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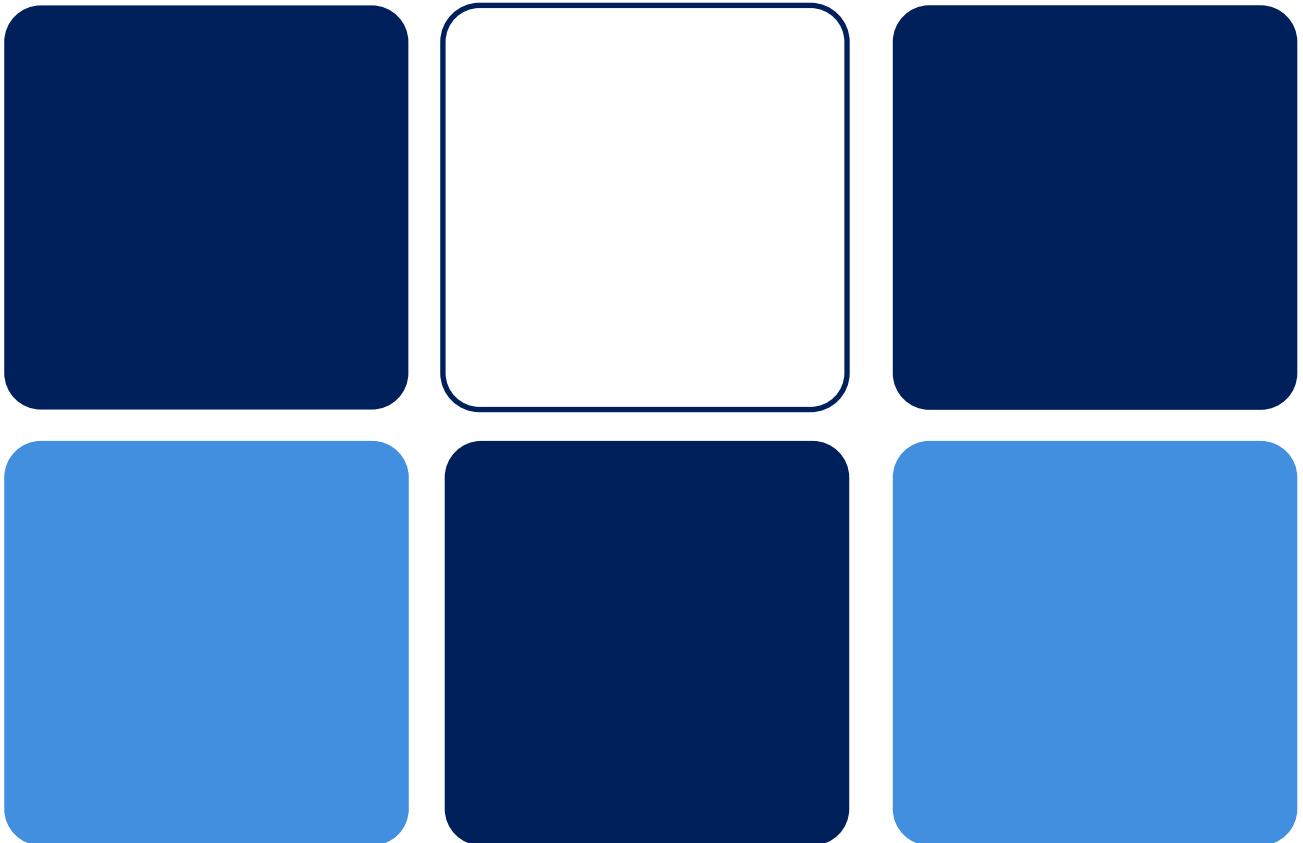
WETHERILL PARK

RESOURCE RECOVERY AND RECYCLING FACILITY
Response to Submissions

SSD 7401

Prepared for **Bettergrow Pty Ltd**

4 SEPTEMBER 2017





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1.0 Introduction

The following document has been prepared to address submissions received for SSD7401 during the exhibition period from 4 May to 2 June 2017 inclusive.

1.1 Background

Bettergrow, trading as 'Greenspot' (the Applicant) is proposing to undertake the development and operation of a Resource Recovery and Recycling Facility (the Proposal) on Lot 18 DP249417, 24 Davis Road, Wetherill Park, NSW.

Bettergrow currently operates a range of recycling facilities across New South Wales (NSW) and Queensland (QLD), and seeks to establish a 200,000 tonnes per annum (tpa) facility at the subject site to complement their existing operations, and also to assist the NSW Government in achieving an increased diversion of waste from landfill through the provision of strategic infrastructure and processing capacity.

The proposed development is to be located within an industrial precinct at 24 Davis Road, Wetherill Park NSW, within land described as Lot 18 DP249417. The Project Area is approximately 10 kilometres north of Liverpool, 10 kilometres west of Parramatta, and 7 kilometres south of Blacktown. The site covers an area of approximately 20,292 m² and is wholly within the Fairfield Local Government Area (LGA).

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

Bettergrow are proposing to construct and operate a 200,000 tpa resource recovery and recycling facility at the project site to complement their existing operations in NSW and QLD, and also to assist the NSW Government in achieving an increased diversion of waste from landfill through the provision of strategic infrastructure and processing capacity.

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

- 60,000 tonnes per year of hydro-excavation drilling muds and fluids for storage, separation and consolidation;
- 40,000 tonnes per year of various bulk landscaping products;
- 70,000 tonnes of Garden Organics (GO) and Mixed Food and Garden Organics (FOGO); and
- 30,000 tonnes of Food Organics.

The facility would receive commercial and household waste from night road projects, cafes, restaurants, kerbside collections, and emergency collections from the greater Sydney region. Wastes received at the site would be recycled and re-used as saleable products or transferred off site for further treatment and blending.

The recovered resources would 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. The existing benching of the site will allow the operations to be separated into individual process areas, and assist with the management of clean and dirty water catchments.

The Project is considered ‘State Significant Development’ (SSD) in accordance with Division 4.1 of Part 4 of the EP&A Act. Specifically, section 89C of the EP&A Act states the following:

89C Development that is State significant development

(1) For the purposes of this Act, State significant development is development that is declared under this section to be State significant development.

(2) A State environmental planning policy may declare any development, or any class or description of development, to be State significant development.

In accordance with s89C(2), the development is declared to be SSD as it is a type listed in Schedule 1 of the State Environmental Planning Policy (SEPP) - State and Regional Development. Namely;

23 Waste and resource management facilities

(3) Development for the purpose of resource recovery or recycling facilities that handle more than 100,000 tonnes per year of waste.

Having triggered as SSD, the relevant consent authority is the Minister pursuant to s89D of the EP&A Act:

89D Minister consent authority for State significant development

(1) The Minister is the consent authority for State significant development.

Note. Section 23 enables the Minister to delegate the consent authority function to the Planning Assessment Commission, the Secretary or to any other public authority.

As the proposed processing capacity of the Resource Recovery Facility is 200,000 tonnes per annum, the developed is classified as SSD.

The proposed development has been subject to an environmental assessment of the key project impacts, including addressing the Secretary’s Environmental Assessment Requirements (SEARs). Project impact assessment also included consultation with relevant government and community stakeholders.

1.2 Summary of Submissions

The submissions received in relation to the proposed development are summarised below in **Table 1**. Full details of the submissions and can be viewed on the Department of Planning and Environment’s (DP&E’s) website at http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7401# or attached as **Appendix 1** to this report.

Table 1 Summary of Received Submissions

Submission Source	Objection / Comments
Government Agencies	
Department of Planning and Environment	Comments
Environment Protection Authority	Comments
Office of Environment and Heritage	No further comment
Department of Primary Industries	No further comment
Fairfield City Council	Comments
Roads and Maritime Services	No further comment
Sydney Water	No further comment
Western Sydney Parklands Trust	Comments

In total, 8 responses were received for the development. All were from government agencies (State and local), with none received from business and community. No objections to the Project were received. Of the 8 responses received, 4 agencies provided comments and requested further information.

1.3 Document Purpose and Structure

This Response to Submissions report has been prepared by RPS Australia East Pty Ltd on behalf of Bettergrow Pty Ltd to address submissions received following public exhibition of the EIS for the proposed Greenspot Resource Recovery and Recycling Facility (SSD 7401). This report has been structured as follows:

- Section 1 – Project background information, summary of submissions, and report structure;
- Section 2 - Response to the issues raised by government agencies;
- Section 3 - Conclusions; and
- Section 4 – References.

2.0 Government Agency Responses

Submissions were received from 8 government agencies following the public exhibition (period 4 May to 2 June 2017) of the Project EIS and are addressed in the sub-sections below. The issues raised are detailed below in ***bold italic*** text, followed by the response in normal text.

2.1 Department of Planning and Environment

The submission received from the DP&E requested clarification on a number of matters in relation to the operation of the proposed resource recovery and recycling facility. The issues and responses are provided below.

General

1. Please confirm how long food organics and garden waste will be stockpiled on-site?

Page 53 and 55 of the EIS

The building will have capacity to stockpile shredded organics for up to two operational days at peak delivery period, although material on-site will only be held for a maximum of 24 hours. While there will be the capacity to store two operation days of material, stockpiles will be separated and rotated through the building to ensure the holding time of 24 hours for each individual stockpile is not exceeded.

Only when a truckload or less of material is remaining on a Friday would it be stored onsite over the weekend for a period greater than 24hrs. In this case the material would be stored within the FOGO building where any odour produced would be managed by the buildings carbon filters. This load would then be the first load dispatched on the Monday morning.

2. Please detail the operating hours for processing and materials receipt for each of the operations on-site

The following hours for receipts are based on those hours applied to the **Traffic Impact Assessment** for the development. In an effort to minimise daily truck movements, Bettergrow proposes to spread the estimated truck movements out Monday to Friday, and between the hours of 6:00 am to 2:30 pm on Saturdays. The hours of collection are also staggered to meet the needs of the various service industries, reduce traffic congestion, and impact to environmental amenity. The following wastes are proposed to be received during the following times:

- Hydro-excavation and drill muds over a 24 hour period (Monday to Friday) and between 6:00 am and 2:30 pm Saturday;
- Garden organics and mixed food and garden organics over extended hours, including 5:00 am to 11:00 pm Monday to Friday, and 6:00 am to 2:00 pm on Saturday's. This is to maximise truck utilisation especially for transfer out of product.
- Food organics between 4:00 am to 4:00 pm Monday to Friday, and 6:00 am to 2:00 pm on Saturday's. This is primarily to capture the generation times for café's and food outlets; and
- Bulk landscape materials will be delivered to the site between 5 am to 11 pm Monday to Friday. Distribution throughout Sydney will only occur during normal working hours Monday to Saturday.

Processing is to occur only during the hours of 7am to 6pm Monday to Friday. Only receipts will continue to occur during hours outside of this period.

3. Please detail how many tonnes can be stored in the food de-packaging tip pit

Appendix 5 of EIS

The tip pit in the food de-packaging building will be 12.2 metres long, 6.5 metres wide, and 2.2 metres deep (2.55m deep externally). This equates to a volume of 174.46m³ or 174,460 litres of storage. This would allow for the storage of approximately 130 tonnes of material.

Whilst architectural drawings supplied with the EIS show a tip pit depth up to 3 metres, the depth of the pit has been reduced to 2.2 metres internally (2.55m externally) to ensure that the base of the pit does not exceed RL44.5m which is the minimum base depth to ensure the groundwater table is not intercepted. This specification is as per the recommendations of the Groundwater Impact Assessment prepared for the EIS. Refer to **Appendix 2, Sheet C01** of this report for a revised plan of the Food De-packaging building and the revised tip pit depth.

4. Please assess the odour and noise impacts on the recreational users of Western Sydney Parklands

Noise

Page 111 and 113 of the EIS

A model of the proposed site was developed, including separate morning shoulder/day (6 am to 6 pm) and evening/night period scenarios (6 pm to 6 am).

The morning shoulder/day period scenario considered a potential worst case operating configuration, including all four operating areas operating concurrently at full capacity. All roller doors on processing buildings were considered to be open, and peak period trucking movements were included. As such, this is considered a conservative scenario, and resulting noise levels from the site should typically be less than predicted.

Model results indicated that:

- Predicted operational noise levels are below relevant noise criteria at the nearest industrial receivers to the site. The criterion for industrial receivers is $L_{Aeq,period}$ 70-75 dB; and
- Predicted operational noise levels are 5 dB or more below relevant criteria at the nearest residential receivers to the site.

The evening /night period scenario considered worst case trucking movements to and from the site. No processing activities are proposed for these periods.

Model results indicated that:

- Predicted operational noise levels are below relevant noise criteria at the nearest industrial receivers to the site. The criterion for industrial receivers is $L_{Aeq,period}$ 70-75 dB. The highest $L_{Aeq,15minute}$ predicted on the site boundary is 59 dB; and
- Predicted operational noise levels are well below relevant criteria at the nearest residential receivers to the site. General traffic movements on site would not be audible at residential locations.

General traffic movements on site would not be audible at residential locations and no operational noise impacts are predicted.

Further to the detail provided above (and in the EIS), additional noise modelling has been undertaken of the area directly to the north of the site within the Western Sydney Parklands area. Noise contours over this area show predictions for the majority of the area are less than $L_{Aeq,period}$ 45 dB. A small area immediately north-west of the subject site exceeds 50 dB, however this area is located between two pipelines and is unlikely to be used for recreation.

The assessment indicates the proposed operation would not impact noise amenity in the Western Parklands Recreation area (refer **Appendix 3** to this report). A revised noise contour plan, covering the Western Sydney Parklands area, is shown as Figure 1 in the **Noise and Vibration Addendum Report** attached as **Appendix 3** to this document.

Odour

Page 93 of the EIS

Contour plots have been prepared for average and peak tonnages at the 99th percentile, 1-second average concentration of odour for meteorological years 2013 through 2015. The western Sydney Parklands area to the north of the site has been included in the modelling for the development, as is shown in Figures 17 to 22 of the EIS.

The contour plots present the 99th percentile (i.e. 87th highest) 1-second odour concentration at each location in the study area (which covers the Western Sydney Parklands area), which for each receptor may occur at different times of the year and under different atmospheric conditions.

Contour plot colours represent the following odour units:

- Green contours < 0.1 OU;
- Yellow contours 0.1 OU to 1.0 OU;
- Orange contours 1.0 OU to 2.0 OU; and
- Red contours > 2 OU.

The results of the dispersion modelling indicate that there will be no significant issues at surrounding locations for any of the scenarios considered, with odour impacts predicted to be less than the regulatory criterion of 2 OU within the property boundary for the facility. The Western Sydney Parklands area will experience odour within the range of 0.1 – 1 units which is considered to be acceptable and in accordance with DEC guidelines. The results also suggest that the proposed odour mitigation measures associated with the operation of the proposed waste facility will be sufficient to manage odour impacts at off-site locations.

5. Figure 42 of the EIS shows a stockpile located on the gravel area in the landscaping area. Please detail the height of stockpiles and why stockpiles are not located within designated bays

The placement of this stockpile on Figure 42 is to depict a temporary indicative stockpile that may be required during the construction of the facility. This is a standard addition to an erosion and sediment control plan as required by the 'Blue Book'. This stockpile is not to represent materials being stored during operations and nor will stockpiling occur outside of designated bays during operations.

A revised Figure 42 has been prepared whereby the temporary stockpile has been removed. Refer to **Appendix 2, Figure 42** of this report for the revised plan.

6. Please detail which facilities will accept the composting material

Page 70 of the EIS

There are several approved or proposed waste recycling facilities surrounding the Project site, however most are not vertically integrated, as will be the case for the subject development, through providing recovered products to Greenspot's Ravensworth and Mount Stewart composting facilities. The Greenspot business model is to own and operate recycling facilities that can provide synergies with other recycling operations within the Greenspot group. By creating a higher and better value end product combined with investing in infrastructure further down the value chain this provides Bettergrow with a distinct edge over its competitors even with them operating in close proximity and vying for similar waste materials.

7. Page 33 states that ‘Liquid food waste generated within the Food De-packaging Facility can be collected and supplied to customers for application to land subject to the requirements outlaid in the NSW EPA’s Resource Recovery Order under Part 9, Clause 93 of the Protection of the Environment Operations (Waste) Regulation 2014 – The liquid food waste order 2014 and associated exemption’. Please confirm whether liquid waste is only being supplied from the food de-packaging facility or whether it will also be sourced from the food organics and garden waste facility.

FOGO

Page 53 of the EIS

Leachate will be captured within a central sump in the building and re-applied to the shredded material prior to transport off-site. This will help maintain the moisture content of material. None of this leachate will be taken offsite for re-use.

Food De-packaging

Page 55 of the EIS

The liquid fraction will be pumped into dedicated 2 x 27,000 litre (total 54,000 litres) liquid organics tanks (location 4) for temporary storage. This volume of storage allows for 4 days of liquid fraction capacity. These tanks will be fully bunded, with the bund area being able to accommodate 110% of the total storage capacity of the tanks. Once a total of 40,000 litres of liquid organics is reached across both the tanks a high level alarm and flashing light will be activated to notify operators that the tanks require emptying. If the alarm is ignored an overflow sensor will engage at 50,000 litres which will shut off the feed pump and sound another alarm. This will leave 4,000 litres of freeboard across the two tanks. The liquid fraction will be either be blended with outgoing shredded organics or removed from site via a liquid tanker. Liquid fractions removed from the facility will be taken to an EPA licenced land application site for soil injection or to one of Bettergrow’s EPA licenced composting operations at Ravensworth or Bathurst for further re-use.

8. Please detail on a plan where the 5,000 litre diesel tank will be stored (see Page 191 of the EIS)

Page 47 of the EIS

The site storage shed (approximately 15.4 m x 8.0 m) has a single large roller door and standard door for entry. This shed will be used to house spare parts, replacement equipment, general maintenance items, and cleaning products. In addition, the storage shed will also contain oils and lubricants required for the maintenance of site plant and machinery, and a 5,000 litre self bunded diesel tank. These items will be stored and handled in accordance with Australian Standard (AS) 1940-2004 *The Storage and Handling of Flammable and Combustible Liquids* and Work Health and Safety regulations.

Refer to **Appendix 2, Figure 11** of this report for a revised plan showing the location of the 5,000 litre diesel pod.

9. The Boral Widemere Resource Recovery Facility (SSD 6525), which was approved in November 2016, identified a future high density residential development to the east of the site. Please detail whether impacts on these future residents have been considered in the EIS

Page 101 of the EIS

The project area is situated within an existing industrial area, in an IN1 (General Industrial) zone as per the Fairfield Local Environmental Plan 2013. The area has mixed heavy and light industrial businesses, and bulky goods storage. Prospect reservoir and adjoining parklands are located to the north. The areas south, east and west of the subject site are all considered industrial. The nearest private residential receivers are located approximately 1,500 - 1,600 metres to the south of the subject site on Maugham Crescent, Wetherill Park. These residences are located immediately south of the industrial estate, and approximately 170 metres north of The Horsely Drive, an arterial road with high traffic flows.

1700m to the north-east of the site is an area of R4 zoned land which allows for the development of high density residential. This land is currently undeveloped and is not subject to a development application.

As this land is undeveloped at this point in time and would not be the closest residential receiver if it were developed, it has not been considered as part of the noise, odour, and dust modelling for the proposed facility. Further, noise, odour, and dust modelling show that this area is well outside the area of affectation.

Refer to **Appendix 2** for a revised **Figure 7** which shows the closest residential receivers, including the undeveloped R4 lands.

10. Please note the Environmental Management Plan (EMP) refers to Council as the approval authority (Page 1). Please update this. Please confirm the EMP only covers operations

Appendix 21 of the EIS

The EMP has been updated to correct the approval authority on Page 1 to the NSW Department of Planning and Environment. Further, this EMP is for the Greenspot Wetherill Park operations only.

Refer to **Appendix 4** of this document for a revised version of the EMP.

Contamination

11. As per the Douglas Partners (DP) letter dated April 2017 the Department requires the targeted soil investigation be completed in the areas which have not yet been investigated such as the former manufacturing area, former substation, workshop, laboratory building, existing interceptor pit and future landscape areas

As per the Douglas Partner letter dated April 2017 (Appendix 15 of the EIS), additional targeted soil investigations have been undertaken within the former manufacturing area, substation compound, workshop, laboratory building, existing interceptor pit and future landscape areas. Field and analytical results of the recent investigation have not revealed contamination that warrants remediation and, therefore, a Remediation Action Plan is not required for the proposed development.

