of environmental issues during construction and refurbishment of site infrastructure. Implementing this CEMP will ensure that construction activities meet relevant statutory and regulatory requirements. This CEMP has also been prepared to ensure compliance with the requirements of SSD-7401 Environmental Impact Statement (EIS), SSD-7401-Mod-1 Statement of Environmental Effects (SEE), and other relevant project approvals.

In particular, this CEMP:

- describes the construction works, including activities to be undertaken;
- describes the environmental management related roles and responsibilities of personnel;
- provides specific mechanisms for compliance with applicable policies, approvals, licences, permits, and legislation;
- states objectives and targets for issues related to the environmental performance of the proposed activity; and
- provides specific mitigation measures and controls that can be applied on-site to avoid or minimise environmental impacts.

This CEMP addresses the management and mitigation requirements of both the SSD-7401 and SSD-7401-Mod-1 approval instruments, and thus builds upon the CEMP prepared by RPS Australia East Pty Ltd (RPS) in February 2019 for SSD-7401.

1.2.1 Conditions of Compliance

Compliance with conditions of approval for Stage 1 construction activities are provided in **Table 1**.

Table 1 Conditions Compliance under SSD -7401 and SSD-7401-Mod-1.

Approval Instrument	Condition Number	Condition / Commitment	Section(s) in CEMP
SSD -7401	B14	Prior to the commencement of construction, the Applicant must prepare a Construction and Demolition Waste Management Plan (CDWMP) for the Development to the satisfaction of the Secretary. The plan must form part of the CEMP required by Condition C1. The CDWMP must: (a) detail the quantities of each waste type generated during construction and the proposed reuse, recycling and disposal locations; and (b) be implemented for the duration of construction works.	▪ Section 6.1 ▪ Appendix H
SSD -7401	B40	Prior to the commencement of construction, the Applicant must prepare a Flood Emergency Response Plan (FERP) for the Development in consultation with Council and to the satisfaction of the Secretary. The Plan must form part of the CEMP and OEMP required by Conditions C1 and C4 and must: (c) be prepared by a suitably qualified and experienced person(s); (d) include details of: (i) the flood emergency responses for both construction and operation phases of the Development; (ii) predicted flood levels; (iii) flood warning time and flood notification; (iv) assembly points and evacuation routes; (v) evacuation and refuge protocols; and (vi) awareness training for employees and contractors.	▪ Section 6.2 ▪ Appendix I
SSD -7401	B52	Prior to the commencement of construction, the Applicant must install and maintain suitable erosion and sediment control measures on-site, in accordance with the relevant requirements in the latest version of the <i>Managing Urban Stormwater: Soils and Construction Guideline</i> and the Erosion and Sediment Control Plan included in the CEMP required by Condition C1.	▪ Section 6.3 ▪ Appendix J
SSD -7401	B71	Prior to the commencement of construction, the Applicant must prepare an unexpected finds protocol to ensure that potentially contaminated material is appropriately managed. The protocol must form part of the CEMP required by Condition C1 and must ensure any material identified as contaminated must be disposed off-site, with the disposal location and results of testing submitted to the Secretary, prior to its removal from the site.	▪ Section 6.4 ▪ Appendix K

Approval Instrument	Condition Number	Condition / Commitment	Section(s) in CEMP
SSD -7401	B72	Prior to the commencement of construction, the Applicant must prepare a Building Material Schedule and Landscape Plan for the Development to the satisfaction of the Secretary. The Schedule and Plan must: (a) be prepared in consultation with Council; (b) be consistent with the Fairfield City Council Development Control Plan 2013; (c) include a schedule of the building materials and colours to be used on the facades; and (d) include details on landscaping including species and number of plants to be planted and the watering regime. Only native species are to be used for landscaping purposes, and species must be selected which benefit the Cumberland Plain Woodland species present on the site.	▪ Section 6.5 ▪ Appendix L ▪ Section 6.6 ▪ Appendix M
SSD -7401	C1	The Applicant must prepare a Construction Environmental Management Plan (CEMP) to the satisfaction of the Secretary. The CEMP must: (a) be approved by the Secretary prior to the commencement of construction; (b) outline all environmental management practices and procedures to be followed during construction works associated with the Development; (c) explain the controls that would be implemented to minimise dust emissions during construction of the Development; (d) describe all activities to be undertaken on the site during construction of the Development, including a clear indication of construction stages; (e) detail how the environmental performance of the construction works will be monitored, and what actions will be taken to address identified adverse environmental impacts; (f) describe the roles and responsibilities for all relevant employees involved in construction works associated with the Development; and (a) include the management plans required under Condition C2 of this consent.	▪ This document

Approval Instrument	Condition Number	Condition / Commitment	Section(s) in CEMP
SSD -7401	C2	As part of the CEMP required under Condition C1 of this consent, the Applicant must include the following: (b) Construction and Demolition Waste Management Plan (Condition B14); (c) Flood Emergency Response Plan (see Condition B40); (d) Erosion and Sediment Control Plan (see Condition B52); (e) Unexpected Finds Protocol (see Condition B71); and (f) Building Material Schedule and Landscape Plan (see Condition B72).	▪ Section 6.1, App H ▪ Section 6.2, App I ▪ Section 6.3, App J ▪ Section 6.4, App K ▪ Section 6.5 & 6.6 App L & M
SSD-7401-Mod-1	B57 (mod)	Hours of construction and demolition will be as follows: (a) Monday to Friday 7am to 6pm. (b) Saturday 8am to 1pm. (c) No works permitted on Sunday*. *While not directly stated, it is assumed that no works (besides emergency works) will occur on a public holiday.	▪ Section 2.6.

1.3 Consultation

Consultation with stakeholders is particularly important during the project design, construction, and operational phases. Significant consultation was undertaken with the (now superceded) NSW Department of Planning and Environment (DPE) during the preparation and assessment of the SSD-7401 EIS and CEMP.

Additional consultation has been undertaken with DPIE during the preparation of the SSD-7401-Mod-1 SEE and supporting documents. Similarly, consultation has also continued with relevant state and local government agencies during the preparation of this CEMP and aforementioned documents. Consultation with impacted stakeholders will continue during the construction and operational phases of the development as required. **Table 2** below details the consultation undertaken during the preparation of this CEMP.

Table 2: Consultation undertaken to date

Relevant Approval	Stakeholder(s)	Date	Details of Consultation
SSD-7401	DPE	18.12.2018	Meeting to discuss project, CEMP, and staging.
SSD-7401	Fairfield City Council	22.2.2019	Flood Emergency Response Plan sent to Council for feedback
SSD-7401-Mod-1	DPIE	19.9.2019	Meeting with officers from DPIE to discuss proposed modification. Main items on the meeting agenda included discussions towards relevant approval pathway and discussion of key environmental concerns.
SSD-7401-Mod-1	DPIE	7.5.2020	Phone meeting. Additional meeting regarding the proposed modification. DPIE advised that approval pathway advice by a legal entity was required (undertaken and provided in SEE) and that a Request for Secretary's Environmental Assessment Requirements (SEARs) was required.
SSD-7401-Mod-1	DPIE	17.6.2020	SEARs request lodged.
SSD-7401-Mod-1	DPIE	15.7.2020	SEARs received.
SSD-7401-Mod-1	Surrounding businesses	7.8.2020	Letter box drop of Project Factsheet to surrounding businesses
SSD-7401-Mod-1	Sydney Water	2.9.2020	Provision of Project Factsheet. No response received.
SSD-7401-Mod-1	Fairfield City Council	2.9.2020	Provision of Project Factsheet. No response received.
SSD-7401-Mod-1	NSW Fire and Rescue	2.9.2020	Provision of Project Factsheet. No response received.
SSD-7401-Mod-1	DPIE - Natural Resources Access Regulator and DPIE Water	2.9.2020	Provision of Project Factsheet. Acknowledgement of factsheet received.

Relevant Approval	Stakeholder(s)	Date	Details of Consultation
SSD-7401-Mod-1	Transport for NSW	2.9.2020	Provision of Project Factsheet. Acknowledgement of factsheet received.
SSD-7401-Mod-1	NSW Environment Protection Authority	2.9.2020	Provision of Project Factsheet. No response received.
SSD-7401-Mod-1	Fairfield Council (Submission application publication)	29.9.2020 to 13.10.2020	Heavy vehicle and loading bay capacity query.
SSD-7401-Mod-1	NSW EPA (Submission application publication)	29.9.2020 to 13.10.2020	Revisions to Air Quality Impact Statement and advice that the Applicant must ensure the processed waste products identified in the SEE have a lawful reuse pathway in accordance with a resource recovery order and exemption prior to their sale
SSD-7401-Mod-1	Fire and Rescue NSW (Submission application publication)	29.9.2020 to 13.10.2020	Requested an assessment against <i>State Environmental Planning Policy 33 – Hazardous and Offense Development</i> (SEPP 33).
SSD-7401-Mod-1	Transport for NSW. WaterNSW, DPIE Water, DPIE Crown Lands	29.9.2020 to 13.10.2020	No response to DPIE publication of application
SSD-7401-Mod-1	Member of the public	29.9.2020 to 13.10.2020	Objection to SSD 7401 based on air quality.
SSD-7401-Mod-1	Nearby business	29.9.2020 to 13.10.2020	The objection raised concern regarding increased heavy vehicle traffic on Bettergrow RRF Wetherill Park Modification 1 (SSD-7401-Mod-1) Modification Assessment Report 15 Davis Road and the associated safety and dust implications. The objection also raised concerns regarding air quality, ancillary noise and the concentration of waste facilities in the area.
SSD-7401-Mod-1	Bettergrow	17.12.2020	Provided Response to Submissions (RTS) document. Additional concerns raised by Fairfield Council and the NSW EPA following release of RTS.
SSD-7401-Mod-1	Bettergrow	8.2.2021	Bettergrow clarified Fairfield Council query in relation to on-site capacity and site access from RTS.
SSD-7401-Mod-1	Bettergrow	15.2.2021	Bettergrow clarified completed dust modelling scenario. The NSW EPA amended recommended conditions following clarification.
SSD-7401-Mod-1	Bettergrow	1.3.2021	Bettergrow provided a Biodiversity Development Assessment Report for SSD-7401-Mod-1.

1.4 CEMP Distribution

This CEMP will be made available to all personnel and sub-contractors. The document is uncontrolled when printed. One controlled hard copy of the CEMP and supporting documentation will be maintained by Bettergrow throughout the duration of construction.

Uncontrolled copies will be distributed to the following key personnel:

- Site Manager.
- Construction Manager.
- Operations Manager.
- Environmental Representative.

1.5 CEMP Revision

A document review process will be implemented to ensure that environmental documentation, including this CEMP, are updated when there are changes to construction activities across the site or should an incident occur that prompts a document review.

Should the document review process identify any issues or items within the document that need updating, it is the responsibility of the Environmental Representative to prepare the revised documents.

The revised document will then be issued to the Operations Manager for certification of the changes. The Environmental Representative can approve minor changes to the CEMP.

2 Project Description

2.1 Location

The proposed development is located within an industrial precinct at Lot 18 Deposited Plan (DP) 249417, 24 Davis Road, Wetherill Park NSW. The site is approximately 10 kilometres (km) north of Liverpool, 10 km west of Parramatta, and 7 km south of Blacktown. The site covers an area of approximately 20,292 m² and is located within the Fairfield Local Government Area (LGA).

The development is surrounded by existing manufacturing, processing, and heavy industry businesses, with the nearest residential dwellings located approximately 1.5 km to the south-east on Maugham Crescent, off The Horsely Drive.

The development area is rectangular in shape and slopes moderately from the northern boundary down to Davis Road on the southern boundary. Topography of the site varies between 36 m and 48 m Australian Height Datum (AHD) within the site boundary, increasing from south to north.

Significant disturbance of the natural environment within the site has occurred as a result of the previous development and industrial activities. The visual amenity of the development site has been highly modified, however significant vegetation exists at the front of the property creating a natural visual barrier.

The location of the proposed development and its surrounds are shown in **Appendix A**.

2.2 Proposed Development

Table 3 provides a summary of key components under the approved SSD-7401-Mod-1. Staging plans for SSD-7401-Mod-1 are shown in **Appendix B**.

Table 3: Summary of SSD-7401-Mod-1

Element	SSD-7401-Mod-1 Summary
Use	Waste or resource management facility, specifically a resource recovery facility. Landscaping material supplies facility
Processing Capacity	Total of up to 350,000 tpa made up of: 100,000 tpa of hydro-excavation, drill muds and fluids. 70,000 tpa of food and garden organics. 30,000 tpa of packaged and bulk food and liquids. 150,000 tpa of general solid waste, including VENM, ENM, soils, gravels, aggregates, street sweepings, clean timber, asphalt waste, cured concrete, rail ballast, and C&D waste.
Storage / sale of bulk landscape materials	Up to 40,000 tpa stored and sold (but not processed).
Site Area	Site and development footprint measures approximately 2.29 ha in area.
Hours of Operation	24 hours / day during operation.
Receival / Dispatch Area (Lower and Mid-Levels)	Up to four weighbridges, main administration office including staff amenities (relocated to west of site) and car parking.

Element	SSD-7401-Mod-1 Summary
Processing Plant and Equipment and existing site buildings (Lower / Mid-Levels)	Partially enclosed shed over drill mud processing plant and equipment, including truck unloading area. Shed area, 7,970m². Drill mud processing plant and equipment with 4 x hydro-tips and 1 x tip-pit. Bulk landscape material storage bays inside shed. Demolition of remaining site buildings.
Food de-packaging building (Upper level)	960m ² food de-packing building.
Garden and food organics sorting building (Upper level)	2,260m ² food and garden organics sorting building.
Garden and food organics office (Upper level)	Office with amenities located to east of Food and Garden organics sorting building.
Water storage	Rainwater/ raw water storage tanks (eastern side of shed).
Received wastes	▪ Soils (ENM and VENM). ▪ Clay/Sands/Stone/Gravels/Aggregates (VENM). ▪ Drilling mud and/or muddy waters from hydro excavation, drilling and pot holing operations. ▪ Garden Mixes/Top Dressings/Mulches. ▪ Garden Organics. ▪ Food and Garden Organics. ▪ Solid Food Waste. ▪ Liquid Food Waste. ▪ Sawdust. ▪ Spent filter sand media. ▪ Street Sweepings. ▪ Stormwater Waste. ▪ Wood Waste. ▪ Asphalt Waste (including asphalt resulting from road construction). ▪ Building and demolition waste. ▪ Rail Ballast.

Element	SSD-7401-Mod-1 Summary
Finished products	- Finished Products include Mine Mix, Naturaliser, BioNRich, Earth4Turf. - Clay/Sands/Stone/Gravels/Aggregates. - Engineering material as per the EPA exemption. - Liquid fraction either to sewer, to composting facility, or to another licenced facility for further processing/re-use. - Garden Mixes/Top Dressings/Mulches. - Material transferred to EPA licenced composting sites for the production of a range of growing media suitable for domestic and agricultural use. - Material transferred to EPA licenced composting sites for the production of a range of growing media suitable for domestic and agricultural use. - Liquid fraction applied to processed FOGO, composting, or sent to another licenced facility for further re-use. - Sawdust. - Component of Mine Mix, Naturaliser, BioNRich, Earth4Turf. - Washed aggregate, organics transferred to EPA licenced composting site. - Wood waste screened and re-used in particle board manufacture - unsuitable wood sent to an EPA licenced facility. - Washed aggregate for re use in recycled products.
Traffic Generation	Up to 432 movements per day (TBC as part of traffic assessment)
Workforce	Up to 40-50 full-time equivalent construction jobs. Up to 25 operational jobs.

2.3 Site Preparation

Erosion and sediment control works are to be installed prior to the commencement of any ground disturbance, demolition or construction related works. Sediment and erosion controls are to be installed in accordance with this CEMP and the SSD-7401-Mod-1 Erosion and Sediment Control Plan (ESCP)(see **Appendix J**) (Eclipse Consulting Engineers, 2020).

It further recommended that the installation of stormwater controls, such as the proposed sediment basin and bioretention basin, is prioritised at the commencement of construction to aid in the control of potential sediment -laden surface water runoff during demolition and construction works onsite.

2.4 Demolition Works

The following will be undertaken to remove remaining buildings from the site:

- Isolation and disconnection of all services, including water, power, and sewer where relevant
- Removal of corrugated roofing and wall cladding
- Removal of timber beams and purlins
- Removal of structural steel supports and framing
- Removal of concrete slabs and footings
- Removal of steel reinforcing
- Testing of soil and removal of any contaminated materials in accordance with EPA requirements.

All demolition waste will be separated, and where possible, taken off-site for recycling at a licenced waste facility. Any non-recyclable materials will be disposed of at a licenced landfill.

2.5 Construction Works

It is proposed to undertake construction works in a stage manner, with the first areas to be developed being the drill mud processing area (**Stage 1**), followed at a later date by the bulk storage area and organics processing area (**Stage 2**). Proposed construction activities will include the following items:

- Refurbishment of the existing site office.
- Widening of the site access and gateway.
- Repair work to existing sealed areas.
- Upgrade works to existing pit and pipe stormwater infrastructure.
- Electrical upgrade works and lighting.
- Sewer upgrade works to allow trade waste discharges.
- Site landscaping works.
- Upgrade works to existing concrete product bays.
- Installation of specialised drill mud processing plant and equipment.
- Installation of raw water and rainwater storage tanks and associated pipe work.
- Installation of incoming and outgoing weighbridges.
- Installation of weighbridge kiosk.
- Site signage.

A staging plan of the proposed works is provided as **Appendix B**.

2.6 Construction Hours

Construction will be undertaken during the following hours:

- Monday to Friday 7am to 6pm.
- Saturday 8am to 1pm.
- No construction on Sundays or Public Holidays.

2.7 Construction Plant and Equipment

The following plant and equipment will be utilised during construction activities:

- Truck and dog for the delivery aggregates and removal of waste soil and concrete.
- Concrete agitator trucks.
- Fixed rigid trucks for the delivery of construction materials.
- 1 x excavator for earthworks and trenching.
- 1 x front end loader for the movement of materials.
- 1 x water cart for dust suppression.
- 1 x crane for the lifting of loads, erection of steel, and movement of heavy plan.
- 1 x plate packer for compaction of materials in trenching.
- 1 x portable generator for temporary site power.
- Hand power tools and equipment.

2.8 Construction Materials

The main construction materials will include:

- Aggregates, road base, and concrete.
- Reinforcing mesh and steel bar.
- Concrete tilt panels.
- Steel fencing materials.

- RHS steel beams, steel purlins, pipes, and bolts.
- Cabling, conduit, and weather proof junction boxes.
- Concrete piping and pits.
- Plastic piping and related materials.
- Steel framing and colorbond sheeting.
- Timber and fixtures for building fit-out.
- Windows and doors.
- Landscape supplies.

2.9 Construction Staff

The anticipated number of construction workers on site will be up to a maximum of 20 people at any one time. Of these workers, it is expected that the majority of the workforce will be sourced from the local area. Any non-local specialised contractors are likely to come from across other areas of NSW.

2.10 Temporary site facilities and amenities

During the refurbishment of existing buildings and amenities at the site, a temporary site building acting as an office, lunch-room, and first aid room will be place onsite. Portable ablution facilities will also be utilised for staff and contractors until such time that the onsite amenities are operational.

3 Environmental Management

3.1 Roles and Responsibilities

All staff and contractors have an obligation to implement the requirements of this CEMP. Bettergrow will appoint appropriately experienced and qualified staff and contractors to undertake work in a manner that is consistent with this CEMP. Roles and responsibilities are to be reviewed and refined where required. Roles and responsibilities are detailed below in **Table 4**.

Table 4 Roles and Responsibilities

Role	Responsibility
Site Manager	- Ensure all works comply with relevant regulatory and Project requirements; - Ensure the requirements of this CEMP are fully implemented, and in particular, that environmental requirements are not secondary to other construction requirements; - Endorse and support the Project environmental policy; - Participate and provide guidance in the regular review of this CEMP and supporting documentation; - Provide adequate resources (personnel, financial and technological) to ensure effective development, implementation and maintenance of this CEMP; - Ensure that all personnel receive appropriate induction training, including details of the environmental and community requirements; - Ensure that complaints are investigated, and issues raised resolved; and - Stop work immediately where there is an actual or potential risk of harm to the environment.
Construction Manager	- Plan construction works in a manner that avoids or minimises impact to environment; - Ensure the requirements of this CEMP are fully implemented; - Designated Chief Flood Warden under Flood Emergency Response Plan (unless otherwise delegated); - During construction, is responsible for delegating roles onsite, such as Deputy Chief Flood Warden, First Aid Officers and Flood Warden. - Responsible for delegating site roles such as Flood Wardens and First Aid Officers during construction; - Emergency contact during construction; - Ensure construction personnel manage construction works in accordance with statutory and approval requirements; - Ensure environmental management procedures and protection measures are implemented; - Ensure all Project personnel attend an induction prior to commencing works; and - Stop work immediately where there is an actual or potential risk of harm to the environment.
Operations Manager	- Overall responsibility for the management of environmental aspects of the Project; - Development, implementation, monitoring and updating of the CEMP; - Ensure management reviews of the CEMP are undertaken annually, documented and actions implemented; - Emergency contact during operation; - During operation, is responsible for delegating roles onsite, such as Deputy Chief Flood Warden, First Aid Officers and Flood Warden. - Ensure environmental risks of the Project are identified and appropriate mitigation measures implemented; - Identify where environmental measures are not meeting the set targets and where improvement can be achieved;

Role	Responsibility
	- Ensure environmental protocols are in place and managed; - Ensure environmental compliance; - Obtain and update all environmental licences, approvals and permits as required; - Lead liaison with approval authorities; - Manage environmental document control, reporting, inductions and training; - Prepare reports on a monthly basis outlining the Project works undertaken, achievements and areas where improvements were made; and - Stop activities where there is actual or potential risk of harm to the environment or to prevent an environmental non-conformance and advise the Construction Manager.
Environmental Representative / Project Ecologist	- Assist in preparing the CEMP (including any future revisions); - Comply with the requirements of this CEMP; - Maintaining site records related to the implementation of this CEMP; - Undertake site inspections, carry out monitoring activities and complete reporting; - Ensuring compliance with environmental legislation, regulations, permits, approvals etc; - Provide copies of this CEMP to all staff and contractors; - Investigating incidents and undertaking corrective or preventative actions where required; - Developing and maintaining an Environmental Incident Report Register or similar; - Provide environmental training to staff and contractors; - Provide reports to the Operations Manager on any major issues resulting from the Project; and - Stop activities where there is an actual or immediate risk of harm to the environment.
All Project Personnel including Contractors	- Comply with the requirements of this CEMP; - Attend all environmental training required; - Undertake all activities in accordance with agreed procedures and work methods; - Ensure that they are aware of the contact person(s) regarding environmental matters; and - Follow instructions of the Construction Manager.

3.2 Communication Protocols

Communication protocols have been established for the Project and are included in the relevant sections of this CEMP to ensure information regarding environmental issues and controls are distributed effectively amongst relevant personnel both internal and external to the Project. The Operations Manager will be responsible for the timing and effectiveness of all communications. Communication with the community will be undertaken as required by the Operations Manager and Environmental Representative.

Key Project contacts are provided in **Table 5**.

Table 5 Key Contacts

Name	Position	Contact Number
Peter Vella	Site Manager	0419 955 551
Gary Davies	Construction Manager	0402 016 645
Neale Hogarth	Operations Manager	0403 996 518
Jacqueline Blomberg	Environmental Representative	0436 609 556

3.3 Legislation and Legal Requirements

Key environmental regulatory and legislative requirements applicable to the Project are summarised in **Table 6**.

Table 6 Key Legislation

Legislation	Summary	Relevance
<i>Environmental Planning and Assessment Act 1979</i> (EP&A Act)	The EP&A Act establishes the statutory framework for planning and environmental assessment in New South Wales. Implementation of the EP&A Act is the responsibility of the Minister for Planning, statutory authorities and local councils.	The Project has been approved under Part 4 of the EP&A Act. Bettergrow must comply with all aspects of the Project Approval. Any works that are not consistent with the Project Approval will require additional assessment and approval.
<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Commonwealth)	<i>The Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) sets out the requirements for the approval of the Commonwealth Minister for Sustainability, Environment, Water, Population and Communities for actions that may have a significant impact on matters of National Environmental Significance (NES).	The Project will not result in a significant impact on any matters of NES and, as such, does not require a referral to the Minister for the Environment and Heritage.
<i>Water Management Act 2000</i>	The <i>Water Management Act 2000</i> is administered by the NSW Department of Primary Industries - Water. The objective of this Act is to protect watercourses from any deleterious effects as a result of works within or near such watercourses. Part 3A of the Act requires any persons undertaking works within 40 metres of a watercourse (a "Controlled Activity") to obtain a permit.	The Project does not require a "Water Management Work Approval" nor "Aquifer Interference Approval" under the <i>Water Management Act 2000</i> .
<i>Contaminated Land Management Act 1997</i>	The <i>Contaminated Land Management Act 1977</i> (CLM Act) is administered by the NSW Environment Protection Authority (EPA) and local councils. It provides a regime for investigating and, where appropriate, remediating land affected by contamination which represents a significant risk of harm to human health or the environment. The CLM Act specifies responsibilities for managing contaminated land and the role of the EPA in the assessment of contamination and the supervision of the investigation, remediation and management of contaminated sites.	The site has been subject of contamination from previous industrial use, however site remediation works have been undertaken and an EPA contaminated site audit has also been undertaken. No known contaminated areas remain on the site, however an unexpected finds protocol has been developed as part of this CEMP in the event that contamination is encountered during construction activities.
<i>Heritage Act 1977</i>	The <i>Heritage Act 1977</i> is concerned with the protection of scheduled heritage items, sites and relics. The NSW Heritage Office administers this Act. It is an offence under the <i>Heritage Act 1977</i> to disturb any relics. Relics, as defined in the	There are no known European heritage items identified within the site.

Legislation	Summary	Relevance
	<i>Heritage Act 1977</i> means any deposit, artefact, object or material evidence that: - Relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and - Is of State or local heritage significance.	
<i>National Parks and Wildlife Act 1974</i>	<i>The National Parks and Wildlife (NPW) Act, 1974</i> is relevant to the protection of Aboriginal artefacts and the protection of native flora and fauna. Consent is required under Section 90 (2) of the NPW Act to destroy an Aboriginal artefact.	An Aboriginal heritage impact assessment has been prepared for the development and no artefacts have been discovered or identified.
<i>Protection of the Environment Operations Act 1997</i>	One of the aims of the <i>Protection of Environment Operations Act 1997</i> (POEO Act) is to reduce risks to human health and prevent the degradation of the environment by the use of mechanisms that promote the following: - Pollution prevention and cleaner production, - The reduction to harmless levels of the discharge of substances likely to cause harm to the environment, - The elimination of harmful wastes, - The reduction in the use of materials and the re-use, recovery or recycling of materials, - The making of progressive environmental improvements, including the reduction of pollution at source, and - The monitoring and reporting of environmental quality on a regular basis.	The Project is a scheduled activity for the purposes of the POEO Act, therefore an EPL is required for construction and operations. An EPL has been obtained for the development.
<i>The Waste Avoidance and Resource Recovery Act 2001</i>	<i>The Waste Avoidance and Resource Recovery Act 2001</i> promotes waste avoidance and resource recovery by: - Encouraging efficient use of resources in accordance with ecologically sustainable principles. - Promoting the “avoid, reuse, recycle, dispose” hierarchy. - Ensuring industry has a responsibility for reducing and dealing with waste. - Providing penalties for breaches of this Act.	Waste will be generated during construction of the Project. The principles of the act are applied to all aspects of construction to reduce impacts from waste.

Legislation	Summary	Relevance
<i>Biosecurity Act 2015</i>	The primary objective of the <i>Biosecurity Act 2015</i> is to provide a framework for the prevention, elimination and minimisation of biosecurity risks posed by biosecurity matter, dealing with biosecurity matter, carriers and potential carriers, and other activities that involve biosecurity matter, carriers or potential carriers.	The proponent has a general biosecurity duty to control weeds as identified within the Project footprint.
<i>Biodiversity Conservation Act 2016</i>	The purpose of the <i>Biodiversity Conservation Act 2016</i> is to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development.	The proposed development requires the removal of approximately 240m² of Cumberland Plain Woodland (listed as a Critically Endangered Ecological Community under both the NSW <i>Biodiversity Conservation Act 2016</i> and Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>). This parcel of CEEC vegetation has limited connectivity to vegetation to the north and east and exists in a managed state. No significant fauna habitat has been observed onsite. No hollow-bearing trees have been recorded onsite. No threatened flora and / or fauna were recorded onsite during the preparation of the SSD-7401-Mod-1 Biodiversity Development Assessment Report (BDAR). A total of 755m² (0.08ha) of native vegetation will be removed.

3.4 Objectives and Targets

Environmental objectives and targets have been established as a means of assessing environmental performance during construction activities. These objectives and targets have been developed with consideration of the key issues identified through an environmental risk assessment process. The objectives and targets are consistent with Bettergrow's Environmental Policy and will assist in monitoring whether the policy commitments are being met.

The performance of the construction activities against the objectives and targets will be documented in the construction compliance reports and as part of the management review.

Environmental objectives and targets for the proposed activities are provided below in

Table 7 Environmental Objectives and Targets

Objective	Target	Measurement Tool
Construct the Project in accordance with environmental approvals	Full compliance with statutory approvals	Audits, construction compliance reporting, management review
Compliance with all legal requirements	No regulatory infringements (PINs or prosecutions)	Audits, construction compliance reporting, management review

	No formal regulatory warning	
Engage with surrounding business, community to minimise complaints, and respond to any complaints within a suitable timeframe	Disseminate regular Project updates and other information through the Bettergrow website and letterbox drops Record and respond to complaints within 48hrs	Review complaints register, construction compliance report, audits
Continuously improve environmental performance	Develop and maintain a program of ongoing environmental training Capture lessons learnt from environmental incidents to minimise repeat issues. Encourage and reward innovation and effort throughout the workforce	Construction compliance report, management review, audits

3.5 Licences, permits, and approvals

All necessary licences, permits and approvals required for the proposed activity will be obtained and maintained as required throughout the life of the Project. An EPL has been obtained for the development, which covers both construction and operations, and is attached as **Appendix C**. Construction activities will be undertaken in accordance with relevant statutory and other obligations including legislation and regulations, policies, approvals, licences and agreements. Any changes arising during construction of the Project will be identified and this CEMP updated accordingly.

3.6 Environmental policy

The Environmental Policy attached as **Appendix D** describes Bettergrow's commitment to continual improvement in environmental performance and compliance with applicable legal requirements.