The residual TRH in soil at the site is considered to not pose a risk to terrestrial ecology, human health or groundwater (based on current and previous investigation results) when considering the proposed development plans.

Based on the findings of this investigation and a review of previous investigation results, it is considered that the site is suitable for the proposed development.

The Douglas Partners report detailing these additional contamination investigations is attached as **Appendix 5** to this document.

12. The letter also states that a Site Audit Statement and Remediation Action Plan has not been provided to DP. Could you please confirm whether a Site Audit Statement and Remediation Action Plan was completed

As no Site Audit Statement or Site Audit Report has been prepared for the development site previously, an accredited EPA auditor was engaged to review existing contamination data and assessments for the site, and to also review the additional contamination investigations and results from work undertaken by Douglas Partners for this Response to Submissions report.

As provided above in **Item 11**, the results of the Douglas Partners field and analytical assessment did not revealed contamination that warrants remediation and, therefore, a Remediation Action Plan is not required for the proposed development. Based on the findings of this investigation and a review of previous investigation results, it is considered that the site is suitable for the proposed development.

In addition, a **Site Audit Report** (including Site Audit Statement) has been prepared by Synversa and are attached as **Appendix 6**. This Site Audit Report and Site Audit Statement concluded that:

“Based on the information presented in the consultants reports and observations made on site, and following the Decision-Making Process for Assessing Urban Redevelopment Sites in DEC (2006) Guidelines for the NSW Site Auditor Scheme, the Auditor concludes that the site is suitable for the proposed commercial/industrial uses”.

13. It is noted that there is hydrocarbon impacted soil insitu near the former manufacturing area, could you please provide the hydrocarbon concentrations in the soil at this location along with the criteria it was assessed against

Following additional contamination sampling at the site by Douglas Partners in July 2017, the hydrocarbon impacted soils near the former manufacturing area were re-sampled. Results of this sampling and the related assessment criteria are provided in Table 9 of the Douglas Partners report attached as **Appendix 5** to this document.

The results in Table 9, **Appendix 5** indicate that hydrocarbon levels are within acceptable limits for assessment criteria. The report (including analysis) prepared by Douglas Partners detailing the additional sampling and results is attached as **Appendix 5** to this document.

Air Quality and Odour

14. Given that 100,000 tonnes per annum of landscaping waste including sands, soils, and saw dust will be stored outside the Department considers that an air quality assessment for particulate matter is required

A **Dust Impact Assessment** of particulate materials generated from the handling of landscape products stored onsite is attached as **Appendix 7** to this report. Results show that impacts from particulate matter will be low and there will be no exceedance of dust levels beyond the site boundaries.

15. Page 50 of the EIS states that ‘dry, wet and semi-dry’ waste (ie. directional drilling muds / hydro excavation waste) is to be deposited into the tip trough. Please detail what is considered to be ‘dry waste’

‘Dry waste’ is considered to be hydro-excavated waste material that has a low moisture content and is able to be spaded (picked up with a shovel).

16. Page 1 of the Executive Summary states the facility is also proposed to act as a distribution centre for the consolidation and distribution of bulk landscape supplies including barks, compost, soils, sands and aggregates. Please confirm whether compost will be stored outside

Page 70 of the EIS

No composting will occur onsite. This will be undertaken offsite at one of Bettergrow’s licenced composting operations, or at another business licenced to undertake composting.

Page 1 of the Executive Summary and Page 33 of the EIS

An error exists in the EIS where it states’The facility is also proposed to act as a distribution centre for the consolidation and distribution of bulk landscape supplies including barks, **compost**, soils, sands and aggregates.’ Composts will not be stored onsite or used in landscaping supplies.

17. Please detail what 'growing media' means

'Growing media' refers to conventional bulk landscape materials such as soil, topdressing, or soil conditioners which are stocked in many landscape supply businesses throughout Sydney.

18. Please detail whether odour from the composting material stored outside has been considered in the odour assessment

No composted material is to be stored outside of the processing sheds, therefore modelling has not considered composted materials in the open. Please refer to the response provided above in **Item 16**.

19. Figure 10 in the Odour Impact Assessment (OIA) (Appendix C of Appendix 8 of the EIS) is not legible. Please provide a legible figure

Figure 10 of Appendix C of the Odour Impact Assessment has been updated and is attached within **Appendix 2** of this report.

20. The truck and dog vehicle movements in Table 5 of the OIA (Appendix 8 of the EIS) do not appear to be consistent with the traffic movements stipulated in the Traffic Impact Assessment (TIA). Please confirm the same assumptions were made in the OIA and TIA

Pages 88 and 120 of the EIS

The odour assessment, noise assessment, and traffic assessment were prepared based on the same estimated traffic volumes for the development. The traffic volumes have been broken down for the specific areas of the operation, and also travelling to and from the site. Both peak and average numbers are provided (refer **Table 3** below).

The traffic assessment considers peak passenger and heavy vehicle movements generated by the entire development. The odour assessment only considers worst case traffic generated by heavy vehicle movements related to the FOGO and Food De-packaging operations. Hence the tables shown in the traffic and odour assessments will not be the same. Whilst the tables are not the same, the same peak traffic movements have been utilised to develop the respective assessment models. The peak and average traffic movements are detailed in **Table 3**.

Further to the above, there are also differences in the peak incoming and outgoing movements for the bulk landscape supplies. This is due to incoming trucks either not going out again on the same day, or going out with a load of shredded green waste rather than a load of landscape material.

21. The OIA states on Page 15 that potentially odorous air from the food de-packaging building will be ducted to the ORPB building, mixed and treated by the carbon filter unit prior to release into the atmosphere. Please show on a plan where the ducting and stacks will be located including their elevation

Revised plans **A01, A02, B01, B02, B03, B04, C02, and C03** are attached within **Appendix 2** to this report. These revised plans show that supported duct work at a height of 5.95 metres will connect the Food De-packaging building and the ORPB (FOGO) building which will allow the treatment of odorous air from the Food De-packaging building through the carbon filters on the FOGO building. The stacks on the 8 odour units will be at a height of 8 metres, which is 2 metres above the height of the FOGO roof line.

Water**22. Please detail how much fire water can be contained on the site and provide contingency measures should the waste water tanks be at full capacity during a fire event**

Both the FOGO and Food De-packaging buildings have contained internal drainage systems to manage leachates and liquid wastes that are a component of the FOGO and Food De-packaging wastes.

The FOGO building has internal sumps and drains which collect leachate which are then sprayed back onto the FOGO materials to maintain the moisture content. Any excess is pumped off into the liquid waste storage tanks in the Food De-packaging building. In the event of a fire, fire water would be captured in the system and contained for later pump out and removal. Each day following processing activities any remaining leachate will be pumped from the internal sumps and drains to the liquid waste tanks in the Food De-packaging building to ensure there is adequate capacity in the internal drainage system to manage fire water.

Similarly, in the Food De-packaging building there is an internal sump and drainage system, however with the addition of a 174,460 litre in ground tip pit. This tip pit will receive food de-packaging waste which will then have the solid components removed and the liquid fraction pumped to 2 x 27,000L liquid waste tanks. This liquid waste will then be tankered from site to other of Bettergrow's facilities for use in licenced composting activities. Each day following processing the tip pit will be emptied to ensure there is adequate capacity in the pit to contain fire water. Refer to the Surface Water Impact Assessment prepared for the EIS for further detail on internal shed drainage design.

23. Please detail the location of the truck wash it does not appear to be included on Figure 8 of the EIS

The location of the truck wash is on the tipping apron on the mid-level of the site. Drill mud trucks and bulk landscape trucks are washed down on this apron to allow all dirty water to be collected within the dirty water system and processed through the CD Enviro drill mud system. An updated **Figure 8** is attached within **Appendix 2** to this report which has been labelled to show the location of truck washing. Organics trucks are washed down either in the FOGO shed or into the tip pit at the Food De-packaging building. This water is either taken off site for re-use at one of Bettergrow's composting facilities or applied to organic waste to re-introduce moisture. The collection of this water has been accommodated for in the design of the internal leachate management system.

24. Please detail where the drill mud and food organics trucks will be washed down and whether this waste water was considered in the design of the waste water system

Please refer to **Item 23** above.

25. Please confirm the waste water tanks will be bunded

As shown on **Figures 8, 9 and 12** attached as **Appendix 2** to this report, the waste water tanks to discharge to trade waste will be fully bunded to contain 110% of the capacity of the tanks and in accordance with the *EPA Guidelines for the 1 in 20 year 24hr storm event*. Any water collected in the bunded area from rainfall will be pumped off into the CD Enviro system for treatment and disposal / reuse.

26. Please demonstrate that the waste water discharged to Council's stormwater infrastructure is capable of meeting Council's water quality criteria

In accordance with Fairfield City Council's DCP, and as confirmed by Fairfield City Council's Catchment Planning engineer Nona Ruddell, no specific water quality mitigation or pollution reduction targets are currently required by Fairfield City Council for development within the Wetherill Park industrial catchment.

Despite the absence of any specific targets by Council, the proposed development intends to implement a train of treatment devices to minimise any adverse impacts upon the ecology and health of the downstream watercourses. The performance of the proposed stormwater management strategy has been assessed against the current state of the existing site. Results from the Northrop Surface Water Assessment as provided in Appendix 13 of the EIS are shown in **Table 2** below.

Table 2 Pollutant Removal Efficiency Results

Parameter	Pre-Development Source Load	Post-Development Source Load	Post-Development Residual Load
TSS (kg/yr)	2150	3720	765
TP (kg/yr)	3.46	5.01	3.34
TN (kg/yr)	25.3	25.6	17.2
GP (kg/yr)	342	293	185

The proposed treatment train will effectively reduce all residual pollutant loads beneath the pre-developed source loads which are currently released into the downstream receiving waters. From a regional perspective, given the net decrease in pollutant loads the development would be considered to have a beneficial impact on the water quality objectives for the catchment.

A **Surface Water Addendum Report** prepared by Northrop is attached as **Appendix 10** to this document.

27. Page 3 of the Zambelli Environmental Briefing Note states that ‘An appropriate volume of water is generated within the CD Enviro process that can be utilised for stockpile dust management as opposed to wasting to trade waste’. Please confirm that the water proposed to be used for dust suppression will not contain contaminants

Water utilised for dust suppression will be sourced from treated waste water produced by the CD Enviro processing equipment. Once the larger fractions have been removed from the drill muds through the initial dewatering process within the CD Enviro, the remaining liquids are then transferred through a clarifier to remove fine particles. Polymers are also mixed with the liquids to further bind solids which settle out and allow clear water to be collected. Solids collected as sludge are further dewatered in a centrifuge. Final polishing of the decanted clear water occurs where any ultra-fine particles are removed. The above processes aims are to concentrate contaminants into the remaining mud fraction which leaves the water fraction suitable for sewer discharge via a Trade Waste Agreement or onsite reuse for dust suppression. The Trade Waste Agreement will have specified water quality requirements which will be required to be met as part of the agreement. Onsite monitoring and testing will be undertaken. The same water quality requirements of the Trade Waste agreement will also be applied to the water utilised for dust suppression.

Noise and Vibration

28. Please provide an assessment of vibration impacts including mitigation measures

A **Noise and Vibration Addendum Report** has been prepared and is attached as **Appendix 3** to this report. Results show that there are no impacts to surrounding businesses or receivers from vibration produced at the site, nor is there any noise or vibration impact on the users of the Western Sydney Parklands to the north of the site.

Traffic

29. It is noted that the traffic counts are based off an average of 770 tonnes per day of waste. The traffic assessment should be updated to include an assessment of the worst case scenario

The Traffic Impact Assessment has been prepared to reflect the existing peak hour traffic conditions within the surrounding road network. The post-development traffic is calculated based on information of the proposed peak/maximum passenger and heavy vehicle generation as provided by Bettergrow (refer **Table 3** below). As such, the traffic report does assess the projected peak traffic generation as a worst case scenario.

30. Please tabulate the traffic movements for the facility including heavy and light vehicles

Peak and average heavy and light vehicle movements are detailed below in **Table 3**. The Traffic Impact Assessment utilised the same traffic movements as detailed below in **Table 3**, however the movements shown in the TIA were broken down into hourly movements (refer Table 2 of the TIA attached as Appendix 11 to the EIS).

31. Please demonstrate how vehicles will access car spaces 13-22 on the western side of the site

The carpark on the western side of the site is an existing parking area that will be accessed from the south-eastern entry. Light vehicles will enter the site from Davis Road from the east, travel past the administration building and wastewater tanks, cross over the access road that connects with the organics and landscape areas, and then enter the western carpark. Safety signs and road marking will be provided to ensure the safe interaction of heavy and light vehicles at this intersection.

The Traffic Impact Assessment prepared by Thompson Stanbury also included a turning path assessment with respect to 85th percentile passenger vehicle access which indicated that such vehicles are able to access, manoeuvre and exit the subject car spaces in a safe and efficient manner. As such, there are no issues with accessibility to parking spaces 13–22.

32. Please confirm that only light vehicles will use the south-eastern driveway to access car spaces 1-4 (Page 44 of EIS)

The south-eastern driveway detailed on Page 44 of the EIS is only for the entry and exit of light vehicles. All heavy vehicles are required to enter and exit via the weigh bridges located at the south-western driveway. This will provide for separate light and heavy access points. All light vehicles will access the site through this driveway. Also refer to **Item 31** above.

Table 3 Average and Peak Daily Vehicle Movements at Full Operations

Vehicle Type	Hydro Exc & Drill Mud				Bulk Landscape Materials				GO and comingled Food and GO				Food Organics				Satff				Total Truck	
	Average		Peak		Average		Peak		Average		Peak		Average		Peak		Average		Peak		Total Truck	Total Truck
	in	out	in	out	in	out	in	out	in	out	in	out	in	out	in	out	in	out	in	out	Ave Movements	Peak Movements
6 or 8 wheeler with Hook lift bin									1	1	1.5	1.5	8	8	10	10					18	23
Truck and Dog 32 t pay load					5	2	6	3	3	6	5	8	1	1	1	1					18	24
Side arm Council kerbside collection garbage trucks									32	32	42	42	2	2	3	3					68	90
19m B' Doubles					3		4			3		4									6	8
6 or 8 wheeler rigid tippers					10	10	15	15													20	30
Semi Tippers 25 tonne	3	3	4	4	1	1	2	2													8	12
4, 6 or 8 wheeler sucker trucks	38	38	46	46																	76	92
Semi Sucker trucks	7	7	9	9																	14	18
Semi liquid tankers													1.5	1.5	2	2					3	4
Tortliners / Flat top trucks													0.5	0.5	1.5	1.5					1	3
Total average truck movements	48	48			19	13			36	42			13	13							232	
Total Peak truck movements			59	59			27	20			48.5	55.5			17.5	17.5						304
Staff Cars																	20	20	22	22	40	44
Visitors Cars																	2	2	4	4	4	8
Fuel deliveries							0.5	0.5			0.5	0.5									2	2
Total average daily vehicle movements																					278	
Total peak daily vehicle movements																						358

33. Please show the heavy vehicle routes on a plan and the key intersections that were assessed

Pages 123 & 124 of EIS

As indicated in the Traffic Impact Assessment for the EIS (Appendix 11), the main transport routes into and out of the development site will be via The Horsley Drive, into Elizabeth Street, and then into Davis Road. Trucks will also enter and exit via Victoria Street, into Elizabeth Street, then into Davis Road. Davis Road connects with the Prospect Highway which then intersects with the M5. The Horsley Drive intersects with the M7. A vehicle route plan has been prepared to show the heavy vehicle routes to be utilised for the development. Refer to **Appendix 2, Figure A** for the heavy vehicle route plan.

34. Please detail where the traffic on Elizabeth Street will be travelling, ie. south then the M7

Heavy vehicles are expected to primarily utilise the orbital motorway network to access and vacate the subject site. As such, some heavy vehicles are expected to travel south along Elizabeth Street, either turn right into The Horsley Drive (or turn right into Victoria Street first before turning right into The Horsley Drive) and thence accessing the M7 Motorway. Similarly, the remaining heavy vehicles are envisaged to travel east along Davis Road, left turn into Widemere Road/Prospect Highway and then access the M4 Motorway. Full details are provided in Section 6.2 of the Traffic Impact Assessment prepared by Thompson Stanbury attached as Appendix 11 to the EIS.

35. Please detail where the traffic on Davis Road will be travelling, ie. Widemere Road and then the M4

Refer to **Item 34** above.

36. Please provide the existing daily traffic volumes on Davis Road and Elizabeth Street

Peak hour traffic volumes within the adjoining road network are most critical to assess the traffic impacts from the proposed development as these volumes represent the heaviest (or worst case) traffic demands over the course of a day. These traffic volumes are then used to assess the level of service (LoS), and the delays and degrees of saturation at key intersections and roads. As such, the Traffic Impact Assessment prepared for the development utilised survey results of the existing peak hour traffic demands at the intersections most impacted by the additional traffic generated by the proposed waste facility. However, the daily traffic flows can be estimated by multiplying the peak hour traffic flows by a factor of 10.

37. The EIS states that there is space for a B-Double to queue off the road while waiting for the weighbridge (Page 44). The TIA states on Page 13 the distance between the weighbridge and the site boundary is 18m. That would mean a truck of 19 m would be queuing over the road reserve / crossover, therefore outside of the site boundary. Please confirm that a length of a B-Double can be accommodated on the site

Pages 44, 66, and 127 of EIS

The layout of the site and the weighbridge position is such that it allows for the queuing of 2 incoming trucks at any one time. This is possible by having one 19m truck on the weighbridge and another 19m truck directly behind waiting to enter the weighbridge. The 22m weighbridge is positioned 19m inside the boundary which provides for 41m of truck parking space. This positioning allows for two 19m trucks to be contained wholly within the site without encroaching onto the road reserve / crossover. A **Revised Traffic Impact Assessment** is attached as **Appendix 8** to this document which correctly shows the layout of the weighbridges in relation to the site boundary.

Hazards

38. Please note that diesel fuel is not a dangerous good under the Australian Dangerous Goods Code, please see section 8.13.4 of the EIS. The requirements in AS 1940 remain applicable for the storage of diesel fuel, which is a combustible liquid

Noted. All combustible liquids are to be stored in accordance with AS1940-2004: *The Storage and Handling of Flammable and Combustible Liquids*.

2.2 Environment Protection Authority

The submission received from the Environment Protection Authority requested further information on odour, air quality, and contamination. The detail of each issue and responses are provided below.

Odour

Statement or guarantee from the manufacturer that the filters achieve 99.9% odour removal for the types of odours to be generated

The odour treatment system to be utilised for the FOGO and Food De-packaging buildings will be designed and supplied by OdourPro. The FiltaCarb FCA900 GAC filter was specifically chosen due to its cost and performance, and also the ability to have redundancy capacity which could not be provided by a wet scrubber option. The FCA900 was also selected as it can neutralise acidic gases and also has a high adsorption for Volatile Organic Compounds (VOCs).

Two types of filter media are proposed to be utilised in the FCA900, including the Acticarb EA1000k and Acticarb GS900. These two media will be used in a blended form of 70% GS900 and 30% EA1000K. Specifications for each of these media are included in **Appendix 9** and are summarised below:

- The Acticarb EA1000K is a microporous impregnated activated carbon which is designed to treat air streams containing volatile organic compounds and acidic gasses
- The Acticarb GS900 is a high activity microporous and mesoporous granular activated carbon suitable for the treatment of gas streams containing high VOC where there is a short contact time and a high degree of removal is required.

Activated carbon material comprised of micropores and mesopores provides high adsorptive efficiency for volatile organic compounds. Micropores are defined as having a width of no greater than 2 nano metres (nm), while mesopores are defined as having a width of 2-50 nm. The combination of micro and mesopores provides a strong adsorption capacity.

Another design feature of this treatment technology is the use of a plenum to ensure the even distribution of odorous air through the filter media.

To ensure 99.9 % removal efficiency a breakthrough detector set at 2 ppm for VOC's was adopted for modelling and will be installed. This will ensure that the filter media would operate at 99.9% removal efficiency until breakthrough occurred with detection being set at a very low concentration.

The filters are considered to be secondary to the control of odour as 3 proprietary probiotic inoculums will be utilised to suppress any VOCs, ammonia, or hydrogen sulphide produced at the point of unloading, processing and short-term storage. The basis for utilising inoculums is that enhanced populations of effective microorganisms will out populate bacteria known to produce odour emissions. The use of the inoculums will reduce putrefying conditions commencing.