Bettergrow's Environmental Policy is to be displayed at the site office, and communicated to staff, sub-contractors and other interested parties via inductions and ongoing awareness programs.

3.7 Complaints handling

The process for managing complaints received from the community and stakeholders will be generally undertaken as follows:

- Complaint received at the site during construction.
- The complaint is referred to the Operations Manager or Environmental Representative.
- Details of the complaint are to be registered as follows:
 - ☐ date and time of the complaint;
 - ☐ the methods by which the complaint was made;
 - ☐ the contact details of the complainant or enquirer (if no details were provided a note to that effect);
 - ☐ the nature of the complaint;
 - ☐ any action(s) taken in relation to the complaint, including timeframes for implementing the action;
 - ☐ if no action was taken in relation to the complaint, the reason(s) why no action was taken; and
 - ☐ follow up and close off date for complaint.

- Investigation of the complaint will be undertaken by the Operations Manager or the Environmental Representative as delegated.
- All complaints will be addressed as soon as possible or within 48 hours of receiving the complaint.
- The complainant will be notified of the outcome of the complaint.

A Complaint Registration Form is attached as **Appendix E**.

4 Training and Awareness

4.1 Site induction

All personnel will undertake a compulsory site induction prior to commencing work on site. The site induction will include an environmental component which will address the following as a minimum:

- Relevant details of this CEMP including purpose and objectives.
- Overview of sub-plans to this CEMP, including specific requirements relating to personnel onsite.
- Key environmental issues.
- Environmental licences, permits and approval conditions.
- Relevant legislation.
- Environmental management requirements and responsibilities.
- Mitigation measures for the control of environmental issues.
- Environmental Incident response and reporting requirements.
- Information relating to the location of environmental constraints.
- Environmental personnel and key contacts.

4.2 Tool-box talks

All personnel will attend toolbox talks on a daily basis at pre-start meetings. Toolbox talks may include, but not limited to:

- Noise and dust control.
- Erosion and sediment control.
- Water management.
- Construction hours.
- Waste management.
- Spill control.
- Environmental exclusion areas.
- Environmental incidents.
- Predicted weather and associated hazards (e.g. flooding, high winds, bushfire).

4.3 Training records

Records of all training will be recorded and maintained and will include information on:

- Who was trained.
- When the person was trained.
- The name of the trainer.
- A general description of the training content.

A Training Register Form is attached as **Appendix F**.

5 Incidents and Emergencies

5.1 Emergency contacts

All staff and contractors will be informed of emergency contact details as part of the site induction. Emergency contacts will be clearly displayed at the site office/sign in area.

A list of the emergency contact numbers is provided in **Table 7**.

Table 8 Emergency Contacts

Agency	Contact Number
NSW Police	000
NSW Ambulance Service	000
NSW Fire and Rescue	000
WorkCover NSW	131 050
EPA	131 555
Ausgrid Emergency Number	131 388
Sydney Water	132 090

5.2 Emergency Preparedness

The following measures would be undertaken to ensure preparedness in the event of an emergency:

- An Emergency Response Plan will be prepared and implemented for the facility.
- Display emergency procedures and information in the site office or other visible location.
- Conduct or participate in site emergency scenarios as required.
- Regularly identify and check all site fire extinguishers and firefighting equipment.

5.3 Incident management

An environmental incident is an unplanned event that occurs onsite and has the potential to result in adverse environmental impacts either onsite or in the surrounding area.

In the event of an environmental incident, the following general actions are to be undertaken:

- Cease work immediately and remove personnel from the immediate area.
- Immediately notify the Construction Manager or Environmental Representative of all environmental incidents.
- Take practical steps to contain or isolate any contamination source, if safe to do so.
- Immediately notify each relevant authority when material harm to the environment is caused or threatened in accordance with the POEO Act (discussed further below).
- Clean up and or remediate impacted area.
- Re-establish mitigation measures at the site to prevent recurrence of a similar incident.
- Document the incident and undertake an incident investigation as soon as practicable.

Response protocols for some of the more common potential environmental incidents are provided below. An Incident Response template is provided within in **Appendix G**.

5.4 Chemical Register

A hazardous chemical register (including Safety Data Sheets (SDS)) will be prepared and kept-up-to date by the Construction Manager to ensure all personnel can easily find information about chemicals stored, handled or used during construction. The chemical register will be displayed in a prominent location such as the site office.

6 Management Plans and Mitigation

6.1 Construction and Demolition Waste Management Plan

See Appendix H.

6.2 Flood Emergency Response Plan

See Appendix I.

6.3 Erosion and Sediment Control Plan

See Appendix J.

6.4 Contamination Unexpected Finds Protocol

See Appendix K.

6.5 Building Material Schedule

See Appendix L.

6.6 Landscape Plan

See Appendix M.

6.7 Mitigation Measures

Mitigation measures outlined in **Table 9** will avoid or reduce the potential impacts of construction activities. These mitigation measures have been designed to minimise and or mitigate, as far as practical, the potential impacts. These mitigation measures are to be applied in conjunction with controls specified in management plans within this CEMP.

Table 9 Summary of Mitigation Measures

Impact	Mitigation Measures
Noise	All equipment used will comply with <i>AS2436-1981 Guide to Noise Control on Construction, Maintenance and Demolition Sites</i>. Work and deliveries will only occur during the following times: Monday to Friday 7am to 6pm, Saturday 8am to 1pm. No construction work or deliveries will occur on Sundays or public holidays. Regular and effective maintenance of all equipment, including vehicles moving on and off the site, will be conducted. Plant and equipment which is used intermittently will either be shut down in the intervening periods between works or throttled down to a minimum. Any portable equipment with the potential to create high levels of noise (e.g. compressors, generators) will only be selected for use if it incorporates effective noise control. This equipment should be located, where practical, so that natural ground barriers are between it and the nearest potentially affected receivers.

Impact	Mitigation Measures
Air Quality	All vehicles and machinery will be fitted with approved exhaust systems to maintain exhaust emissions within accepted standards.
	Natural lighting will be utilised wherever possible.
	Power generated from photovoltaic cells and battery storage may be used onsite.
	Variable frequency drive motor controls will be utilised on stationary equipment wherever possible to minimise electricity consumption.
	Machinery and vehicles will not be left running or idling when not in use for long periods.
	Odour or air pollutant emission complaints will be dealt with promptly and the source will be eliminated wherever practicable.
	Truck routes and loading capacity will be designed and optimised to reduce the distance and effort required by the vehicles.
	Waste transfer vehicles to leave site with full loads to reduce the number of traffic movements and diesel consumption
	All loads of excavated material, soil, fill and other erodible matter that are transported to or from the work site will be kept covered at all times during transportation and will remain covered until they are unloaded either for use at the work site, reuse or disposal at an EPA licensed waste disposal facility.
	All work sites, general work areas and stockpiles will be closely monitored for dust generation and watered down (with clean water) or covered (tarpaulins) in the event of dry and/or windy conditions.
	In the event visible dust emissions are observed beyond the site boundary, related works will be ceased and additional controls put in place to control dust emissions. If visible dust emissions continue to drift beyond the site boundary, related works are to cease until more favourable environmental conditions are present.
	Landscaping sprinkler systems (once installed) may be used as dust suppression systems (noting increased potential for sediment laden runoff to occur).
	Driveways and haulage paths are to be regularly swept to prevent the accumulation of fine materials.
	In adverse weather conditions bulk landscaping supplies must be wet down so as to minimise the release of dust at the time of unloading or loading.
Stormwater	Sediment and nutrient controls, prepared in accordance with the <i>Landcom Managing Urban Stormwater – Soils and Construction</i> (the Blue Book), will be implemented to reduce the impacts of stormwater, erosion and sedimentation on water quality. Specific erosion and sediment controls are to be contained within the site CEMP. All erosion and sediment control measures will be established before excavation begins. Control measures are to remain in place until all surfaces have been fully restored and stabilised.
	Sandbags will be placed at the entry points to any culverts and stormwater channels to prevent sediment entering the stormwater system.
	Sediment and erosion control devices will be inspected regularly, maintained to ensure effectiveness over the entire duration of the project, and cleaned out before 30% capacity is reached.
	Any temporary stockpiles will have appropriate erosion control devices installed to control runoff and prevent sedimentation.

Impact	Mitigation Measures
	Sediment fences down slope of all disturbed areas and material stockpile areas. Erosion potential would be limited by managing runoff fetches and velocities, with measures such as contour drains or silt fences. Sediment filters such as silt fences or coir bales will be located downstream of disturbed areas. No chemicals, fuels, and/or waste will be stored or collected for disposal within or adjacent to drainage lines or unsealed surfaces. Nevertheless a 'spill kit' will be kept on site at all times for potential chemical or fuel spills. Drainage systems will be checked at regular intervals and maintained to ensure they are operating at full capacity (e.g. clearance of debris from drainage lines). Once the relevant infrastructure has been installed, the following additional controls will be applied: ▪ Pipes, pits and bunds to be regularly checked for the build-up of excessive sediment. ▪ Site structures to be regularly checked for erosion and scouring. ▪ Treatment areas and structures to be regularly checked for the build-up of litter material. ▪ Inflow areas and pit grates are to be clear of litter and debris. ▪ The sediment chamber of the Humeceptor is to be regularly checked and cleaned and any damaged covers replaced. ▪ Ensure downpipe leaf eaters, first flush devices and litter screens are unblocked and are operating correctly. ▪ Rainwater tanks to be regularly checked for any accumulation of litter, sediment or debris on or within the tanks. ▪ Sediment basin to be cleaned regularly and kept free of excessive debris and sediment build-up. ▪ Bioretention basin floor and inlet/outlet areas to be kept free of deposited sediment and debris.
Traffic	A traffic control plan shall be prepared by a suitably qualified person, detailing construction movements and controls, prior to commencement of work on the site. Vehicle speed limits onsite shall be limited to Work areas shall be bounded by fencing or barriers to prevent pedestrian access. Safe, alternative access should be provided for pedestrians where required.
Waste	Wherever possible waste generated during site preparation and construction will be reused. Waste that cannot be avoided, re-used or recycled will be managed in accordance with the principles of the <i>Waste Avoidance and Resource Recovery Act 2001</i> and classified in accordance with the Waste Classification Guidelines and disposed of at appropriately licenced facilities. All vessels used for contaminated or hazardous waste should be sealed, labelled according to their contents, and stored within bunded areas until their removal from the work site. Any fuel, lubricant or hydraulic fluid spillages will be collected using absorbent material and the contaminated material disposed of at an EPA licensed waste depot.

Impact	Mitigation Measures
	In the unlikely event of a pollution incident, the relevant authorities will be notified in accordance with Clause 148 of the POEO Act and remedial actions undertaken. Environmental incident response and notification procedures will be detailed in the CEMP prior to the commencement of construction. The work site will be left clean and free of debris and other rubbish at the end of works. Hazardous wastes, if any, on site will be removed and disposed in accordance with the state and national regulations and guidelines and best practice for the removal of these materials. Portable, self-contained toilets would be provided at the work site and would be regularly emptied and serviced by the contractor providing them. Off-cuts of piping and other materials used will be recycled where possible. Treatment, handling and disposal methods for contaminated soils, when encountered, will be done in accordance with NSW EPA Guidelines. Contaminated soils will be disposed of at an EPA licensed waste depot.
Contamination	An unexpected finds protocol shall be developed and implemented, via the CEMP, in the event that any potentially contaminated soils or materials are uncovered during excavations. Treatment, handling and disposal methods for contamination, when encountered, will be done in accordance with EPA Guidelines. All potentially contaminated soil excavated must be stockpiled in a secure area and be assessed and classified in accordance with the Waste Classification Guidelines (EPA, 2014) before being transported from the site for disposal at an appropriately licensed waste facility.
Hydrocarbons	All mobile plant and equipment will be fitted with fire extinguishers. An Emergency Response Plan will be prepared and implemented for the facility. All staff on site will be appropriately trained in the handling of dangerous goods. Flammable and combustible liquids will be stored in accordance with AS1940.
Rehabilitation	Actions outlined under the Landscape Plan (see Appendix M), including plantings, are to be undertaken as soon as practicable following the completion of ground disturbance areas within a particular area to limit bare soil exposure timeframe and potential adverse impacts to visual amenity. Existing trees currently slated for removal will be retained wherever possible to enhance ecological integrity and provide a visual screen of the development.
Biodiversity	Vegetation removal works are to occur outside core breeding periods for species known to use habitat within the site wherever possible (see Section 6.7.1, Table 10, recommended spring to summer under BDAR). A pre-clearance survey of vegetation to be removed will be undertaken at least one week prior to the commencement of each stage of construction (vegetation clearing, Stage 1 and Stage 2) in order to identify potential breeding fauna. Trees approved for removal are to be clearly marked using spray paint (or similar) prior to the commencement of vegetation removal works to ensure only approved trees are removed. In the event fauna breeding is observed during the pre-clearance survey, vegetation clearing works will not be undertaken until the breeding period is complete.

Impact	Mitigation Measures
	Equipment and vehicles entering the site for construction purposes will be cleaned of foreign soil and seed prior to entering the site to avoid the spread of invasive flora and / or pathogens. Construction works limited to daylight hours as per approved hours. All machinery will be correctly maintained and operated as per operation manual. Excessively loud or poorly maintained machinery / vehicles may be removed from site, at the discretion of the Site Manager, Construction Manager, Environmental Representative or appointed delegate. A 10 km/h speed limit will be enforced for all vehicles when onsite, both to control potential fugitive dust emissions and to promote safety of site personnel and potential fauna in the locality.
Fire	Smoking is to only occur onsite within clearly signposted smoking areas. Fire extinguishers will be maintained in readily accessible locations. All equipment will be regularly serviced in line with the manufacturer's recommendations. Temperature of all stockpiles and windrows will be monitored in accordance with established workplace procedures. If temperatures throughout the compost exceed 67 degrees C, then sprinkling is to be initiated to dissipate heat In the event that a fire cannot be extinguished using water or soil, the use of fire retardants will be considered (expert advice should be sought from Fire and Rescue NSW before taking action with retardants). Once the fire has been extinguished, affected areas will be monitored on a continual basis until materials have cooled. All water used in fire suppression will be contained within established stormwater and sediment and erosion control systems. All staff will be trained in the use of firefighting equipment for application in the event of an emergency. Combustible materials will not be stored / accumulated in areas close to exhausts or engines.
General	All contractors and machine operators will be inducted on the environmental sensitivities of the work site(s) and relevant safeguards. In accordance with the SSD-7401-Mod-1 Flood Emergency Response Plan, the temporary site office established during construction will act as the Emergency Assembly Point during construction. Floor levels of the temporary office will be above 38.0m AHD (height of Probable Maximum Flood level).

6.7.1 Threatened Fauna Breeding Periods

Threatened fauna listed as having low potential for occurrence (largely based on foraging habitat due to no presence of logs, debris or hollow-bearing trees) within the site under the SSD-7401-Mod-1 BDAR (MJD, Environmental), and their respective breeding periods are listed in **Table 10** below. Unless referenced otherwise, information presented in **Table 10** has been sourced from the following:

- NSW Scientific Committee - final determinations for relevant species (NSW Threatened Species Scientific Committee, 2021).
- NSW DPIE Threatened Species Database (NSW Office of Environment and Heritage, 2021).
- *The Morcombe and Stewart Guide to Birds of Australia* (Morcombe & Stewart, 2021).

Table 10 Threatened fauna breeding periods

Species Name	Common Name	Listing	Breeding Period
<i>Anthochaera phrygia</i>	Regent Honeyeater	Critically Endangered – NSW <i>Biodiversity Conservation Act 2016</i> . Critically Endangered – Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>	July - January
<i>Artamus cyanopterus cyanopterus</i>	Dusky Woodswallow	Vulnerable – NSW <i>Biodiversity Conservation Act 2016</i> .	Usually August – December but can occur throughout the year.
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	Vulnerable – NSW <i>Biodiversity Conservation Act 2016</i> .	Usually October - January
<i>Daphoenositta chrysoptera</i>	Varied Sitella	Vulnerable – NSW <i>Biodiversity Conservation Act 2016</i> .	September – December, often also in February – March.
<i>Haliaeetus leucogaster</i>	White-bellied Sea Eagle	Vulnerable – NSW <i>Biodiversity Conservation Act 2016</i> .	Typically lays two eggs between June and September with young birds remaining in the nest for 65-70 days.
<i>Hieraaetus morphnoides</i>	Little Eagle	Vulnerable – NSW <i>Biodiversity Conservation Act 2016</i> .	For nest sites this species requires a tall living tree within a remnant patch, where pairs build a large stick nest in winter and lay in early spring. Young fledge in early summer.
<i>Lathamus discolor</i>	Swift Parrot	Endangered – NSW <i>Biodiversity Conservation Act 2016</i> . Critically Endangered – Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>	June – January.

Species Name	Common Name	Listing	Breeding Period
<i>Lophoictinia isura</i>	Square-tailed Kite	Vulnerable – NSW <i>Biodiversity Conservation Act 2016</i> .	July - February,
<i>Micronomus norfolkensis</i>	Eastern Coastal Free-tailed Bat	Vulnerable – NSW <i>Biodiversity Conservation Act 2016</i> .	NA – however no suitable breeding habitat occurs onsite and low potential for access due to habitat fragmentation.
<i>Miniopterus australis</i>	Little Bent-winged Bat	Vulnerable – NSW <i>Biodiversity Conservation Act 2016</i> .	Maternity colonies form in spring and birthing occurs in early summer.
<i>Miniopterus orianae oceanensis</i>	Large Bent-winged Bat	Vulnerable – NSW <i>Biodiversity Conservation Act 2016</i> .	Form discrete populations centred on a maternity cave that is used annually in spring and summer for the birth and rearing of young.
<i>Ninox connivens</i>	Barking Owl	Vulnerable – NSW <i>Biodiversity Conservation Act 2016</i> .	Generally August - November
<i>Ninox strenua</i>	Powerful Owl	Vulnerable – NSW <i>Biodiversity Conservation Act 2016</i> .	Nesting occurs from late autumn to mid-winter.
<i>Petaurus norfolcensis</i>	Squirrel Glider (foraging only)	Vulnerable – NSW <i>Biodiversity Conservation Act 2016</i> .	May – December (Menkhorst & Knight, 2001).
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	Vulnerable – NSW <i>Biodiversity Conservation Act 2016</i> . Vulnerable – Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>	Annual mating commences in January and conception occurs in April or May; a single young is born in October or November.
<i>Saccolaimus flaviventris</i>	Yellow-bellied Sheath-tail-bat	Vulnerable – NSW <i>Biodiversity Conservation Act 2016</i> .	Breeding has been recorded from December to mid-March, when a single young is born.
<i>Tyto novaehollandiae</i>	Masked Owl	Vulnerable – NSW <i>Biodiversity Conservation Act 2016</i> .	Year round, however usually breeds March – July.
<i>Meridolum corneovirens</i>	Cumberland Plain Land Snail	Endangered – NSW <i>Biodiversity Conservation Act 2016</i> .	Little is known of its biology, including breeding biology. It is known to be hermaphroditic, laying clutches of 20-25 small, round, white eggs in moist, dark areas (such as under logs), with the eggs taking 2-3 weeks to hatch. There is a suggestion that the species breeds throughout the year when conditions are suitable.

7 Inspections, monitoring and auditing

7.1 Environmental Inspections

Regular site inspections are an important part of maintaining an environmental presence and observing construction activities to ensure compliance with all applicable requirements including legislation, standards, and this CEMP.

The frequency of inspections depends on the risks posed to the environment by each construction activity or the nature of the site. The frequency of the inspections recommended below should be taken as a minimum.

7.1.1 Daily site inspections

Daily inspections will be undertaken by the Environmental Representative or Construction Manager to ensure site compliance. Results of the inspections will be appropriately recorded and documented and discussed at tool-box talks.

7.1.2 Event base inspections

Event based inspections will be undertaken by the Environmental Representative following any significant event including rainfall of a sufficient quantity, strong winds, or receipt of an environmental complaint.

7.2 Environmental monitoring

Environmental monitoring will be undertaken in accordance with the requirements of the EPL during construction, however where visual inspections and auditing determine a potential non-compliance monitoring may then be undertaken to validate the impacts.

If ongoing environmental monitoring is deemed necessary, all environmental monitoring equipment will be maintained and calibrated according to the manufacturers specifications and appropriate records kept.

7.3 Auditing and reporting

Internal audits will be carried out by the Environmental Representative every three (3) months, with the first audit occurring no longer than one (1) month after commencement of construction.

These audits will be undertaken to verify compliance with:

- This CEMP.
- Project EIS and MOD1 SEE.
- Project Approvals.
- Any additional relevant legal and other requirements (e.g. licences, permits, regulations).

Outcomes of the audit are to be documented and reported to the Site Manager, Construction Manager and Operations Manager.

The above reporting will be undertaken in conjunction with those required under the project EPL (e.g. Annual Return, Statement of Compliance, Complaints Summary).

7.4 Non-conformity, corrective and preventative actions

A non-conformance is the failure or refusal to comply with the requirements of this CEMP and supporting documentation.

For each non-conformance identified corrective/preventative action (or actions) must be implemented. In addition, any environmental management improvement opportunities can be initiated as a result of incidents or emergencies, monitoring and measurement, audit findings or other reviews. Improvement opportunities may also result in the implementation of corrective/preventative actions.

8 Reporting and Documentation

8.1 Environmental records

The Operations Manager is responsible for maintaining all environmental management documents.

Types of records include:

- Monitoring, inspection and compliance reports/records.
- Correspondence with public authorities.
- Induction and training records.
- Reports on environmental incidents, other environmental non-conformances, complaints and follow-up action.
- Community engagement information.
- Minutes of CEMP and construction environmental management system review meetings and evidence of any action taken.

All environmental management documents are subject to ongoing review and continual improvement. This includes times of change to scheduled activities or to legislative or licensing requirements.

Only the Operations Manager, or delegate, has the authority to change any of the environmental management documentation.

8.2 Document control

The Operations Manager will coordinate the preparation, review, and distribution of the environmental documents listed above. During construction, the environmental documents will be kept at the site office.

Documents will be appropriately controlled through the following means:

- Developed, reviewed and approved prior to issue.
- Issued for use.
- Controlled and stored for the legally required timeframe.
- Removed from use when superseded or obsolete.
- Archived.

A register and distribution list will identify the current revision of particular documents or data.

9 Document Review and Improvement

This CEMP shall be reviewed by Bettergrow every 12 months to ensure compliance with relevant legislation and regulations, policies, approvals, licences, plans and agreements. The CEMP will also be reviewed following changes in construction activities (including staging), where targets are not being achieved, ongoing non-conformances, or in response to audit findings.

10 References

- ❑ Advanced Environmental Dynamics (2020). *Bettergrow Wetherill Park - Modification, Dust Assessment*.
- ❑ Advanced Environmental Dynamics (2020). *Bettergrow Wetherill Park - Modification, Greenhouse Gas Assessment*.
- ❑ Douglas Partners (2016a). *Review of Contamination Reports Proposed Resource Recovery & Recycling Centre, 24 Davis Road, Wetherill Park, NSW*.
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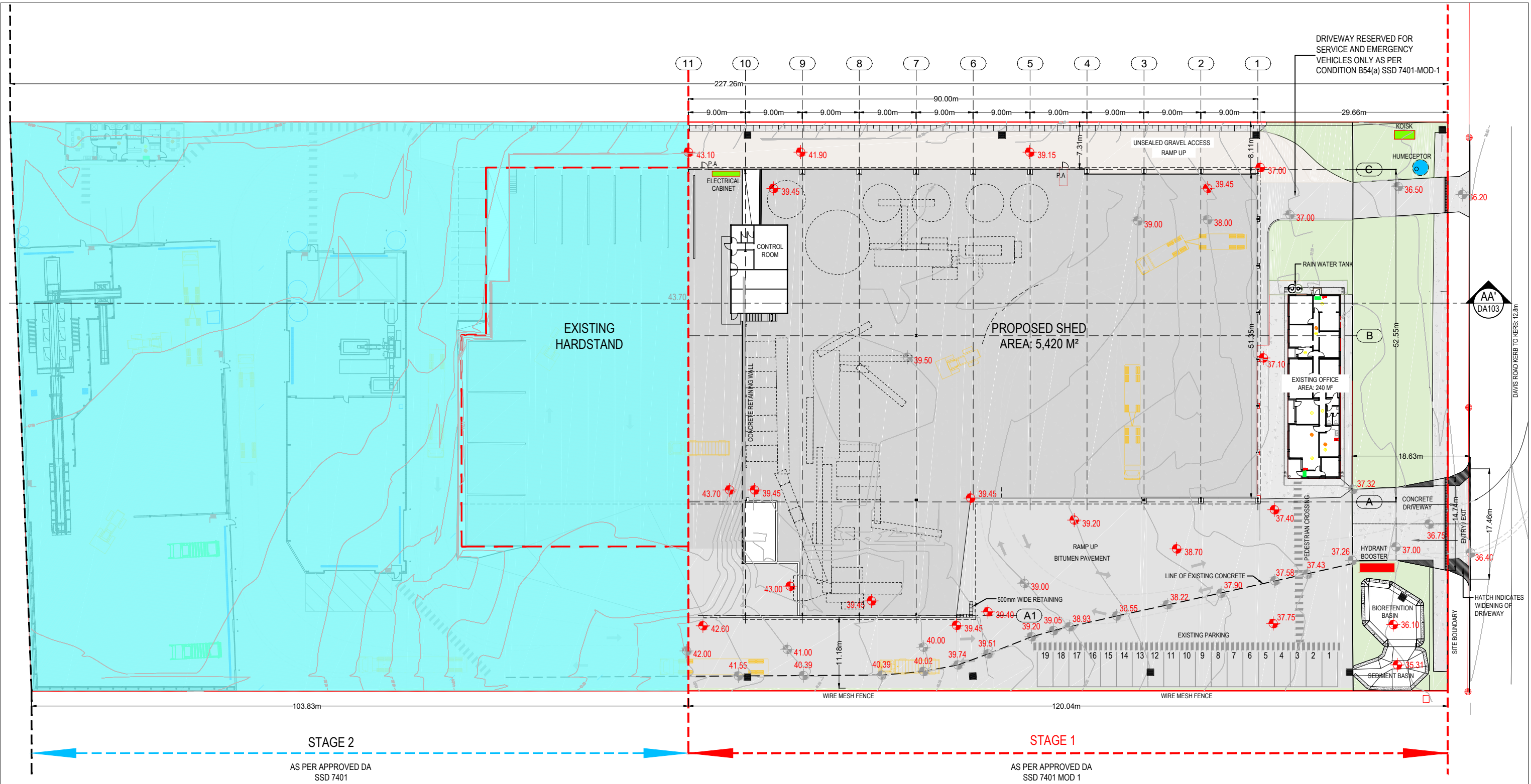
Appendix A: Site Location (RPS, 2020)



FIGURE 1: REGIONAL CONTEXT

LOCATION:	WETHERILL PARK	DATUM:	GDA94
JOB NO.:	PR 145249	PROJECTION:	MGA Zone 56
PURPOSE:	PLANNING	Data Sources:	RPS, Client
Technician:	james.hugo	Land and Property	2017
Date:	16/03/2020		

Appendix B: Construction and Staging



01 PROPOSED SITE PLAN AT GROUND LEVEL
SCALE: 1:300 (A1)

LEGEND:

39.50

EXISTING SITE SPOT LEVELS

TRUCK MOVEMENT

39.45

PROPOSED SITE SPOT LEVELS
(RED IN COLOUR)

NOTES:

TOTAL SITE AREA:	20,280m ²
TOTAL ROOFED AREA:	11,450m ²

ISSUE	DESCRIPTION	DATE	DRAWN	AUTH
05	Amended Staging Plan	13-07-2021	JU	GD
04	Construction certificate 3	22-06-2021	JU	GD
03	Construction Certificate	15-02-2021	JU	GD
02	For Fire Engineer	25-11-2020	JU	GD
01	Construction Certificate	12-11-2020	JU	GD

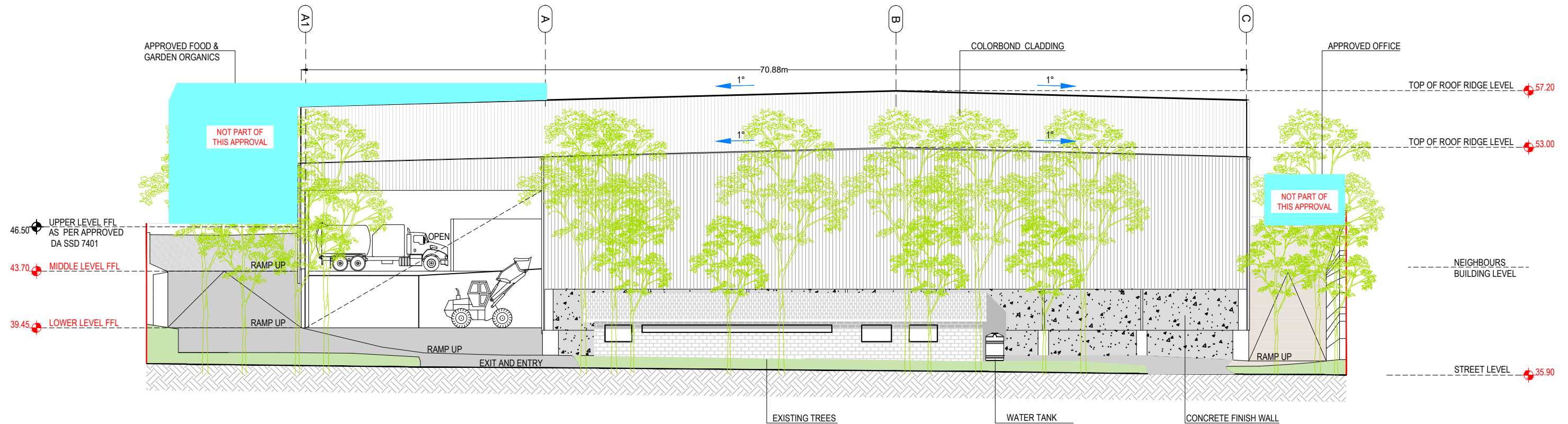
48 INDUSTRY ROAD
VINEYARD NSW 2765
WWW.BETTERGROW.COM.AU