Justification for the assumption that 90% efficiency of the filters is 'conservative' including description of the behaviour of the filter as it fills

The choice of utilising 90% efficiency for the air filters was part of the sensitivity analysis performed for the odour model. The aim was to determine the level of efficiency of the filters when 2.5 odour units were reached at the property boundary. The model determined that even at 90% efficiency odour levels at the boundary were less than 2.5 odour units.

At 90% efficiency the filters would likely trigger the breakthrough detector indicating sulphide or VOC's, however the filters would not be operated, in practice, to a point of 90%.

To reduce the clogging of the filters a plenum has been designed in the carbon filter units that can support the weight of the media while providing enough suitably sized penetrations in the plenum floor to allow free airflow. This has been achieved through the use of a HDPE grating supported around the outside of the filter vessel with strategically placed support pods on the underside of the plenum space. PVC gauze matting is also used as an interface between the carbon media and plenum floor that is combined with a stainless steel pre-filter that treats all air before entering the filter vessel.

Explanation of how the VOC breakthrough alarm relates to filter performance – behaviour of the filter and the relationship between odour and measured VOC

A breakthrough detector with a 2ppm limit for H₂S was adopted as a result of searching the market for a reliable detector suitable for the odorous environment in which it is needed to operate and that could register hydrogen sulphide at a very low concentration to indicate that the filter media needs replacing. The filter media will effectively neutralise acid gases such as hydrogen sulphide. When the acid neutralising capacity is spent, hydrogen sulphide will commence breakthrough. A second detector will be utilised for VOCs which is similar in its operation to the H₂S detector. The specifications for the detectors are included in **Appendix 9** to this report.

Detectors will be placed at a height that is easily observed at the outlet of the filter and will be located in a chamber attached to the filter outlet via a venturi configuration. The detectors would be checked every morning prior to operations commencing. When breakthrough occurs the filter media will be changed. Redundancy is provided through the use of 8 filter units as 7 filter units have been modelled as being effective to treat odours generated from both the FOGO and Food De-packaging buildings. When a detector indicates breakthrough, there will be enough additional odour treatment capacity in the system to continue normal operations whilst the filter media is replaced.

The EPA further recommends the proponent consider what additional measures might be available should the proposed mitigation fail to achieve desired performance

Whilst it is unlikely that all carbon filter units would fail at the same time, the odour treatment design incorporates one extra filter unit so that when one is offline, being repaired, serviced, or receiving a filter change, the remaining 7 will be operating. Modelling has confirmed that 7 units will be sufficient to achieve compliant odour emissions at the property boundary.

Should there be a loss of power at the site and all filters go off line the buildings would be left fully closed to ensure that leakage of odour is minimised. While the odour units would not be functioning as normal there would still be some minimal odour treatment through the filters as air leaks through the filter medium. To further control odour, no further deliveries would occur whilst the filters are not fully functioning. A probiotic inoculum would be applied to any organics contained in either of the organics buildings. This treatment would minimise the onset of putrefaction and odour.

Should the power remain off for an extended period or proposed mitigation fail to achieve performance the organic materials would either be removed to land-fill or the volume of materials held onsite reduced until the filters are re-instated to achieve the required performance.

As part of a post approval requirement, Bettergrow will prepare an Odour Management Plan and Procedure for the facility to ensure materials and odours are appropriately managed and performance is met.

Page 15 of the odour assessment (Appendix 8) states that 'potentially odorous air from the Food De-packaging building will be ducted to the Organics Reveal and Processing Building where it will be mixed and treated by the carbon filter unit to release into the atmosphere'. However the figures do not show the ducting or the stacks, are the 8 carbon filters enough to service the two buildings

Revised plans **A01, A02, B01, B02, B03, B04, C02, and C03** are attached within **Appendix 2** to this report. These revised plans show that supported duct work at a height of 5.95 metres will connect the Food De-packaging building and the ORPB (FOGO) building which will allow the treatment of odorous air from the Food De-packaging building through the carbon filters on the FOGO building. The stacks on the 8 odour units will be at a height of 8 metres, which is 2 metres above the height of the FOGO roof line.

Modelling in the Odour Impact Assessment prepared for the EIS has been based on 7 carbon filter units being able to manage the odour generated from both the FOGO building and the Food De-packaging building. Results presented for the odour assessment are based on only 7 carbon units operating at any one time. In order to provide some further redundancy capacity an additional carbon filter unit was added to bring the total number of carbon filters up to 8. Specifications for the carbon filter units are attached as **Appendix 9** to this report.

Air Quality

The Applicant has not conducted an air quality assessment of particulate matter. As 100,000 tonnes per annum of landscaping materials including sawdust, sands, and soils will be stored outside the EPA is of the view that an air quality assessment and mitigation measures should be provided

A **Dust Impact Assessment** of particulate materials generated from the handling of landscape products stored onsite is attached as **Appendix 7** to this report. Results show that impacts from particulate matter will be low and there will be no exceedance of dust levels beyond the site boundaries.

Contamination

The site was previously an asphalt batching plant owned by Mobil. However, no Remediation Action Plan or Site Audit Statement has been completed for the site. Some parts of the site have been remediated but there are several areas which have not been investigated (see page 17 of the Douglas Partners (DP) report (Appendix 14)). This appendix was supplemented by a letter from DP (Appendix 15) which concludes the site is suitable for the intended use subject to targeted soil investigations being conducted

Further contamination assessment works have been undertaken by Douglas Partners as part of this Response to Submissions report. This contamination works also involved the engagement of a third party NSW EPA auditor (Synversa) to undertake a full review of all contamination work and results for the site, prepare a Site Audit Report, and provide a Site Audit Statement.

As provided above in **Item 11**, the results of the Douglas Partners field and analytical assessment did not revealed contamination that warrants remediation and, therefore, a Remediation Action Plan is not required for the proposed development. Based on the findings of this investigation and a review of previous investigation results, it is considered that the site is suitable for the proposed development.

The **Site Audit Report** and **Site Audit Statement** prepared for the site concluded that:

"Based on the information presented in the consultants reports and observations made on site, and following the Decision-Making Process for Assessing Urban Redevelopment Sites in DEC (2006) Guidelines for the NSW Site Auditor Scheme, the Auditor concludes that the site is suitable for the proposed commercial/industrial uses".

The report for the additional sampling work undertaken by Douglas Partners is attached as **Appendix 5**, and the **Site Audit Report** (including Site Audit Statement) prepared by Synversa are attached as **Appendix 6**.

2.3 Fairfield City Council

Catchment Management

It is noted on page 38 of the Surface Water Assessment produced by Northrop (21/02/2017 that the 'bunded area surrounding the Drill Mud Processing Facility was excluded (from the post development model) as it will discharge to sewer under the wastewater management system.' The proponent will need to confirm that the discharge to sewer point will be able to cater for the 1 in 100 year ARI flows for this area. If not, then this catchment area and discharge will need to be added to the DRAINS catchments and site discharge results.

The bunded area has been sized for the 1 in 20-year ARI in accordance with EPA requirements. The drains catchment areas have therefore been amended accordingly. The revised site discharge flow rates are summarised below in **Table 4**.

Table 4 Site Discharge Results

	Pre-development Outflow (m ³ /s)	Post-development Outflow (m ³ /s)	% Change
Peak 5 Year ARI Storm Event	0.667	0.674	1% increase
Peak 100 Year ARI Storm Event	1.100	1.110	< 1% increase

The modelling results shown in **Table 4** indicate that the proposed development will result minor increase in discharge flowrates. It should be noted that the drains model has not taken into account the 345kL of storage provided across the site in the rainwater harvesting tanks, bunded areas and sediment trap. It can be reasonably expected that this storage volume would attenuate some of the post developed flow, particularly during minor storm events. Further to this given the relatively minor size of the site compared to the receiving environments catchment, it is not expected that an increase of this size would have any impact on the downstream hydrologic regime with no significant changes proposed to the frequency or magnitude of flow as a result of the proposed development.

It has also been confirmed with Fairfield City Council's Catchment Planning engineer, Nona Ruddell, that in accordance with the DCP no onsite detention is required to mitigate increases in post developed flow within the Wetherill Park industrial catchment (FCC's City Wide DCP Section 2.5.5).

A **Surface Water and Addendum Report** prepared by Northrop is attached as **Appendix 10** to this document.

Fairfield City Council Water Quality Improvement Targets are taken from the Georges River Estuary Coastal Zone Management Plan (July 2013). The relevant targets below (taken from page 33 of this report) are to be met for the site, and documented as a % reduction.

In accordance with Fairfield City Council's DCP, as confirmed by Fairfield City Council's Catchment Planning engineer Nona Ruddell, no specific water quality mitigation or pollution reduction targets are currently required for development within the Wetherill Park industrial catchment.

Despite this the proposed development intends to implement a train of treatment devices to minimise any adverse impacts upon the ecology and health of the downstream watercourses. The performance of the proposed stormwater management strategy has been assessed against the current state of the existing Site using the conceptual software MUSIC (Version 6). The results calculated by the MUSIC model are shown in **Table 2** of this document.

The results in **Table 2** show the proposed treatment train will effectively reduce all residual pollutant loads beneath the pre-developed source loads which are currently released into the downstream receiving waters.

For full details on the proposed water quality treatment measures and MUSIC modelling refer to section 5.4.2 of the Surface Water Assessment attached as Appendix 13 to the EIS.

The proponent needs to confirm that all floor levels for the site are at least the freeboard level (0.5m) above the relevant 1 in 100 year ARI flood level.

The 1 in 100-year ARI Flood level at the front of the site is 36.70m AHD with the existing adjacent office building's FFL approximately at 37.26m AHD (0.56m above). All other existing and proposed floor levels are above the office building and therefore also above the 1 in 100-year ARI flood level plus 0.5m freeboard.

Development Engineering

The site is identified as flood affected due to overland flooding and located within medium, low and no flood risk precinct.

Appendix 13, section 7 Flood Impact Assessment reveals the proposed works will not be impacted by the flood extents located along Southern Boundary adjacent to Davis Road. Appendix 4 Detailed Flood Impact Assessment is satisfactory and has addressed the matrix in Chapter 11 of Council's DCP.

The Stormwater Plans that have been provided in Section 7 Flood Impact Assessment - Appendix A, appear satisfactory.

No further detail required to be supplied.

Traffic Management

SIDRA output files for existing and proposed traffic conditions shall be submitted to Council for assessment.

SIDRA output files are provided on CD attached to this report.

The development application shall be referred to the Roads and Maritime Services for comments.

RPS on behalf of Bettergrow has been in consultation with the RMS during the preparation of the EIS and Thompson Stanbury who undertook the Traffic Impact Assessment has also undertaken consultation with the RMS. DPE provided the EIS to RMS during the exhibition period and no further comments were provided by RMS.

The width of the proposed driveway shall comply with Figure 3.2 of AS 2890.2-2002.

The proposed width of the heavy vehicle driveway for the development is 12.5m as detailed in the EIS. 12.5m is compliant with the requirements of AS2890.2-2002.

The evening peak should be modelled using traffic volumes between 3.00pm-4.00pm.

Previous and recent observations and surveys of the surrounding road network in the immediate vicinity of the site indicate that the evening peak is generally between 4pm – 6pm, which is commensurate with the operating hours of the surrounding industrial land use. Times outside of this peak period and on weekends have been observed to be generally lower. An evening/afternoon peak of between 3–4pm would be appropriate if there were schools within the immediate vicinity of the site, however there no schools within close proximity to the site or any specific factors nominated by Council that would indicate 3pm – 4pm as being the evening peak period. The existing weekday traffic demands (surveyed between 7am – 9am and 4pm – 6pm) presented and used for analysis in the Traffic Impact Assessment is considered to best capture the peak traffic demands within the surrounding road network.

RMS have also reviewed the Traffic Impact Assessment and have provided no further comment or requested any further information on traffic counts or modelling.

The traffic volumes used to model the intersections of Victoria Street/Elizabeth Drive and Davis Road/Elizabeth Drive for the existing traffic conditions is considered low.

Existing traffic volume surveys were undertaken during weekdays between 7am – 9am and 4pm – 6pm to capture the peak traffic demands within the surrounding road network. RMS have also reviewed the Traffic Impact Assessment and have provided no further comment or requested any further information on traffic counts or modelling.

Cycle time of 70 seconds adopted for modelling the signalised intersection of Victoria Street and Elizabeth Street is incorrect, considering the number of phasing at the intersection.

The Traffic Impact Assessment prepared by Thompson Stanbury for the EIS used a cycle time of 120 seconds not 70 seconds. This is confirmed in the SIDRA output provided on the CD attached to this report.

Environmental Management

Details of any proposals for preventing leachate from organic landscape materials storage areas from entering the onsite stormwater system.

To avoid the potential contamination risk of leachate generation, all unloading, storage and sorting of raw organics received onsite will occur within the proposed building enclosures, with wash down facilities provided internally. Localised floor sumps and grated trench drains at all trafficable doorways will collect generated leachate and prevent flows leaving the covered facility. Leachate collected within the enclosed sumps of the GO/FOGO facility will be applied to outgoing product. Should there be an excess of runoff build up within the sumps (not considered likely), the leachate would be transferred offsite via truck to an approved licenced facility.

Products received as part of the bulk landscaping supply will be pre-treated and sorted within the existing concrete lined bins. Only inert materials used with the landscape and home garden market such as soil, garden mixes, sands, rocks, gravels and bark will be received with no potential for leachate or wastewater generation. To further manage the potential for leachates to enter the onsite stormwater system a sediment control system will be installed at the collection point for the stormwater captured in the bulk landscape supplies area.

For full details on the proposed onsite wastewater management refer to Section 5.5 of the Surface Water Assessment attached as Appendix 13 to the EIS.

Details of any proposals for preventing clay sized sediment from drill mud processing areas from entering the onsite stormwater system.

The receipt, separation and consolidation of hydro-excavated drill muds and fluids is to occur entirely within bunded containment areas to prevent runoff entering the stormwater system. The bunded volume has been sized in accordance with NSW EPA's Spill Management Bunding guidelines. A minimum containment volume of 224m³ is to be provided via a minimum 280mm set down into the area. The volume comprises of the 2 x 40kL drill mud receipt pits that receive the unprocessed drill muds brought to site plus the runoff generated from the 1 in 20-year average reoccurrence interval (ARI) 24hr storm event (7.61mm/hr) over the 785m² bunded catchment. Wastewater runoff collected within the bunded area and from wash of the tip trough will be transferred into the drill mud pits for recycled processing within the CD Enviro system.

In addition to this, prior to the release of the piped stormwater from site, the stormwater network is to be directed to an online proprietary STC-27 Humeceptor system. The Humeceptor system is an underground, precast concrete stormwater treatment solution that utilises hydrodynamic and gravitational separation to efficiently remove total suspended solids (reported to remove particles ≥ 10 microns) and entrained hydrocarbons (Humes, 2016). Laboratory and field results of stable, hardstand, roads, commercial and industrial Sites reflect an 80% reduction in total suspended solids.

Any mobile machinery used within the bunded area surrounding the drill mud processing equipment will be washed down within this bunded area prior to moving into other areas of the site in order to prevent sediment from entering the onsite stormwater system.

For full details on the proposed treatment devices refer to section 5.4.2 of the Surface Water Assessment attached as Appendix 13 to the EIS.

Alterations to the proposal to ensure all areas of the site are fully sealed.

All trafficable areas are to be stabilised via hardstand pavement of either concrete, asphalt or gravel road base. The only operational area proposing a gravel road base is within the bulk landscaping storage area. All runoff from this area is to report to a first flush sediment trap designed to capture the coarse sediment and suspended solids.

Detailed descriptions of the sediment trap and sizing summary are provided in Section 5.4.2 and Appendix C of the Surface Water Assessment which is attached as Appendix 13 to the EIS.

Based on the detailed provided in the EIS, and outlined above, it is considered that all high risk areas are appropriately sealed and all runoff can be suitably treated.

Written confirmation from Sydney Water Corporation agreeing to the discharge of treated stormwater from the surrounds of the drill mud processing system to the Sydney Water sewer.

All water collected from the surrounds of the drill mud processing area will be treated through the CD Enviro treatment process prior to either being stored and then taken offsite for reuse, or sent to trade waste.

Sydney Water has confirmed the following in its submission comments for the proposed development dated June 2017:

- *Water service is available from the 200mm main in Davis Road.*
- *Wastewater service is available from the 225mm lead-in main from the front of the lot in Davis Road.*
- *Amplifications and extensions to these mains may be required depending on the size and scale of development.*
- *Detailed requirements will be provided at the Section 73 application phase.*

The Section 73 application phase refers to obtaining a compliance certificate which confirms that infrastructure is adequate (or not) to service the proposed development with water, wastewater, and storm water services. Sydney Water has indicated that the existing system will be able to accommodate the trade waste volumes proposed to be generated from the site and confirmed that further detailed requirements with regard to these services will be provided at the time of the Section 73 application.

Details of any proposed chemical storage, including a chemical manifest with indicative volumes and details of bunding/isolation/spill response equipment.

It is not proposed to store any bulk volumes of chemicals at the facility other than those utilised for general cleaning, truck washing, and water treatment. Up to 40 litres of a biodegradable truck wash would be kept onsite at any one time which would be utilised within the apron to the tip trough on the mid level of the site where the washing of drill mud trucks and landscape supply trucks would occur.

For the onsite water treatment process, up to 500kg of MaxiFlox 540 (flocculant) would be stored on site at any one time in powdered form. This would be mixed with water and used in the CD Enviro process on an as needs basis. The flocculant is not classified as a dangerous good or hazardous as per the product Material Safety Data Sheet (MSDS). The MSDS is attached as **Appendix 11** to this report.

Up to 250 litres of hydraulic fluid, 80 litres of engine oil, and 120 litres of coolant would also be kept onsite in the event that plant and machinery require fluids to be topped up between service intervals. The MSDSs are attached as **Appendix 11** to this report.

All of the fluids detailed above would be kept in the site maintenance shed, adjacent to the 5,000 litre bulk diesel tank, and within an existing bunded chemical store. Spill kits would be placed on the upper, mid, and lower levels of the site, in the maintenance shed, and the site workshop. All staff will be appropriately trained in the use of spill response equipment and the requirements of the site Environmental Management Plan (attached as Appendix 21 to the EIS).

Timetables for the 'regular inspections' of onsite stormwater treatment devices.

A detailed description of the Monitoring and Maintenance Activities (including inspections) for the site is provided in Section 8 of the Surface Water Assessment attached as Appendix 13 to the EIS. In general, it is recommended that all listed inspections be carried out at three-monthly intervals for the first year of operation. Any major problems encountered during this time should be documented and communicated to the owner to seek appropriate action. It is also recommended that inspections take place as soon as possible after heavy rainfall or if a problem is suspected. All inspection and maintenance records must be kept onsite for inspection by the approval authority if necessary. Alterations to this proposed maintenance schedule may be implemented depending on the inspection outcomes. After the initial twelve-month period suitable timeframes for each maintenance activity should be adopted to ensure regular monitoring practices remain in place for the life of the development.

Comments from Sydney Water Corporation regarding the additional load on the existing Trade Waste disposal agreement.

Sydney Water has confirmed the following in its submission comments for the proposed development dated June 2017:

- *Water service is available from the 200mm main in Davis Road.*
- *Wastewater service is available from the 225mm lead-in main from the front of the lot in Davis Road.*
- *Amplifications and extensions to these mains may be required depending on the size and scale of development.*
- *Detailed requirements will be provided at the Section 73 application phase.*

The Section 73 application phase refers to obtaining a compliance certificate which confirms that infrastructure is adequate (or not) to service the proposed development with water, wastewater, and storm water services. Sydney Water has confirmed that further detailed requirements with regard to these services will be provided at the time of the Section 73 application.

A Remediation Action Plan, prepared in accordance with the NSW EPA Contaminated Land Series.

Further contamination assessment works have been undertaken by Douglas Partners as part of this Response to Submissions report. This contamination works also involved the engagement of a third party NSW EPA auditor (Synversa) to undertake a full review of all contamination work and results for the site, prepare a Site Audit Report, and provide a Site Audit Statement.

As provided above in **Item 11**, the results of the Douglas Partners field and analytical assessment did not revealed contamination that warrants remediation and, therefore, a Remediation Action Plan is not required for the proposed development. Based on the findings of this investigation and a review of previous investigation results, it is considered that the site is suitable for the proposed development.