P: 02 4587 7852
F: 02 4577 2603

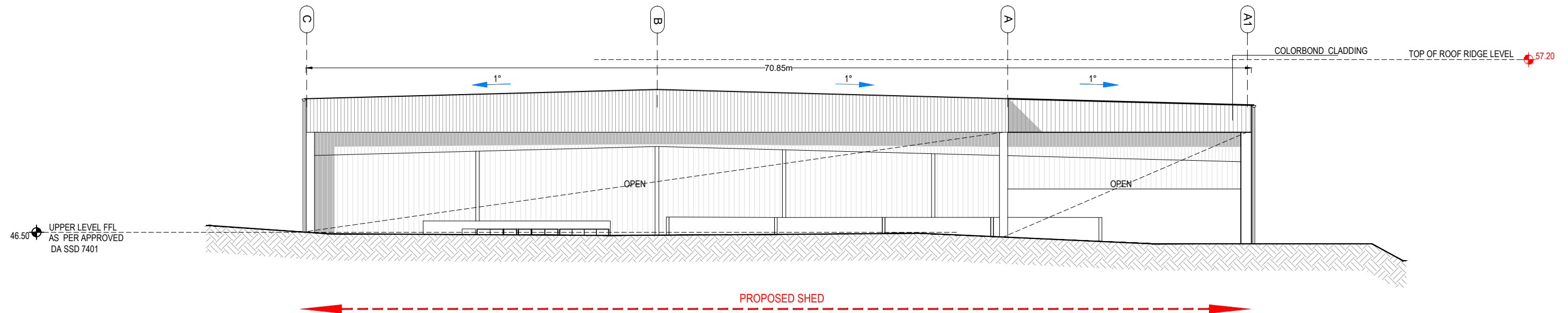
OFFICE
2 WELLS WAY SOMERSBY, N.S.W. 2250 AUSTRALIA
Tel: 02 4340 9800 Fax: 02 4340 9293

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NOTE: ALL WALLS AND ROOF CLADDING TYPE C CONSTRUCTION 60/60/60		NOTE CONDITION B20A: THE DESIGN & CONSTRUCTION OF PARTIALLY OPEN AREAS MUST ALLOW FOR THE FUTURE INSTALLMENT OF ROLLER DOORS. REFER TO ENGINEERS DRAWINGS AND SPECIFICATIONS.	
PROJECT PROPOSED BETTERGROW RESOURCE RECOVERY FACILITY		DRAWING SITE PLAN STAGE 1 AND 2	
LOCATION 24 DAVIS ROAD WETHERILL PARK NSW 2164		SCALE 1:300 @ A1, 1:600@A3	STAGE CC3
PROJECT NUMBER 2020/04	DRAWING NUMBER CC130	ISSUE 05	



01 PROPOSED STREET ELEVATION
SCALE: 1:150 (A1)



02 PROPOSED SHED NORTH ELEVATION
SCALE: 1:150 (A1)

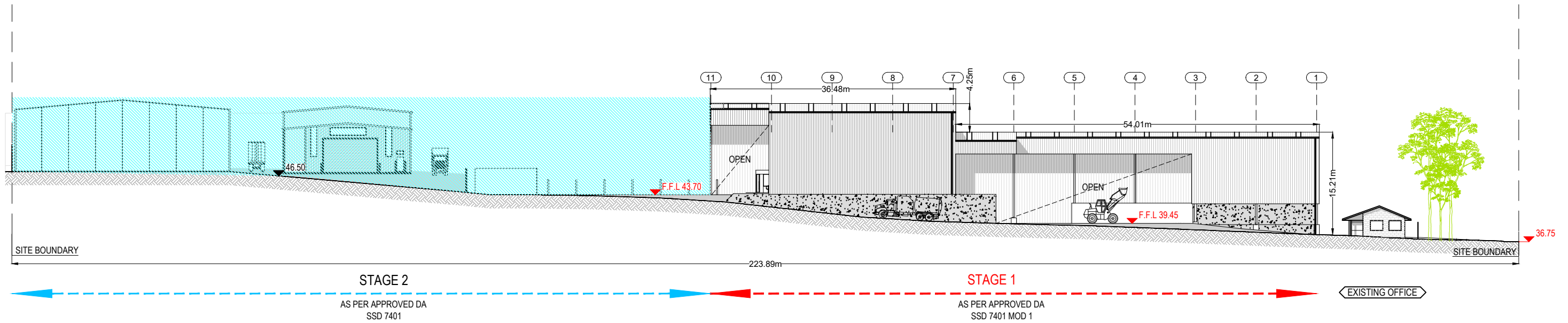
NOTE: ALL WALLS AND ROOF CLADDING TYPE C CONSTRUCTION 60/60/60		NOTE CONDITION B20A: THE DESIGN & CONSTRUCTION OF PARTIALLY OPEN AREAS MUST ALLOW FOR THE FUTURE INSTALMENT OF ROLLER DOORS. REFER TO ENGINEERS DRAWINGS AND SPECIFICATIONS.	
PROJECT PROPOSED BETTERGROW RESOURCE RECOVERY FACILITY		DRAWING STREET AND NORTH ELEVATIONS	
LOCATION 24 DAVIS ROAD WETHERILL PARK NSW 2164		SCALE 1:300 @ A1, 1:600@A3	STAGE CC3
PROJECT NUMBER 2020/04	DRAWING NUMBER CC200	ISSUE 05	

NOTES:

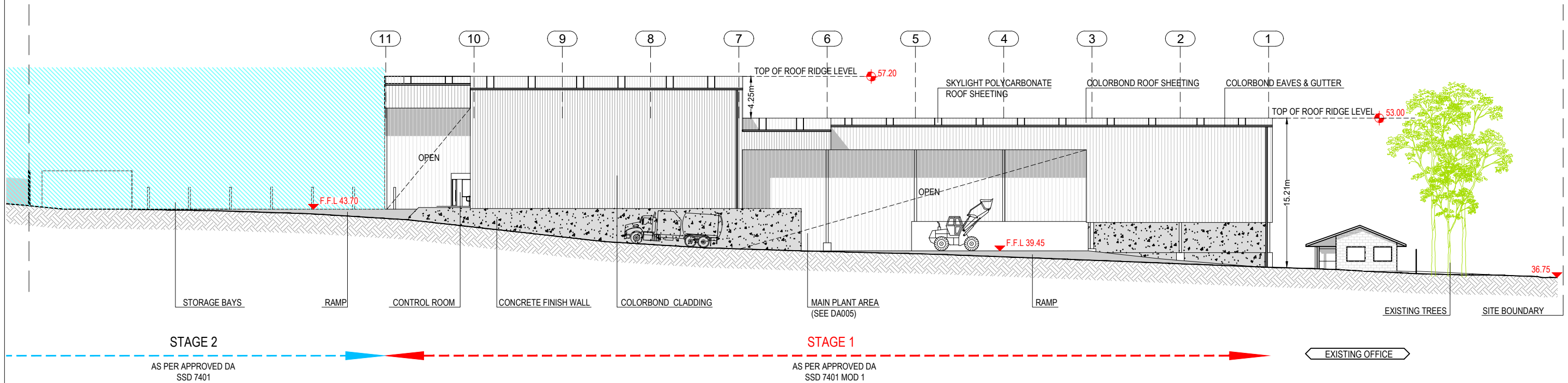
ISSUE	DESCRIPTION	DATE	DRAWN	AUTH
05	Amended Staging Plan	13-07-2021	JU	GD
04	Construction Certificate 3	22-06-2021	JU	GD
03	Unrelated CC2 Works Omitted	07-05-2021	JU	GD
02	Construction Certificate	20-04-2021	JU	GD
01	Construction Certificate	12-11-2020	JU	GD



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01 PROPOSED WEST SITE ELEVATION
SCALE: 1:300 (A1)

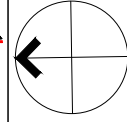


02 PROPOSED SHED WEST ELEVATION
SCALE: 1:200 (A1)

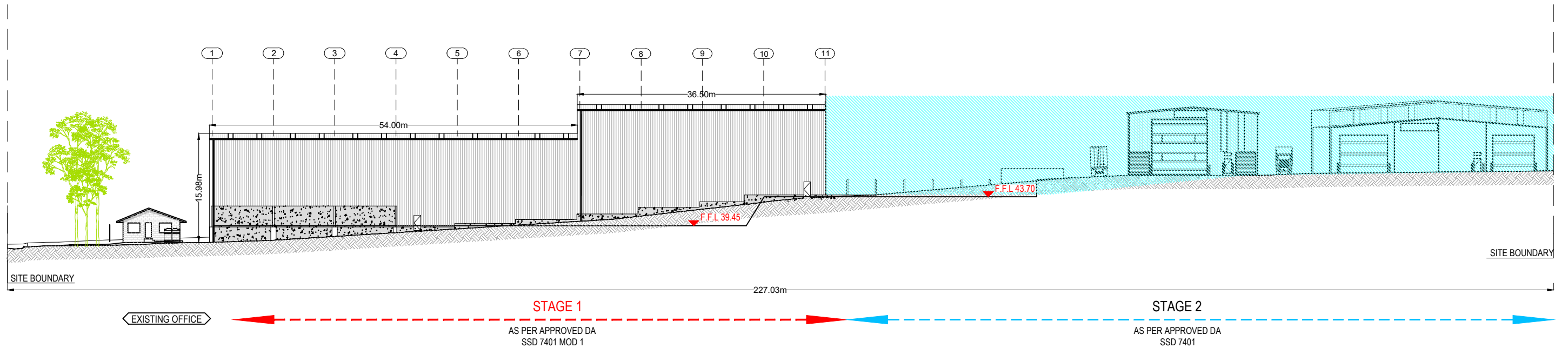
NOTE: ALL WALLS AND ROOF CLADDING TYPE C CONSTRUCTION 60/60/60		NOTE CONDITION B20A: THE DESIGN & CONSTRUCTION OF PARTIALLY OPEN AREAS MUST ALLOW FOR THE FUTURE INSTALMENT OF ROLLER DOORS. REFER TO ENGINEERS DRAWINGS AND SPECIFICATIONS.	
PROJECT PROPOSED BETTERGROW RESOURCE RECOVERY FACILITY		DRAWING WEST AND SITE ELEVATION STAGE 1 & 2	
LOCATION 24 DAVIS ROAD WETHERILL PARK NSW 2164		SCALE 1:300 @ A1, 1:600@A3	STAGE CC3
PROJECT NUMBER 2020/04	DRAWING NUMBER CC210	ISSUE 05	

NOTES:

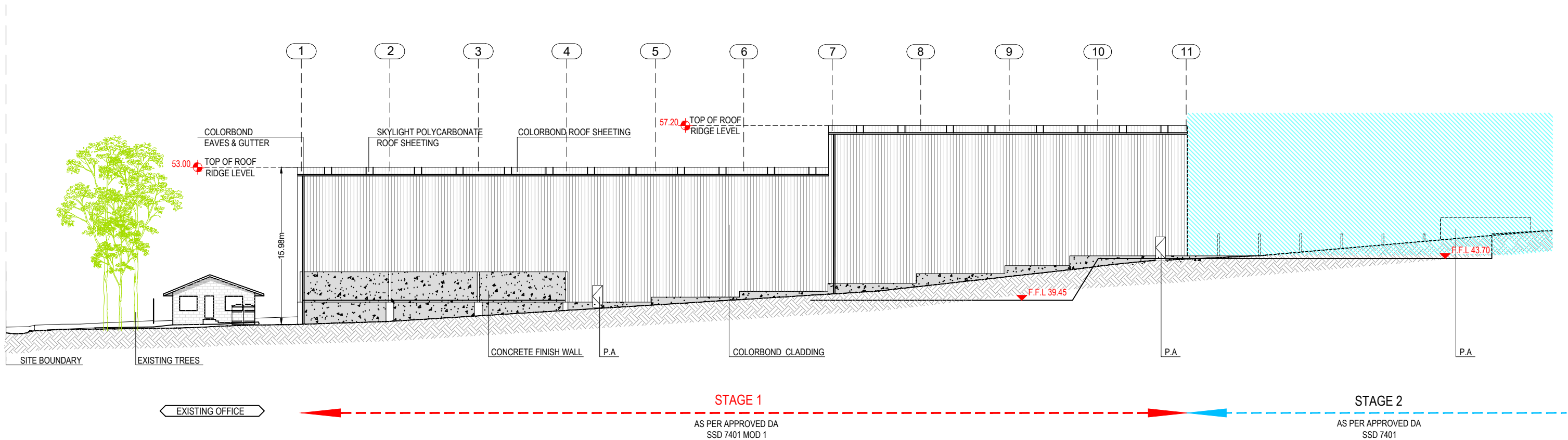
ISSUE	DESCRIPTION	DATE	DRAWN	AUTH
05	Amended Staging Plan	13-07-2021	JU	GD
04	Construction Certificate 3	22-06-2021	JU	GD
03	Unrelated CC2 Works Omitted	07-05-2021	JU	GD
02	Construction Certificate	20-04-2021	JU	GD
01	Construction Certificate	12-11-2020	JU	GD



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01 PROPOSED EAST SITE ELEVATION
SCALE: 1:300 (A1)

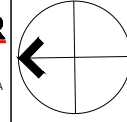


02 PROPOSED SHED EAST ELEVATION
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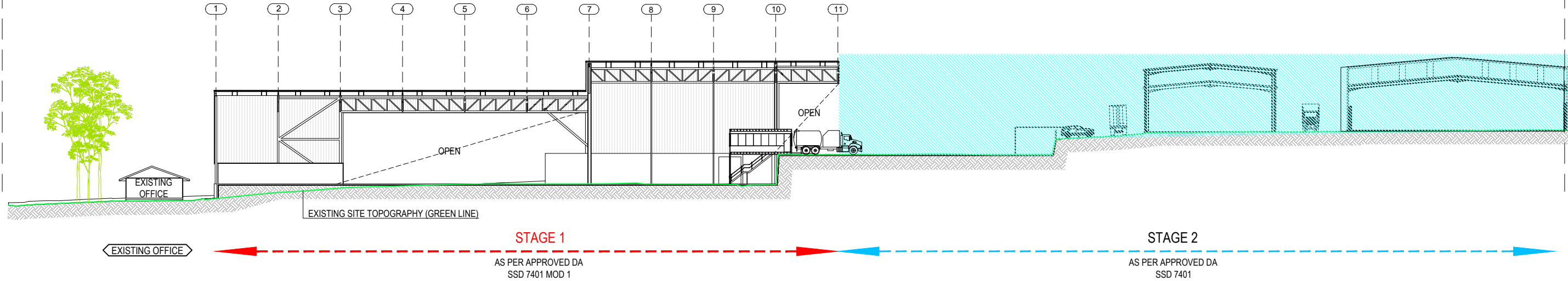
NOTE: ALL WALLS AND ROOF CLADDING TYPE C CONSTRUCTION 60/60/60		NOTE CONDITION B20A: THE DESIGN & CONSTRUCTION OF PARTIALLY OPEN AREAS MUST ALLOW FOR THE FUTURE INSTALMENT OF ROLLER DOORS. REFER TO ENGINEERS DRAWINGS AND SPECIFICATIONS.	
PROJECT PROPOSED BETTERGROW RESOURCE RECOVERY FACILITY		DRAWING EAST AND SITE ELEVATIONS STAGE 1 & 2	
LOCATION 24 DAVIS ROAD WETHERILL PARK NSW 2164		SCALE 1:300 @ A1, 1:600@A3	STAGE CC3
PROJECT NUMBER 2020/04	DRAWING NUMBER CC215	ISSUE 05	

NOTES:

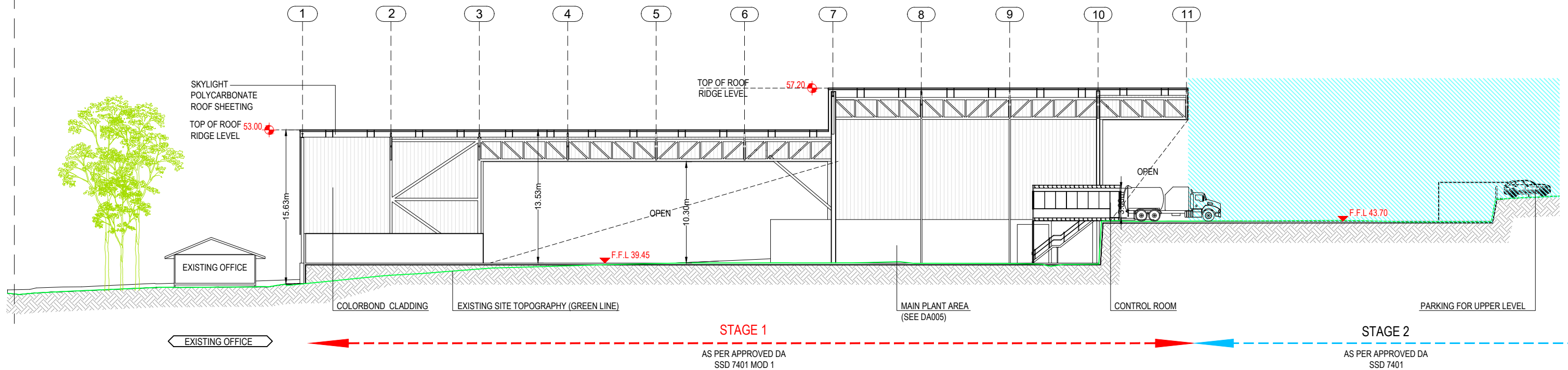
ISSUE	DESCRIPTION	DATE	DRAWN	AUTH
05	Amended Staging Plan	13-07-2021	JU	GD
04	Construction Certificate 3	22-06-2021	JU	GD
03	Unrelated CC2 Works Omitted	07-05-2021	JU	GD
02	Construction Certificate	20-04-2021	JU	GD
01	Construction Certificate	12-11-2020	JU	GD



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01 PROPOSED SITE SECTION AA'
SCALE: 1:300 (A1)



02 PROPOSED SHED SECTION AA'
SCALE: 1:200 (A1)

NOTE: ALL WALLS AND ROOF CLADDING TYPE C CONSTRUCTION 60/60/60		NOTE CONDITION B20A: THE DESIGN & CONSTRUCTION OF PARTIALLY OPEN AREAS MUST ALLOW FOR THE FUTURE INSTALMENT OF ROLLER DOORS. REFER TO ENGINEERS DRAWINGS AND SPECIFICATIONS.	
PROJECT PROPOSED BETTERGROW RESOURCE RECOVERY FACILITY		DRAWING SHED SECTION AA' STAGE 1 & 2	
LOCATION 24 DAVIS ROAD WETHERILL PARK NSW 2164		SCALE 1:300 @ A1, 1:600@A3	STAGE CC3
PROJECT NUMBER 2020/04	DRAWING NUMBER CC220	ISSUE 05	

NOTES:

ISSUE	DESCRIPTION	DATE	DRAWN	AUTH
05	Amended Staging Plan	13-07-2021	JU	GD
04	Construction Certificate 3	22-06-2021	JU	GD
03	Unrelated CC2 Works Omitted	07-05-2021	JU	GD
02	Construction Certificate	20-04-2021	JU	GD
01	Construction Certificate	12-11-2020	JU	GD



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Appendix C: Environment Protection Licence

Environment Protection Licence

Licence - 21092

Licence Details

Number:	21092
Anniversary Date:	10-January

Licensee

BETTERGROW PTY. LIMITED

PO BOX 945

WINDSOR NSW 2756

Premises

GREENSPOT RESOURCE RECOVERY FACILITY

24 DAVIS ROAD

WETHERILL PARK NSW 2164

Scheduled Activity

Resource recovery

Waste processing (non-thermal treatment)

Waste storage

Fee Based Activity

Scale

Non-thermal treatment of general waste	Any annual processing capacity
Non-thermal treatment of liquid waste	Any annual processing capacity
Recovery of general waste	Any general waste recovered
Waste storage - hazardous, restricted solid, liquid, clinical and related waste and asbestos waste	Any listed waste type stored
Waste storage - other types of waste	Any other types of waste stored

Region

Waste & Resource Recovery

59-61 Goulburn Street

SYDNEY NSW 2000

Phone: (02) 9995 5000

Fax: (02) 9995 5999

PO Box A290

SYDNEY SOUTH NSW 1232



Environment Protection Licence

Licence - 21092

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Environment Protection Licence

Licence - 21092



General Dictionary ----- 12

Environment Protection Licence

Licence - 21092

Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act);
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

Environment Protection Licence

Licence - 21092



The EPA publication “A Guide to Licensing” contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

BETTERGROW PTY. LIMITED
PO BOX 945
WINDSOR NSW 2756

subject to the conditions which follow.

Environment Protection Licence

Licence - 21092

1 Administrative Conditions

A1 What the licence authorises and regulates

A1.1 This licence authorises the carrying out of the scheduled development work listed below at the premises listed in A2.

There are four stages to the scheduled development works of which the following stages are authorised by this licence:

1- Site preparation. 2- Construction and installation of the hydro-excavation and drill mud processing equipment. 3- Construction of the Food and Garden Organics building. 4- Construction of the Food and Liquid Depackaging building.

A1.2 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Waste processing (non-thermal treatment)	Non-thermal treatment of general waste	Any annual processing capacity
Waste processing (non-thermal treatment)	Non-thermal treatment of liquid waste	Any annual processing capacity
Resource recovery	Recovery of general waste	Any general waste recovered
Waste storage	Waste storage - hazardous, restricted solid, liquid, clinical and related waste and asbestos waste	Any listed waste type stored
Waste storage	Waste storage - other types of waste	Any other types of waste stored

A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
GREENSPOT RESOURCE RECOVERY FACILITY
24 DAVIS ROAD
WETHERILL PARK
NSW 2164
LOT 18 DP 249417

Environment Protection Licence

Licence - 21092



A3 Information supplied to the EPA

- A3.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
- b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

- A3.2 Except as expressly provided by this licence, works and activities must be carried out in accordance with the proposal contained in:

- a) the development application SSD 7401 submitted to the Department of Planning and Environment; and
- b) environmental impact statement *Greenspot Wetherill Park, Resource Recovery and Recycling Facility, Environmental Impact Statement, SSD 7401* prepared by RPS, dated 11 April 2017.

2 Limit Conditions

L1 Pollution of waters

- L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

L2 Waste

- L2.1 No waste is permitted to be accepted at the premises until stages of scheduled development work are completed to enable scheduled activities to be carried on at the premises and this licence is varied to permit receipt of waste at the premises.

L3 Hours of operation

- L3.1 All construction works must be undertaken between

- Monday to Friday: 7:00am to 6:00pm
- Saturday: 8:00am to 1:00pm
- No works permitted on Sunday

L4 Potentially offensive odour

Environment Protection Licence

Licence - 21092

- L4.1 No condition of this licence identifies a potentially offensive odour for the purposes of section 129 of the Protection of the Environment Operations Act 1997.

Note: Section 129 of the Protection of the Environment Operations Act 1997, provides that the licensee must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.

3 Operating Conditions

O1 Activities must be carried out in a competent manner

- O1.1 Licensed activities must be carried out in a competent manner.
This includes:
- a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
 - b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O2 Maintenance of plant and equipment

- O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:
- a) must be maintained in a proper and efficient condition; and
 - b) must be operated in a proper and efficient manner.

O3 Dust

- O3.1 The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.
- O3.2 Activities must be carried out in a manner which minimises the generation of dust at the premises.
- O3.3 All vehicles leaving the Premises must not track dirt, sand or other materials onto public roads.

4 Monitoring and Recording Conditions

M1 Monitoring records

- M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.
- M1.2 All records required to be kept by this licence must be:
- a) in a legible form, or in a form that can readily be reduced to a legible form;

Environment Protection Licence

Licence - 21092



- b) kept for at least 4 years after the monitoring or event to which they relate took place; and
- c) produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:

- a) the date(s) on which the sample was taken;
- b) the time(s) at which the sample was collected;
- c) the point at which the sample was taken; and
- d) the name of the person who collected the sample.

M2 Recording of pollution complaints

M2.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

M2.2 The record must include details of the following:

- a) the date and time of the complaint;
- b) the method by which the complaint was made;
- c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
- d) the nature of the complaint;
- e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
- f) if no action was taken by the licensee, the reasons why no action was taken.

M2.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M2.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M3 Telephone complaints line

M3.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.

M3.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.

M3.3 The preceding two conditions do not apply until three (3) months after the date of the issue of this licence.

5 Reporting Conditions

R1 Annual return documents

Environment Protection Licence

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R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:

1. a Statement of Compliance,
2. a Monitoring and Complaints Summary,
3. a Statement of Compliance - Licence Conditions,
4. a Statement of Compliance - Load based Fee,
5. a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan,
6. a Statement of Compliance - Requirement to Publish Pollution Monitoring Data; and
7. a Statement of Compliance - Environmental Management Systems and Practices.

At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

R1.3 Where this licence is transferred from the licensee to a new licensee:

- a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
- b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:

- a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
- b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.

R1.5 The Annual Return for the reporting period must be supplied to the EPA via eConnect *EPA* or by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').

R1.6 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.

R1.7 Within the Annual Return, the Statements of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:

- a) the licence holder; or
- b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

Environment Protection Licence

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R2 Notification of environmental harm

R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.

Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R3 Written report

- R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
- a) where this licence applies to premises, an event has occurred at the premises; or
 - b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence, and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.
- R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.
- R3.3 The request may require a report which includes any or all of the following information:
- a) the cause, time and duration of the event;
 - b) the type, volume and concentration of every pollutant discharged as a result of the event;
 - c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
 - d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
 - e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
 - f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
 - g) any other relevant matters.
- R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

6 General Conditions

G1 Copy of licence kept at the premises or plant

G1.1 A copy of this licence must be kept at the premises to which the licence applies.

Environment Protection Licence

Licence - 21092



G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.

G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

Environment Protection Licence

Licence - 21092

Dictionary

General Dictionary

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
AM	Together with a number, means an ambient air monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
BOD	Means biochemical oxygen demand
CEM	Together with a number, means a continuous emission monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 2009.
general solid waste (non-putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

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flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
general solid waste (putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
restricted solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
special waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TM	Together with a number, means a test method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .



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TSP	Means total suspended particles
TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste type	Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non - putrescible), special waste or hazardous waste

Mr Trevor Wilson

Environment Protection Authority

(By Delegation)

Date of this edition: 10-January-2019

End Notes

Appendix D: Environmental Policy

2. Quality, WHS, Environmental and Industrial Relations Policies

Quality Policy

It is the policy of Bettergrow to consistently provide all products and services in accordance with our customer's specified requirements and applicable regulatory requirements.

Bettergrow recognises that in order to maintain customer satisfaction, it must achieve all that has been specified and completely fulfil its obligations before seeking customer approval and acceptance. This will be undertaken through contract review to confirm the customer's needs and expectations, planning and controlling the managerial and technical aspects of the work, and verifying that the outcomes of the planning and control activities have been successful.

Bettergrow also aims to achieve improved productivity, efficiency and quality by having an effective and properly managed quality system in place that complies with ISO 9001, and which ensures that all staff are suitably trained before carrying out tasks and duties and which encompasses a mechanism for improvement when deficiencies are identified.

All employees of Bettergrow are responsible for the quality of their efforts and are required to comply with Bettergrow's quality management system as outlined in this Management System Manual. All employees will be made aware of these requirements by their supervisors. If at any time during the course of exercising one's duties an employee is not sure of a particular requirement, then their immediate supervisor must be consulted for direction.

WHS Policy

Bettergrow will take all reasonable care to provide and maintain a working environment that is safe and which presents no risks to health of employees, in accordance with this WHS policy.

In particular, Bettergrow will attend to the following:

- develop, implement, maintain and continually improve its comprehensive WHS management system,
- assign adequate resources to implement and monitor the WHS management system,
- assess risks and plan work activities to eliminate or control foreseeable hazards or risks,
- comply with relevant WHS, workplace injury management and workers compensation legislation and regulations,
- establish measurable objectives and targets for continuous improvement,
- consult with employees and disseminate WHS information,
- issue a WHS Induction Manual to all employees,
- provide appropriate instruction and training for employees,
- ensure that assigned WHS responsibilities are well understood by all employees,
- provide and maintain plant and equipment in safe operating condition,
- provide systems of work that are safe,
- ensure that all materials are used, handled, stored and transported safely,
- keep workplaces under its control in a safe condition,
- provide adequate facilities for employees at work sites.



3. Environmental Policy

Bettergrow is committed to planning, carrying out and monitoring its operations in order to:

- comply with relevant environmental regulations, any local council development application consent conditions and any additional customer requirements relating to the environment;
- set environmental targets for each service area;
- prevent pollution;
- minimise environmental risks;
- minimise waste through efficient material and plant utilisation, plus re-use or recycling of material when appropriate. Dispose of waste properly;
- respond promptly to any emergency situation which could cause adverse environmental impacts;
- support the principles of Ecologically Sustainable Development.

Environmental compliance is regularly reviewed. We aim to prevent problems from occurring and promote continuous improvement towards best practice in environmental management.

Management provides appropriate training and instruction to ensure that employees understand how to implement Environmental Management Plans and Pollution Incident Response Management Plans, as needed. Staff are encouraged to offer suggestions about how environmental protection measures can be improved. Such suggestions will be assessed by Company management and implemented as appropriate.

Bettergrow is open about its environmental policy and will make it available to relevant interested parties.

4. Industrial Relations Policy

It is the policy of Bettergrow to be honest and fair in all dealings with its most valuable resources, our employees.

Bettergrow will always adopt a proactive approach to Industrial Relations in an effort to ensure harmony with our employees and employee representatives, which in turn will assist our customers to achieve their goals.

Bettergrow generally works under the Waste Management Award 2010 and will comply with other Awards or Agreements that may be applicable to any particular work place or site.

Bettergrow will endeavour to establish, maintain and continually improve communications with its workforce in all industrial matters.

Bettergrow is committed to the training of its management personnel in the field of Industrial Relations Management techniques, and to creating a close working relationship with our employees, at all levels.

A handwritten signature in dark ink, appearing to be "Neil Schembri", is located at the bottom left of the page.

Appendix E: Complaints Registration Form

COMPLAINTS REGISTRATION FORM

Date of Contact:

Time:

Received By:

Type of Contact (Phone, Email, Verbal, Other)

Complainant Details

Name:

Address:

Phone:

Follow Up Required:

Preferred Method of Contact:

Complaint Details

Corrective Action (If None, Why No Action Was Taken)

Assigned To

Name:

Position:

Action Completed

Date:

Time:

Close Off:

Name:

Position:

Signature:

Appendix F: Training Register

[illegible]

Appendix G: Environmental Incident Report Form

ENVIRONMENTAL INCIDENT REPORT FORM - CEMP

Details

Person/s Involved	Position
Are you: ☐ An Employee ☐ Contractor ☐ Visitor	

Office Site:
Phone: Mobile:

Incident Details (Attach or Insert photo/s if available)

Date and Time of Incident: / /	Location: (where did the incident occur)
: am/pm	

Description of Incident:

Immediate Action Taken:

Name of Witness (if applicable):	Position:
----------------------------------	-----------

Environmental

Air: ☐ Noise ☐ Dust ☐ Odour ☐ Emission ☐ Other

Land: ☐ Spill Hydrocarbon ☐ Disturbance ☐ Fire ☐ Erosion ☐ Cultural Heritage

Water: ☐ Ground Contamination Surface: ☐ Spill Hydrocarbon ☐ Unexpected Rainfall

Waste: ☐ Incorrect disposal ☐ Cross contamination

Incident Investigation

What was the Employee/Contractor/Visitor doing at the time? (e.g. description of work being conducted)

What Happened Unexpectedly? (include name of process, chemical, product or equipment involved)

Causal/Contributing Factors

Category	Factors		Describe
Equipment:	Not suited to task	☐	
	Defective	☐	
	Other	☐	
Organisational:	Supervision provided	☐	
	Time pressure/deadlines	☐	
	Other	☐	
Environmental:	Weather	☐	
	Housekeeping	☐	

	Other	☐	
People:	Actions	☐	
	Competence	☐	
	Other	☐	
Procedures:	Procedure/JHA for task	☐	
	Current and applicable	☐	
	Other	☐	
Corrective Action		Responsible	Due Date
Site Manager		Employee Involved:	
Signature:		Signature:	
Date:		Date:	
Management Comment/Close Out			
Comment:			

Appendix H: Construction and Demolition Waste Management Plan

Construction and Demolition Waste Management Plan

Resource Recovery and Recycling Facility

SSD-7401-MOD-1

24 Davis Road Wetherill Park, NSW

Borg Property Pty Ltd

22 July 2021

Document Control

Rev No.	Revision Date	Author / Position	Details	Authorised	
				Name / Position	Signature
1	22/07/2021	Brad Deane Environmental Services Coordinator	Updated following MOD1 of SSD 7401	Shaun Smith Principal Environmental Planner	

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1 Introduction

1.1 Background

1.1.1 Project Approval

This Construction and Demolition Waste Management Plan (CDWMP) has been prepared by Borg Property Pty Ltd (Borg) on behalf of Bettergrow Pty Ltd (Bettergrow) for the construction phase of the Resource Recovery and Recycling Facility (the facility), located at 24 Davis Road Wetherill Park, NSW (the site).

Consent for State Significant Development 7401 (SSD-7401) was initially granted by the then NSW Department of Planning and Environment (DPE) on 22 December 2017. Consent for Modification 1 (Mod1) of SSD-7401 (SSD-7401-Mod-1) was approved by the NSW Department of Planning, Industry and Environment (DPIE) on 21 April 2021.

This CDWMP has been prepared to address Condition B14 and C2 (a) of SSD 7401 issued for the construction and operation of the Project. These conditions require the preparation of a CDWMP prior to the commencement of construction activities at the Project site. This CDWMP addresses requirements management and mitigation requirements resultant of both the SSD-7401 and SSD-7401-Mod-1 approval instruments, and thus builds upon the CDWMP prepared by RPS Australia East Pty Ltd (RPS) in February 2019 for SSD-7401.

1.1.2 Project Description

The main waste types and materials to be accepted at the site will include:

- Hydro-excavation and drill muds;
- Garden organics, commingled food and garden organics, and food waste; and
- Bulk landscape materials and growing media.

The recovered resources will be transferred either directly to end use markets or to other facilities or processors for value adding to achieve maximum value for the beneficial use. The facility is also proposed to act as a distribution centre for the consolidation and distribution of bulk landscape supplies including barks, soils, sands and aggregates.

The operation has been designed to utilise existing site infrastructure and buildings where possible to minimise encroachment on the remaining vegetation on the property, noting that the increased development throughput approved under SSD-7401-Mod-1 requires the replacement of some existing site infrastructure to contain site machinery and reduce environmental impacts during operation of the facility. The existing benching of the site has allowed the operations to be separated into individual process areas and assist with the management of clean and dirty water catchments.

It is proposed the undertake construction at the site in two stages. **Stage 1** will include the bulk landscape area and drill mud processing area while **Stage 2** will include the organics processing area. Construction

1.2 Conditions of Approval

1.2.1 Conditions of Compliance

Conditions of consent relevant to waste management are detailed below in **Table 1**.

Table 1 Conditions compliance under SSD-7401 and SSD-7401-Mod-1.

Approval Instrument	Condition Number	Condition / Commitment
SSD -7401	B14	Prior to the commencement of construction, the Applicant must prepare a Construction and Demolition Waste Management Plan (CDWMP) for the Development to the satisfaction of the Secretary. The plan must form part of the CEMP required by Condition C1. The CDWMP must: (a) detail the quantities of each waste type generated during construction and the proposed reuse, recycling and disposal locations; and (b) be implemented for the duration of construction works.
SSD -7401	C2	As part of the CEMP required under Condition C1 of this consent, the Applicant must include the following: (c) Construction and Demolition Waste Management Plan (Condition B14); (d) Flood Emergency Response Plan (see Condition B40); (e) Erosion and Sediment Control Plan (see Condition B52); (f) Unexpected Finds Protocol (see Condition B71); and (g) Building Material Schedule and Landscape Plan (see Condition B72).
SSD-7401-Mod-1	B57 (mod)	Hours of construction and demolition will be as follows: (a) Monday to Friday 7am to 6pm. (b) Saturday 8am to 1pm. (c) No works permitted on Sunday*. *While not directly stated, it is assumed that no works (besides emergency works) will occur on a public holiday.

2 Purpose and Objectives

2.1 Purpose

The purpose of this CDWMP is to maximise resource recovery and minimise residual waste produced from demolition and construction activities. This includes:

- Minimisation of waste generation;
- Maximisation of recycling and reuse of waste materials;
- Appropriate handling and storage of waste materials whilst present on the site during demolition activities;
- Disposal of wastes to appropriately licenced facilities;
- Minimise the environmental impacts associated with waste management; and
- Meet regulatory requirements for waste recycling and disposal.

2.2 Objectives

The key objective of the CDWMP is to ensure that waste is minimised. To achieve this objective, Bettergrow will undertake the following:

- Ensure measures are identified and implemented to minimise waste, manage waste and conserve energy throughout the construction of the Project;
- Ensure the preferred waste management hierarchy of avoidance, minimisation, reuse, recycling and finally disposal is followed;
- Provide staff with an increased level of understanding and awareness of waste and resource use management issues;
- Ensure appropriate measures are implemented to address the relevant Conditions of Approval (SSD-7401 and SSD-7401-Mod-1); and
- Ensure appropriate measures are implemented to comply with all relevant legislation and other requirements as described in this Plan.

3 Environmental Requirements

3.1 Legislation and Guidelines

3.1.1 Legislation

Legislation relevant to waste management includes:

- *Environmental Planning and Assessment Act 1979* (EP&A Act);
- *Protection of the Environment Operations Act 1997* (POEO Act);
- *Protection of the Environment Operations (General) Regulation 2009*;
- *Protection of the Environment Operations (Waste) Regulation 2014*;
- *Waste Avoidance and Resource Recovery Act 2001* (WARR Act);
- *Contaminated Land Management Act 2021*;
- *National Greenhouse and Energy Reporting Act 2007* (Cth);
- *Biosecurity Act 2015*; and
- *Environmentally Hazardous Chemicals Act 1985*.

Relevant provisions of the above legislation are explained in the register of legal and other requirements included in the CEMP.

3.1.2 Guidelines and Standards

The main guidelines, specifications and policy documents relevant to this Plan include:

- Waste Classification Guidelines Part 1: Classifying waste (NSW EPA, 2014);
- Waste Classification Guidelines Part 2: Immobilisation of waste (NSW EPA, 2014);
- Waste Classification Guidelines Part 4: Acid sulfate soils (NSW EPA, 2014);
- Waste Reduction and Purchasing Policy 2011-2014 (WRAPP), NSW Government;
- Guidelines on Resource Recovery Exemptions - Land Application of Waste Materials as Fill (2011, DECCW);
- Storing and Handling Liquids, Environmental Protection: Participants Manual (NSW DECC, 2007); and
- National Environment Protection (Assessment of Site Contamination) Measure 1999 (National Environment Protection Council, April 2013).

4 Environmental Aspects and Impacts

4.1 Construction Waste Streams

The following construction related waste streams have been identified:

- Demolition wastes from existing structures that require demolition (ie brick, tile, plasterboard, timber);
- Potential asbestos waste in existing buildings;
- Waste steel offcuts through construction and assembly of the strands;
- Excavated soil material;
- Excess concrete surplus to pours;
- Electrical wiring off-cuts and redundant wiring removed from buildings;
- Packaging materials associated with items delivered to site such as pallets, crates, cartons, plastics and wrapping materials; and
- General wastes including office wastes, scrap materials and biodegradable wastes.

4.2 Impacts

The potential environmental impacts associated with construction waste generation include:

- Generation of construction waste from production, assembly and installation of site infrastructure;
- Generation of domestic waste from construction personnel;
- Inappropriate disposal of hazardous waste if discovered;
- Generation or spread of contaminated waste/soils, e.g. groundwater, used or expired chemicals, or construction materials; and
- Water pollution due to surface water runoff from exposed areas.

5 Waste Management

5.1 Classification of Waste Streams

Where waste cannot be avoided, reused or recycled it will be classified and appropriate disposal will then occur. The classification of waste is undertaken in accordance with the EPA's *Waste Classification Guidelines Part 1: Classifying Waste* (2014). This document identifies six classes of waste: Special, Liquid, Hazardous, Restricted Solid, General Solid (putrescible) and General Solid (non-putrescible) and describes a six-step process to classifying waste. That process is described below:

Step 1: Is it 'special waste'?

Establish if the waste should be classified as special waste. Special wastes include clinical and related, asbestos, waste tyres. Definitions are provided in the guidelines.

Note: Asbestos and clinical wastes must be managed in accordance with the requirements of Part 7 and Clause 113 of the Protection of the Environment Operations (Waste) Regulation 2014.

Step 2: If not special, is it 'liquid waste'?

If it is established that the waste is not special waste it must be decided whether it is 'liquid waste'. Liquid waste means any waste that: has an angle of repose of less than 5° above horizontal becomes free flowing at or below 60° Celsius or when it is transported is generally not capable of being picked up by a spade or shovel.

Liquid wastes are sub-classified into:

- Sewer and stormwater effluent;
- Trackable liquid waste, being category 1 trackable waste and wastes stated under the *Protection of the Environment Operations (Waste) Regulation 2014, Schedule 1 Waste to which waste tracking requirements apply*; and
- Non-trackable liquid waste.

Step 3: If not liquid, has the waste already been pre-classified by the NSW EPA?

The EPA has pre-classified several commonly generated wastes in the categories of hazardous, general solid waste (putrescibles) and general solid waste (non-putrescibles). If a waste is listed as 'pre-classified', no further assessment is required.

Step 4: If not pre-classified, is the waste hazardous?

If the waste is not special waste (other than asbestos waste), liquid waste or pre-classified, establish if it has certain hazardous characteristics and can therefore be classified as hazardous waste.

Hazardous waste includes items such as explosives, flammable solids, substances liable to spontaneous combustion, oxidizing agents, toxic substances and corrosive substances.

Step 5: If the waste does not have hazardous characteristics, undertake chemical assessment to determine classification.

If the waste does not possess hazardous characteristics, it needs to be chemically assessed to determine whether it is hazardous, restricted solid or general solid waste (putrescible and non-putrescible). If the waste is not chemically assessed, it must be treated as hazardous.

Waste is assessed by comparing Specific Contaminant Concentrations (SCC) of each chemical contaminant, and where required the leachable concentration using the Toxicity Characteristics Leaching Procedure (TCLP), against Contaminant Thresholds (CT).

Step 6: Is the general solid waste putrescible or non-putrescible?

If the waste is chemically assessed as general solid waste, a further assessment is available to determine whether the waste is putrescible or non-putrescible. The assessment determines whether the waste is capable of significant biological transformation. If this assessment is not undertaken, the waste must be managed as general solid waste (putrescible).

5.2 Classification of Potential Waste Streams

The construction aspects and types of wastes, which may be generated during construction, are outlined with classifications in **Table 2**. In addition, **Table 3** outlined expected waste generation during operation of the facility.

Table 2: Classification of potential waste streams during construction

Materials on site		Treatment / reuse / recycling		Disposal
CONSTRUCTION PHASE				
Type of Material	Description	Onsite	Offsite	Residual
Excavated material	Crushed rock	Stockpile and re-use on site as fill.	None	None
Concrete – construction wastes	Surplus pours	Ensure that quantities are correctly estimated prior to pour. Crush and use any surplus as fill where possible.	Concrete waste to be separated and collected by concrete recycling contractor	Dispose any surplus to concrete crushing facility for recycling
Metals	Steel off-cuts wiring off-cuts	Nil	Scrap metal to be separated and collected for recycling by recycling contractor	Nil
Plastic/HDPE	Wrap from materials delivered and packaging	Nil	Collection by recycling contractor for recycling	Dispose non-recyclable material to licensed waste disposal facility
Cardboard	Packaging from materials delivered	Nil	Collection by recycling contractor for recycling	Nil
General Waste	Contractors/work force	All waste streams to be separated and recycled	Collection by recycling contractor for recycling	Dispose general waste to licensed waste disposal facility

Table 3: Classification of potential waste streams during operation

Type of Waste to be Generated	Proposed Onsite Storage and Treatment Facilities	Destination
OPERATION PHASE		
Cardboard packaging / Office paper	Paper and Cardboard to be separated for recycling at source. Paper and Cardboard to be reused where possible, or compacted for recycling	Recycling contractor for recycling
Plastic packaging	Bale up on-site. Store in waste storage and recycling area(s)	Recycling contractor for recycling. Non-recyclable plastics to be disposed as general waste
Pallets	Stored on-site in designated area	Return to supplier for reuse
Waste/reject product	Store in waste storage and recycling area	Returned to supplier
Liquid wastes	Wastewater from drill mud/hydro-excavation to be stored in 1 x 100,000L tank	Wastewater to be tested and reused on site in composting process
Recyclable glass, aluminium, metal, and plastic containers	To be separated at source as far as practicable for recycling by recycling contractor	Recycling contractor for recycling
Used Toner Cartridges	To be stored on site for collection by toner supplier	Toner supplier for recycling
General waste	To be stored inside warehouse or retail facility or suitably screened from public areas	Disposed by licenced waste contractor to licenced waste disposal facility
Portaloo waste	Pump out by waste contractor	Disposal at a licenced facility approved to accept untreated effluent

Waste storage and recycling receptacles are to be located nearby all generation sources. Waste storage and recycling bins to be clearly labelled. The center manager or representative would be responsible for maintaining the waste storage and recycling area, for ensuring bins are emptied and collected as required, and for ensuring that no contamination of waste streams is occurring.

5.3 Reuse and Recycling

Waste separation and segregation will be promoted on-site to facilitate reuse and recycling as a priority of the waste management program as follows:

- Waste segregation onsite – Waste materials, including spoil and demolition waste, will be separated onsite into dedicated bins/areas for either reuse onsite or collection by a waste contractor and transport to offsite facilities; and
- Waste separation offsite – Wastes to be deposited into one bin where space is not available for placement of multiple bins, and the waste is to be sorted offsite by a waste contractor.

Where materials cannot be reused and recycled, all waste would be handled and disposed in accordance with the *Protection of the Environment Operations Act 1997*.

5.4 Waste Handling and Storage

Where waste is required to be handled and stored onsite prior to onsite reuse or offsite recycling/disposal, the following measures apply:

- Spoil, topsoil and mulch are to be stockpiled onsite and mitigation measures for dust control and surface water management will be implemented;
- Liquid wastes are to be stored in appropriate containers in bunded areas until transported offsite. Bunded areas will have the capacity to hold 110 per cent of the liquid waste volume for bulk storage or 120 per cent of the volume of the largest container for smaller packaged storage;
- Any hazardous waste encountered during construction works will be managed by appropriately qualified and licenced contractors, in accordance with the requirements of the *Environmentally Hazardous Chemicals Act 1985* and the EPA waste disposal guidelines; and
- All other recyclable or non-recyclable wastes are to be stored in appropriate covered receptacles (e.g. bins or skips) in appropriate locations onsite and contractors commissioned to regularly remove/empty the bins to approved disposal or recycling facilities.

5.5 Waste Disposal

Waste (and spoil) disposal is to be in accordance with the *Protection of the Environment Operations Act 1997* and the *Waste Avoidance and Resource Recovery Act 2001*. Wastes that are unable to be reused or recycled will be disposed of offsite to an EPA approved waste management facility following classification.

Where possible wastes will be removed off-site to a recycling facility or will be disposed of at a licenced waste facility. Waste contractors and licensed waste management facilities that may be available for offsite waste disposal are included in **Table 4**.

Table 4: Waste contractors and licenced facilities

Name	Details	Contact Details	Waste Accepted
SUEZ	Transfer station	20 Davis Road, Wetherill Park, NSW Ph. 02 9609 3377	Batteries, asbestos, paper and cardboard, E-waste, garden and food waste, gas bottles, hazardous waste, metal, mixed putrescible, non-putrescible, plastic, white goods, and wood waste

Name	Details	Contact Details	Waste Accepted
Veolia	Resource recovery and landfill	752/716 Wallgrove Road, Horsley Park, NSW Ph. 132 955	General solid non-putrescible waste, including concrete, soils, timber and steel.
Boral	Resource recovery facility	39A Widemere Road, Wetherill Park, NSW Ph. 02 9604 9101	Separation, crushing, and blending of recovered construction and demolition (C&D) wastes.
Cleanaway	Transfer station and landfill	85-87 Quarry Road, Erskine Park, NSW Ph. 131 339	Commercial and industrial, general solid waste (non-putrescible), general solid waste soils (special asbestos), low level contaminated soils (LLCS), construction and demolition waste (C&D Waste) excluding asbestos, and clean fill (ENM/VENM).

Details of waste types, volumes and destinations are to be recorded in the Waste Tracking Register in **Appendix A**.

6 Environmental Mitigation Measures

Mitigation and management measures associated with waste handling on the site are outlined below and have been developed to ensure consistency with industry best practice:

- Ensure that all waste (liquid, air emissions and solid material) generated during site clearing and subdivision project construction are managed in accordance with waste hierarchy (avoid, reuse, recycle, dispose) to reduce adverse impact on the environment;
- Plant and equipment will be regularly maintained;
- Assessment of suspicious potentially contaminated materials, hazardous materials and liquid wastes will be undertaken;
- Regular monitoring, inspection, and reporting will be undertaken, and findings implemented;
- Manage and reduce consumption and use of natural resources and promote the use of alternative environmentally friendly materials where practical;
- Licenced waste contractors will be used to collect, transport and dispose of materials at a licensed off-site facility in accordance with waste regulations;
- Waste will be appropriately contained in designated waste areas located away from drainage paths;
- No burning of waste or vegetation is allowed under any circumstances;
- General and putrescible waste and recyclables such as metal, plastic, glass, paper, cardboard will be segregated and collected in suitable waste containers positioned in convenient locations within each work area;
- Timber, plasterboard, concrete, bricks, steel and general waste will be stored in separate skip bins;
- Separate skips and recycling bins will be provided for effective waste segregation and recycling purposes;
- Training and awareness of the requirements of this WMP and specific waste management strategies will be undertaken during the site induction;
- Soil will be stored in stockpiles away from drainage lines and drip lines of trees with appropriate run-off controls;
- All waste Skips would be checked every day and, if at or reaching capacity, removal would be organised within 24 hours;
- Skip bins will have secure lids in place to prevent water ingress;
- Quantities of waste kept on-site will be kept to a minimum. Maximum volume of each waste stored will be consistent with EPA regulations and guidelines;
- Volume of materials required for construction will be calculated carefully to avoid over ordering of materials;
- Portable toilets used on site during construction will be serviced as required, with effluent disposed of at a licenced off-site facility;
- Where excavated soil can't be re-used it will be classified in accordance with waste classification guidelines;
- Materials will be segregated to maximise reuse and recycling;
- Contaminated waste will be managed, transported, and disposed of in accordance with licensing Requirements;
- Off-site waste disposal will be transported and disposed of in accordance with licensing requirements;
- Waste concrete, timber, steel, cardboard, paper, recyclable plastics, etc removed from site will be processed recycling facilities for reuse; and

- Any Asbestos Containing Materials (ACM) identified will be disposed off-site at a licensed facility in accordance with waste classification guidelines and the Unexpected Finds Protocol attached as **Appendix K** to the CEMP.

In addition, a Waste Tracking Register has been prepared to assist with the management of waste disposal. The Waste Tracking Register is attached at **Appendix A**.

7 Compliance

7.1 Roles and Responsibility

The organisational structure and overall roles and responsibilities are outlined in Section 3.1 of the CEMP.

7.2 Training

All employees and contractors working on site will undergo site induction training, including the correct management of construction waste. The induction training will address elements related to waste management including:

- Existence and requirements of this sub-plan;
- Relevant legislation;
- Waste management mitigation and management measures; and
- Procedure to be implemented in the event of an incident.

Further details regarding staff induction and training are outlined in Section 4 of the CEMP.

7.3 Monitoring and Inspections

Weekly visual monitoring and inspections will be undertaken during construction. Inspections would be undertaken in accordance with Section 7 of the CEMP.

7.4 Non-conformances

Non-conformances will be managed in accordance with Section 7.4 of the CEMP.

7.5 Audits and Reporting

Audit and reporting requirements are detailed in Section 7.3 of the CEMP.

8 Review and Improvement

8.1 Review and Updates

The processes described in Section 7 of the CEMP may result in the need to update or revise this Plan. This will occur as needed.

Only the Operations Manager, or delegate, has the authority to change any of the environmental management documentation. In terms of approval of updates or amendments to this Plan, this is to be carried out by the Operations Manager to ensure that the amendments are consistent (or not) with the Project Approval.

A copy of the updated plan and changes will be distributed to all relevant stakeholders in accordance with the requirements of the CEMP.

8.2 Continuous Improvement

Continuous improvement of this Plan will be achieved by the ongoing evaluation of environmental management performance against environmental policies, objectives and targets for the purpose of identifying opportunities for improvement.

The continuous improvement process will be designed to:

- Identify areas of opportunity for improvement of environmental management and performance;
- Determine the cause or causes of non-conformances and deficiencies;
- Develop and implement a plan of corrective and preventative action to address any non-conformances and deficiencies;
- Verify the effectiveness of the corrective and preventative actions;
- Document any changes in procedures resulting from process improvement; and
- Make comparisons with objectives and targets.

9 References

- DPE (2017). SSD 7401 Project Approval
- DPIE (2021) SDD-7401-Mod-1 Approval
- EPA (2014a). *NSW Waste Avoidance and Resource Recovery Strategy 2014-21*.
- EPA (2014b). *Waste Classification Guidelines – Part 1: Classifying Waste (2014)*.
- EPA (2012) *Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities*.
- Moirs (2016). *Visual Impact Assessment, GreenSpot Resource Recovery Centre, 24 Davis Road, Wetherill Park, NSW*.
- RPS (2017a) *Greenspot Wetherill Park – EIS for a 200,000tpa resource recovery and recycling facility*.
- RPS (2017b). *Waste Management Plan for Proposed Resource Recovery & Recycling Centre, 24 Davis Road, Wetherill Park*.

Appendix A: Waste Tracking Register

WASTE TRACKING REGISTER

[illegible]

Appendix I: Flood Emergency Response Plan



Flood Emergency Response Plan

for

24 David Road, Wetherill Park

for Borg Property

Report Details

Project: Proposed Resource Recovery & Recycling Centre
24 Davis Road, Wetherill Park

Project Ref: NL151740_E02_[D]

File Location: Y:\YEAR 2015 Jobs\NL151740\E - Reports\NL151740_E03[D]_GB.docx

Revision History

Revision	Report Status	Prepared	Reviewed	Issue Date
1	For Comment	L Gitzel	A Brien	04/02/2019
A	Final	L Gitzel	A Brien	21/02/2019
B	Final	L Gitzel	D Jarvis	25/03/2019
C	Amended Layout	A Brien	L Gitzel	21/07/2021
D	Amended Layout	A Brien	L Gitzel	27/07/2021

Limitation Statement

Northrop Consulting Engineers Pty Ltd (Northrop) has been retained to prepare this report based on specific instructions, scope of work and purpose pursuant to a contract with its client. It has been prepared in accordance with the usual care and thoroughness of the consulting profession for the use by Borg Property. The report is based on generally accepted practices and standards applicable to the scope of work at the time it was prepared. No other warranty, express or implied, is made as to the professional advice included in this report.

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1. Introduction

Northrop Consulting Engineers have been engaged by Borg Property Pty Ltd to prepare a Flood Emergency Response Plan for the Resource Recovery & Recycling Centre at 24 Davis Road, Wetherill Park (the subject site). The subject site is located within the Smithfield-Wetherill Park Industrial estate which is the largest industrial estate in the southern hemisphere employing over 20,000 people over 1,000 manufacturing, wholesale, transport and service firms.

This Flood Emergency Response Plan (FERP) has been developed to:

- Promote a satisfactory awareness of the expected flood behaviour and flood risks associated with the subject site.
- Identify measures to monitor weather forecasts and to become flood prepared.
- Provide a recommended course of action during and after flood events.

This assessment has given consideration to the following documents:

- The Surface Water Assessment Modification of a Resource Recovery and Recycling Facility at 24 Davis Road, Wetherill Park, completed by Eclipse Consulting September 2020.
- The Surface Water Assessment for 24 Davis Road, Wetherill Park, Proposed Resource Recovery & Recycling Centre completed by Northrop Consulting Engineers in 2017 and referenced as the “*Surface Water Assessment (Northrop, 2017)*” in this report.
- A Flood Information Sheet for 24 Davis Road, Wetherill Park provided by Fairfield City Council in 2016 and referenced as the “*Flood Information Sheet (Fairfield City, 2016)*” in this report.
- The Wetherill Park Overland Flood Study completed by Fairfield City Council in conjunction with Cardno in 2015 and referenced as the “*Wetherill Park Flood Study (Fairfield Council, 2015)*” in this report.
- Prospect Creek Floodplain Management Plan Review Parts 1 and 2 completed by Bewsher Consulting in 2010 referenced as the “*Prospect Creek FMP (Bewsher, 2010)*” in this report.
- The Fairfield City Flood Emergency Sub Plan developed by the State Emergency Service (SES) in consultation with Fairfield City Council, completed in 2016 and referenced as the “*SES EMPLAN (SES, 2016)*” in this report.

Contained herein is a description of the subject site, the study methodology, a summary of the likely flood behaviour, recommendations for flood preparation and response actions prior to a flood event.

		Date
Prepared by	GB	27/07/2021
Checked by	LG	27/07/2021
Admin	BBR	27/07/2021

2. Methodology and Available Data

This Flood Emergency Response Plan has been prepared using the following methodology:

- Desktop review of the available flood information for the subject site including a summary of the likely flood behaviour across and within the general vicinity of the subject site.
- Investigation and presentation of the local flood evacuation procedures and summary of how and where flood warnings can be assessed.
- Nomination of the persons responsible for site specific roles such as the preparation and maintenance of the onsite flood emergency kit and identification of the responsible guides for safe evacuation and/or refuge for the subject site.
- Identification of potential on-site refuge points and off-site evacuation assembly points.

3. Flood Behaviour

3.1. Flood Source

The site is located within the northern-western portion of the highly urbanised Smithfield-Wetherill Park Industrial Estate and is also located adjacent to Prospect Creek. Flooding of the subject site has the potential to occur from two sources including both the local Wetherill Park catchment and regional Prospect Creek catchment.

The subject site is located in the upper reaches of the Prospect Creek catchment which commences just downstream of the Prospect Reservoir and travels in a south-easterly direction and ends at its confluence with the Georges River approximately 20km downstream.

The local catchment extends to the east of the subject site and includes the Wetherill Park industrial estate and a portion of Rural Residential and Open Space land-use which is located adjacent to the northern and western boundaries of the industrial estate.

3.2. Peak Flood Levels and Velocities

Site specific peak flood levels are presented in the Flood Information Sheet (Fairfield City, 2016) and velocities are presented in the Wetherill Park Flood Study (Fairfield Council, 2015) are summarised in Table 1 below.

Table 1 – Subject Site Flood Levels

Event	Level (m AHD)	Depth (m)*	Velocity (m/s)*
5% AEP	36.3 – 36.8	0.0 – 0.3	N/A
1% AEP	36.4 – 36.9	0.0 – 0.5	<1.0
PMF	37.0 – 38.0	0.0 – 1.0	>1.5

* Flood Depths and Velocities have been obtained from the Wetherill Park Flood Study (Fairfield Council, 2015) and include depths in Davis Road.

These are rare events which are not expected to occur every time it rains. The 5% AEP refers to the Annual Exceedance Probability and is commonly referred to as the “20-year flood” while the 1% AEP is commonly referred to as the “100-year flood”. The PMF is the Probable Maximum Flood which has a nominal annual probability of occurring in the order of 1 in 10 million.

The following Figure 1 presents the predicted 5% AEP, 1% AEP and PMF flood extents across the subject site and Davis Road.

Figure 1 suggests that only a small portion of the subject site is expected to become inundated during all events up to and including the PMF design storm event. It is anticipated that Davis Road, adjacent to the subject site, will not be trafficable for events greater than or equal to the 1% AEP.



Figure 1 – Flood extents relative to the site boundary

3.3. Flood Behaviour and Hazard Category

Flooding from the local catchment has been considered in the Wetherill Park Flood Study (Fairfield Council, 2015). The study suggests a critical duration in Davis Road and across the subject site of two hours for the 1% and 5% AEP design storm events and 15 minutes is shown for the PMF. Due to the relatively steep topography across the subject site and relatively short duration events, prolonged inundation of the subject site is not anticipated with flood waters expected to subside within a couple hours. Flows are expected to approach from the west along Davis Road and continue in an easterly direction along Davis Road towards an un-named watercourse located to the east of Wenban Place.

Flood hazard has been assessed as part of the Wetherill Park Flood Study (Fairfield Council, 2015) based on the hydraulic hazard categories outlined within the NSW Floodplain Development Manual (OEH, 2005) and reproduced in the below Figure 2.