The **Site Audit Report** (including Site Audit Statement) prepared for the site concluded that:

“Based on the information presented in the consultants reports and observations made on site, and following the Decision-Making Process for Assessing Urban Redevelopment Sites in DEC (2006) Guidelines for the NSW Site Auditor Scheme, the Auditor concludes that the site is suitable for the proposed commercial/industrial uses”.

The report for the additional sampling work undertaken by Douglas Partners is attached as **Appendix 5** and the **Site Audit Report** (including Site Audit Statement) prepared by Synversa is attached as **Appendix 6**.

Details of any proposed vehicle maintenance area.

Page 47 of the EIS

There is no dedicated vehicle maintenance area proposed onsite. Existing shedding and workshops along the eastern boundary of the site will be utilised to undertake minor equipment servicing and repairs. Any major repairs to heavy vehicles will be undertaken offsite at a dedicated repair facility.

Strategic PlanningSection 94A Contributions

Section 94A contributions are to be paid in accordance with Fairfield City Council – Indirect Section 94A Development Contributions Plan.

It is noted that on page 78, Section 5.4.4 “94A Fixed development consent levies” of the Environmental Impact Statement prepared by RPS Australia East Pty Ltd for Bettergrow Pty Ltd, the calculation of fees are incorrect.

The total fee payable based on 1% of a total development cost of \$16 million is \$160,000, not \$16,000 as stated.

Noted. This was a typo error in the document. Total S94A contribution payable is \$160,000.

Development Planning

Page No. 82 of the EIS, reference is made to ‘Table 9’, when it would appear that such reference should be to ‘Table 11’.

Noted. This is a typo error and should refer to Table 11 in the EIS not Table 9.

The built form addressing Davis Road, particularly the southern elevation of the existing administration type building, is unsatisfactory from a streetscape perspective. It is recommended that the applicant / designer be encouraged to embellish the appearance of this building, including through providing a greater level of architectural interest, providing glazed elements addressing the street and the provision of an identifiable entrance.

As detailed in the Architectural renders provided in Appendix 5 of the EIS (refer Sheet D00), the existing office building is to be fully renovated and re-furnished to provide a modern and architecturally pleasing appearance which will enhance the site and surrounds. As the building is within 1.5m of the southern boundary it does not lend itself to provide an entrance on this side of the structure. Therefore the main entrance will remain on the northern side of the building.

The structure will have its external brick walls rendered and painted in a light cream colour. All existing aluminium windows will be removed and replaced with modern powder coated windows that will complement the external colour palette. The main entrance will be widened and commercial aluminium powder coated extrusions installed. A narrow awning will be installed along the northern side of the building to provide protection from the weather and to further enhance the architectural appearance of the building. Roof guttering, bollards, and the awning will be painted green to blend with Greenspot's corporate logo and colours scheme. Greenspot's signage will also feature above the main entrance. The proposed external façade of the office building is shown as **Plate 1**.

Plate 1 Proposed Refurbished Office Building – Greenspot Wetherill Park



The overall layout should provide a clearly identifiable point for visitors to the site to approach.

As detailed on Page 122 of the EIS, entry to the site for light vehicles will be at the south-eastern entrance, while heavy vehicles will enter via the south-western entrance. Each of these entries will have signage at the gate stipulating either 'light vehicle access only' or 'heavy vehicle access only'. Upon entry to the site, on site signage will direct all visitors to the site office where they will access the office through the main entrance on the northern side of the building. Visitors will be required to sign on to a visitors manifest prior to accessing any of the operational areas and undergo a safety briefing.

The main / outdoor yard area should be screened from public view. Screening structures should be constructed of high quality materials (such as masonry) that complement surrounding development / buildings.

In order to maintain the existing character of the site, it is proposed to not have any hard screening features at the site. The southern boundary of the property currently has remnant native vegetation along the street front which currently provides a soft vegetative screen for the site. As per Page 136 of the EIS, Bettergrow proposes to enhance and maintain this vegetative strip to provide a natural screen for the outdoor process areas rather than creating a hard barrier through the installation of a masonry wall. Further details of the Visual Impact Assessment for the development are provided in Section 8.5 and Appendix 12 of the EIS.

A detailed landscape plan (prepared by a suitably qualified person) should be provided for consideration. A minimum 1m wide landscape strip should be provided around both side and the rear boundaries of the site. Landscaping within the front setback area should be embellished, maintaining existing trees and having regard to / complementing the attributes of the existing Cumberland Plain vegetation.

It is proposed that a detailed landscape plan would be prepared as part of the application for a construction certificate for the development of the site. General details on the proposed landscaping for the site have been provided in the Visual Impact Assessment in Section 8.5 and Appendix 12 of the EIS.

The provision of a 1m landscape strip along the eastern and western (side) boundaries will provide no visual or landscaping enhancement for the site. The eastern boundary is currently bordered by concrete tilt panels

from the adjoining commercial buildings. The establishment of vegetation along this boundary will provide no improvement to amenity beyond the development site. The western boundary is currently vegetated with a range of native tree and shrub species for approximately 2/3 of its extent. The remaining 1/3 of the western boundary will be occupied by a concrete tilt panel which will form the western wall of the FOGO building on the upper level of the site. The northern (rear) boundary will also be occupied by a concrete tilt panel which will form the northern wall of the FOGO building.

Landscaping enhancements to the site will include additional plantings (mainly shrubs) within the existing strip of vegetation fronting the property. This area contains an Endangered Ecological Community (EEC) of Cumberland Plain Woodland which is to be avoided and enhanced. Shrub species planted in this area will be representative to the Cumberland Plain Woodland community.

All trafficable (parking / driveway / manoeuvring) areas should be sealed.

All trafficable areas are to be stabilised via hardstand pavement of either concrete, asphalt or gravel road base. The only operational area proposing a gravel road base is within the bulk landscaping storage area. All runoff from this area is to report to a first flush sediment trap designed to capture the coarse sediment and suspended solids.

Detailed descriptions of the sediment trap and sizing summary are provided in Section 5.4.2 and Appendix C of the Surface Water Assessment which is attached as Appendix 13 to the EIS.

Stockpile area / bays should be roofed and bunded.

Products received as part of the bulk landscaping supply will be pre-treated and sorted within the existing concrete lined bins at the site. Only inert materials used with the landscape and home garden market such as soil, garden mixes, sands, rocks, gravels and bark will be received with no potential for leachate or wastewater generation. All runoff from this area is to report to first flush sediment trap designed to prevent coarse sediment and suspended solids entering the piped stormwater network. As water from the area will be appropriately contained and treated it is not considered prudent to place a roof over this area. Further, the installation of a roof over these areas would be operationally constraining for loading equipment, and potentially a hazard.

It must be demonstrated what measures are to be implemented to prevent material / matter being tracked from the site.

The entire site is to be stabilised through landscaping, sealed pavement and road base gravel. All received material is to be deposited with controlled tip troughs with wash down facilities. Any loose material which may escape the storage bins in the landscape storage area will be collected by the sediment trap system. A street sweeper will also be utilised at the site to ensure roadways and process areas are kept clean. Further to this, no loose material or matter is to be stored onsite outside of the sealed containment bins, with operational measures to ensure no breaches of this practise occurs.

It must be demonstrated what measures are to be implemented to prevent material / matter entering the stormwater system.

A description of the Stormwater Management System detailing the proposed treatment / containment devices is provided in Section 5 of the Surface Water Assessment attached as Appendix 13 to the EIS.

The surface water management plan has been designed such that the site is separated into two distinct systems - the stormwater management system and the wastewater management system. The stormwater system deals with rainfall runoff from areas of the site not considered to have atypical pollutant risks. The wastewater system covers the areas which have a higher chance of creating pollution that require additional treatment and management procedures above and beyond standard urban stormwater runoff. For this site, the wastewater system covers the GO/FOGO and Food De-packaging area and the Hydro-Excavated Drill Muds and Fluids area. Both systems have been designed with the primary intent of preventing pollutants and material from site entering the downstream stormwater network and receiving environment.

The water quality treatment devices that have been utilised within the design for the Stormwater System can be summarised as follows:

- **Rainwater Harvesting Tanks** – Runoff from five of the individual roof areas is to be directed to above ground reuse tanks which are to be fitted with propriety first flush devices. By capturing the first portion of runoff from the roof the first flush devices will effectively remove dead insects, bird and animal droppings and concentrated tannic acids from the stormwater system. The rainwater tank will also provide treatment as it will act as a sediment trap, collecting fine sediments and attached nutrients.
- **Sediment Trap** – Runoff from the gravel Bulk Landscaping Supplies storage area is to be directed to a sediment trap with a minimum storage volume of 41kL. The first flush collection system has been employed to capture and isolate the initial stormwater runoff that typically contains higher sediment and attached pollutant loads allowing them to settle. Sizing details of the sediment trap are provided within Appendix C of the Surface Water Assessment.
- **Humeceptor** – Prior to the release of runoff from Site, the stormwater network is to be directed to an online proprietary STC-27 Humeceptor system. The proposed system has been designed to provide a storage volume of 27m³ including an emergency oil storage volume of approximately 4000L in case of onsite spillages. The Humeceptor system is an underground, precast concrete stormwater treatment solution that utilises hydrodynamic and gravitational separation to efficiently remove total suspended solids (≥ 10 microns) and entrained hydrocarbons.

To avoid the potential contamination risk of leachate generation, all unloading and storage of the raw organics will occur within the proposed building enclosures, with wash down facilities provided internally. Localised floor sumps and grated trench drains at all trafficable doorways will collect generated leachate and prevent flows leaving the covered facility. Leachate collected within the enclosed sumps of the GO/FOGO facility will be applied to outgoing product. Should there be an excess of runoff build up within the sumps (not considered likely), the leachate would be transferred offsite via truck to an approved licenced facility. Consolidated solid waste will also be trucked from Site to a regional composting facility operated by the Proponent or farm for further processing or land application as applicable.

Wastewater discharge from the Mud Processing Facility is unavoidable due to the high moisture content of the products processed within the facility. To avoid any potential stormwater contamination on downstream waterways, all extracted liquid from the Mud Processing Facility will be piped to 6 x 35kL holding tanks for discharge to sewer. The holding tanks will be bunded in accordance with NSW EPA's Spill Management Bunding guidelines to prevent any containment breaches.

Further to the above, strict operational and management guidelines have been outlined for the development including ongoing maintenance of the systems for the lifespan of the facility. The entire site is also to be stabilised prior to removing any sediment control measures post construction. Stabilisation of the site will be achieved through landscaping, sealed pavement and no fines gravel hardstand areas.

2.4 Department of Primary Industries – Water

No comments to address.

2.5 Office of Environment and Heritage

No comments to address.

2.6 Roads and Maritime Services

No comments to address.

2.7 Sydney Water

No comments to address.

2.8 Western Sydney Parklands Trust

Please refer to **Section 2.1, Item 4** above for additional information regarding noise and odour impacts on the Western Sydney Parklands.

3.0 Conclusions

The information provided in this RTS document has been developed to respond to regulator concerns and questions raised in their submissions to the project EIS. A considerable amount of information provided in this RTS document has been drawn from the original EIS, while other information has been developed and prepared to address specific concerns raised. Additional information prepared and studies commissioned include:

- Preparation of a Dust Impact Assessment for particulate dust generation;
- Additional sampling and analysis for site contamination;
- Third party NSW EPA audit and the provision of a Site Audit Report and Site Audit Statement;
- Preparation of an additional noise impact assessment specific to vibration and the Western Sydney Parklands area;
- Further justification of the Odour Impact Assessment and odour treatment systems;
- Further justification of the site stormwater design and leachate management;
- Further justification of the Traffic Impact Assessment and related traffic generation and management; and
- Further explanation of operational treatment processes, processing equipment, and waste re-use.

Based on the information provided in the EIS, and the additional information provided in this report, it has been demonstrated that the proposal will not result in significant impacts to the environment through the implementation of management and mitigation strategies. The development is considered an appropriate use for the existing site, has positive social and resource recovery benefits for the region, and is in the best interest of the public, environment, and sustainability.

The proposal provides enhanced social and economic benefits by increasing the processing capacity for organic and commercial waste into recycled materials, thereby reducing the amount of waste going to landfill, and increasing availability of recycled products. Utilisation of recycled materials contributes to the conservation of natural resources and biodiversity, and is consistent with the principles of Ecologically Sustainable Development and Government waste initiatives.

4.0 References

- Advanced Environmental Dynamics (2017a). Greenspot Wetherill Park Odour Assessment.
- Advanced Environmental Dynamics (2017b). Greenspot Wetherill Park Dust Assessment, August 2017.
- Douglas Partners (2016a). Review of Contamination Reports Proposed Resource Recovery & Recycling Centre, 24 Davis Road, Wetherill Park, NSW.
- Douglas Partners (2016b). Report on Groundwater Assessment, Proposed Resource Recovery & Recycling Centre, 24 Davis Road, Wetherill Park.
- Douglas Partners (2017). Targeted Site Investigation for Contamination, Proposed Resource Recovery & Recycling Centre, 24 Davis Road, Wetherill Park, August 2017.
- Global Acoustics (2017a). Resource Recovery and Recycling Centre Wetherill Park NSW, Noise and Vibration Impact Assessment.
- Global Acoustics (2017b). Resource Recovery and Recycling Centre Wetherill Park NSW, Noise and Vibration Impact Assessment – Addendum report, 6 July 2017.
- Northrop Engineers (2017a). Surface Water Assessment for 24 Davis Road, Wetherill Park, Proposed Resource Recovery & Recycling Centre.
- Northrop Engineers (2017b). Response to Authorities Submissions for 24 Davis Road, Wetherill Park, Proposed Resource Recovery & Recycling Centre, July 2016.
- Synversa (2017). Site Audit Report - 24 Davis Road, Wetherill Park, Proposed Resource Recovery & Recycling Centre, August 2017.
- Thompson Stanbury (2016). Parking, Traffic, and Transport Impact Assessment, Proposed Resource Recovery & Recycling Centre, 24 Davis Road, Wetherill Park.
- Zambelli Environmental (2017). Environmental Management Plan for Greenspot Wetherill Park.



Appendix I

Agency Submissions



Department of Primary Industries

OUT17/21652

Ms Kate Masters
Industry, Key Sites & Priority Projects
NSW Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Kate.masters@planning.nsw.gov.au

Dear Ms Masters

Bettergrow Resource Recovery Facility, Wetherill Park (SSD 7401) Comment on the Environmental Impact Statement (EIS)

I refer to the email of 1 May 2017 to the Department of Primary Industries (DPI) in respect to the above matter. Comment has been sought from relevant divisions of DPI. Views were also sought from NSW Department of Industry - Lands that are now a division of the broader Department and no longer within NSW DPI.

Any further referrals to DPI can be sent by email to landuse.enquiries@dpi.nsw.gov.au.

DPI has reviewed the EIS and advises that the proponent has appropriately addressed matters of regulatory interest to the Department.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'M Isaacs'.

Mitchell Isaacs
Director, Planning Policy & Assessment Advice
31 May 2017

DPI appreciates your help to improve our advice to you. Please complete this three minute survey about the advice we have provided to you, here:

<https://goo.gl/o8TXWz>



Our ref. DOC17/254763-08
Sender's ref. SSD 7401

Mr Kelly McNicol
Team Leader
Industry Assessments
NSW Planning & Environment
GPO Box 39
SYDNEY NSW 2001

STANDARD POST & EMAIL
5 June 2017

Attention: Kate Masters

Dear Ms Masters

Bettergrow Resource Recovery Facility, Wetherill Park, (SSD 7401) - Response to Notice of Exhibition

I refer to your letter dated 28 April 2017 seeking the Environment Protection Authority's (EPA's) comment on the publicly exhibited Environmental Impact Statement for the State Significant Development Proposal for a resource recovery facility (the Proposal) at 24 David Road, Wetherill Park (the Premises) in the Fairfield Local Government Area.

Background

Bettergrow trading as 'Greenspot' proposes to develop and operate the Premises, which would process up to 200,000 tonnes of waste per year, comprising approximately 70,000 tonnes of garden organics/FOGO; 60,000 tonnes of drilling muds and fluids; 40,000 tonnes of bulk landscape material; and 30,000 tonnes of commercial and industrial organic materials.

End products would be transferred either to end use markets or to other facilities for value-adding to maximise beneficial re-use. Processing is limited to separation of materials.

EPA cannot recommend approval of proposal

The EPA has reviewed the Proposal and cannot recommend the Proposal as there is insufficient information provided in the areas of odour, air quality and contamination to make an adequate assessment of the Proposal. Please see the reasons set out below.

Odour

Organic waste can produce significant of odour. Proposed odour management includes:

- All organic material received and processed in enclosed buildings.
- Buildings vented through stacks with carbon filters and fitted with fast-closing roller doors.
- Receival over all hours to minimise fugitive emissions.
- Use of a proprietary inoculant to reduce odour.

Assessment of potential odour impacts found boundary concentration of odour below the impact assessment criterion of 2 odour units, even for upset conditions with reduced efficiency of the carbon filters. Filter performance is listed as 99.9% based on manufacturer's guarantee.

The EPA has assessed whether the assumptions regarding odour removal by the carbon filter are realistic and makes the following recommendations in relation to this aspect of the proposal.

The EPA advises that further information is needed to assess the odour mitigation measures

- Statement or guarantee from the manufacturer that the filters achieve 99.9% odour removal for the types of odours to be generated.
- Justification for the assumption that 90% efficiency of the filters is "conservative" including description of the behaviour of the filter as it fills.
- Explanation of how the VOC breakthrough alarm relates to filter performance – behaviour of the filter and relationship between odour and measured VOC.

The EPA further recommends the proponent consider what additional measures might be available should the proposed mitigation fail to achieve desired performance

Page 15 of the odour assessment (Appendix 8) states that 'potentially odorous air from within the Food Depackaging Building will be ducted to the Organic Receival and Processing building where it will be mixed and treated by the carbon filtration unit to release into the atmosphere. However, the figures do not show the ducting or the stacks, are the 8 carbon filters enough to service two buildings.

Air Quality

The Applicant has not conducted an air quality assessment for particulate matter. As 100,000 tonnes per annum of landscaping materials including sawdust, sands and soils will be stored outside the EPA is of the view that an air quality assessment and mitigation measures should be provided. The justification provided in Appendix 10 appears inadequate.

Contamination

The site was previously an asphalt batching plant owned by Mobil. However, no Remediation Action Plan or Site Audit Statement has been completed for the site. Some parts of the site have been remediated but there are several areas which have not been investigated (see page 17 of the Douglas Partner (DP) report (Appendix 14)). This appendix was supplemented by a letter from DP (Appendix 15) which concludes the site is suitable for the intended use subject to targeted soil investigations being conducted.

If you have any questions about the EPA's assessment, please contact me on 9995 5646.

Yours sincerely



TREVOR WILSON
Unit Head – Sydney Waste Compliance
Environment Protection Authority

In reply please quote: 11/00020

Your reference: SSD 15_7401

Contact: Andrew Mooney 9725 0214

5 June 2017

Kate Masters
Senior Planning Officer
Dept. of Planning & Environment
Industry Assessments
GPO Box 39
SYDNEY NSW 2001

Dear Ms Masters

**PUBLIC EXHIBITION SSD 15_7401 – 24 DAVIS ROAD, WETHERILL PARK,
DEVELOPMENT AND OPERATION OF A RESOURCE RECOVERY AND
RECYCLING FACILITY**

I refer to the public exhibition of the above State Significant Development. In response, Council requests that the following matters be taken into consideration by the Department under its assessment of the proposal.

CATCHMENT MANAGEMENT

It is noted on page 38 of the Surface Water Assessment produced by Northrop (21/02/2017 that the '*bunded area surrounding the Drill Mud Processing Facility was excluded (from the post development model) as it will discharge to sewer under the wastewater management system.*' The proponent will need to confirm that the discharge to sewer point will be able to cater for the 1 in 100 year ARI flows for this area. If not, then this catchment area and discharge will need to be added to the DRAINS catchments and site discharge results.

Fairfield City Council Water Quality Improvement Targets are taken from the Georges River Estuary Coastal Zone Management Plan (July 2013). The relevant targets below (taken from page 33 of this report) are to be met for the site, and documented as a % reduction.