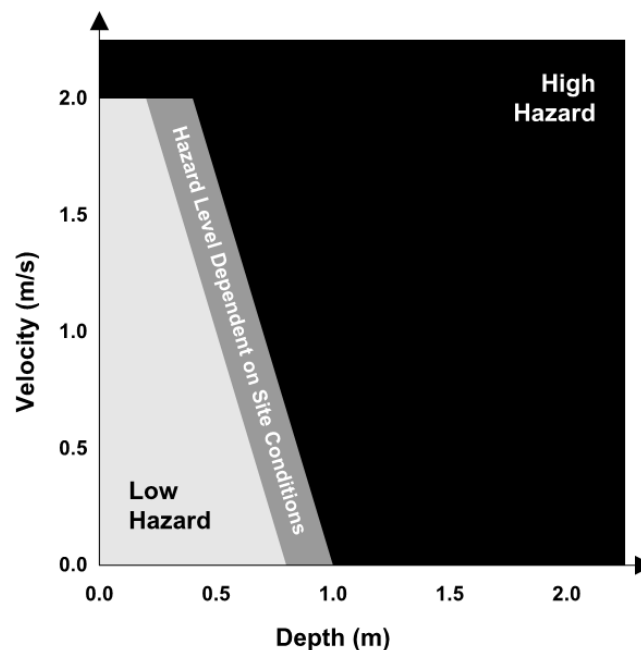


Figure 2 – Flood Hazard Classifications (NSW Floodplain Development Manual (OEH, 2005))

During the 1% AEP design storm event the Wetherill Park Flood Study (Fairfield Council, 2015) suggests the flood depths in the Davis Road carriageway generally less than 500mm with velocities generally less than 1.0m/s. This corresponds to “Low Hazard” flow behaviour in accordance with Figure 2.

Similarly, during the PMF design storm event, depths presented in the Wetherill Park Flood Study (Fairfield Council, 2015) are shown to be less than 1.0m with velocities generally less than 1.5m/s. When combined, these hydraulic conditions have the potential to produce “High Hazard” flow behaviour.

The hydraulic behaviour presented in Figure 2 has been used to develop the Provisional Flood Precincts for the Wetherill Park Flood Study (Fairfield Council, 2015), reproduced in Figure 3 below. The results show a Medium Flood Risk Precinct exists in Davis Road which also suggests “Low Hazard” conditions are observed during the PMF design storm event.

Do not Drive or Walk Through Floodwater.

Remember, If It’s Flooded, Forget It!

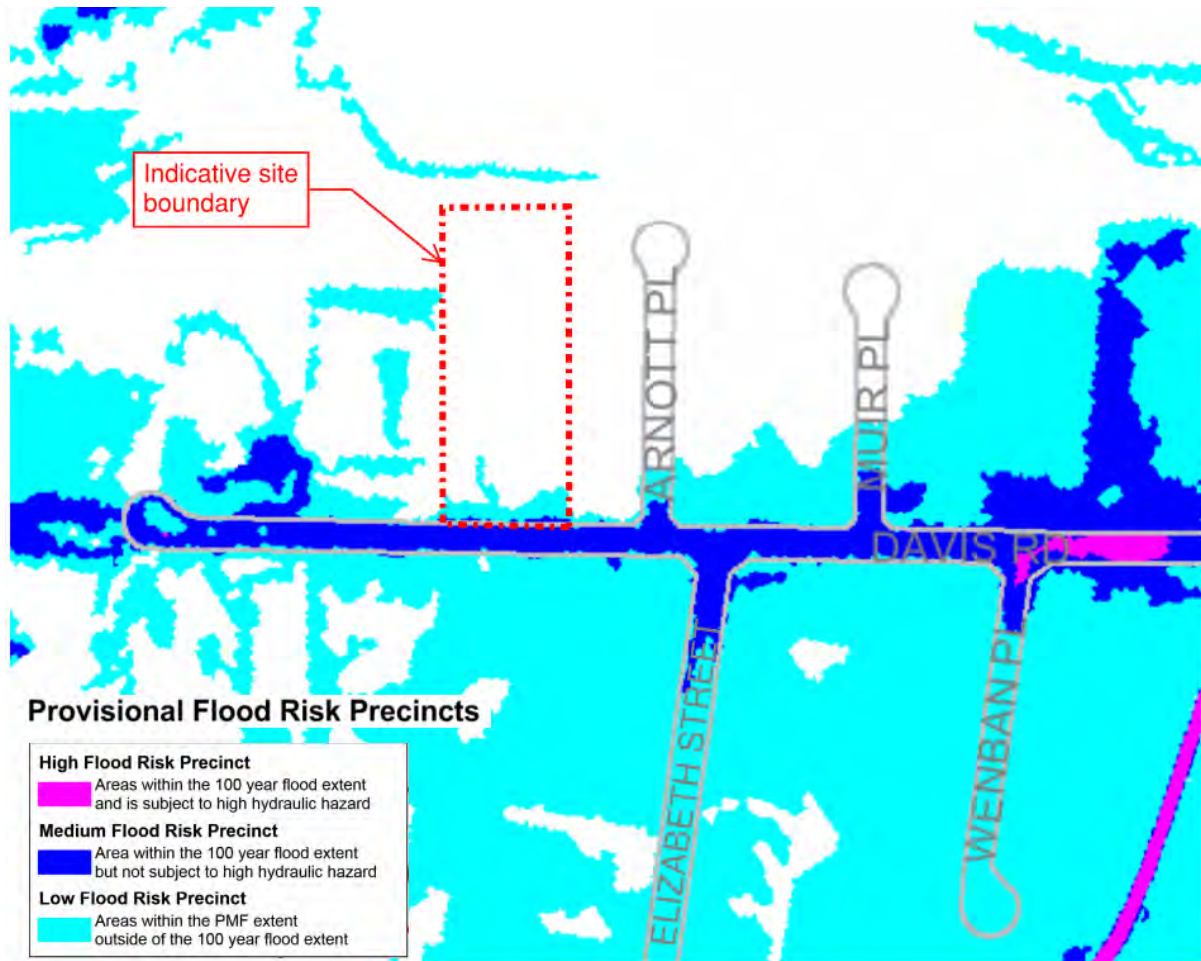


Figure 3 – Provisional Flood Risk Precincts (Wetherill Park Flood Study (Fairfield Council, 2015))

Review of the previously discussed hydraulic behaviour with respect to the latest Australian Rainfall and Runoff 2019 (ARR 2019) guidelines suggests a maximum H2 and H5 hazard classifications may be observed in Davis Road (directly adjacent to the subject site) during the 1% AEP and PMF design storm events respectively. This suggests that Davis Road may be trafficable for large vehicles and pedestrians during the 1% AEP but is unsafe for all vehicles and pedestrians during the PMF.

Although Davis Road may be trafficable along the subject site frontage during a 1% AEP does not mean it is safe to evacuate the site during a 1% AEP design storm event. Flood hazard conditions can vary significantly throughout the catchment. Figure 3 suggests there is a spike in the flood hazard conditions at the intersection of Davis Road and Wenban Place and as suggests Davis Road is not trafficable at this location during the 1% AEP. Similarly, the Wetherill Park Flood Study (Fairfield Council, 2015) suggests depths in excess of 500mm are likely at the intersection of Elizabeth Street and Davis Road during the 1% AEP design storm event.

Note that as flood waters rise and overtop roads, there is a potential for shallow depths but high velocity flow conditions, particularly across roads and creek crossings. Never drive or walk through flood water, remember if it is flooded, forget it!

3.4. Prospect Creek and Dam Break

Given the size of the upstream regional catchment (in the order of 10km²), and the significant storage capacity of the Prospect Reservoir, if flooding of the subject site occurs from Prospect Creek it is expected to occur over a long period of time. Unfortunately, the Prospect Creek FMP (Bewsher, 2010) does not include the portion of Prospect Creek to the north of the subject site however, this does not preclude the possibility of flooding from this catchment.

Similarly, Prospect Reservoir is located to the north of the subject site. Dam break conditions were not available when preparing this plan however, in the unlikely event of a failure of the Prospect Reservoir, flooding may be spontaneous with little warning.

Flooding of the subject site from these sources is also not noted on the Flood Information Sheet provided by Council however, in the unlikely event of flooding from these sources, it is important to always follow the direction from Emergency Services.

4. Flood and Evacuation Warnings

A network of rainfall gauge stations is maintained throughout the greater Sydney metropolitan region. These provide information to the Bureau of Meteorology as one source of information informing their flood warning system.

The Bureau should issue one of five types of warnings through local radio, television and through their website <http://www.bom.gov.au>. In addition, the SES may issue a flood bulletin, evacuation warning or evacuation order.

Due to the sensitive nature of this location, it is recommended to register for automatic text and email notifications from the Early Warning Network which filters and passes on BoM warnings.

4.1. Warning Types

4.1.1. Severe Weather Warning

Severe weather warnings are issued by the Bureau for potentially dangerous weather conditions. A description of the threat will be included in the warning along with the time for next issue. It is noted that a severe weather warning does not imply that flooding will eventuate. Warnings are generally updated every six hours, or as the event dictates.

This type of warning should be accompanied with predicted extreme rainfall depth as discussed in Section 10, as well as observed values from around the state.

4.1.2. Severe Thunderstorm Warning

A severe thunderstorm warning will be issued if there is strong evidence that a severe thunderstorm will develop, or if a severe thunderstorm is reported. Flash flooding may occur during severe thunderstorms. Warnings are generally updated every three hours or shorter as required.

4.1.3. Flood Alert/ Watch/ Advice

A flood alert/watch/advice will be issued if flood producing rain is expected. This provides an early warning that flooding may occur.

4.1.4. Generalised Flood Warning

A generalised flood warning is to be issued when flooding is expected to occur in the given area. Three hours warning time is expected from issue of warning to peak flood level as per the "Service Level Specification for Flood Forecasting and Warning Services for New South Wales – Version 3.1" (Bureau of Meteorology, 2013).

This is the most likely warning type for the subject site should evacuation need to occur.

4.1.5. Minor/ Moderate/ Severe Flood Warning

A more detailed flood warning may be issued based on any additional information available. Three hours warning time is expected from issue of warning to peak flood level.

All warnings will be issued through the website, radio and television. Radio frequencies include ABC Sydney (702AM / 92.9FM, 206.352MHz Digital), Triple J (105.7FM), 2DayFM (104.1FM), Triple M (104.9FM), Nova (96.9FM), MIX (106.5FM), 2GB (873AM) and 2UE (954AM).

All public and commercial television stations should broadcast warnings.

4.2. SES Flood Bulletins

The SES may issue a flood bulletin providing information of the likely flood consequences and recommended actions.

4.3. Evacuation Warning

The SES may issue an evacuation warning which allows time to prepare for evacuation.

4.4. Evacuation Order

The SES will issue an Evacuation Order if evacuation is required. If this occurs evacuation must be undertaken. Broadcast will be via radio/ TV, door knock, automated telephone message or SMS.

4.5. On-site Emergency Tone

It is recommended that the handheld loudspeaker be configured to sound an emergency tone meaning all visitors, staff and customers shall assemble in the designated assembly point under the direction of staff and flood wardens.

This should be tested every drill, or once a year. Should it be inoperable in the event of an emergency, an air horn is located within the Flood Emergency Kit.

4.6. Early Warning Network Automated Text and Email Service

The facility is to register for automatic alerts with the Early Warning Network (www.ewn.com.au) which will filter the above BoM warnings and send texts and emails to the Chief Flood Warden and all Flood Wardens to notify them of the situation.

5. Flood Response Personnel

5.1. Responsibilities

Summarised below in Table 2 are the subject site personnel, their location and responsibilities in managing flood response.

Table 2 - Flood Response Personnel

	Location	Responsibilities
Chief Flood Warden	Onsite	• Coordinate flood evacuation drills with the Deputy Flood Warden, First Aid Officers and Flood Wardens. • Monitor weather daily for upcoming extreme rainfall events. • Receive notifications from Early Warning Network (EWN). • Decide when closure of the facility and evacuation is necessary. • Communicate closure and evacuation to Deputy Chief Flood Warden, First Aid Officers and Flood Wardens. • Liaison with SES or Emergency Services personnel if they attend site. • Remain calm and direct staff and visitors through evacuation procedures.
Deputy Chief Flood Warden	Onsite	• Undertake Chief Flood Warden duties when Chief Warden unavailable. • Receive text notifications from EWN.
First Aid Officer	Onsite	• Prepare and maintain Flood Emergency Kit. • Ensure all visitors have the necessary medications if evacuating site. • Coordinate assistance for staff and visitors with mobility difficulties.
Flood Wardens	Onsite	• Cancel any upcoming bookings and co-ordinate alternative accommodation for visitors in the hotel. • Receive text notifications from EWN. • Maintain calm and direct staff and visitors through evacuation or refuge process.
Staff, Contractors and Visitors	Onsite	• Maintain calm, proceed to the Emergency Assembly Point and follow directions from the Flood Wardens.

5.2. Recommended Role Allocation

During construction, it is anticipated that the site supervisor will be on-site the most and as such has been nominated the role of Chief Flood Warden. The Deputy Chief Flood Warden should be allocated to the second in command while the roles of First Aid Officer and Flood Warden should be allocated to staff that are on site on a frequent basis.

During operation, the facility manager is expected to be on-site the most and as such has been nominated the role of Chief Flood Warden. The Deputy Chief Flood Warden should again be assigned to the second in command, while the First Aid Officer should be allocated to the site WHS officer. The role of Flood Warden should be allocated to staff that are located in each section of the facility and are on site on a regular basis.

6. Assembly Point and Evacuation Routes

6.1. Emergency Assembly Point

During construction of the facility, it is recommended a **temporary Site Office** be placed outside the flood zone. This facility is nominated as **Emergency Assembly Point during construction**.

The nominated **Emergency Assembly Point during operation** of the facility is the **Shed/ Warehouse** shown below in Figure 4 below.

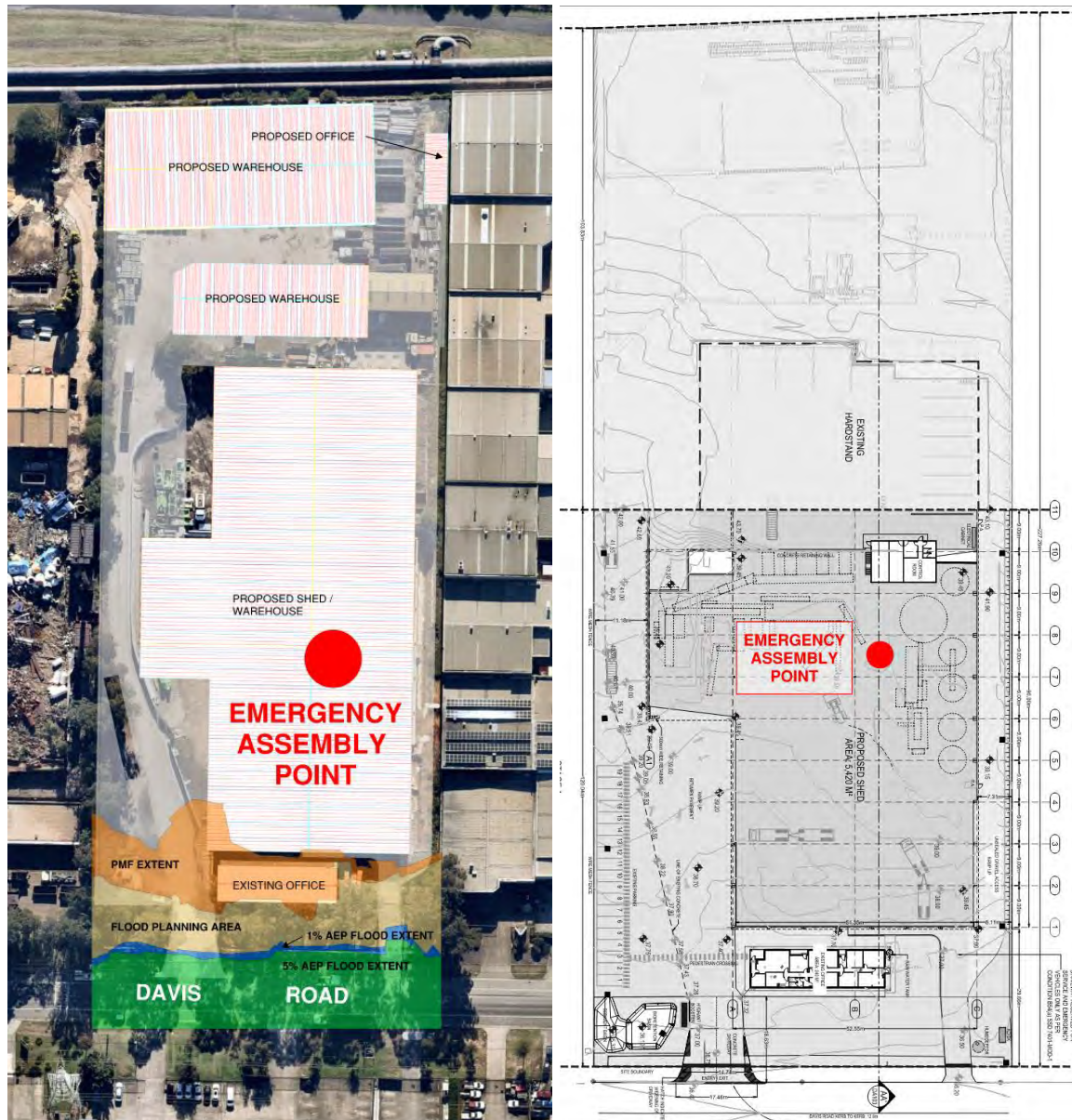


Figure 4 - Flood Emergency Assembly Point

During operation, the shed / warehouse facilities have been chosen as it is well outside the flood zone and is under cover providing staff and visitors seeking refuge shelter and access to supplies during the event.

6.2. Trigger for Action

The following Table 3 presents the estimated rainfall depths for the 5% AEP, 1% AEP and PMF return intervals as well as the predicted return interval when it is expected that evacuation routes will be cut by flooding.

Table 3 – Evacuation Routes Cut by Flooding at specific return intervals

Return Interval	Predicted Rainfall Depth*	Evacuation Route Cut by Flooding**
5% AEP (1 in 20-year event)	31.3mm over 20 mins	Depths in excess of 500mm in Davis Road intersection with Wenban Place.
	68.2mm over 2 hours	<u>Access and egress from the subject site is cut along Davis Road to the east of Muir Place.</u>
	104.4mm over 6 hours	- Depths in excess of 500mm on Victoria Street to the west of Canley Vale Road and east of Emerson's Street. <u>Access and egress from subject site cut along Victoria Road.</u> - Depths in excess of 1 metre in Widemere Road/ Prospect Highway at Prospect Creek Crossing. <u>Access and egress to the north from subject site cut along Widemere Road/ Prospect Highway at Prospect Creek Crossing.</u>
1% AEP (1 in 100-year event)	40.3mm over 20 mins	Potential for depths in excess of 500mm in The Horsley Drive to the east of Emerson Street.
	88.2mm over 2 hours	Depths in excess of 500mm at the intersection of Davis Street and Elizabeth Street.
	135.6mm over 6 hours	<u>Access and egress to Elizabeth Street unavailable. Davis Street to the east of Elizabeth Street including the subject site becomes isolated.</u>
PMF	~170mm over 15 mins	Depths in excess of 500mm along Davis Road adjacent to the subject site.
	~390mm over 1 hour	<u>Access and egress from the subject site to Davis Street is unavailable.</u>
	~740mm over 3 hours	

* Obtained from the Bureau of Meteorology for a location over Wetherill Park using ARR 1987 IFD Charts

** Based on the figures presented in the Wetherill Park Flood Study (Fairfield Council, 2015)

The analysis has assumed access will not be possible at a "High Hazard Precinct" classification, a depth in excess of 500mm and/or a velocity greater than 2.0m/s. The additional depth and velocity conditions are based on a maximum hazard classification of H2 (unsafe for small vehicles) from the latest ARR 2016 guidelines, in particular Book 6 - Chapter 7 – Section 7.2.7 – General Flood Hazard Curves.

The above Table 3 suggests evacuation from the subject site onto Davis Street may be possible but egress along Davis Road at the intersection with Elizabeth Street will not be possible during a predicted 1% AEP design storm event. As such the subject site and Davis Road becomes isolated during the 1% AEP design storm event.

In the event where the Bureau of Meteorology issues a **Severe Thunderstorm Warning** or **Generalised Flood Warning** with depths in the order of the **1% AEP predicted rainfall depths** presented in **Table 3** it is recommended **the facility be closed and evacuated prior to the commencement of rainfall**.

If there are any staff or visitors still on-site at the commencement of rainfall, it is recommended they seek refuge in the designated **Emergency Assembly Point** and wait until flood waters subside.

Note that this trigger is expected to be used as a guide only. In the event where emergency services request the site be evacuated at a lower predicted rainfall depth direction from emergency services takes precedence over the findings of this report.

6.3. Evacuation Route

Evacuation from the subject site is not recommended during a flood event. Refuge onsite is the safest option following commencement of a flood event. In the event where evacuation is required, the preferred evacuation route from the subject site is to the east along Davis Street turning south along Elizabeth Street, west along The Horsley Drive, south along Mimosa Road and finally east or west along Polding Street. This route is presented in the below **Figure 5**.

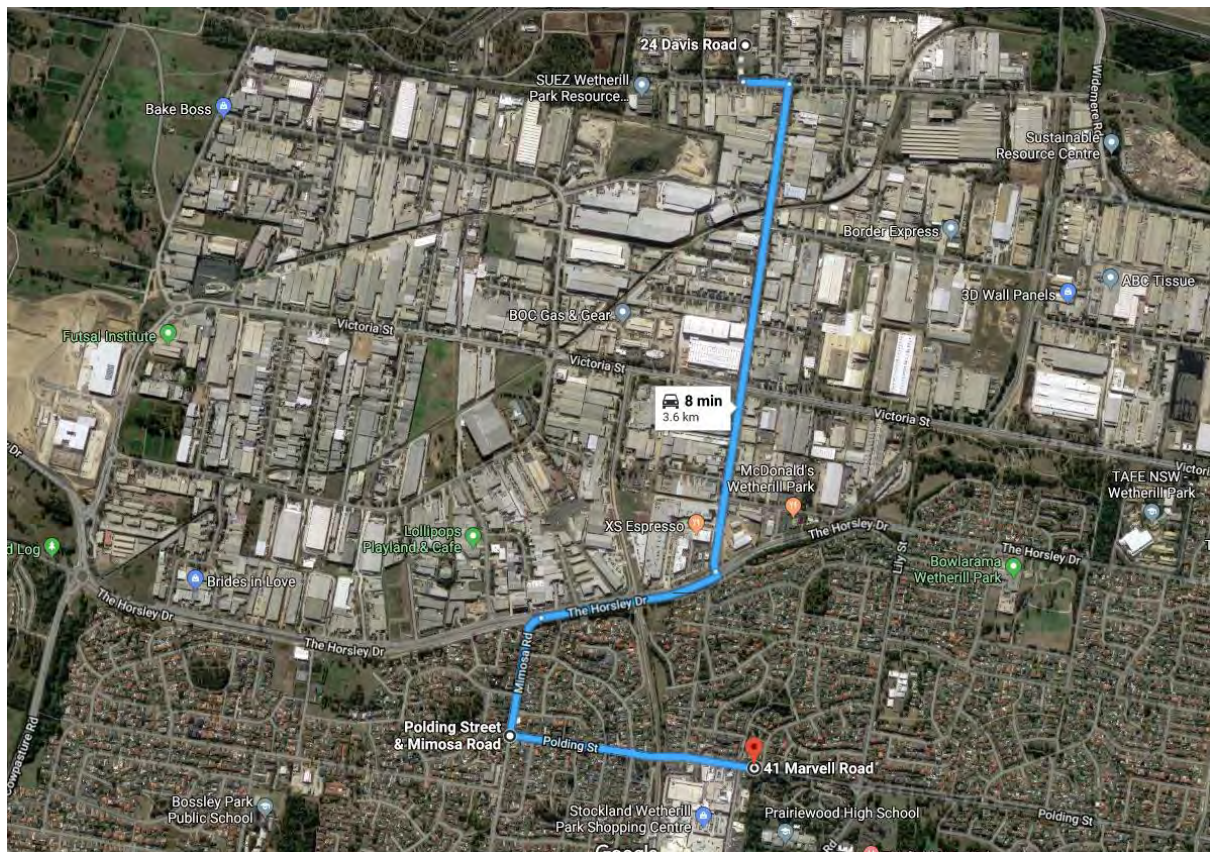


Figure 5 – Flood Evacuation Route

It is strongly recommended that if staff and visitors remain on site during a flood event, refuge be sort on site until flood water subsides. Evacuation should only be attempted in an emergency for events up to the 1% AEP design storm event. Evacuation should not be attempted during the PMF unless advised otherwise by emergency personnel.

7. Floor Levels and On-site Refuge

7.1. Floor Levels

The **temporary office facility** is to be placed outside the flood extent with a floor level above the PMF to ensure safe refuge is available during construction. Floor levels for the temporary office should be no less than **38.0m AHD**.

During operation floor levels for the **Proposed Warehouse/ Shed** is expected to be **39.45m AHD** which is approximately 1.45 metres above the **PMF level of 38.0m AHD**.

7.2. On-site Refuge

In the event where rainfall has commenced with staff, contractors and visitors still on-site during construction it is recommended they seek refuge within the **temporary office facility**. Anyone seeking refuge should remain in the office facility and wait until flood water subsides.

In the event where rainfall has commenced with staff or visitors still on-site during operation of the facility, on-site refuge is available on site in the **Proposed Warehouse / Shed** where they should remain and wait until flood water subsides.

8. Emergency Contact

For emergency assistance during flood events, please call the **SES** on **132 500**.

If you are in a life-threatening situation please call **Police, Fire or Ambulance** on **000**.

9. Flood Response Preparation

It is the responsibility of the Chief Flood Warden that the facility is prepared for a flood event. This will be achieved through; induction training, drills, nomination of flood wardens, education of flood risks and behaviour, and the preparation and maintenance of a *Floodsafe Emergency Kit*. A *Floodsafe Emergency Kit* should be prepared for both construction and operation of the facility.

The information presented above is a summary of the flood behaviour and is considered key to understanding the risks associated with flooding. This should be displayed in conjunction with other emergency information (such as fire, etc.) throughout the centre.

9.1. Evacuation Drills

Evacuation drills are designed to increase flood awareness within the facility. These drills are to be undertaken at least once per year to familiarise staff of the procedures when responding to a flood event.

9.2. Training

During construction, all personnel will undertake a compulsory site induction prior to commencing work onsite. It is recommended that during the site induction, information with respect to the flooding conditions around the subject site be included in the induction. This should include a summary of the information provided in this plan.

If site inductions are not required during the operation of the facility, additional training courses are recommended to educate staff of the flooding conditions of the site. This training should be performed on the staff members first day and may include a site walkover that identifies the flooding conditions as well as the nominated flood refuge locations.

In addition to site inductions and training courses, tool-box talks can be performed and should include reminders as to what to do in the event of a flood as well as identify the nominated flood refuge points.

Records should be kept which should detail who has had the training, when they were trained, the name of the trainer as well as reference to the material used in the training course.

9.3. Flood Emergency Kit

Potential items for a flood emergency kit are outlined at;
<https://www.ses.nsw.gov.au/floodsafe/prepare-your-home/emergency-kit/>, and reproduced below:

- A copy of each facility's emergency management plan.
- Chemical register.
- Air horn and hand-held loudspeaker.
- Portable radios with spare batteries.
- A torch with spare batteries.
- A first aid kit.
- Candles and waterproof matches.
- Waterproof bag for valuables.
- Drinking water and non-perishable food items.
- A copy of emergency numbers.

When leaving or evacuating add the following items:

- **Sign in book** for visitors and contractors.
- **Drinking water, medicines and non-perishable food items.**
- **Special requirements** for infants, the disabled and the elderly (**i.e., walking aids, medications, etc.**).

The Flood Emergency Kit should be kept in the **Control Room** in a roll trolley suitable for easy deployment in the event of an evacuation. The contents of the kit and management during a flood event will be the responsibility of the **First Aid Officers**.

TRIGGER FOR REVIEW AND EDUCATION; Six monthly checking of the emergency kit to ensure all items are in suitable working order. Yearly evacuation drill and reminder of the flood risks.

BY WHO; Chief Flood Warden and First Aid Officer.

9.4. Monitoring of Weather Situation

It is the responsibility of the Chief Flood Warden to monitor the weather situation of be aware if a warning has been issued. This will be achieved through automatic text messages and emails from the Early Warning Network and checking of local radio station and the Bureau website.

TRIGGER FOR MONITORING; Continuous – daily.

BY WHO; Chief Flood Warden.

10. Flood Response Actions

10.1. Evacuation

In order to minimise the risk to life of staff, contractors and visitors, it is recommended the facility be closed in the event of a **Generalised Flood Warning** or **Severe Weather Warning** with nominated rainfall in the order of the **1% AEP predicted rainfall depths presented in Table 3**. In the event where staff and visitors remain on site.

The Chief Flood Warden is responsible reviewing the weather forecasts daily and notifying the other facilities and staff of the decision.

When a warning is received, and if time permits, consideration should also be given to:

- Securing and/or covering loose materials and equipment.
- Blocking floor wastes and toilets.
- Securing and/or raising objects that are likely to float, be blown away and cause damage.
- Turning off mains power, water and gas.
- Relocating chemicals above the predicted water level.

The evacuation procedure shall be as follows:

- Chief Flood Warden to Sound Emergency Tone using the Hand-Held Loudspeaker.
- Chief Flood Warden to communicate evacuation to all facilities.
- Chief Flood Warden to the Emergency Assembly Point.
- Staff, Visitors and Contractors to the Emergency Assembly Point.
- Flood wardens clear all buildings.
- Roll call to ensure all staff and visitors are accounted for.
- Leave signage undercover and notify Police / SES that evacuation has occurred, and to where.
- Control evacuation to either evacuation centre nominated above.
- Wait it out at the designated refuge point.

TRIGGERS FOR EVACUATION:

- Generalised Flood Warning.
- Severe Weather Warning with forecast in the order of:
 - 40.3mm over a period of 20 mins.
 - 88mm or more of rain over 2-hour period.
 - 135.6mm over a period of 6 hours.
- Request from Emergency Services to Evacuate.

RESPONSIBLE FOR THE DECISION; Chief Flood Warden

10.2. Refuge On-Site

In the event where staff and visitors become remain onsite after rainfall has commenced, it is recommended they seek refuge in the nominated Emergency Assembly Point. In the event where refuge is sort on site:

- **Make Announcement Over the Hand-Held Loudspeaker.**
- **Direct** everyone to nominated **Emergency Assembly Point.**
- **Roll call** to ensure everyone is accounted for.
- **Explain** that refuge is being sought on-site and the measures in place to make this safe to maintain calm.
- **Wait it out** until flood waters subside.