Table 2-2 Stormwater reduction targets for urban development (SMCMA, 2011)

Stormwater pollutant	Greenfield developments, Large re-developments	Multi-unit dwellings, commercial developments, industrial developments, small re-developments
Gross pollutants	90%	90%
Total suspended solids (TSS)	85%	80%
Total phosphorus (TP)	80%	55%
Total nitrogen (TN)	45%	40%

The proponent needs to confirm that all floor levels for the site are at least the freeboard level (0.5m) above the relevant 1 in 100 year ARI flood level.

DEVELOPMENT ENGINEERING

The site is identified as flood affected due to overland flooding and located within medium, low and no flood risk precinct.

Appendix 13, section 7 Flood Impact Assessment reveals the proposed works will not be impacted by the flood extents located along Southern Boundary adjacent to Davis Road. Appendix 4 Detailed Flood Impact Assessment is satisfactory and has addressed the matrix in Chapter 11 of Council's DCP.

The Stormwater Plans that have been provided in Section 7 Flood Impact Assessment - Appendix A, appear satisfactory.

TRAFFIC MANAGEMENT

The following issues shall be satisfactorily addressed prior to determination:

1. SIDRA output files for existing and proposed traffic conditions shall be submitted to Council for assessment.
2. The development application shall be referred to the Roads and Maritime Services for comments.
3. The width of the proposed driveway shall comply with Figure 3.2 of AS 2890.2-2002.
4. The evening peak should be modelled using traffic volumes between 3.00pm-4.00pm.
5. The traffic volumes used to model the intersections of Victoria Street/Elizabeth Drive and Davis Road/Elizabeth Drive for the existing traffic conditions is considered low.

6. Cycle time of 70 seconds adopted for modelling the signalised intersection of Victoria Street and Elizabeth Street is incorrect, considering the number of phasing at the intersection.

ENVIRONMENTAL MANAGEMENT

The following information is to be sought:

1. Details of any proposals for preventing leachate from organic landscape materials storage areas from entering the onsite stormwater system.
2. Details of any proposals for preventing clay sized sediment from drill mud processing areas from entering the onsite stormwater system.
3. Alterations to the proposal to ensure all areas of the site are fully sealed.
4. Written confirmation from Sydney Water Corporation agreeing to the discharge of treated stormwater from the surrounds of the drill mud processing system to the Sydney Water sewer.
5. Details of any proposed chemical storage, including a chemical manifest with indicative volumes and details of bunding/isolation/spill response equipment.
6. Timetables for the 'regular inspections' of onsite stormwater treatment devices.
7. Comments from Sydney Water Corporation regarding the additional load on the existing Trade Waste disposal agreement.
8. A Remediation Action Plan, prepared in accordance with the NSW EPA Contaminated Land Series.
9. Details of any proposed vehicle maintenance area.

STRATEGIC PLANNING

Under Fairfield LEP 2013, the land use category is Zone IN1 - General Industrial and the proposed use is permissible with development consent.

Under Fairfield City Wide DCP 2013, the proposal is generally consistent with the provisions of Chapter 9 – Industrial Development.

The site is located on the northern edge of the Wetherill Park Industrial area, and adjoins the Western Sydney Parklands. The site is over 1km from the nearest residential properties in the Fairfield LGA. In this regard the potential for the operations on the site to directly impact on the amenity of the residential areas of the City is considered negligible.

Section 94A Contributions

Section 94A contributions are to be paid in accordance with Fairfield City Council – Indirect Section 94A Development Contributions Plan.

It is noted that on page 78, Section 5.4.4 “*94A Fixed development consent levies*” of the Environmental Impact Statement prepared by RPS Australia East Pty Ltd for Bettergrow Pty Ltd, the calculation of fees are incorrect.

The total fee payable based on 1% of a total development cost of \$16 million is \$160,000, not \$16,000 as stated.

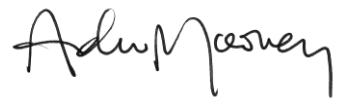
DEVELOPMENT PLANNING

The following issues shall be satisfactorily addressed prior to determination:

1. Page No. 82 of the EIS, reference is made to ‘Table 9’, when it would appear that such reference should be to ‘Table 11’.
2. The built form addressing Davis Road, particularly the southern elevation of the existing administration type building, is unsatisfactory from a streetscape perspective. It is recommended that the applicant / designer be encouraged to embellish the appearance of this building, including through providing a greater level of architectural interest, providing glazed elements addressing the street and the provision of an identifiable entrance.
3. The overall layout should provide a clearly identifiable point for visitors to the site to approach.
4. The main / outdoor yard area should be screened from public view. Screening structures should be constructed of high quality materials (such as masonry) that complement surrounding development / buildings.
5. A detailed landscape plan (prepared by a suitably qualified person) should be provided for consideration. A minimum 1m wide landscape strip should be provided around both side and the rear boundaries of the site. Landscaping within the front setback area should be embellished, maintaining existing trees and having regard to / complementing the attributes of the existing Cumberland Plain vegetation.
6. All trafficable (parking / driveway / manoeuvring) areas should be sealed.
7. Stockpile area / bays should be roofed and bunded.
8. It must be demonstrated what measures are to be implemented to prevent material / matter being tracked from the site.
9. It must be demonstrated what measures are to be implemented to prevent material / matter entering the stormwater system.

Please contact Melanie Prior on 9725 0228 if you would like to discuss any of the above further.

Yours faithfully

A handwritten signature in black ink that reads "Andrew Mooney". The signature is written in a cursive, flowing style.

Andrew Mooney
STRATEGIC PLANNING COORDINATOR

Kate Masters

Subject: FW: Notice of exhibition for a state significant development application for a resource recovery facility at 24 Davis Road, Wetherill Park (SSD 7401) - Fairfield LGA

Dear Kate,

Thank you for forwarding the above proposal to the Office of Environment and Heritage (OEH) for consideration.

After reviewing the relevant documents, OEH's Greater Sydney Planning Team has concluded that the matter does not contain biodiversity, natural hazards or Aboriginal cultural heritage issues that require a formal OEH response. We have no further need to be involved in the assessment of this project.

Kind regards,
Dana

Dana Alderson
Planning Team
Regional Operations Division
Office of Environment and Heritage
T: 02 8837 6304
F: 02 9995 6900
W: www.environment.nsw.gov.au

Please note my work days are Mon-Thurs



Please consider the environment before printing this e-mail



Mr Neil Schembri
Bettergrow Pty Ltd
48 Industry Road
Vineyard NSW 2765

cc: Shaun Smith (Shaun.Smith@rpsgroup.com.au)

Dear Mr Schembri

**Bettergrow Resource Recovery Facility (SSD 7401)
24 Davis Road, Wetherill Park
Response to Submissions**

The exhibition of the Environmental Impact Statement for the above project ended on 2 June 2017. All submission received by the Department during the exhibition of the project are available on the Department's website at the following location:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7401

In accordance with section 85A of the *Environmental Planning and Assessment Regulation 2000*, the Secretary requires Bettergrow (the Applicant) to provide a response to the submissions made during the exhibition period. In addition, you must also provide additional information in response to the Department's comments provided at **Attachment 1**.

If there are any changes to the scope of the development that substantially change the environmental impacts of the development as outlined in the EIS, exhibition of the proposed changes may be required.

Please provide a response to these issues by 28 July 2017.

Note that under clause 113(7) of the *Environmental Planning and Assessment Regulation 2000*, the days occurring between the date of this letter and the date on which your response to submissions is received by the Secretary are not included in the deemed refusal period.

If you have any queries, please contact Ms Kate Masters, who can be contacted on (02) 9274 6321 or via email at kate.masters@planning.nsw.gov.au

Yours sincerely


Chris Ritchie 9/6/17.
Director
Industry Assessments
as delegate for the Secretary

Attachment 1 - Department of Planning and Environment

General

1. Please confirm how long food organics and garden waste will be stockpiled on-site i.e 2 days or 24 hours (see page 55 of the Environmental Impact Statement (EIS)).
2. Please detail the operating hours for processing and materials receipt for each of the operations on-site.
3. Please detail how many tonnes can be stored in the food depackaging tip pit.
4. Please assess the odour and noise impacts on the recreational users of Western Sydney Parklands.
5. Figure 42 of the EIS, shows a stockpile located on the gravel area in the landscaping area. Please detail the height stockpiles and why stockpiles are not located within designated bays.
6. Please detail which facilities will accept the composting material.
7. Page 33 states that 'Liquid food waste generated within the Food Depackaging Facility can be collected and supplied to consumers for application to land subject to the requirements outlined in the *NSW EPA's Resourced Recovery Order under Part 9, Clause 93 of the Protection of the Environment Operations (Waste) Regulation 2014 – The liquid food waste order 2014*' and associated Exemption'. Please confirm whether liquid waste is only being supplied from the food depackaging facility or whether it will also be sourced from the food organics and garden waste facility.
8. Please detail on a plan where the 5,000 L diesel tank will be stored on the site (see Page 191 of the EIS).
9. The Boral Widemere Resource Recovery Facility (SSD 6525) which was approved in November 2016, identified a future high density residential development to the east of the site. Please detail whether impacts on these future residents has been considered in the EIS.
10. Please note the Environmental Management Plan (EMP) refers to Council as the approval authority (Page 1). Please update this. Please confirm the EMP only covers operation.

Contamination

11. As per the Douglas Partners (DP) letter dated April 2017 the Department requires the targeted soil investigation to be completed in the areas which have not yet been investigated such as the former manufacturing area, former substation, workshop, laboratory building, existing interceptor pit and future landscape areas.
12. The letter also states that a Site Audit Statement and Remediation Action Plan has not been provided to DP. Could you please confirm whether a Site Audit Statement and Remediation Action Plan was completed.
13. It is noted that there is hydrocarbon impacted soil in situ near the former manufacturing area, could you please provide the hydrocarbon concentrations in the soil at this location along with the criteria it was assessed against.

Air Quality and Odour

14. Given that 100,000 tonnes per annum of landscaping waste including sands, soils and saw dust will be stored outside the Department considers that an air quality assessment for particulate matter is required.
15. Page 50 of the EIS states that 'Dry, wet and "semi-dry" waste (i.e. directional drilling muds / hydro excavation waste) is to be deposited into the tip trough. Please detail what is considered 'dry waste'.
16. Page 1 of the Executive Summary states that 'the facility is also proposed to act as a distribution centre for the consolidation and distribution of bulk landscape supplies including barks, compost, soils, sands and aggregates. Please confirm whether compost will be stored outside.
17. Please detail what 'growing media' means (Page 33 and 44 of EIS).
18. Please detail whether odour from the composting material stored outside has been considered in the odour assessment.
19. Figure 10 in the Odour Impact Assessment (OIA) (Appendix 8) is not legible, please provide a legible figure.
20. The truck and dog vehicle movements in Table 5 of the OIA (Appendix 8) do not appear to be consistent with the traffic movements stipulated in the Traffic Impact Assessment (TIA). Please confirm the same assumptions were made in the OIA and TIA.
21. The OIA states on Page 15, states that potentially odorous air from the food depackaging building will be ducted to the ORPB building, mixed and treated by the carbon filter unit prior to release into the atmosphere. Please show on a plan where the ducting and stacks will be located including their elevation.

Water

22. Please detail how much firewater can be contained on the site and provide contingency measures should the waste water tanks be at full capacity during a fire event.
23. Please detail the location of the truck wash, it does not appear to be included in Figure 8 of the EIS.
24. Please detail where the drill mud and food organics trucks will be washed down and whether this waste water was considered in the design of the waste water system.
25. Please confirm the waste water tanks will be bunded.
26. Please demonstrate that the surface water discharged to Council's stormwater infrastructure is capable of meeting Council's water quality criteria.
27. Page 3 of the Zambelli Environmental Briefing Note states that 'An appropriate volume of water is generated within the CD Enviro process that can be utilised for stockpile dust management as opposed to wasting to trade waste'. Please confirm that the water proposed to be used for dust suppression will not contain contaminants.

Noise and Vibration

28. Please provide an assessment of vibration impacts including mitigation measures.

Traffic

29. It is noted that the traffic counts are based off an average of 770 tonnes per day of waste, the traffic assessment should be updated to include an assessment of the worst-case scenario.
30. Please tabulate the traffic movements for the facility including heavy and light vehicles.
31. Please demonstrate how light vehicles will access car spaces 13-22 on the western side of the site.
32. Please confirm that only light vehicles will use the south-eastern driveway to access car spaces 1-4 (Page 44 of EIS).
33. Please show the heavy vehicle routes on a plan and the key intersections that were assessed.
34. Please detail where the traffic on Elizabeth Street will be travelling i.e south to the M7.
35. Please detail where the traffic on Davis Road will be travelling i.e. Widemere Road and then the M4.
36. Please provide the existing daily traffic volumes on Davis Road and Elizabeth street.
37. The EIS states there is space for a B-Double to queue off the road while waiting for the weighbridge (p. 44). The TIA states on Page 13 the distance between the weighbridge and the site boundary is 18m. That would mean a truck of 19 m would be queuing over the road reserve/crossover, therefore outside of the site boundary. Please confirm that the length of a B-Double can be accommodated on the site.

Hazards

38. Please note diesel fuel is not a dangerous good under the Australian Dangerous Goods Code, please see section 8.13.4 of the EIS. The requirements in AS 1940 remain applicable for the storage of diesel fuel, which is a combustible liquid.



2 June 2017

Our Reference: SYD15/01506/04 (A17744288)
DP&E Ref: SSD 7401

Team Leader
Industry Assessments
Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Attention: Kate Masters

Dear Ms McNicol,

**PROPOSED RESOURCE RECOVERY FACILITY
24 DAVIS ROAD, WETHERIL PARK**

Reference is made to the Department of Planning and Environment (DP&E) letter dated 28 April 2017, regarding the abovementioned application which was referred to Roads and Maritime Services (Roads and Maritime) for comment.

Roads and Maritime has reviewed the submitted application and provides the following comments for your consideration in the determination of the application:

1. All vehicles are to enter and exit the site in a forward direction. Provision for vehicles to turn around must be provided within the property boundary.
2. Car parking should be provided to Council's satisfaction.
3. All works/regulatory signposting associated with the proposed development are to be at no cost to Roads and Maritime.

Any inquiries in relation to this application can be directed to Zhaleh Alamouti on 8849 2331 or by email at development.sydney@rms.nsw.gov.au

Yours sincerely

A handwritten signature in black ink that reads 'RCumming'.

Rachel Cumming
Senior Land Use Assessment Coordinator
Network Sydney West Precinct

Roads and Maritime Services

Kate Masters

Subject: FW: FOLLOW-UP - Notice of exhibition for a resource recovery facility at 24 Davis Road, Wetherill Park (SSD 7401) - Fairfield LGA

Dear Nuray,

Thank you for referring the development application listed above to Sydney Water. We have reviewed the application and can provide the following comments:

- Water service is available from the 200mm main in Davis Road.
- Wastewater service is available from the 225mm lead-in main from the front of the lot in Davis Road.
- Amplifications and extensions to these mains may be required depending on the size and scale of development.
- Detailed requirements will be provided at the Section 73 application phase.

Should you have further question, please contact me on the details below.

Kind regards,

Lulu Huang

Student Planner

Growth Planning and Development | Liveable City Solutions

Sydney Water, Level 7, 1 Smith Street, Parramatta NSW 2150



Ph 8849 4269

lulu.huang@sydneywater.com.au



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Western Sydney Parklands Trust, Parramatta NSW, made the following submission on the project:
Bettergrow Resource Recovery Facility, Wetherill Park

Comments on this project



It is noted in 2.6 Surrounding Land Use that the land to the north of the site is parkland.

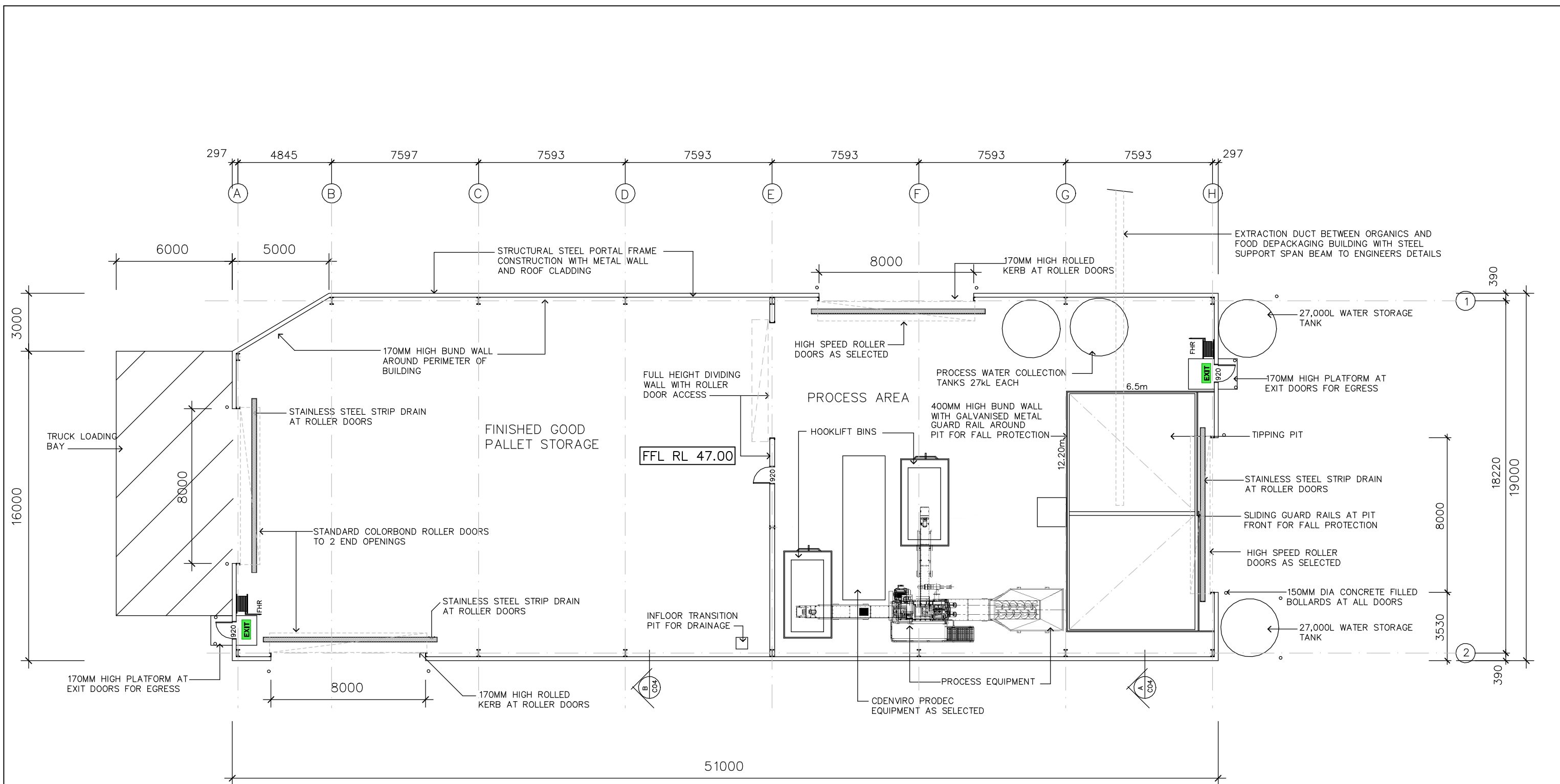
It should be noted, under the Western Sydney Parklands Plan of Management that the land to the north is being progressively improved for recreational parkland, cycleways, entertainment & tourism, and other outdoor activities supporting increasing activation for the for the growing population of western Sydney.