TRIGGERS FOR REFUGE ONSITE

- **Rainfall has commenced.**

RESPONSIBLE FOR THE DECISION; Chief Flood Warden

10.3. Emergency Services Attending Site

It is noted that self-motivated evacuation and closure of the facility, well in advance of the beginning of rainfall, reduces strain on emergency services in a flood event. There is however, a possibility that emergency services such as Police, Fire, Ambulance or SES may attend site and assume control from the Chief Flood Warden. Once this has occurred, they are in control of the site and any response operations.

TRIGGERS FOR EMERGENCY SERVICES TAKE CONTROL

- Police, Fire, Ambulance or SES attending site.

RESPONSIBLE FOR THE DECISION; Chief Flood Warden

10.4. After a Flood

Once a Final Flood Warning or SES “All Clear” has been received:

- A thorough check of services such as electricity, sewer, water and gas should be undertaken by qualified persons.
- Advice should be sought from a suitably qualified engineer as to the structural integrity of buildings prior to their use.
- Personal protective equipment should be worn during the clean-up and disinfectant used.

TRIGGER FOR RETURN; All clear given by SES or emergency services and building inspected by representatives.

BY WHO; SES, Emergency services, Flood wardens.

11. Revision of the Flood Emergency Response Plan

This plan should be revised if any of the Studies or Plans outlined in **Section 1** of this report is reviewed to capture changes in the catchment since the last studies and the new guidelines developed as part of Australian Rainfall and Runoff 2016. This plan should also be revised if a Dam Break report for the Prospect Reservoir is made available.

Notwithstanding the above, this plan shall be **revised every three years** or when there is a major operational change or major flood event.

Revisions should be undertaken by a suitably qualified flood emergency response consultant.

12. Conclusion

The subject site is affected by flooding from the local upstream catchment. A review of the proposed development has been undertaken in conjunction with the expected flood behaviour and it was concluded that:

- Nominated flood wardens will provide adequate direction in flood emergencies.
- Closure of all facilities is preferable prior to major events to eliminate exposure to flood hazards.
- If operations have commenced for the day, closure and evacuation from the facility should be carried out prior to rainfall commencing.
- If rainfall has begun, refuge may be sought on-site as a means of last resort. The shed/warehouse facility has a building floor level well above the predicted PMF.
- Through adoption of this plan, the proposed development adequately minimises the flood risks. The recommendations contained herein assist in managing the risk to life of the staff, children and visitors to the subject site.

This Flood Emergency Response Plan recommends the following:

- A temporary site office is recommended to be used during construction and is anticipated to be used as an Emergency Assembly Point in the event of a flood. It is recommended this office be placed at a location outside the flood extent to enable safe refuge in the occasion of a major/extreme flood event.

This study has been developed based on the information provided in the Wetherill Park Flood Study (Fairfield Council, 2015). There is the potential for flooding from Prospect Creek and the Prospect Reservoir however, due to limited information available while preparing this plan these flood sources have not been included in this study.

This report is based on the best information available at the time of preparation. It is possible that flood conditions may vary from those outlined in this report. As such, during a flood event, it is important to always follow instruction from the SES and emergency services as they will have the best information on the ground at the time of the event. If emergency services nominate an alternative evacuation procedure during an event SES and Emergency Services direction should take precedence.

Do Not Drive or Walk through Floodwater.

Remember, If It's Flooded, Forget It!

13. References

- | | | |
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Appendix A – Flood Response Summary

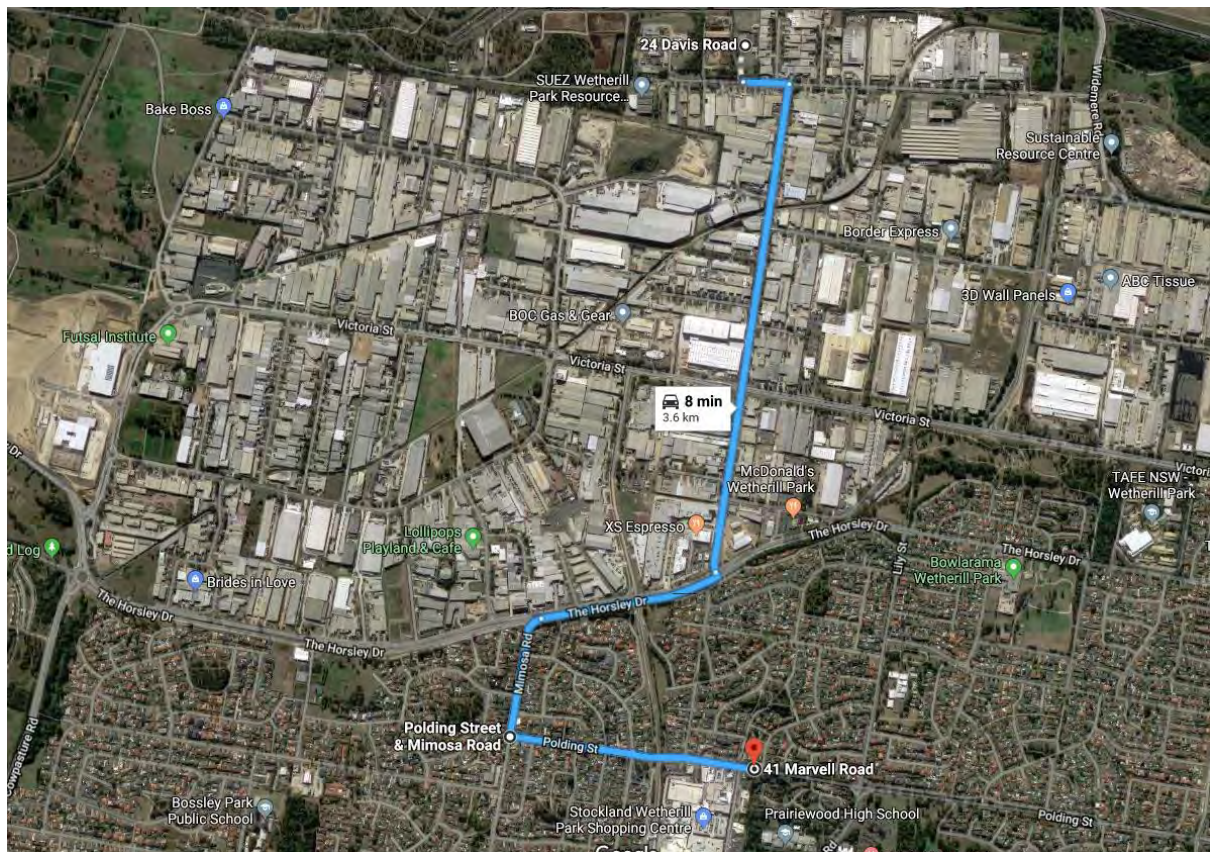
Flood Response Summary

WHEN	WHAT	BY WHO
Prior to Flooding	Assemble Emergency Kit	First Aid Officer
	Check Kit every six months	First Aid Officer
	Coordinate Evacuation Drills yearly and during Site Inductions	Chief Flood Warden
	Sign up and maintain Early Warning Network subscription	Chief Flood Warden
	Monitor weather situation at 4pm every afternoon	Chief Flood Warden
Evacuation	Text / Email from Early Warning Network with rainfall predicted to be greater than; 40.3mm over a period of 20 mins 88mm or more of rain over 2-hour period 135.6mm over a period of 6 hours	Chief Flood Warden
	Make decision to Close the facility and Evacuate	Chief Flood Warden
	Sound Evacuation Tone using Hand-held Loud Speaker and Chief Warden to Emergency Assembly Point	Chief Flood Warden
	Direct staff, contractors and visitors to Emergency Assembly Point	Deputy Flood Warden/Flood Wardens
	Clear buildings to ensure effective evacuation of the subject site.	Flood Wardens
	Roll call to make sure all staff, contractors and visitors are accounted for.	Chief Flood Warden
	Leave signage notifying any responders attending site that evacuation has been undertaken	Chief Flood Warden
	Evacuate to homes / accommodation	Chief Flood Warden
On-site Refuge	Warning has been issued triggering evacuation, but rainfall has commenced.	Chief Flood Warden
	Sound Evacuation Tone and Chief Flood Warden to the nominated Emergency Assembly Point	Chief Flood Warden
	Direct remaining staff, contractors and visitors to the nominated Emergency Assembly Point	Deputy Flood Warden/Flood Wardens
	Roll Call. Ensure everyone is accounted for.	Chief Flood Warden
	Follow direction from Emergency Services	All
	Do not attempt to drive or walk through floodwaters. If stranded on-site and water inundates floor level, call 000 immediately.	All
Once Risk has Passed / After a Flood	Check all services and structural stability of buildings.	Qualified persons
	Return to operation.	Chief warden

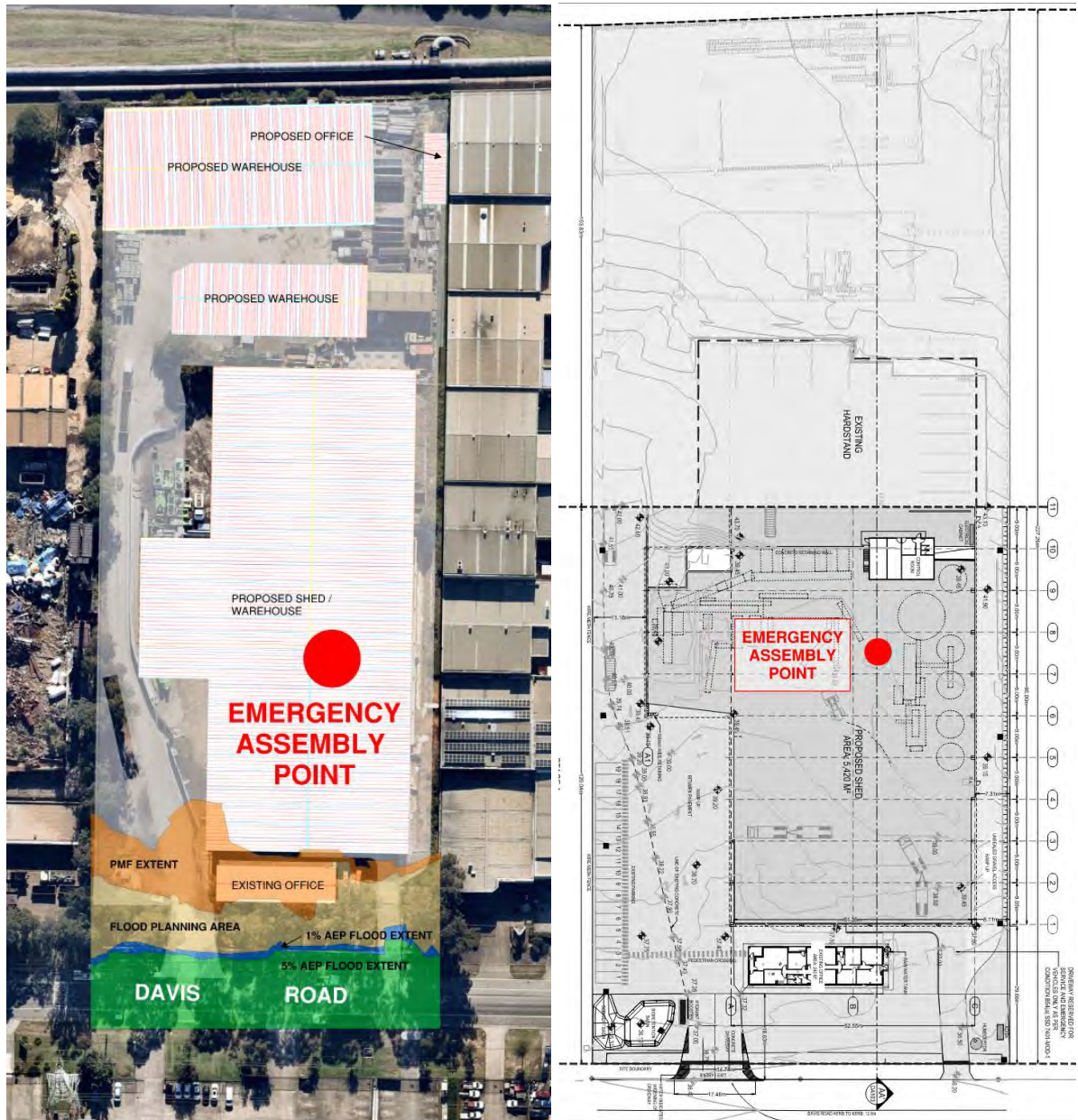
Key Personnel

Person Organisation	Name	Number
Chief Flood Warden		
Deputy Flood Warden		
First Aid Officer		
Flood Warden 1		
Flood Warden 2		
SES	-	132 500
Police / Fire / Ambulance	-	000

Evacuation Routes



Emergency Assembly Point / On-site Refuge



Appendix J: Erosion and Sediment Control Plan

PROPOSED RECOVERY AND RECYCLING FACILITY

24 Davis Rd, Wetherill Park

CONCEPT STORMWATER / CIVIL WORKS

LOCATION PLAN



GENERAL NOTES

- G1. THE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL DRAWINGS AND SPECIFICATIONS AND OTHER WRITTEN INSTRUCTIONS THAT MAY BE ISSUED.
- G2. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING FROM THE DRAWINGS. REFER ARCHITECT'S DRAWINGS FOR ALL DIMENSIONS.
- G3. REFER ANY DISCREPANCY TO THE ENGINEER/ARCHITECT.
- G4. MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE APPROPRIATE SAA SPECIFICATIONS OR CODE AND WITH THE REQUIREMENTS OF THE RELEVANT LOCAL AUTHORITY.
- G5. THE ALIGNMENT AND LEVEL OF ALL SERVICES SHOWN ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL CONFIRM THE POSITION AND LEVEL OF ALL SERVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DAMAGE TO SERVICES SHALL BE RECTIFIED AT THE CONTRACTORS EXPENSE.
- G6. NO WORKS ARE TO COMMENCE UNTIL THE REQUIRED TREE REMOVAL PERMITS HAVE BEEN GRANTED BY RELEVANT LOCAL AUTHORITY, AND THE APPROPRIATE NOTICE OF INTENTION TO COMMENCE GIVEN.
- G7. ALL SERVICES, OR CONDUITS FOR SERVICING SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF PAVEMENT CONSTRUCTION.
- G8. SUBSOIL DRAINAGE, COMPRISING 100 AGRICULTURE PIPE IN GEO-STOCKING TO BE PLACED AS SHOWN AND AS MAY BE DIRECTED BY THE SUPERINTENDENT. SUBSOIL DRAINAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE RELEVANT LOCAL AUTHORITY CONSTRUCTION SPECIFICATION.
- G9. NO WORK IS PERMITTED WITHIN ADJOINING PROPERTIES WITHOUT WRITTEN PERMISSION FROM THE OWNERS OR RESPONSIBLE AUTHORITY.

DRAINAGE NOTES

- D1. ALL DRAINAGE OUTLET LEVELS SHALL BE CONFIRMED ON SITE, PRIOR TO CONSTRUCTION COMMENCING.
- D2. ALL PIPES WITHIN THE PROPERTY TO BE MIN. 100 DIA UPVC @ 1% MIN. GRADE, UNO.
- D3. ALL PITS WITHIN THE PROPERTY ARE TO BE FITTED WITH "WELDOLOK" OR APPROVED EQUIVALENT GRATES.
- LIGHT DUTY FOR LANDSCAPED AREAS
- HEAVY DUTY WHERE SUBJECTED TO VEHICULAR TRAFFIC
- D4. PITS WITHIN THE PROPERTY MAY BE CONSTRUCTED AS:
1) PRECAST STORMWATER PITS
2) CAST INSITU MASS CONCRETE
3) CEMENT RENDERED 230mm BRICKWORK
SUBJECT TO THE RELEVANT LOCAL AUTHORITY CONSTRUCTION SPECIFICATION.
- D5. ENSURE ALL GRATES TO PITS ARE SET BELOW FINISHED SURFACE LEVEL WITHIN THE PROPERTY. TOP OF PIT RLS ARE APPROXIMATE ONLY AND MAY BE VARIED SUBJECT TO APPROVAL OF THE ENGINEER. ALL INVERT LEVELS ARE TO BE ACHIEVED.
- D6. ANY PIPES BENEATH RELEVANT LOCAL AUTHORITY ROAD TO BE RUBBER RING JOINTED RCP, UNO.
- D7. ALL PITS IN ROADWAYS ARE TO BE FITTED WITH HEAVY DUTY GRATES WITH LOCKING BOLTS AND CONTINUOUS HINGE.
- D8. PROVIDE STEP IRONS TO STORMWATER PITS GREATER THAN 1200 IN DEPTH.
- D9. TRENCH BACK FILL IN ROADWAYS SHALL COMPRISE SHARP, CLEAN GRANULAR BACK FILL IN ACCORDANCE WITH THE RELEVANT LOCAL AUTHORITY SPECIFICATION TO NON-TRAFFICABLE AREAS TO BE COMPACTED BY RODDING AND TAMPING USING A FLAT PLATE VIBRATOR.
- D10. WHERE A HIGH EARLY DISCHARGE (HED) PIT IS PROVIDED ALL PIPES ARE TO BE CONNECTED TO THE HED PIT, UNO.
- D11. DOWN PIPES SHALL BE A MINIMUM OF DN100 SW GRADE UPVC OR 100X100 COLORBOND/ZINCALUME STEEL, UNO.
- D12. COLORBOND OR ZINCALUME STEEL BOX GUTTERS SHALL BE A MINIMUM OF 450 WIDE X 150 DEEP.
- D13. EAVES GUTTERS SHALL BE A MINIMUM OF 125 WIDE X 100 DEEP (OR OF EQUIVALENT AREA) COLORBOND OR ZINCALUME STEEL, UNO.
- D14. SUBSOIL DRAINAGE SHALL BE PROVIDED TO ALL RETAINING WALLS & EMBANKMENTS, WITH THE LINES FEEDING INTO THE STORMWATER DRAINAGE SYSTEM, UNO.

EARTHWORKS NOTES

- E1. THE EARTHWORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT.
- E2. THE SITE OF THE WORKS SHALL BE PREPARED BY STRIPPING ALL EXISTING TOPSOIL, FILL AND VEGETATION.
- E3. SUBGRADE SHALL BE COMPACTED UNTIL A DRY DENSITY HAS BEEN ACHIEVED OF NOT LESS THAN 100% OF THE STANDARD MAXIMUM DRY DENSITY WHEN TESTED IN ACCORDANCE WITH AS 1289 TESTS E 1.1, OR E 1.2.
- E4. THE EXPOSED SUBGRADE SHOULD BE PROOF ROLLED TO DETECT ANY SOFT OR WET AREAS WHICH SHOULD BE LOCALLY EXCAVATED AND BACK FILLED WITH SELECTED MATERIAL.
- E5. THE BACK FILLING MATERIAL SHALL BE IMPORTED GRANULAR FILL OF LOW PLASTICITY, PREFERABLY CRUSHED SANDSTONE, AND TO BE PLACED IN LAYERS NOT EXCEEDING 150 LOOSE THICKNESS AND COMPACTED TO 98% OF STANDARD DRY DENSITY AT A MOISTURE CONTENT WITHIN 2% OF OPTIMUM.
- E6. SITE WORKS ARE TO BE BATTERED TO ADJACENT PROPERTY LEVELS.
- E7. STORMWATER MUST NOT BE CONCENTRATED ON TO AN ADJACENT PROPERTY.
- E8. AT NO TIME DURING OR AFTER CONSTRUCTION IS STORMWATER TO BE PONDED ON ADJOINING PROPERTIES.
- E9. THE SITE SHALL BE GRADED AND DRAINED SO THAT STORMWATER WILL BE DIRECTED AWAY FROM THE BUILDING PLATFORM.
- E10. STORMWATER DRAINAGE SHALL BE PROVIDED AND MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION. ALL STORMWATER RUNOFF SHALL BE GRADED AWAY FROM THE SITE WORKS AND DISPOSED OF VIA SURFACE CATCHDRAINS AND STORMWATER COLLECTION PITS.
- E11. ALL SURFACE CATCH DRAINS SHALL BE GRADED AT 1% (1 IN 100) MINIMUM. THE GROUND SHALL GRADE AWAY FROM ANY DWELLING AT 5% (1 IN 20) FOR THE FIRST METRE THEN AT 2.5% (1 IN 40).
- E12. WHERE A CUT FILL PLATFORM IS USED THERE SHALL BE A MINIMUM BERM 1000 WIDE TO THE PERIMETER OF THE SITE WORKS WHICH SHALL BE SUPPORTED BY BATTERS OF 3:1 IN FILL.
- E13. ANY VERTICAL OR NEAR VERTICAL PERMANENT EXCAVATION (CUT) DEEPER THAN 600 IN MATERIAL OTHER THAN ROCK SHALL BE ADEQUATELY RETAINED OR BATTERED AT A MINIMUM OF 3:1.
- E14. WHERE BATTERS CANNOT BE PROVIDED TO SUPPORT THE CUT OR FILL, THEY SHALL BE ADEQUATELY RETAINED.
- E15. RETAINING WALLS ARE TO BE CONSTRUCTED WITH ADEQUATE SUBSOIL DRAINAGE.

CONCRETE PAVEMENT

- C1. SUBGRADE SHALL BE PREPARED AS OUTLINED IN EARTHWORKS.
- C2. PROVIDE JOINTING AT MINIMUM 6000 MAX. INTERVALS OR AS OTHERWISE SPECIFIED IN THE DRAWINGS.
- C3. CONCRETE SHALL COMPRISE A MIN. COMPRESSIVE STRENGTH OF 32MPa AT 28 DAYS IN ACCORDANCE WITH THE RELEVANT LOCAL AUTHORITY SPECIFICATION, UNO.
- C4. ANY SUB-BASE MATERIAL SHALL BE COMPACTED AS OUTLINED IN EARTHWORKS.
- C5. CONCRETE KERB AND GUTTER SHALL COMPRISE A MINIMUM COMPRESSIVE STRENGTH OF 25MPa, UNO.
- C6. CONCRETE WORKS ARE TO BE CURED BY ONE OF THE FOLLOWING MEANS:
i) WETTING TWICE DAILY FOR THE FIRST THREE DAYS.
ii) USING AN APPROVED CURING COMPOUNDED FOR A MINIMUM OF 7 DAYS COMMENCING IMMEDIATELY AFTER POURING.

FLEXIBLE PAVEMENT NOTES

- F1. SUBGRADE SHALL BE PREPARED AS OUTLINED IN EARTHWORKS.
- F2. PAVEMENT MATERIAL SHALL CONSIST OF APPROVED OR RIPPED SANDSTONE, NATURAL GRAVEL OR FINE CRUSH ROCK AS PER THE RELEVANT COUNCIL AUTHORITY SPECIFICATION.
- F3. PAVEMENT MATERIALS SHALL BE SPREAD IN LAYERS NOT EXCEEDING 150 AND NOT LESS 75 COMPACTED THICKNESS.
- F4. PAVEMENT MATERIALS SHALL BE SIZED AND OF A STANDARD OUTLINED IN AS1141.
- F5. CRUSHED OR RIPPED SANDSTONE SHALL BE MINUS 75 NOMINAL SIZE DERIVED FROM SOUND, CLEAN SANDSTONE FREE FROM OVERBURDEN, CLAY SEAMS, SHALE AND OTHER DELETERIOUS MATERIAL.
- F6. PAVEMENT MATERIALS SHALL BE COMPACTED BY SUITABLE MEANS TO SATISFY THE FOLLOWING MINIMUM SPECIFICATIONS (AS PER AS1289.2)

DESCRIPTION	MEDIUM DENSITY RATIO
SUB-BASE	98% MOD
BASE COURSE	98% MOD
ASPHALTIC CONCRETE	97% MOD

AND SUBJECT TO THE RELEVANT LOCAL AUTHORITY CONSTRUCTION SPECIFICATION.

- F7. TESTING FOR EACH LAYER SHALL BE UNDERTAKEN BY A N.A.T.A. REGISTERED LABORATORY IN ACCORDANCE WITH AS1289, AT NOT MORE THAN 50m INTERVALS AND A MINIMUM OF TWO PER LAYER. FURTHER FREQUENCY OF TESTING SHALL BE NO LESS THAN THAT REQUIRED BY AS3978.

PAVED AREAS NOTES

- A1. SUBGRADE SHALL BE PREPARED AS OUTLINED IN EARTHWORKS.
- A2. ALL PAVERS ARE TO BE PLACED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION.
- A3. TRAFFICABLE AREAS:
SUB-BASE TO BE 150 COMPACTED THICKNESS DGS75.
SUB-BASE TO BE SUITABLY COMPACTED TO MEDIUM DENSITY 98% MOD.
SUB-BASE TO EXTEND AT LEAST 200 BEYOND PAVED SURFACE.
PAVERS TO BE 80 THICK INTERLOCKING PAVERS ON 50 SAND BEDDING.
- A4. NON TRAFFICABLE AREAS:
SUB BASE AS PER TRAFFICABLE AREAS
PAVERS TO BE 60 INTERLOCKING PAVERS ON 50 SAND BEDDING (UNO).

EROSION AND SEDIMENT NOTES

- B1. THIS PLAN TO BE READ IN CONJUNCTION WITH EROSION AND SEDIMENT CONTROL DETAILS AS ATTACHED.
- B2. THE CONTRACTOR SHALL IMPLEMENT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS NECESSARY AND TO THE SATISFACTION OF THE RELEVANT LOCAL AUTHORITY PRIOR TO THE COMMENCEMENT OF AND DURING CONSTRUCTION. NO DISTURBANCE TO THE SITE SHALL BE PERMITTED OTHER THAN IN THE IMMEDIATE AREA OF THE WORKS AND NO MATERIAL SHALL BE REMOVED FROM THE SITE WITHOUT THE RELEVANT LOCAL AUTHORITY APPROVAL. ALL EROSION AND SEDIMENT CONTROL DEVICES TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH STANDARDS OUTLINED IN NSW DEPARTMENT OF HOUSING'S "MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTIONS".
- B3. TOPSOIL SHALL BE STRIPPED AND STOCKPILED OUTSIDE HAZARD AREAS SUCH AS DRAINAGE LINES. THIS TOPSOIL SHALL BE RESPREAD LATER ON AREAS TO BE REVEGETATED AND STABILISED ONLY, (I.E. ALL FOOTPATHS, BATTERS, SITE REGARDING AREAS, BASINS AND CATCHDRAINS). TOPSOIL SHALL NOT BE RESPREAD ON ANY OTHER AREAS UNLESS SPECIFICALLY INSTRUCTED BY THE SUPERINTENDENT. IF THEY ARE TO REMAIN FOR LONGER THAN ONE MONTH STOCKPILES SHALL BE PROTECTED FROM EROSION BY COVERING THEM WITH A MULCH AND HYDROSEEDING AND, IF NECESSARY, BY LOCATING BANKS OR DRAINS DOWNSTREAM OF A STOCKPILE TO RETARD SILT LADEN RUNOFF.
- B4. THE CONTRACTOR SHALL REGULARLY MAINTAIN ALL EROSION AND SEDIMENT CONTROL DEVICES AND REMOVE ACCUMULATED SILT FROM SUCH DEVICES, SUCH THAT MORE THAN 60% OF THEIR CAPACITY IS LOST. ALL THE SILT IS TO BE PLACED OUTSIDE THE LIMIT OF WORKS. THE PERIOD FOR MAINTAINING THESE DEVICES SHALL BE AT LEAST UNTIL ALL DISTURBED AREAS ARE REVEGETATED AND FURTHER AS MAY BE DIRECTED BY THE SUPERINTENDENT OR COUNCIL.
- B5. LAY TURF STRIP (MIN 300 WIDE) ON 100 TOPSOIL BEHIND ALL KERB WITH 1000 LONG RETURNS EVERY 6000 AND AROUND STRUCTURES IMMEDIATELY AFTER BACKFILLING AS PER THE RELEVANT LOCAL AUTHORITY SPECIFICATION.
- B6. THE CONTRACTOR SHALL GRASS SEED ALL DISTURBED AREAS WITH AN APPROVED MIX AS SOON AS PRACTICABLE AFTER COMPLETION OF EARTHWORKS AND REGRAIDING.
- B7. VEHICULAR TRAFFIC SHALL BE CONTROLLED DURING CONSTRUCTION CONFINING ACCESS WHERE POSSIBLE TO NOMINATED STABILISED ACCESS POINTS.
- B8. WHEN ANY DEVICES ARE TO BE HANDED OVER TO COUNCIL, THEY SHALL BE IN CLEAN AND STABLE CONDITION.
- B9. THE CONTRACTOR SHALL IMPLEMENT DUST CONTROL BY REGULAR WETTING DOWN (BUT NOT SATURATING) DISTURBED AREA.
- B10. PROVIDE AND MAINTAIN SILT TRAPS AROUND ALL SURFACE INLET PITS UNTIL CATCHMENT IS REVEGETATED OR PAVED.
- B11. REVEGETATE ALL TRENCHES IMMEDIATELY UPON COMPLETION OF BACKFILLING.
- B12. ALL DRAINAGE PIPE INLETS TO BE CAPPED UNTIL:
- DOWNPIPES CONNECTED
- PITS CONSTRUCTED AND PROTECTED WITH SILT BARRIER

CONCRETE STRUCTURES NOTES

- S1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600 CURRENT EDITION WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- S2. CONCRETE COMPONENTS AND QUALITY SHALL BE AS FOLLOWS, UNO:

ELEMENT	SLUMP mm	MAX. SIZE AGG. mm	CEMENT TYPE	f _c AT 28 DAYS - MPa	ADMIXTURE
FOOTINGS	80	20	A	25	-
PIERS & CAPS	80	20	A	25	-
SLABS ON GROUND	80	20	A	32	-
SUSPENDED SLABS	80	20	A	32	-
PITS	80	20	A	25	-

- S3. MINIMUM CLEAR CONCRETE COVER TO REINFORCEMENT INCLUDING TIES AND STIRRUPS SHALL BE AS FOLLOWS UNO.