Appendix 2

Figures and Plans

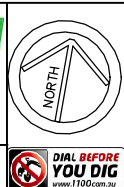


PROPOSED FLOOR PLAN FOOD DEPACKAGING AND PROCESS

ISSUE	BY	DESCRIPTION	DATE
A	GR	FOR EIS	8-8-16
B	GR	ADD ODOUR UNITS AND DUCTS	19-6-2017
C	GR	AMEND PIT NOTES	20-6-2017

BetterGROW

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WWW.BETTERGROW.COM.AU



GENERAL NOTES:

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2. LEVELS SHOWN ARE APPROXIMATE UNLESS ACCOMPANIED BY REDUCED LEVELS FROM A DETAILED SURVEY
3. FIGURED DIMENSIONS MUST BE TAKEN IN PREFERENCE TO SCALING
4. ALL BOUNDARY CLEARANCES MUST BE VERIFIED BY THE SURVEYOR PRIOR TO COMMENCEMENT OF ANY BUILDING WORK
5. WHERE ENGINEERING DRAWINGS ARE REQUIRED SUCH MUST TAKE PRECEDENCE OVER THIS DRAWING
6. STORMWATER TO BE DISCHARGED TO COUNCIL'S REQUIREMENTS AND AS 3500.3-2003
7. ALL SERVICES TO BE LOCATED AND VERIFIED BY THE BUILDER WITH RELEVANT AUTHORITIES BEFORE ANY BUILDING WORK COMMENCES
8. ALL WORKS TO BE COMPLETED IN ACCORDANCE WITH THE AUSTRALIAN STANDARDS
9. TERMITES PROTECTION TO BE INSTALLED IN ACCORDANCE WITH AS3660.1-1995 PART 1 NEW BUILDINGS
10. SMOKE DETECTORS TO BE INSTALLED BY A LICENSED ELECTRICIAN IN ACCORDANCE WITH THE

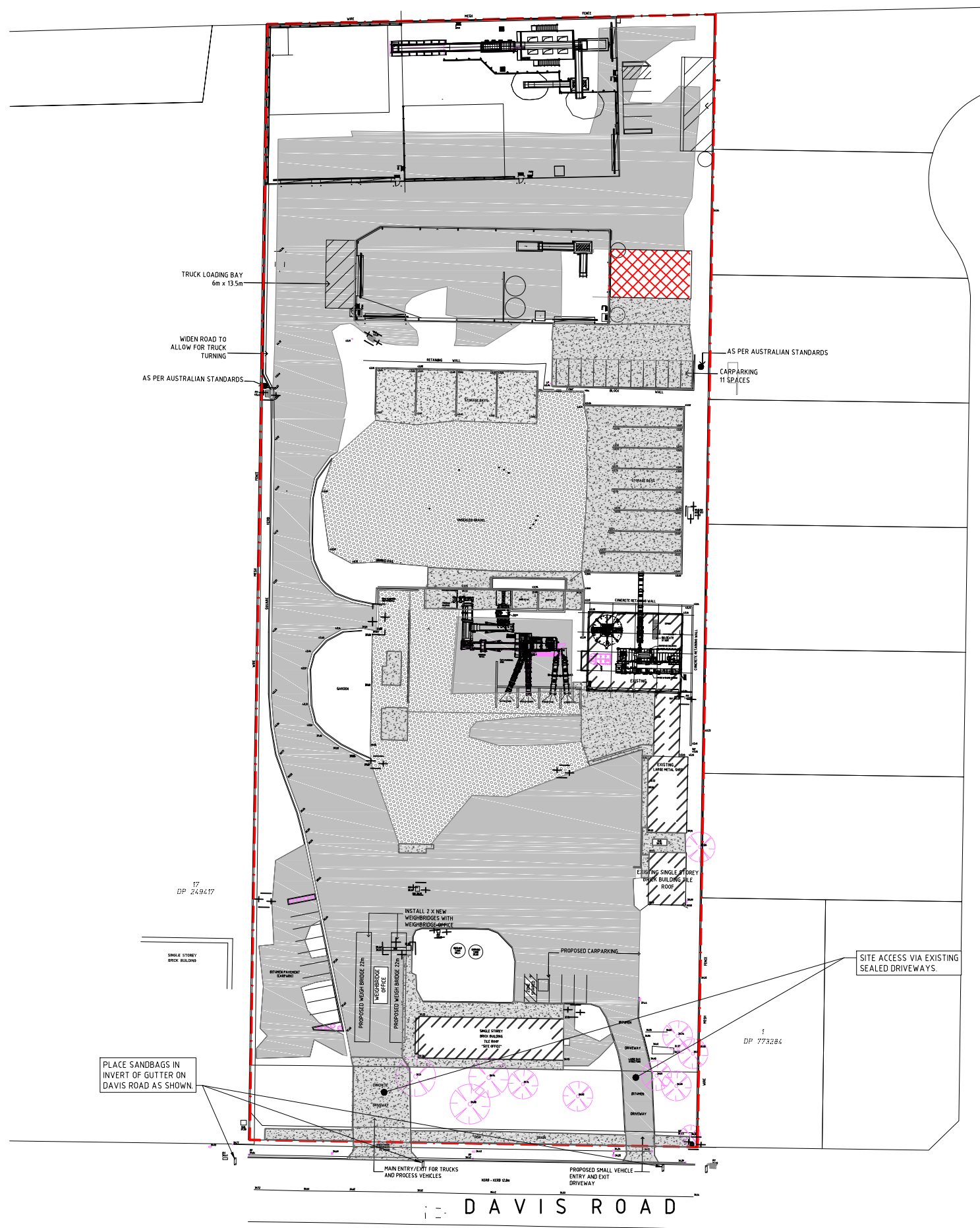
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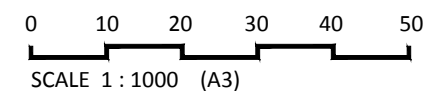


PROJECT	PROPOSED GREENSPOT RESOURCE RECOVERY AND RECYCLING FACILITY 24 DAVIS ROAD WETHERILL PARK NSW 2164	PROJECT NO.	1521
CLIENT	BETTERGROW	SCALE	1: 100
TITLE	FOOD DEPACKAGING AND PROCESS BUILDING FLOOR PLAN	JOB NO.	0604-16
		SHEET NO.	C01
		ISSUE	C



- LEGEND**
- DENOTES CUT OFF SWALE.
 - DENOTES SEDIMENT CONTROL FENCE.
 - DENOTES SANDBAG OR GEOTEXTILE SOCK FILLED WITH NO FINES GRAVEL, PLACED AROUND EXISTING PITS.
 - DENOTES EXTENT OF EXISTING RETAINING WALL.
 - DENOTES EXTENT OF EXISTING BUILDING OUTLINE TO BE RETAINED.
 - DENOTES EXTENT OF EXISTING BUILDING OUTLINE TO BE REMOVED.
 - DENOTES EXTENT OF EXISTING BITUMENT PAVEMENT.
 - DENOTES EXTENT OF EXISTING CONCRETE PAVEMENT.
 - DENOTES EXTENT OF STABILISED GRAVEL SURFACE.

NOTE: PRIOR TO UNDERTAKING DISTURBANCE ACTIVITIES, INSTALL TEMPORARY UPSLOPE DIVERSIONS (I.E. SANDBAGS) TO DIVERT UP SLOPE WATER AROUND THE PROPOSED DISTURBANCE AREA TO MINIMISE SEDIMENT LAIDEN WATER GENERATION.



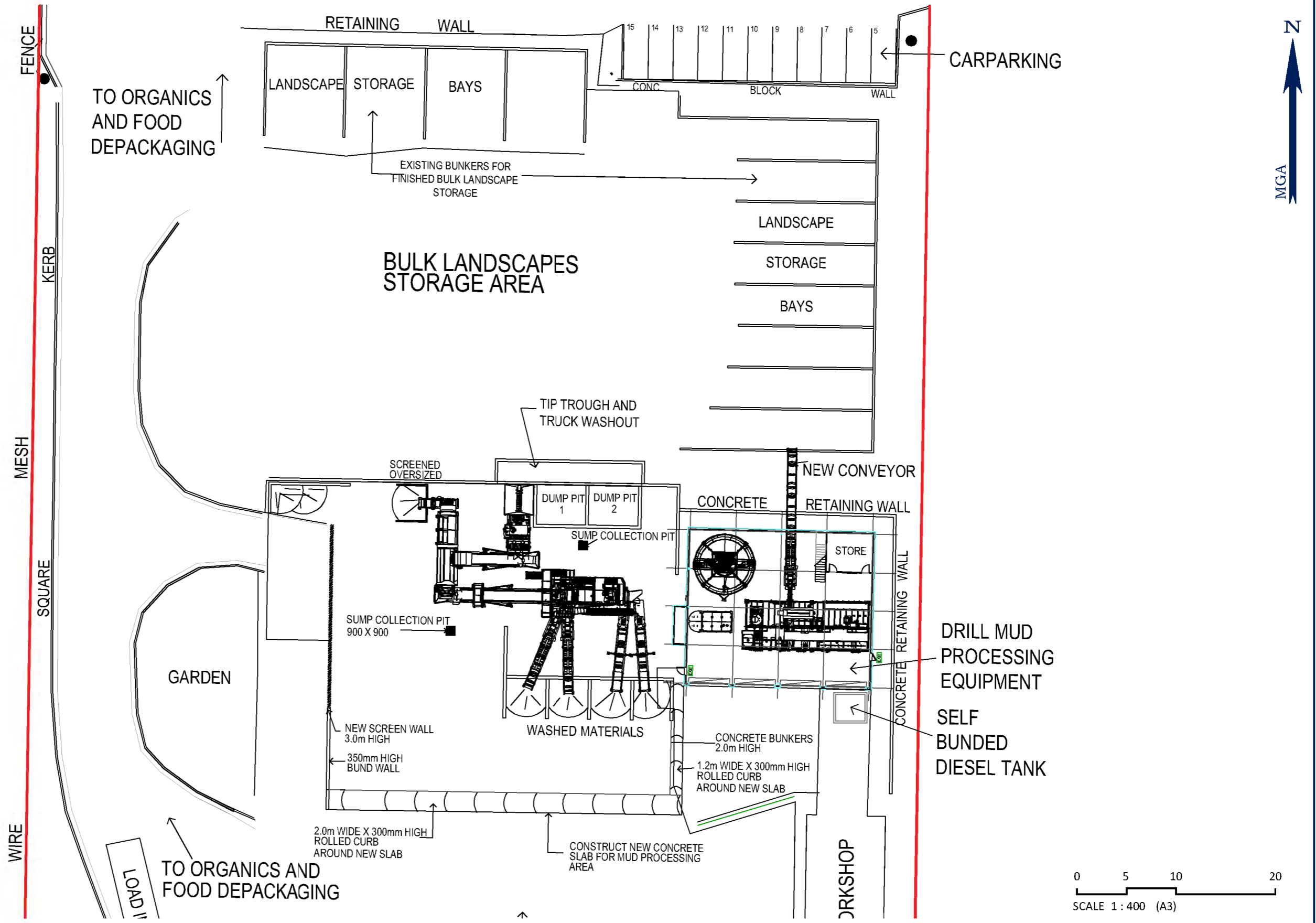
ORIGINAL PLAN PROVIDED BY



Newcastle
 Suite 4, 215 Pacific Hwy, Charlestown NSW 2290
 P.O. Box 180, Charlestown NSW 2290
 Ph (02) 4943 1777 Fax (02) 4943 1577
 Email newcastle@northrop.com.au ABN 81 094 433 100

TITLE: **FIGURE 42: EROSION AND SEDIMENT CONTROL PLAN** | LOCATION: **DAVIS RD WETHERILL PARK** | DATUM: **GDA94** | DATE: **9/08/2017** | AUTOCAD REF: **J:\085\127\127695 Wetherill Park\10 - Drafting\Worthrop C A3 (JH-NW)**
 PROJECTION: **MGA ZONE 56** | PURPOSE: **PLANNING**

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TITLE: FIGURE 11: PROPOSED SITE LAYOUT
MID & LOWER LEVELS

LOCATION: DAVIS RD
WETHERILL PARK

DATUM: GDA 94
PROJECTION: MGA ZONE 56

DATE: 9/08/2017
PURPOSE: PLANNING

AUTOCAD REF: J:\JOBS\127695 Wetherill Park\10 - Drafting\Acad Drawing Files
VERSION: D A3

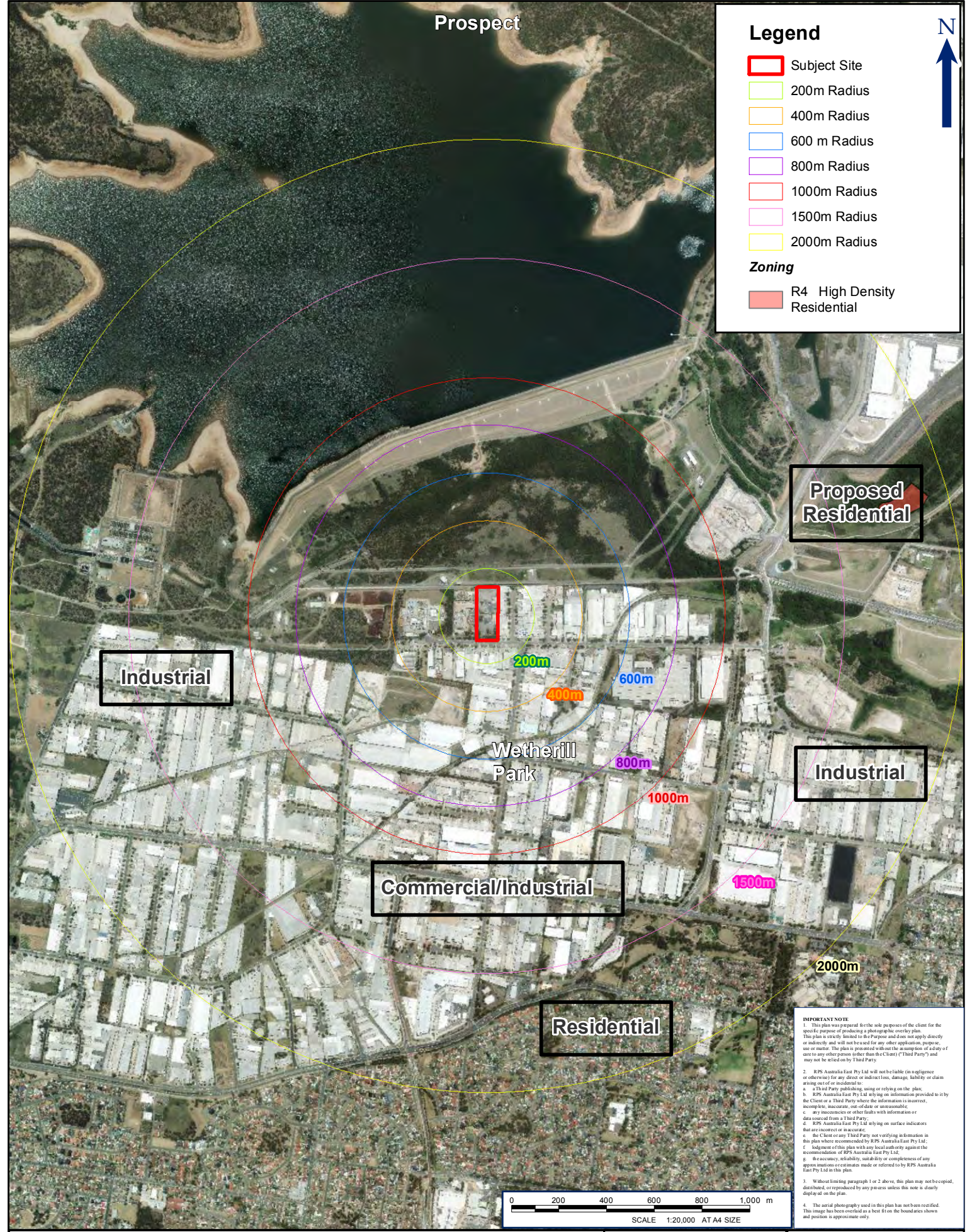
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CLIENT: BETTER GROW
JOB REF: PR127695

RPS AUSTRALIA EAST PTY LTD (ABN 44 140 292 762)
241 DENISON STREET BROADMEADOW PO BOX 428 HAMILTON NSW 2303
T: 02 4940 4200 F: 02 4961 6794 www.rpsgroup.com.au

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Legend

- Subject Site
 - 200m Radius
 - 400m Radius
 - 600 m Radius
 - 800m Radius
 - 1000m Radius
 - 1500m Radius
 - 2000m Radius
- Zoning**
- R4 High Density Residential



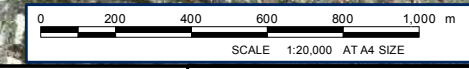
Industrial

Proposed Residential

Industrial

Commercial/Industrial

Residential



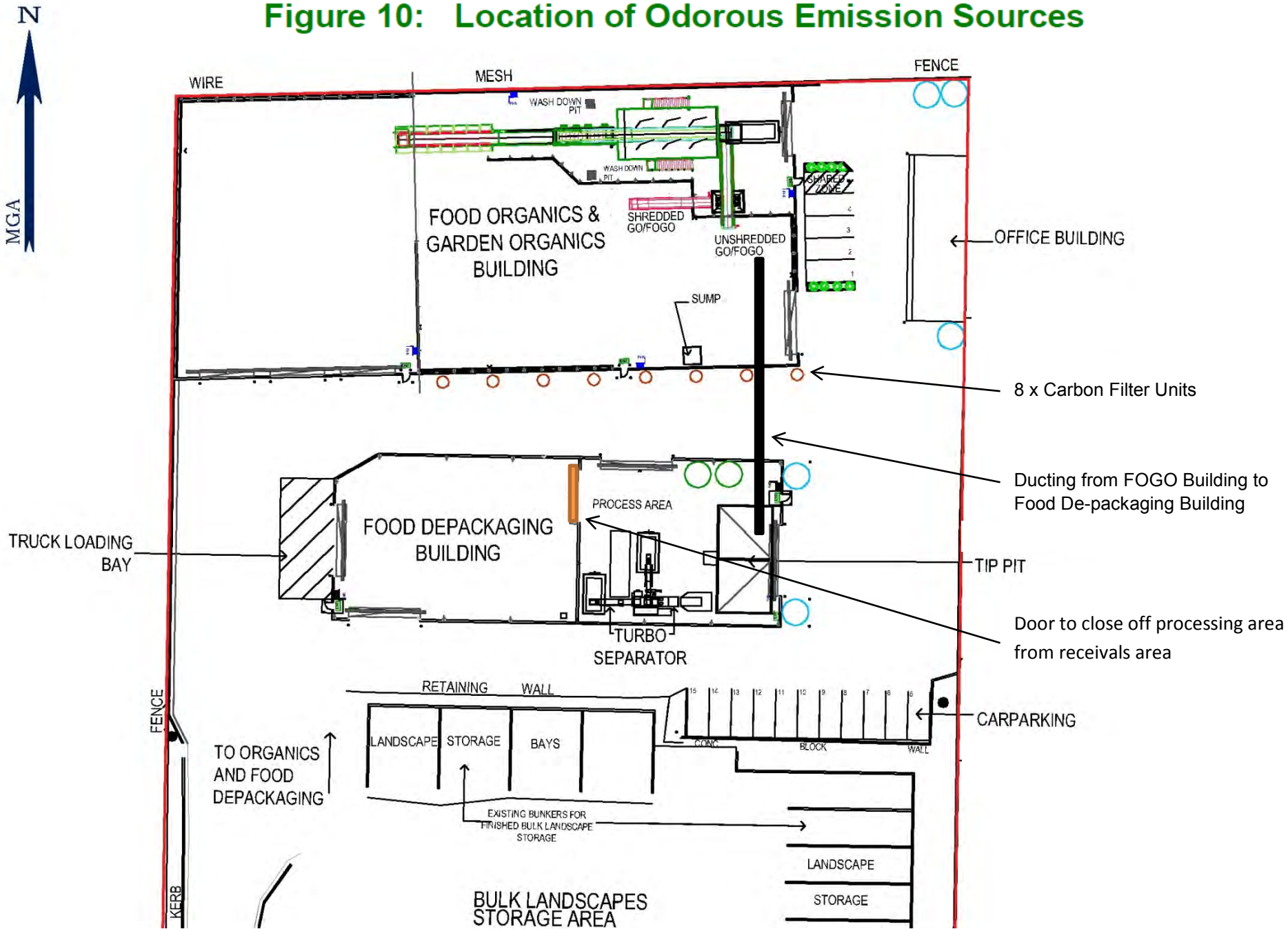
IMPORTANT NOTE

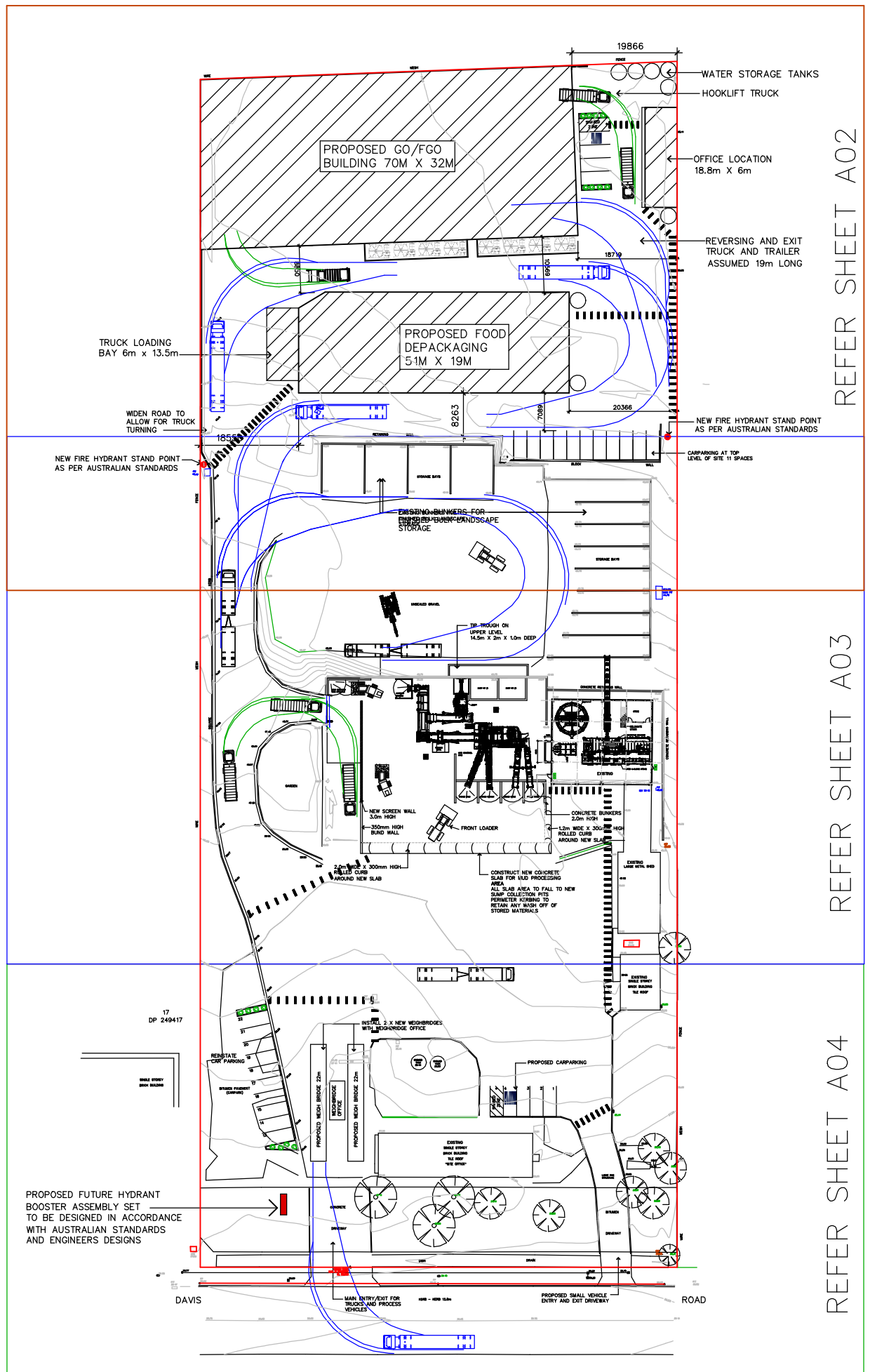
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4. The aerial photography used in this plan has not been rectified. This image has been overlaid as a best fit on the board area shown and position is approximate only.

FIGURE 7: SURROUNDING RECEIVERS

LOCATION: WETHERILL PARK	DATUM: GDA94
JOB NO.: 127695	PROJECTION: MGA Zone 56
PURPOSE: PLANNING	Data Sources: RPS Land and Property Information 2015
Technician: Natalie Wood	Date: 9/08/2017

Figure 10: Location of Odorous Emission Sources



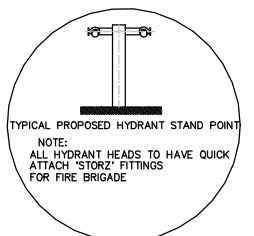


REFER SHEET A02

REFER SHEET A03

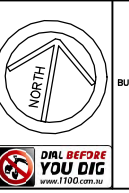
REFER SHEET A04

OVERALL SITE PLAN
SCALE 1:500



ISSUE	BY	DESCRIPTION	DATE
A	GR	FOR EIS	8-8-16
B	GR	AMENDMENTS - REISSUE FOR EIS	20-2-17
C	GR	AMENDMENTS - REISSUE FOR EIS	7-4-17
D	GR	AMENDMENTS - ADD ODOUR UNITS	19-6-17

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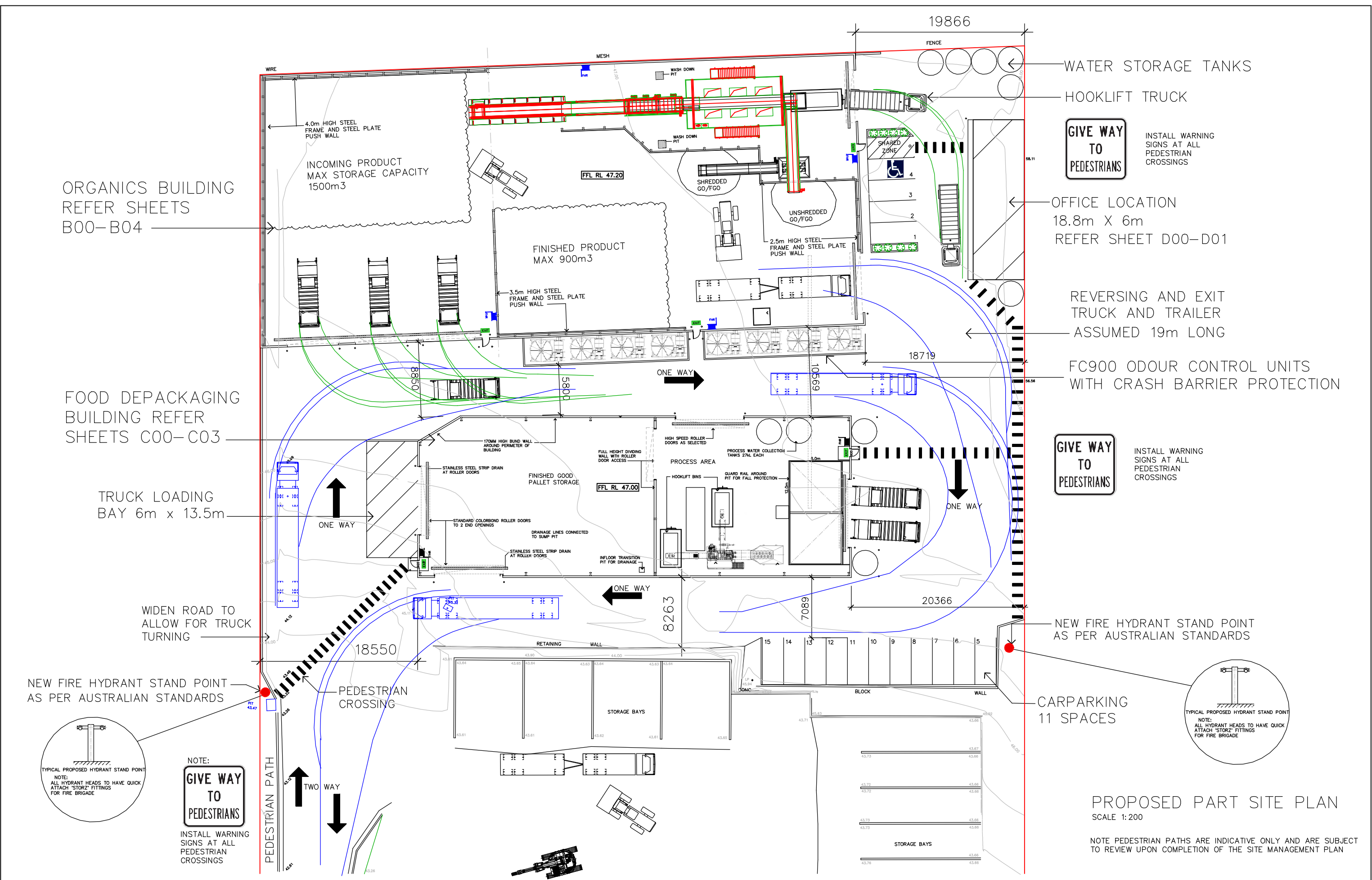
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PROJECT	PROPOSED GREENSPOT RESOURCE RECOVERY AND RECYCLING FACILITY 24 DAVIS ROAD WETHERILL PARK NSW 2164	PROJECT NO.	1521
CLIENT	BETTERGROW	SCALE	1:500
TITLE	OVERALL SITE PLAN	JOB NO.	0604-16
		SHEET NO./ISSUE	A01 / D

A1 SHEET



ORGANICS BUILDING
REFER SHEETS
B00-B04

FOOD DEPACKAGING
BUILDING REFER
SHEETS C00-C03

TRUCK LOADING
BAY 6m x 13.5m

WIDEN ROAD TO
ALLOW FOR TRUCK
TURNING

NEW FIRE HYDRANT STAND POINT
AS PER AUSTRALIAN STANDARDS

WATER STORAGE TANKS
HOOKLIFT TRUCK



INSTALL WARNING
SIGNS AT ALL
PEDESTRIAN
CROSSINGS

OFFICE LOCATION
18.8m X 6m
REFER SHEET D00-D01

REVERSING AND EXIT
TRUCK AND TRAILER
ASSUMED 19m LONG

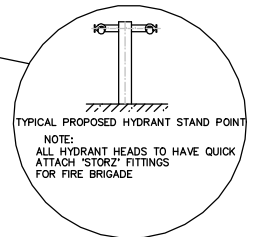
FC900 ODOUR CONTROL UNITS
WITH CRASH BARRIER PROTECTION



INSTALL WARNING
SIGNS AT ALL
PEDESTRIAN
CROSSINGS

NEW FIRE HYDRANT STAND POINT
AS PER AUSTRALIAN STANDARDS

CARPARKING
11 SPACES



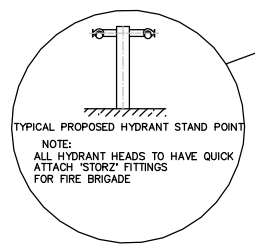
NOTE:
ALL HYDRANT HEADS TO HAVE QUICK
ATTACH 'STORZ' FITTINGS
FOR FIRE BRIGADE

PROPOSED PART SITE PLAN
SCALE 1:200

NOTE PEDESTRIAN PATHS ARE INDICATIVE ONLY AND ARE SUBJECT
TO REVIEW UPON COMPLETION OF THE SITE MANAGEMENT PLAN



INSTALL WARNING
SIGNS AT ALL
PEDESTRIAN
CROSSINGS



NOTE:
ALL HYDRANT HEADS TO HAVE QUICK
ATTACH 'STORZ' FITTINGS
FOR FIRE BRIGADE

ISSUE	BY	DESCRIPTION	DATE
A	GR	FOR EIS	8-8-16
B	GR	AMENDMENTS - REISSUE FOR EIS	20-2-17
C	GR	AMENDMENTS - REISSUE FOR EIS	7-4-17
D	GR	AMENDMENTS - ADD ODOUR UNITS	19-6-17

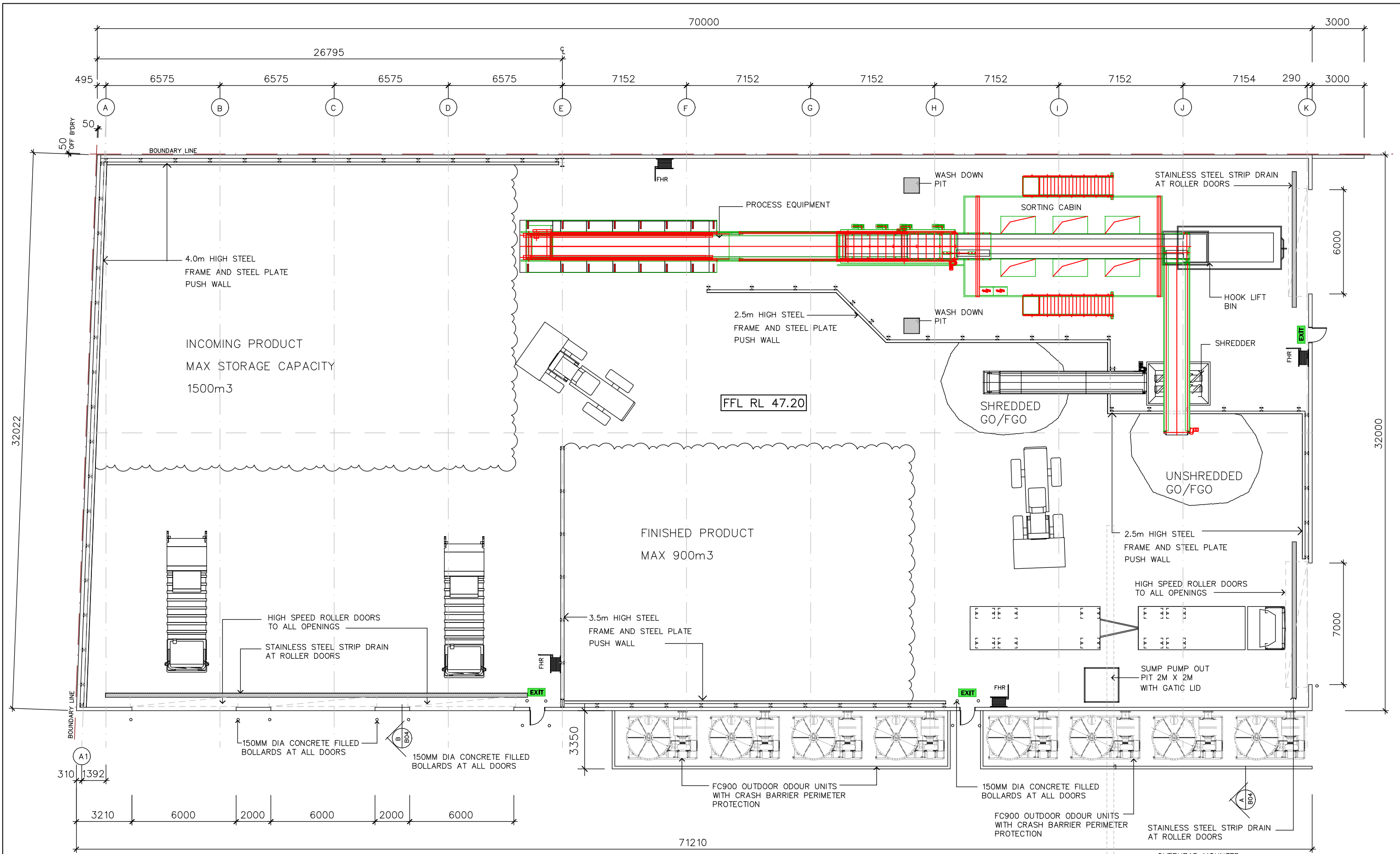
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PROJECT	PROPOSED GREENSPOT RESOURCE RECOVERY AND RECYCLING FACILITY 24 DAVIS ROAD WETHERILL PARK NSW 2164	PROJECT NO.	1521
CLIENT	BETTERGROW	SCALE	1:200
TITLE	ORGANICS RECEIVAL AND PROCESS BUILDING SITE PLAN	JOB NO.	0604-16
		SHEET NO./ISSUE	A02 / D

AT SHEET



PROPOSED FLOOR PLAN
ORGANICS REVEAL AND PROCESS BUILDING

ISSUE	BY	DESCRIPTION	DATE
A	GR	FOR EIS	8-8-16
B	GR	REMOVE SCRUBBERS - ISSUE FOR EIS	20-2-2017
C	GR	ADD ODOUR UNITS AND DUCTS	19-6-2017

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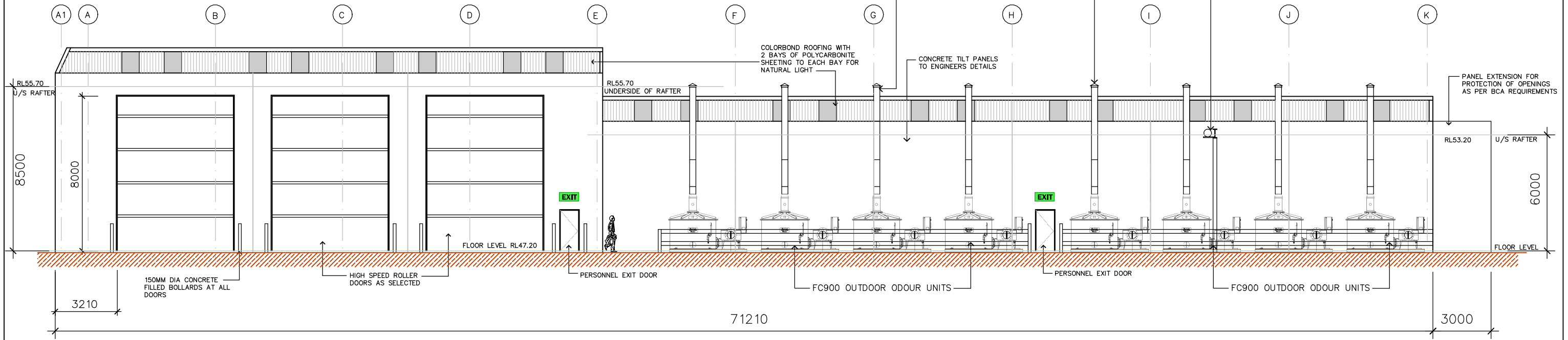
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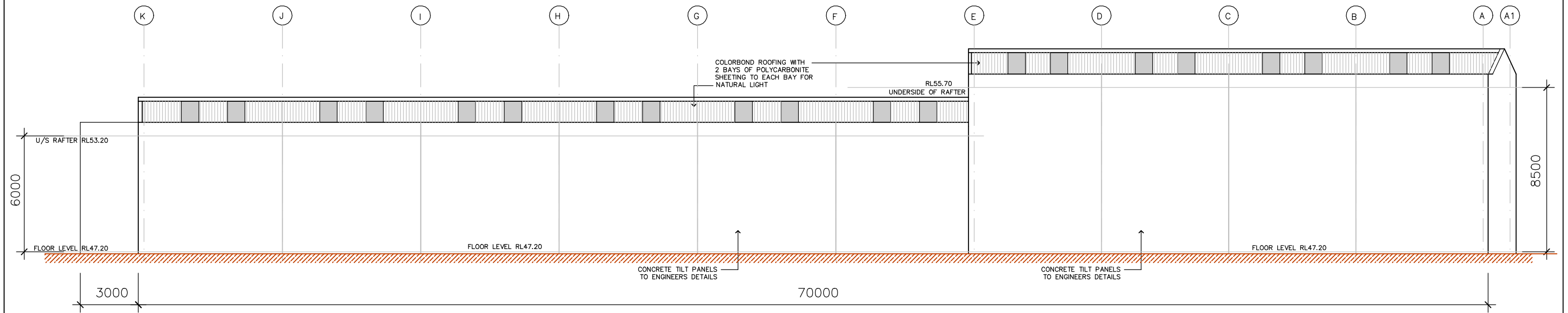


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CLIENT	BETTERGROW	SCALE	1: 100
TITLE	ORGANICS REVEAL AND PROCESS BUILDING FLOOR PLAN	JOB NO.	0604-16
		SHEET NO.	B01
		ISSUE	C