EXPOSURE CLASSIFICATION	MINIMUM COVER (mm)				
	CONCRETE STRENGTH (f _c)				
	20 MPa	25 MPa	32 MPa	40 MPa	>50 MPa
A1	20	20	20	20	20
A2	(50)	30	25	20	20
B1	-	(60)	40	30	25
B2	-	-	(65)	45	35
C	-	-	-	(70)	50

FOR BRACKETED FIGURES REFER TO AS 3600 CURRENT EDITION TABLE 4.10.3.2

- S4. MINIMUM COVER FOR FIRE RESISTANCE LEVEL (FRL) SHALL BE AS FOLLOWS;

MINIMUM ELEMENT WIDTH OR THICKNESS / MIN COVER (mm)				
FRL	BEAM	SLAB	COLUMN	WALL
60	125 / 30	80 / 20	200 / 20	80 / 20
90	150 / 45	100 / 25	250 / 35	100 / 35
120	200 / 55	120 / 30	300 / 45	120 / 40
180	240 / 70	150 / 45	400 / 60	150 / 45
240	270 / 80	170 / 55	450 / 70	170 / 50

NOTE : 1. REFER TO AS 3600 CURRENT EDITION FOR REDUCED COVERS IF GREATER ELEMENT THICKNESSES ARE ADOPTED FOR BEAMS & COLUMNS.
2. COVER IS MEASURED TO THE MAIN REINFORCEMENT

- S5. COVER TO REINFORCEMENT SHALL BE OBTAINED BY THE USE OF APPROVED BAR CHAIRS. ALL CHAIRS SHALL BE SPACED AT 1000 CTS MAXIMUM.
- S6. ALL CONCRETE SHALL BE MECHANICALLY VIBRATED. VIBRATORS SHALL NOT BE USED TO SPREAD CONCRETE.
- S7. SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.
- S8. NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
- S9. CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE LOCATED TO APPROVAL OF THE ENGINEER. ALL CONSTRUCTION JOINTS SHALL BE SCABBLED OVER THE WHOLE FACE AND ANY UNSOUND MATERIAL REMOVED.
- S10. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY; IT IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.
- S11. SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN THE POSITIONS SHOWN OR AS APPROVED BY THE ENGINEER. WHERE THE LAP LENGTH IS NOT SHOWN IT SHALL BE SUFFICIENT TO DEVELOP THE FULL STRENGTH OF THE REINFORCEMENT AS SPECIFIED IN AS3600. COGS AND HOOKS SHALL BE STANDARD UNLESS SHOWN OTHERWISE.
- S12. WELDING OF REINFORCEMENT WILL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE ENGINEER.
- S13. PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE CONCRETE COVER TO REINFORCEMENT WITHOUT THE APPROVAL OF THE ENGINEER.
- S14. REINFORCEMENT SYMBOLS:
N - DENOTES DEFORMED GRADE 500 NORMAL DUCTILITY REINFORCING BARS TO AS/NZS 4671.
R - DENOTES PLAIN ROUND GRADE 250 NORMAL DUCTILITY REINFORCING BARS TO AS/NZS 4671.
SL - DENOTES DEFORMED GRADE 500 LOW DUCTILITY REINFORCING MESH TO AS/NZS 4671.
RL - DENOTES DEFORMED GRADE 500 LOW DUCTILITY REINFORCING MESH TO AS/NZS 4671.
L-TM - DENOTES DEFORMED GRADE 500 LOW DUCTILITY TRENCH MESH TO AS/NZS 4671.
- S15. ALL REINFORCING FABRIC SHALL COMPLY WITH AS1303 AND AS1304 AND SHALL BE SUPPLIED IN FLAT SHEETS.
- S16. SPLICES IN FABRIC: THE OUTERMOST TRANSVERSE WIRES SHALL BE OVERLAPPED BY AT LEAST THE SPACING OF THESE TRANSVERSE WIRES PLUS 25 mm.
- MINIMUM OVERLAP
- 25 MIN.
- 50 MAX.
- ALTERNATIVE FABRIC SPLICE DETAIL:
- N12 AT WIRE CENTRES x 1200 LONG
- S17. EXPOSED CORNERS SHALL BE 20 mm CHAMFERED UNO.
- S18. ALL REINFORCEMENT SHALL BE INSPECTED BY THE SUPERINTENDENT OR ENGINEER PRIOR TO PLACING CONCRETE.
- S19. ALL SLAB CONCRETE TO BE CURED IN AN APPROVED MANNER FOR A MINIMUM OF 7 DAYS.
- S20. ALL FORMWORK AND PROPS FOR SLABS AND BEAMS SHALL BE REMOVED BEFORE CONSTRUCTION OF ANY MASONRY WALLS OR PARTITIONS ON THE FLOOR.
- S21. ALL ABBREVIATIONS ARE IN ACCORDANCE WITH AS1100.
- S22. FORMWORK SHALL NOT BE STRIPPED UNTIL CONCRETE HAS ACHIEVED A MINIMUM STRENGTH OF 20 MPa. THE CONCRETE SLAB AND BEAMS SHALL BE TEMPORARILY BACK PROPPED UNTIL THE CONCRETE HAS ACHIEVED 28 DAY STRENGTH AND ANY PROPPING TO HIGHER LEVEL FORMS HAVE BEEN REMOVED.
- S23. WHERE A SUSPENDED SLAB IS TO BE SUPPORTED OFF A SUSPENDED SLAB BELOW, WRITTEN APPROVAL SHALL BE OBTAINED FROM THE ENGINEER PRIOR TO ANY SITE WORKS.

MASONRY

- M1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3700.
- M2. THE DESIGN STRENGTH OF MASONRY SHALL BE AS FOLLOWS U.N.O. :

EXPOSURE CLASSIFICATION TO AS 3600	MASONRY COMPRESSIVE STRENGTH MPa (f _m)	MASONRY SALT RESISTANCE GRADE	DURABILITY CLASSIFICATION OF BUILT IN COMPONENTS	MORTAR MIX GP PORTLAND CEMENT : LIME : SAND	f _c MPa
A1 / A2	> 6.3	General Purpose	R3 (Galvanised)	1.0 : 1.0 : 6.0	2.8
B1	> 6.3	General Purpose	R3 (Galvanised)	1.0 : 1.0 : 6.0	2.8
B2	> 6.7	Exposure	R4 (Stainless)	1.0 : 0.5 : 4.5	2.8

- M3. ALL MASONRY WALLS SUPPORTING SLABS AND BEAMS SHALL HAVE A PRE-GREASED TWO LAYER GALVANISED STEEL SLIP JOINT BETWEEN CONCRETE AND MASONRY.
- M4. ALL MASONRY WALLS SUPPORTING OR SUPPORTED BY CONCRETE FLOORS SHALL BE PROVIDED WITH VERTICAL JOINTS TO MATCH ANY CONTROL JOINTS IN THE CONCRETE.
- M5. NON LOAD BEARING WALLS SHALL BE SEPARATED FROM CONCRETE ABOVE BY 20 mm THICK CLOSED CELL POLYETHYLENE STRIP.
- M6. MASONRY SHALL BE ARTICULATED IN ACCORDANCE WITH TECHNICAL NOTE 61 FROM THE CEMENT AND CONCRETE ASSOCIATION OF AUSTRALIA. VERTICAL CONTROL JOINTS SHALL NOT EXCEED 5 METRES MAXIMUM CENTRES, AND 4 METRES MAXIMUM FROM CORNERS IN MASONRY WALLS, AND BETWEEN NEW & EXISTING BRICKWORK.
- M7. MASONARY RETAINING WALLS ARE TO BE BACKFILLED WITH EITHER OF THE FOLLOWING MATERIAL:
- COARSE GRAINED SOIL WITH LOW SILT CONTENT
- RESIDUAL SOIL CONTAINING STONES
- FINE SILTY SAND
- GRANULAR MATERIALS WITH LOW CLAY CONTENT

BLOCKWORK

- B1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3700.
- B2. REINFORCED CONCRETE BLOCKWORK SHALL COMPLY WITH THE FOLLOWING, UNO:
- BLOCKS : GRADE 15 CONFORMING TO AS1500.
- MORTAR : 1 CEMENT / 0.25 LIME / 3 SAND.
- PROVIDE CLEANOUT HOLES AT BASE OF WALL & ROD CORE HOLES TO REMOVE PROTRUDING MORTAR FINIS.
- CORE FILLING : f_c = 20 MPa, 10 AGG, 230 SLUMP +/- 30 mm.
- COVER : 55 mm MIN. FROM OUTSIDE OF BLOCKWORK.
- B3. BACKFILL TO RETAINING WALLS TO BE FREE DRAINING GRANULAR MATERIAL, UNO. PROVIDE SUBSOIL DRAIN BEHIND WALL AND AT WEEP HOLES.
- B4. VERTICAL CONTROL JOINTS SHALL BE PROVIDED AT 10 m MAX. CENTRES.
- B5. NO ADMIXTURES SHALL BE USED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.

STANDARD LINE TYPES AND SYMBOLS:

	PROPOSED KERB & GUTTER
	EXISTING KERB & GUTTER
	PROPOSED BELOW GROUND PIPELINE
	PROPOSED SUSPENDED PIPELINE
	EXISTING PIPELINE
	SUBSOIL DRAINAGE LINE
	PROPOSED KERB INLET PIT
	EXISTING KERB INLET PIT
	PROPOSED JUNCTION OR INLET PIT
	EXISTING JUNCTION OR INLET PIT
	DESIGN CENTRELINE
	EXISTING EDGE OF BITUMEN
	TELECOMMUNICATION CONDUIT
	GAS MAIN
	WATER MAIN
	SEWER MAIN
	UNDERGROUND ELECTRICITY CABLES
	PERMANENT MARK & S.S.M.
	BENCH MARK, SURVEY STATION

SCHEDULE OF DRAWINGS

SHEET No	DESCRIPTION
C01	GENERAL NOTES
C02	SEDIMENT & EROSION CONTROL PLAN
C03	SEDIMENT & EROSION CONTROL DETAILS
C04	STORMWATER CATCHMENT AREA PLAN SHEET 1 OF 2
C05	STORMWATER CATCHMENT AREA PLAN SHEET 2 OF 2
C06	STORMWATER DRAINAGE PLAN SHEET 1 OF 3
C07	STORMWATER DRAINAGE PLAN SHEET 2 OF 3
C08	STORMWATER DRAINAGE PLAN SHEET 3 OF 3
C09	EXTERNAL PAVEMENT PLAN AND DETAILS SHEET 1 OF 2
C10	EXTERNAL PAVEMENT PLAN AND DETAILS SHEET 2 OF 2
C11	STORMWATER DETAILS SHEET 1 OF 2
C12	STORMWATER DETAILS SHEET 2 OF 2
C13	BULK EARTHWORKS CUT AND FILL PLAN
C14	SITE CROSS SECTIONS SHEET 1 OF 2
C15	SITE CROSS SECTIONS SHEET 2 OF 2

FOR APPROVAL

NOT TO BE USED FOR CONSTRUCTION PURPOSES

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RECOVERY AND RECYCLING FACILITY

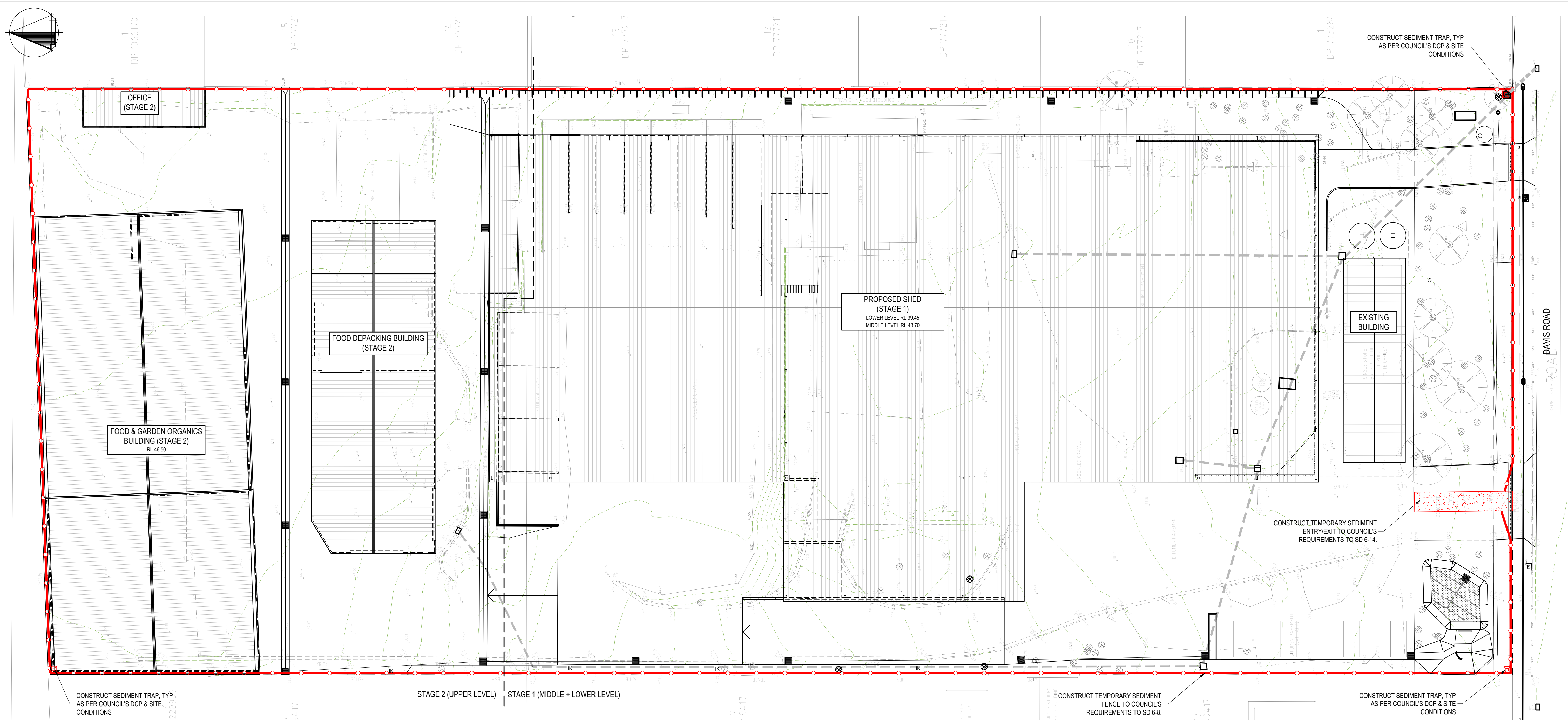
24 Davis Rd, Wetherill Park

For BORG Construction

GENERAL NOTES

DESIGN	DRAWN	DATE	PROJECT No
SWH	RCL	AUG 2020	10067
CHECKED	APPROVED	SCALE	DRG No
			C01 - A

AT ORIGINAL SIZE



SEDIMENT & EROSION CONTROL PLAN

1:300

- DENOTES SEDIMENT FENCE

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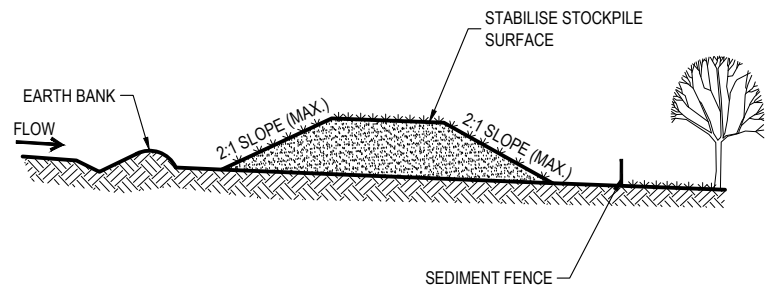
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RECOVERY AND RECYCLING FACILITY
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For BORG Construction

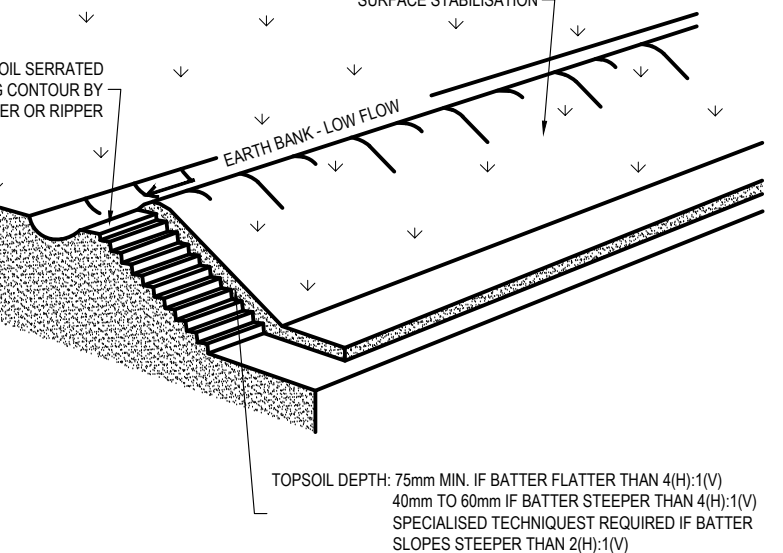
SEDIMENT & EROSION CONTROL PLAN			
DESIGN SWH	DRAWN RCL	DATE AUG 2020	PROJECT No 10067
CHECKED	APPROVED	SCALE 1:300	DRG No C02 - A



CONSTRUCTION NOTES

1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES 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 METRES IN HEIGHT.
4. WHERE THEY ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, STABILISE FOLLOWING THE APPROVED ESCP OR SWMP TO REDUCE THE C-FACTOR TO LESS THAN 0.10.
5. CONSTRUCT EARTH BANKS (STANDARD DRAWING 6-8) 1 TO 2 METRES DOWNSLOPE.

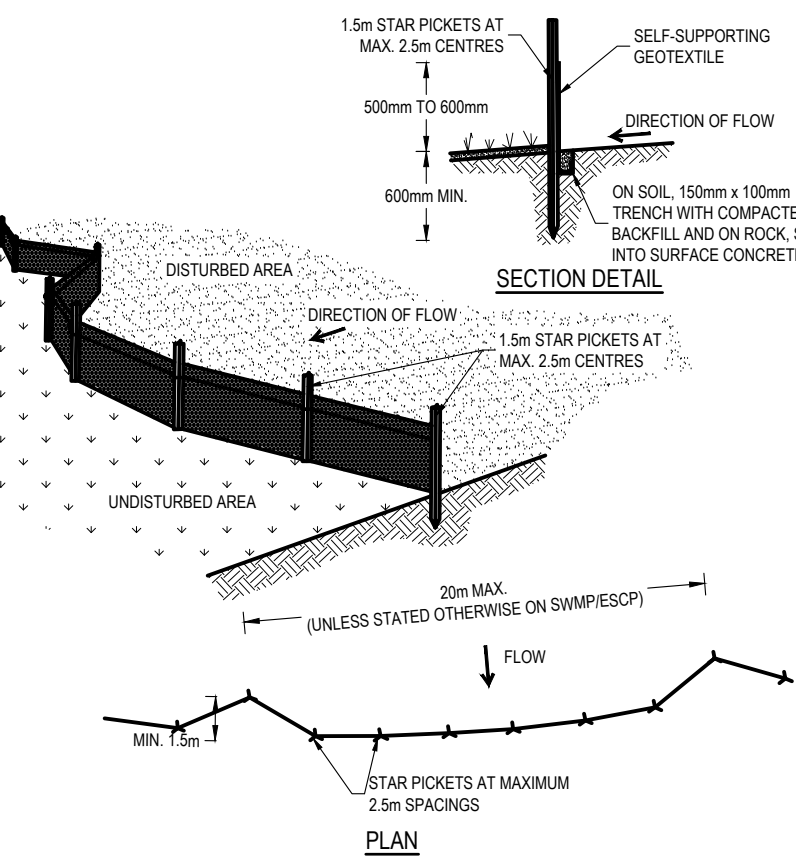
STOCKPILES **SD 4-1**



CONSTRUCTION NOTES

1. SCARIFY THE GROUND SURFACE ALONG THE LINE OF THE CONTOUR TO A DEPTH OF 50mm TO 100mm TO BREAK UP ANY HARDSETTING SURFACES AND TO PROVIDE A GOOD BOND BETWEEN THE RESPREAD MATERIAL AND SUBSOIL.
2. ADD SOIL AMENDMENTS AS REQUIRED BY THE ESCP OR SWMP.
3. RIP TO A DEPTH OF 300mm IF COMPACTED LAYERS OCCUR.
4. WHERE POSSIBLE, REPLACE TOPSOIL TO A DEPTH OF 40 TO 60mm ON LANDS WHERE THE SLOPE EXCEEDS 4(H):1(V) AND TO AT LEAST 75mm ON LOWER GRADIENTS.

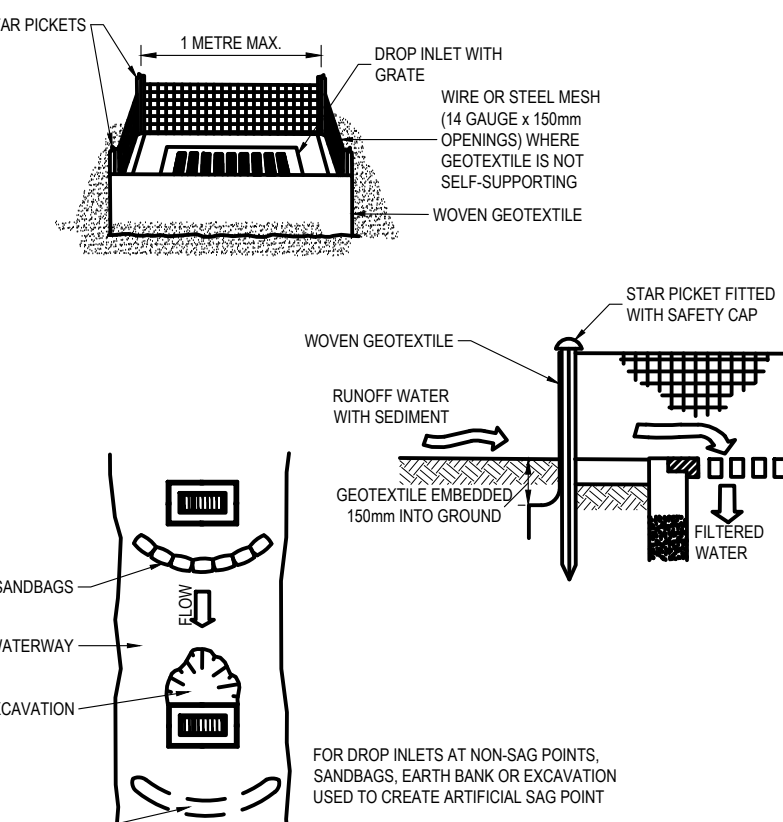
REPLACING TOPSOIL **SD 4-2**



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 CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT 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 10-YEAR EVENT.
2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRINCHED.
3. DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND AT 2.5 METRE 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 A 150mm OVERLAP.
6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

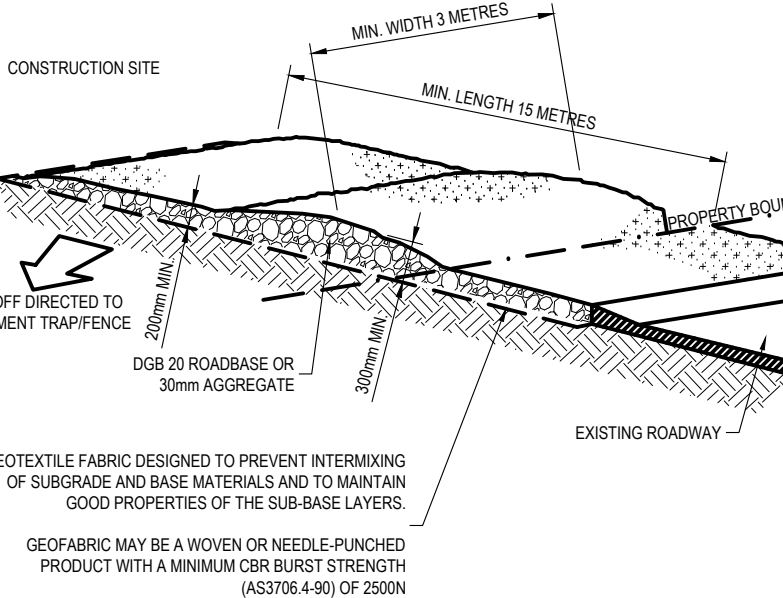
SEDIMENT FENCE **SD 6-8**



CONSTRUCTION NOTES

1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
2. FOLLOW STANDARD DRAWING 6-7 AND STANDARD DRAWING 6-8 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.

GEOTEXTILE INLET FILTER **SD 6-12**



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 BASE OR 30mm AGGREGATE.
4. ENSURE THE STRUCTURE IS AT LEAST 15 METRES LONG OR TO BUILDING ALIGNMENT AND AT LEAST 3 METRES WIDE.
5. WHERE A SEDIMENT FENCE JOINS ONTO THE STABILISED ACCESS, CONSTRUCT A HUMP IN THE STABILISED ACCESS TO DIVERT WATER TO THE SEDIMENT FENCE.

STABILISED SITE ACCESS **SD 6-14**

SEDIMENT AND EROSION CONTROL NOTES

SEDIMENT AND EROSION CONTROL SHALL BE EFFECTIVELY MAINTAINED AT ALL TIMES DURING THE COURSE OF CONSTRUCTION AND SHALL NOT BE REMOVED UNTIL THE SITE HAS BEEN STABILISED OR LANDSCAPED TO THE SUPERINTENDENT'S SATISFACTION.

A SINGLE ALL WEATHER ACCESS WAY WILL BE PROVIDED AT THE FRONT OF THE PROPERTY CONSISTING OF 50-75 AGGREGATE OR SIMILAR MATERIAL AT A MINIMUM THICKNESS OF 150 LAID OVER NEEDLE-PUNCHED GEOTEXTILE FABRIC AND CONSTRUCTED PRIOR TO COMMENCEMENT OF WORKS.

THE CONTRACTOR SHALL ENSURE THAT NO SPOIL OR FILL ENCROACHES UPON ADJACENT AREAS FOR THE DURATION OF WORKS.

THE CONTRACTOR SHALL ENSURE THAT KERB INLETS AND DRAINS RECEIVING STORMWATER SHALL BE PROTECTED AT ALL TIMES DURING DEVELOPMENT. KERB INLET SEDIMENT TRAPS SHALL BE INSTALLED ALONG THE IMMEDIATE VICINITY ALONG THE STREET FRONTAGE.

ALL TOPSOIL STRIPPED FROM THE SITE AND STOCKPILED DOES NOT INTERFERE WITH DRAINAGE LINES AND STORMWATER INLETS AND WILL BE SUITABLY COVERED WITH AN IMPERVIOUS MEMBRANE MATERIAL AND SCREENED BY SEDIMENT FENCING.

SOIL CONSERVATION NOTE:

PRIOR TO COMMENCEMENT OF CONSTRUCTION PROVIDE 'SEDIMENT FENCE', 'SEDIMENT TRAP' AND WASHOUT AREA TO ENSURE THE CAPTURE OF WATER BORNE MATERIAL GENERATED FROM THE SITE.

MAINTAIN THE ABOVE DURING THE COURSE OF CONSTRUCTION, AND CLEAR THE SEDIMENT TRAP AFTER EACH STORM.

SEDIMENT TRAP

1000 x 1000 WIDE 500 DEEP PIT, LOCATED AT THE LOWEST POINT TO TRAP SEDIMENT AND IN ACCORDANCE WITH LOCAL COUNCIL'S DCP AND SITE CONDITIONS.

SEDIMENT FENCE

PROVIDE 'SEDIMENT FENCE' ON DOWN SLOPE BOUNDARY AS SHOWN ON PLAN. FABRIC TO BE BURIED BELOW GROUND AT LOWER EDGE. REFER TO SD 6-8

BUILDING MATERIAL STOCKPILES

ALL STOCKPILES OF BUILDING MATERIAL SUCH AS SAND AND SOIL MUST BE PROTECTED TO PREVENT SCOUR AND EROSION.

THEY SHOULD NEVER BE PLACED IN THE STREET GUTTER WHERE THEY WILL WASH AWAY WITH THE FIRST RAINSTORM. REFER TO SD 4-1

GENERAL NOTES

THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH OTHER CONSULTANT'S DRAWINGS AND SPECIFICATIONS AND WITH OTHER SUCH WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.

ALL DIMENSIONS ARE IN MILLIMETRES & ALL LEVELS ARE IN METRES, UNO (UNLESS NOTED OTHERWISE).

NO DIMENSION SHALL BE OBTAINED BY SCALING THE DRAWINGS.

ALL LEVELS AND SETTING OUT DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF THE WORK.

DURING EXCAVATION WORK THE STRUCTURE SHALL BE MAINTAINED IN A STABLE AND NO PART SHALL BE OVERSTRESSED.

ALL WORK IS TO BE UNDERTAKEN IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS & THE SPECIFICATION.

EXISTING SERVICES WHERE SHOWN HAVE BEEN PLOTTED FROM SUPPLIED DATA AND SUCH THEIR ACCURACY CAN NOT BE GUARANTEED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH THE LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF WORK.

ALL SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACK FILLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL COUNCIL.

ALL TRENCH BACK FILL MATERIAL SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT MATERIAL.

ON COMPLETION OF STORMWATER INSTALLATION, ALL DISTURBED AREAS MUST BE RESTORED TO ORIGINAL CONDITION, INCLUDING KERBS, FOOTPATHS, CONCRETE AREAS, GRAVEL AND GRASSED AREAS AND ROAD PAVEMENTS, UNLESS DIRECTED OTHERWISE.

CONTRACTOR TO OBTAIN ALL AUTHORITY APPROVALS UNLESS DIRECTED OTHERWISE.

STORMWATER DRAINAGE

THE STORMWATER DRAINAGE DESIGN HAS BEEN CARRIED OUT IN ACCORDANCE WITH AS/NZS 3500.3 - 2018 "STORMWATER DRAINAGE".

ANY VARIATIONS TO THE NOMINATED LEVELS SHALL BE REFERRED TO ENGINEER IMMEDIATELY.

ANY VARIATIONS TO SPECIFIED PRODUCTS OR DETAILS SHALL BE REFERRED TO THE ENGINEER FOR APPROVAL.

DOWN PIPES SHALL BE A MINIMUM OF DN100 SW GRADE UPVC OR 100X100 COLORBOND/ZINCALUME STEEL, UNO.

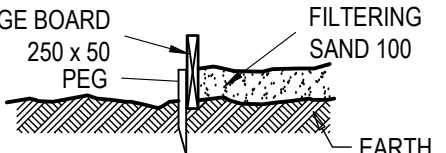
BOX COLORBOND OR ZINCALUME STEEL. GUTTERS SHALL BE A MINIMUM OF 450 WIDE X 150 DEEP.

EAVES GUTTERS SHALL BE A MINIMUM OF 125 WIDE X 100 DEEP (OR OF EQUIVALENT AREA) COLORBOND OR ZINCALUME STEEL.

SUBSOIL DRAINAGE SHALL BE PROVIDED TO ALL RETAINING WALLS & EMBANKMENTS, WITH THE LINES FEEDING INTO THE STORMWATER DRAINAGE SYSTEM.

WASHOUT AREA

TO BE 1800 x 1800 ALLOCATED FOR THE WASHING OF TOOL & EQUIPMENT.



FOR APPROVAL

NOT TO BE USED FOR CONSTRUCTION PURPOSES

AT ORIGINAL SIZE

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RECOVERY AND RECYCLING FACILITY

24 Davis Rd, Wetherill Park
For BORG Construction

SEDIMENT & EROSION CONTROL DETAILS			
DESIGN	DRAWN	DATE	PROJECT No.
SWH	RCL	AUG 2020	10067
CHECKED	APPROVED	SCALE	DRG No.
		-	C03 - A

Appendix K: Contamination Unexpected Finds Protocol

Unexpected Finds Protocol

Resource Recovery and Recycling Facility

SSD-7401-MOD-1

24 Davis Road Wetherill Park, NSW

Borg Property Pty Ltd
22 July 2021

Document Control

Rev No.	Revision Date	Author / Position	Details	Authorised	
				Name / Position	Signature
1	22/07/2021	Brad Deane Environmental Services Coordinator	Updated following MOD1 of SSD 7401	Shaun Smith Principal Environmental Planner	

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1 Introduction

1.1 Background

This Unexpected Finds Protocol (UFP) has been prepared by Borg Construction Pty Ltd (Borg) on behalf of Bettergrow Pty Ltd (Bettergrow) for the construction phase of the Resource Recovery and Recycling Facility (the facility), located at 24 Davis Road Wetherill Park, NSW (the site).

Consent for State Significant Development 7401 (SSD-7401) was initially granted by the then NSW Department of Planning and Environment (DPE) on 22 December 2017. Consent for Modification 1 (Mod1) of SSD-7401 (SSD-7401-Mod-1) was approved by the NSW Department of Planning, Industry and Environment (DPIE) on 21 April 2021.

In 2017, Douglas Partners undertook a Targeted Site Investigation for Contamination across the development site to ascertain whether previous remediation works had removed all contamination from previous industrial activities. Given that the site has had previously contained numerous potentially contaminating sources, there was reasonable potential for contamination to exist between previously sampled locations. Accordingly, it was recommended that an Unexpected Finds Protocol (UFP) be prepared and adopted for the development of the site.

This UFP addresses requirements management and mitigation requirements resultant of both the SSD-7401 and SSD-7401-Mod-1 approval instruments, and thus builds upon the UFP prepared by RPS Australia East Pty Ltd (RPS) in February 2019 for SSD-7401.

1.2 Unexpected Finds

An unexpected find typically comprises of any buried material which is not a typical soil material (i.e. fill, soil, rock) likely to be present at the site. Types of unexpected materials that could be encountered during excavation works include:

- Buried wastes.
- Buried containers/drums.
- Discoloured and odorous soils and groundwater/seepage.
- Underground tanks.
- Asbestos.

Previous sampling at the site has not found any of the above, however due to the previous industrial use of the site there is the need to have an UFP in place.

1.3 Legislation

The following legislation has been considered during development of this UFP.

- *Work Health and Safety Act 2011* and associated regulations; and
- *Contaminated Land Management Act 2021*.

2 Purpose

This procedure details the actions to be taken in the event that potentially contaminated soil, underground storage tanks, or asbestos are unexpectedly encountered during construction of the facility at Wetherill Park.

Condition B71 of the SSD-7401 Project Approval requires the preparation of an UFP prior to commencing construction activities. Condition B71 of SSD 7401 states:

Prior to the commencement of construction, the Applicant must prepare an unexpected finds protocol to ensure that potentially contaminated material is appropriately managed. The protocol must form part of the CEMP required by Condition C1 and must ensure any material identified as contaminated must be disposed off-site, with the disposal location and results of testing submitted to the Secretary, prior to its removal from the site.

This procedure has been prepared to address the requirements of Condition B71 and Condition C1 of SSD-7401.

No changes to either Condition B71 or Condition C1 occurred following approval of SSD-7401-Mod-1.

3 Objectives and Scope

3.1 Objectives

This UFP describes the strategy to be adopted during construction activities to identify, assess, manage and mitigate impacts associated with unidentified areas of contamination that may pose a risk to health and the environment.

Implementation of the UFP should ensure an efficient, staged, and transparent/ auditable process for the identification, assessment, mitigation (remediation) and/or management of contamination within the Project footprint.

The objectives of this UFP include:

- Ensuring that potentially contaminated sites are identified, assessed and managed in accordance with legislative and Project specific requirements.
- Ensuring appropriate controls and procedures are implemented during construction activities to avoid or minimise potential adverse impacts from expected finds within the Project footprint.
- Ensure that migration of contamination off the Project site does not occur as a result of construction activities associated with the Project.
- Deal with any unexpected finds of contaminated material in a manner that minimises risk to human health and the environment.

3.2 Scope

This UFP has been prepared to manage potentially contaminated materials that may be encountered during site establishment and construction works.

4 Procedure

4.1 UFP for buried underground storage tank or similar infrastructure

In the event that an Underground Storage Tank (UST) or similar buried structure is encountered during site works, the UST or structure and any associated pipework should be managed / removed as follows:

- Upon discovery of the structure, the site foreman is to be notified and the area barricaded;
- In accordance with Clause 23(1) of the *Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2019*, the relevant local authority will be notified as soon as reasonably practicable after the decision to decommission the system is made;
- If deemed achievable, a qualified contractor is to remove and dispose of any stored liquid, the structure and associated pipework. In the case of an UST, the tank must be removed in accordance with Australian Standard AS 4976 – 2008 *The Removal and Disposal of Petroleum Underground Storage Tanks*, SafeWork NSW *Potential risks when removing underground storage tanks: Safety alert* (Catalogue No. WC01188), NSW EPA *Guidelines for implementing the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2019* and SafeWork NSW *Code of Practice: Demolition Work 2019*..
- Excavate and stockpile impacted soils (based on field observations).
- Validation of the tank pit by a qualified environmental consultant through soil sampling and laboratory analysis for the contaminants of concern.
- If required, “chase out” all of soils in the tank pit identified to be impacted by the contaminants of concern and further validation sampling and analysis as required to assess appropriate removal of impacted soils.
- The environmental consultant is to sample and assess stockpiled soils for waste classification and / or possible re-use.
- Inclusion of validation results, waste classification information and disposal documents (including liquid waste disposal dockets, landfill dockets and, in the case of USTs, tank and pipe work destruction certificates) in a validation report. According to Clause 23(2) of the *Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2019*, if a storage system is decommissioned, the validation report must be served to the relevant local authority within 60 days of decommissioning.

It is noted that the identification of contaminated soil associated with a UST may trigger the need for a groundwater assessment. At the time of preparing this document, NSW EPA, *Guidelines for implementing the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2019* is applicable to the assessment of a tank pit.

It should further be noted, that any UST removal will need to be undertaken by suitably qualified individuals (or company) appropriately licenced for demolition works. See the SafeWork NSW document *Applicant Guide for Demolition Licences and Notifications* (2021) for further information.

4.2 UFP for asbestos

If potential asbestos containing materials (ACM) in soil are detected in unexpected areas prior to, or during, site development works, the following unexpected finds protocol will apply:

- Upon discovery of suspected asbestos containing material, the site manager is to be notified and the affected area closed off by the use of barrier tape and warning signs. Warning signs shall be

specific to Asbestos Hazards and shall comply with the Australian Standard AS 1319-1994 – *Safety Signs for the occupational environment*.

- A licensed asbestos assessor (or competent person) is to be notified to inspect the area and confirm the presence of asbestos and to determine the extent of remediation works to be undertaken. A report detailing this information would be compiled by the licensed asbestos assessor (or competent person) and provided to the site manager.
- If the impacted soil is to be disposed off-site, it should be classified in accordance with the NSW EPA's *Waste Classification* Guidelines 2014 and disposed of, as a minimum, as asbestos contaminated waste to a landfill licensed to receive such waste. If soils are dry, the soil would be lightly wetted and/or covered with plastic sheet whilst awaiting disposal.
- Based on the report by the licensed asbestos assessor (or competent person), all work associated with the removal of asbestos contaminated soil would be undertaken by a licensed contractor. SafeWork NSW must be notified at least 5 days in advance of any asbestos removal works.
- Depending on the report by the licensed asbestos assessor (or competent person), monitoring for airborne asbestos fibres is to be carried out during the soil excavation in asbestos contaminated materials.
- At the completion of the excavation, a clearance inspection is to be carried out and written certification is to be provided by the licenced asbestos assessor (or competent person) that the area is safe to be accessed and worked. If required, the filling remaining in the inspected area can be covered/ sealed by an appropriate physical barrier layer of non-asbestos containing material prior to sign-off.
- Details of the works are to be recorded in the site record system.
- Following clearance by the licenced asbestos assessor (or competent person), the area may be reopened for further excavation or construction work. SafeWork NSW, *Managing Asbestos in or on Soil*, July 2020 provides further guidance with regards to asbestos in or on soil.

4.3 General UFP for other signs of contamination

In the case that signs of contamination (other than asbestos) such as odours and staining of soils are encountered during site works, the following general unexpected finds protocol will apply:

- A qualified environmental consultant will inspect the potential Area of Environmental Concern (AEC) and determine the nature of the issue, whether it comprises an AEC, and the appropriate approach to assessing or (if appropriate) managing the issue.
- The environmental consultant will undertake an assessment considered necessary to determine the management strategy for the AEC.
- If contamination is found and remediation action is considered necessary, a remediation strategy for the AEC will be prepared by the environmental consultant. The remediation strategy is to be implemented by a qualified contractor.
- Any remediation works are to be validated by the environmental consultant and documented in a validation report.

5 Training and Awareness

All staff and contractors will be appropriately trained and made aware of this procedure prior to the commencement of construction activities at the site. All new starters to the project will also be required to undertake a generic site induction and made aware of this UFP.

Toolbox talks will also be undertaken on a daily basis with staff and contractors where any unexpected finds will be discussed. A register of training will also be kept detailing the type of training undertaken, the topics discussed, attendance, and the date training was given.

Further detail on training is provided in **Section 4** of the CEMP.

6 Inspections, Monitoring and Reporting

Regular compliance activities, such as inspections, observations, monitoring, and reporting will be undertaken for the purposes of this UFP throughout the construction activities. Compliance activities will focus on the implementation of this protocol and the management construction activities across the development site.

Further detail on Inspections, Monitoring and Reporting is provided in **Section 7** of the CEMP.

7 Review

7.1 Protocol revision

Protocol revisions and performance revisions will be undertaken as per **Section 9** of the CEMP.

9 References

- DPE (2017). SSD 7401 Project Approval
- DPIE (2021) SDD-7401-Mod-1 Approval
- NSW Environmental Protection Authority (2020). *Guidelines for implementing the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2019*, State of NSW and the NSW Environment Protection Authority
- EPA (2014a). *NSW Waste Avoidance and Resource Recovery Strategy 2014-21*.
- EPA (2014b). *Waste Classification Guidelines – Part 1: Classifying Waste (2014)*.
- RPS (2017) *Greenspot Wetherill Park – EIS for a 200,000tpa resource recovery and recycling facility*.
- RPS (2019). *Greenspot Wetherill Park – Unexpected Finds Protocol*, RPS Australia East Pty Ltd
- SafeWork NSW (2019). *Code of Practice: Demolition Work 2019*, NSW Government < [Code of Practice – Demolition work \(nsw.gov.au\)](https://www.safework.nsw.gov.au/code-of-practice-demolition-work) >
- SafeWork NSW (2020). *Managing asbestos in or on soil*, NSW Government < <https://www.safework.nsw.gov.au/resource-library/asbestos-publications/managing-asbestos-in-or-on-soil#:~:text=The%20principal%20considerations%20in%20determining%20how%20to%20manage,or%20is%20buried%20at%20depth%20More%20items...%20> >
- SafeWork NSW (2014). *Potential risks when removing underground storage tanks: Safety alert (catalogue no. WC01188)*, NSW Government < <https://www.safework.nsw.gov.au/resource-library/potential-risks-when-removing-underground-storage-tanks-safety-alert> >
- SafeWork NSW (2021). *Applicant Guide for Demolition Licences and Notifications*, NSW Government < https://www.safework.nsw.gov.au/_data/assets/pdf_file/0004/49342/SW08018-Guide-for-applicants-for-demolition-licences-and-notifications.pdf >

Appendix A: Unexpected Find Form

Unexpected Find Form

Unexpected Find No.: _____

Date: _____

Location: _____

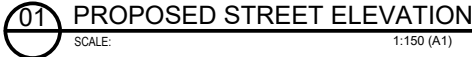
Actions

Item	Action Taken	Action Taken By
Unexpected Find Encountered		

Information for the Environmental Representative to be completed by the Construction Manager

Description of the Unexpected Find		
Does the Unexpected Find potentially involve asbestos?	Yes	No

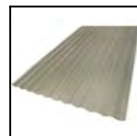
Appendix L: Building Materials Schedule



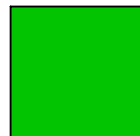
LEGEND:



COLORBOND
CORRUGATED
STEEL WALL /ROOF
CLADDING -
SURMIST COLOUR



SOLAR GREY
POLYCARBONATE
ROOF SHEETING



ENVIRO GREEN
COLOUR



SURFMIST COLOUR

B	Development Application	20-01-2021	DC	MDJE
A	Development Application	19-08-2020	DC	MDJE
ISSUE	DESCRIPTION	DATE	DRAWN	AUTH



48 INDUSTRY ROAD
VINEYARD NSW 2765
WWW.B

P: 02 4587 785
F: 02 4577 260
WWW.COMLAU

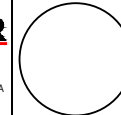
WWW.BETTERGROW.COM.AU



2 WELLA WAY SOMERSBY, N.S.W. 2250 AUSTRALIA
Tel: 02 4340 9800 Fax: 02 4340 8293

TEL: 02 4040 0000 FAX: 02 4040 0200

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PROJECT	PROPOSED BETTERGROW RESOURCE RECOVERY FACILITY
---------	--

LOCATION
24 DAVIS ROAD
WETHERILL PARK NSW 2164

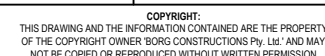
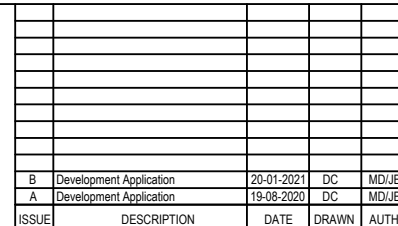
DRAWING
PROPOSED STREET & NORTH
ELEVATIONS (SHED)

SCALE
1:150 @ A1, 1:300@A3

PROJECT NUMBER
2020/04

STAGE	DA
-------	----

ISSUE
B



SCALE VARIES		STAGE DA
PROJECT NUMBER 2020/04	DRAWING NUMBER DA101	ISSUE B



B	Development Application	20-01-2021	DC	MD/JH
A	Development Application	19-08-2020	DC	MD/JH
ISSUE	DESCRIPTION	DATE	DRAWN	AUTH

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SCALE VARIES		STAGE DA
PROJECT NUMBER 2020/04	DRAWING NUMBER DA102	ISSUE B

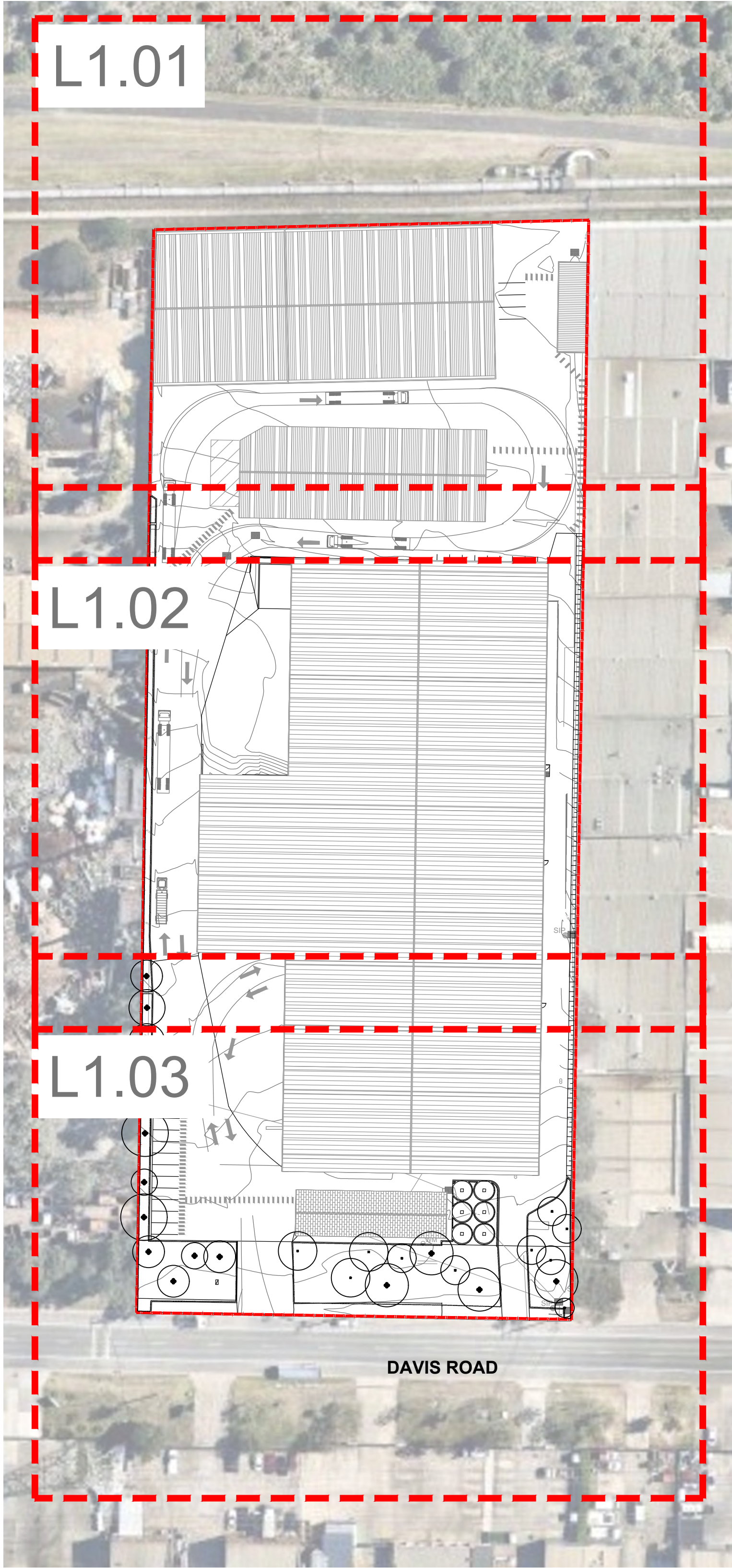
Appendix M: Landscape Plan

GREENSPOT RESOURCE CENTRE

24 DAVIS ROAD, WETHERILL PARK

LANDSCAPE DOCUMENTATION

SHEET PLAN 1:750



LEGEND 1:100

General

Extent of works

Softscape

- Existing tree
To be retained
- Tree
Refer Planting
Schedule
- Planting area
Type 1

NOTES

- 1.0 These drawings must be read in conjunction with drawing packages from the consultant team including all engineering drawings and architectural drawings.
- 2.0 Do not scale from these drawings - use figured dimensions.
- 3.0 Services
Verify the 'as built' location of all existing services before excavation works are started. Services shown are indicative only.
- 4.0 Surface levels
final surface levels to be verified on site. All adjacent surfaces are to be level and flush unless stated or documented otherwise.
- 5.0 Falls
all pavement, planting & turf areas to be graded evenly. Ponding is unacceptable.
- 6.0 Materials & finishes
Refer schedule materials & finishes in specification for all elements contained within these drawings.
- 7.0 Design for access and mobility
All external works to comply with as 1428 parts 1 & 4. Longitudinal grades no steeper than 1 in 20 and crossfall grades no steeper than 1 in 40.
- 8.0 Planting
Refer planting schedule.
- 9.0
The landscape plan has been design in accordance with with the Fairfield City Council Development Control Plan 2013

DRAWING SCHEDULE

DWG No.	Drawing Title
L0.01	Cover Sheet
L0.02	Specification Notes
L1.01	External Works
L1.02	External Works
L1.03	External Works
L2.01	Details

MATERIALS & FINISHES

Code / Item	Manuf .	Requirements
Soils		
To Planting Areas		300mm depth Imported Topsoil to AS4419 table 1 Water retention additive: Hydrocell flakes 30% by volume combined with imported soil blend
Fertiliser		
Planting Areas		Each Plant: N.P.K. Ratio 20:4.3:4.1 Apply as per manuf. recommendations. Min. 2 tablets per plant. Agriform 10gm Tablets or similar General - Prior to placing mulch Apply 'dynamic lifter' at manfu. recommended rate
Mulch		
Mulch type 1		Type: 75mm depth of 25mm Hardwood Chip Mulch to all planter beds unless otherwise specified
Irrigation		
Irrigation drip system to be provided and connected to rainwater tank		
Establishment / Maintenance		
All planting and turf areas and all other elements		
All planting and turf areas and all other landscape elements		12 weeks
X-Ground Stock		52 weeks

NOT FOR CONSTRUCTION

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ABN 44 140 292 762
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Sydney NSW 2000
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W rpsgroup.com

client

BETTERGROW PTY LTD T/A GREENSPOT

project name

GREENSPOT RESOURCE CENTRE

project location

24 DAVIS ROAD, WETHERILL PARK

title

COVER SHEET

scale

AS SHOWN

project number

127695-1

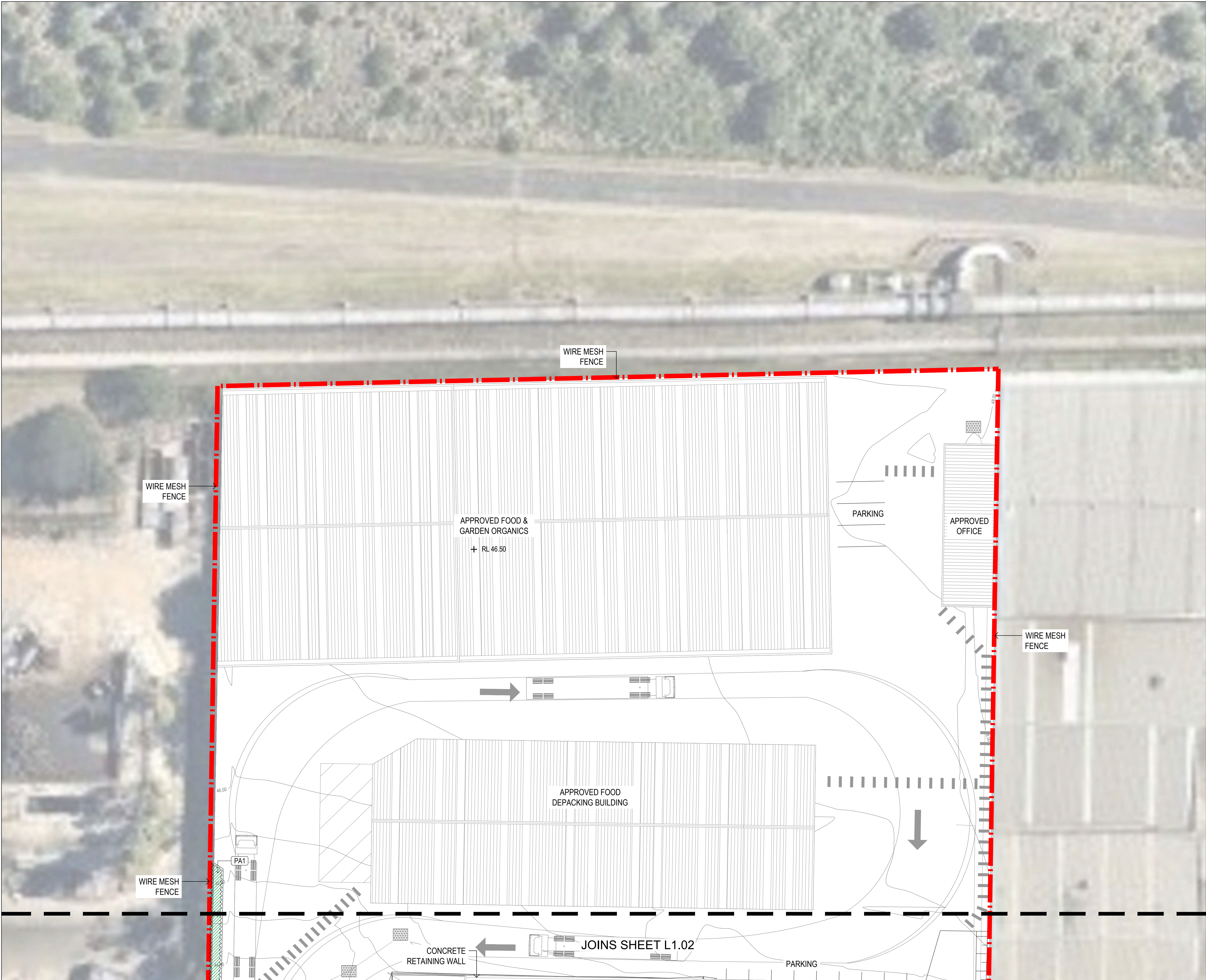
drawing number

L0.01

rev

B

northpoint



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B	EIS	15/07/2020	JM	MD
A	EIS	17/01/2019	OC	MD
rev. no	description	date	drawn	appr.

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project name

GREENSPOT RESOURCE CENTRE

project location

24 DAVIS ROAD, WETHERILL PARK

title

EXTERNAL WORKS

scale 1:200 @ A1

0m 2 5 10 20m



project number

127695-1

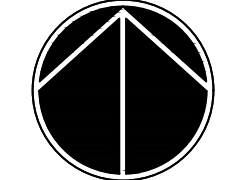
drawing number

L1.01

rev

B

northpoint





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B	EIS	15/07/2020	JM	MD
A	EIS	17/01/2019	OC	MD
rev. no	description	date	drawn	appr.

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project name

GREENSPOT RESOURCE CENTRE

project location

24 DAVIS ROAD, WETHERILL PARK

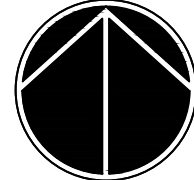
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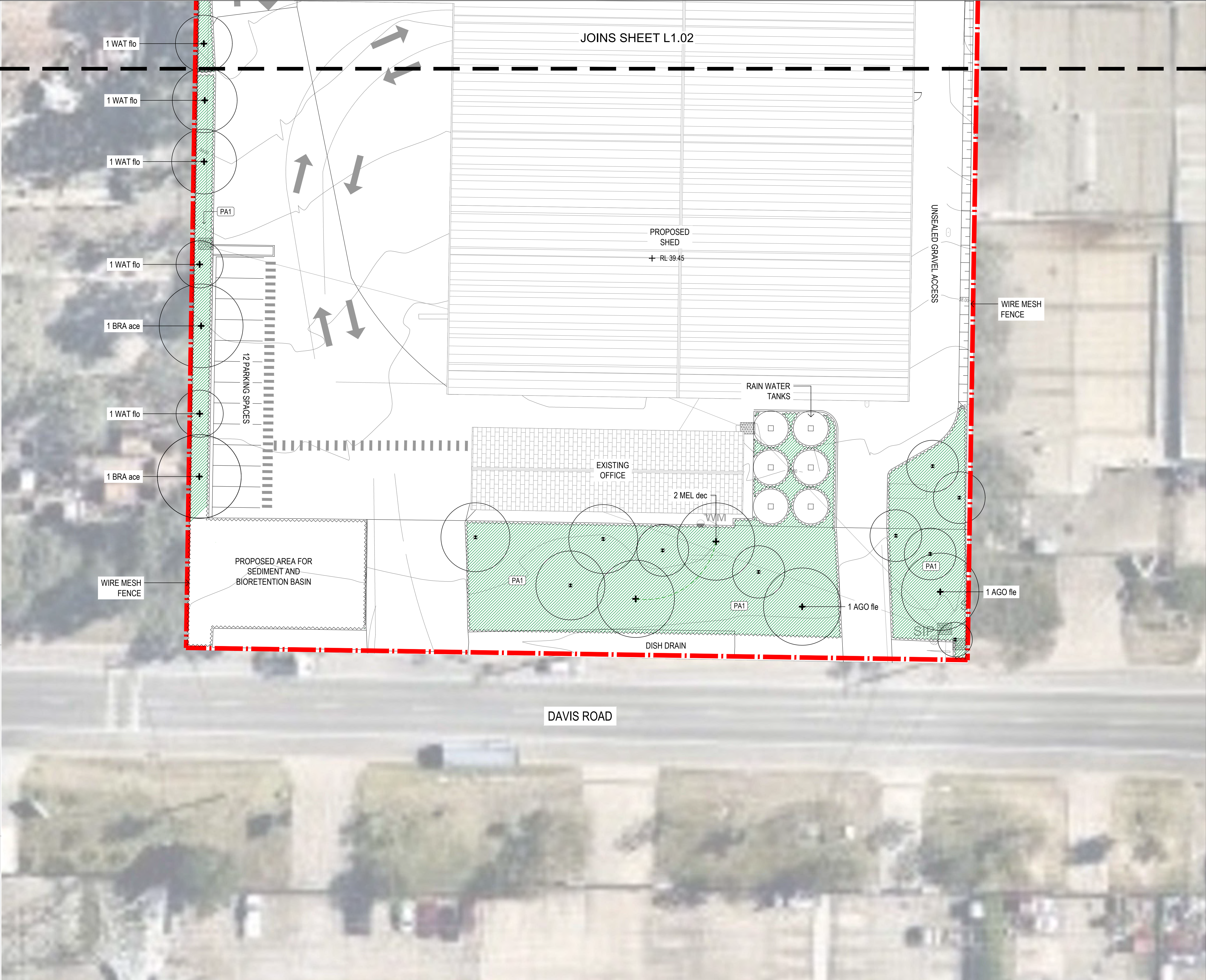
EXTERNAL WORKS

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project number	127695-1	northpoint	
drawing number	L1.02		
rev	B		



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B	EIS	15/07/2020	JM	MD
A	EIS	17/01/2019	OC	MD
rev. no	description	date	drawn	appr.

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client		BETTERGROW PTY LTD T/A GREENSPOT
project name		GREENSPOT RESOURCE CENTRE
project location		24 DAVIS ROAD, WETHERILL PARK
title		EXTERNAL WORKS
scale 1:200 @ A1		0m 2 5 10 20m
project number		127695-1
drawing number		L1.03
rev		B
northpoint		