A1 SHEET



SOUTH ELEVATION
SCALE 1:100



NORTH ELEVATION
SCALE 1:100

ISSUE	BY	DESCRIPTION	DATE
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B	GR	ADD ODOUR UNITS AND DUCTS	19-6-2017

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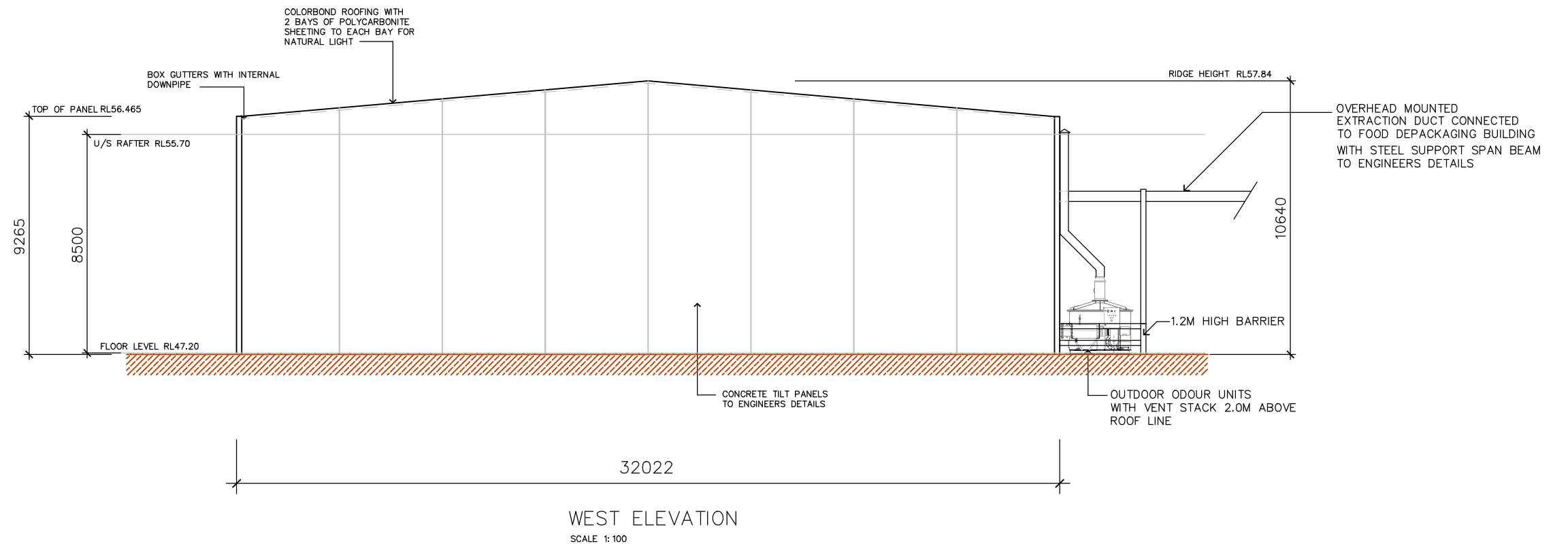
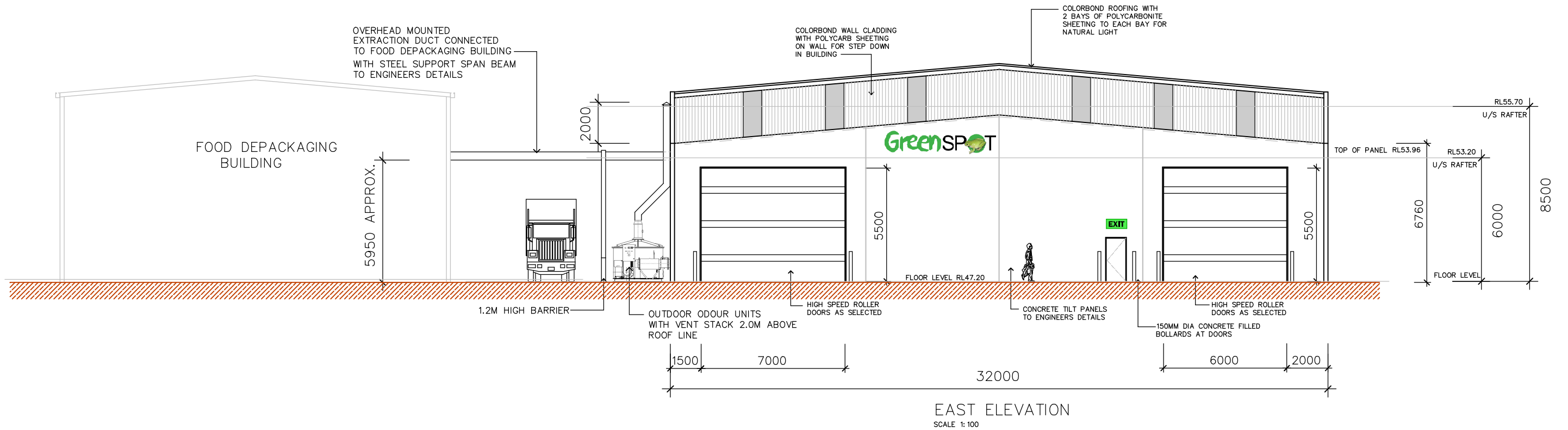
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		SHEET NO.	B02
		ISSUE	B



ISSUE	BY	DESCRIPTION	DATE
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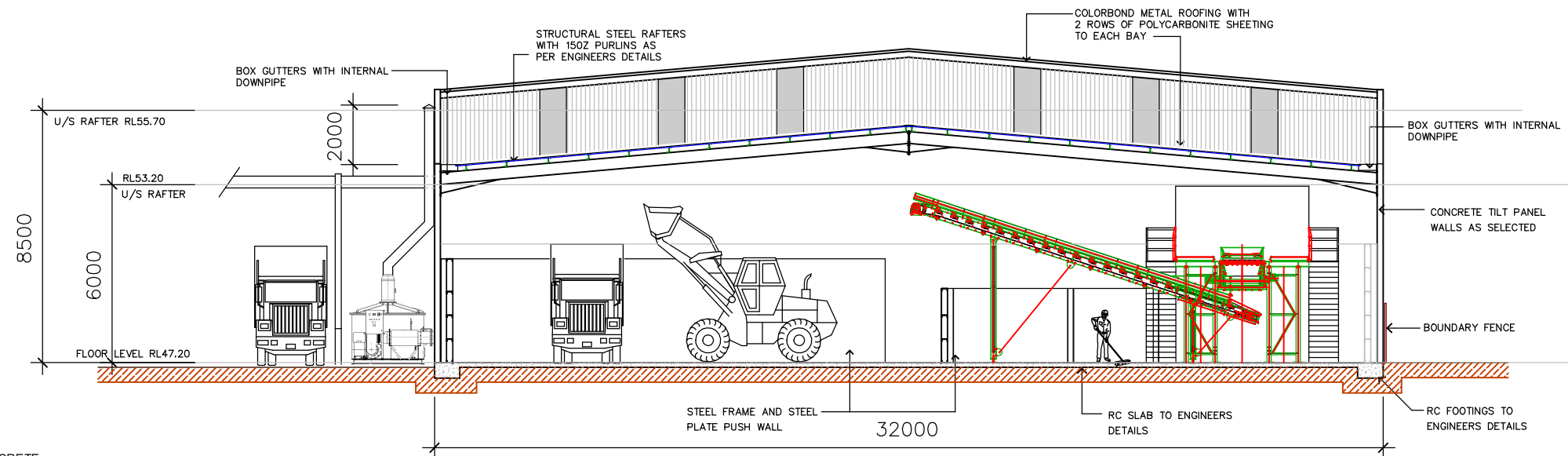
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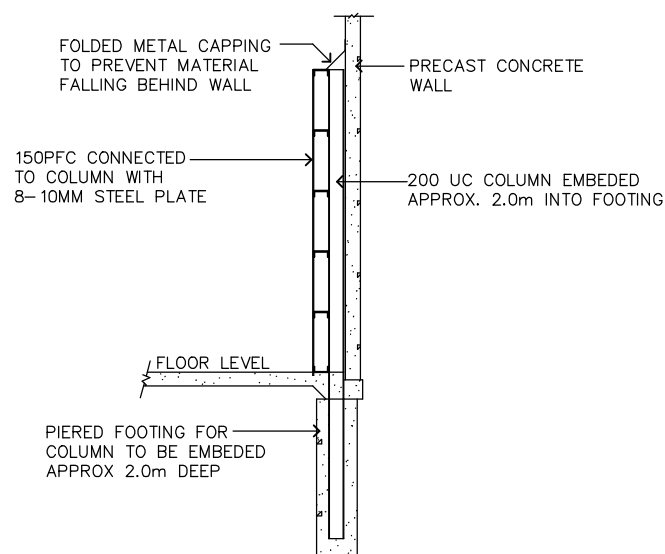
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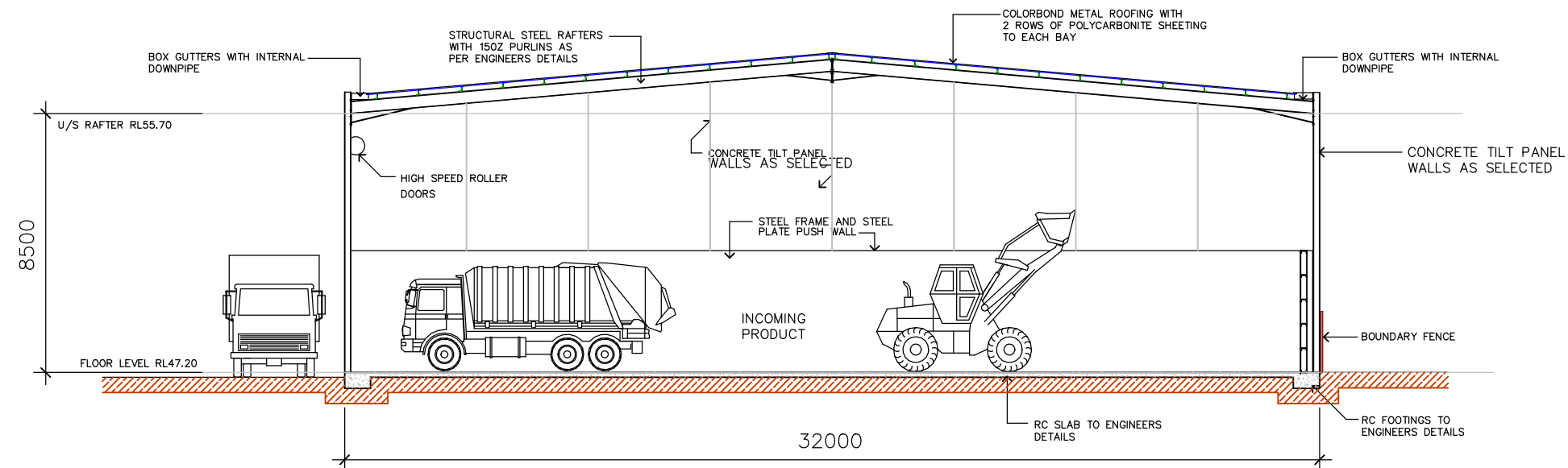
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		SHEET NO.	B03
		ISSUE	B



SECTION A
SCALE 1:100
A
B01



TYPICAL PUSHWALL SECTION
HEIGHTS VARY



SECTION B
SCALE 1:100
B
B01

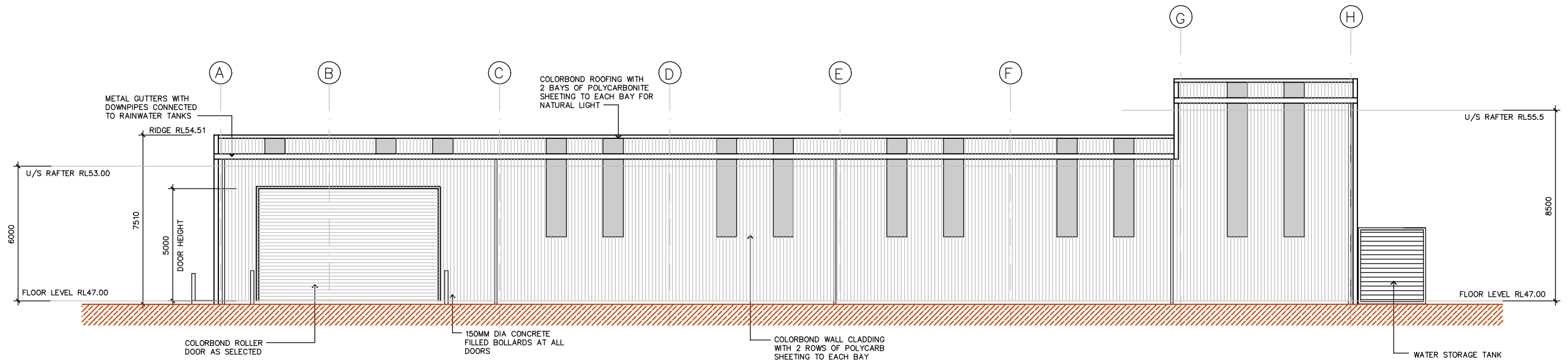
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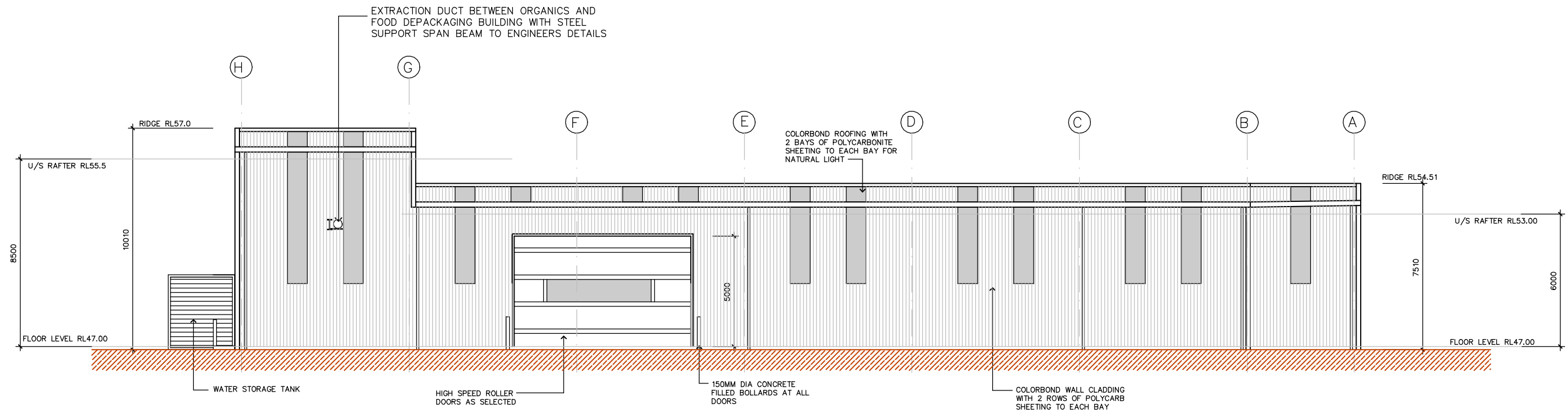
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		ISSUE	B



SOUTH ELEVATION
SCALE 1:100



NORTH ELEVATION
SCALE 1:100

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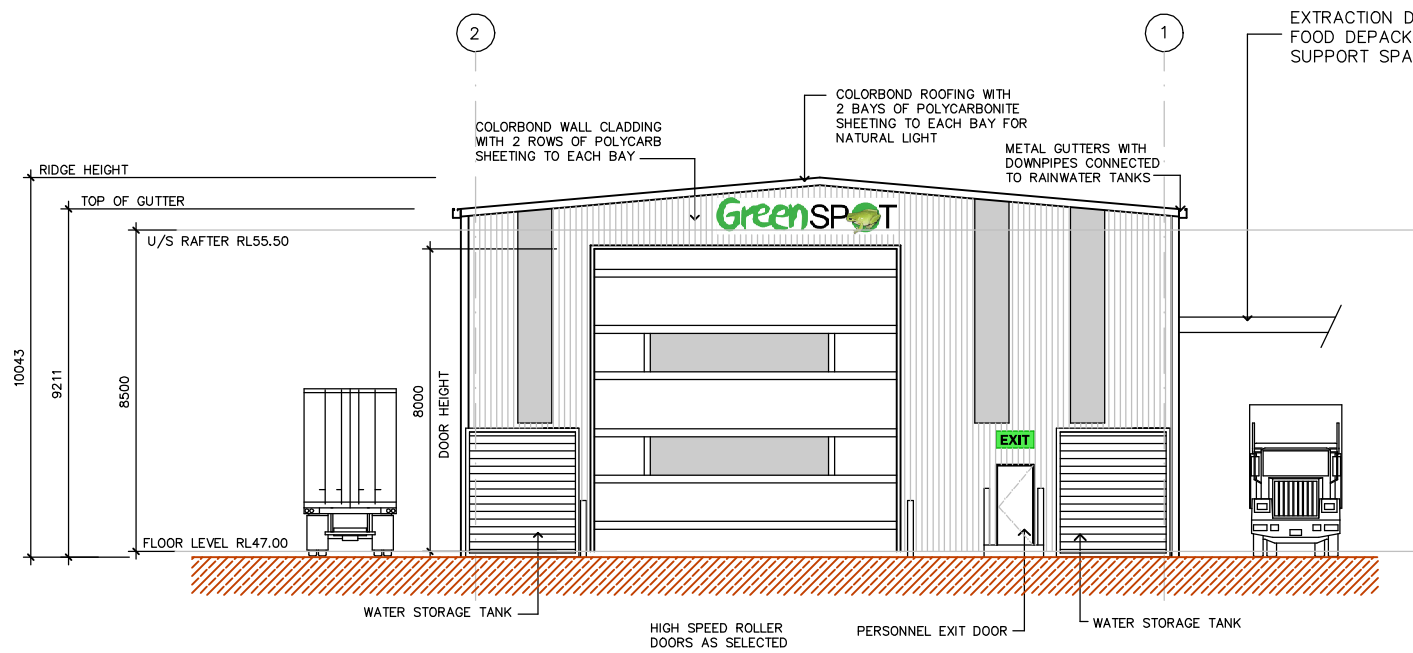


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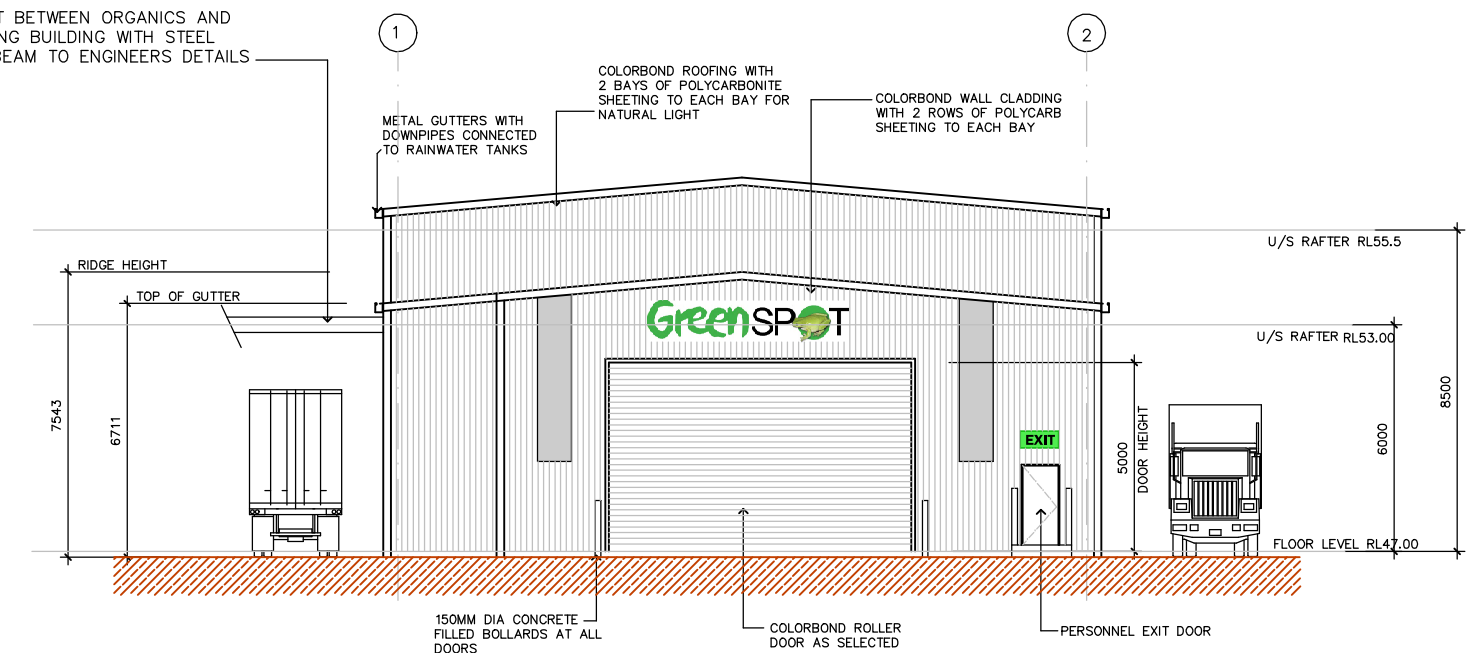
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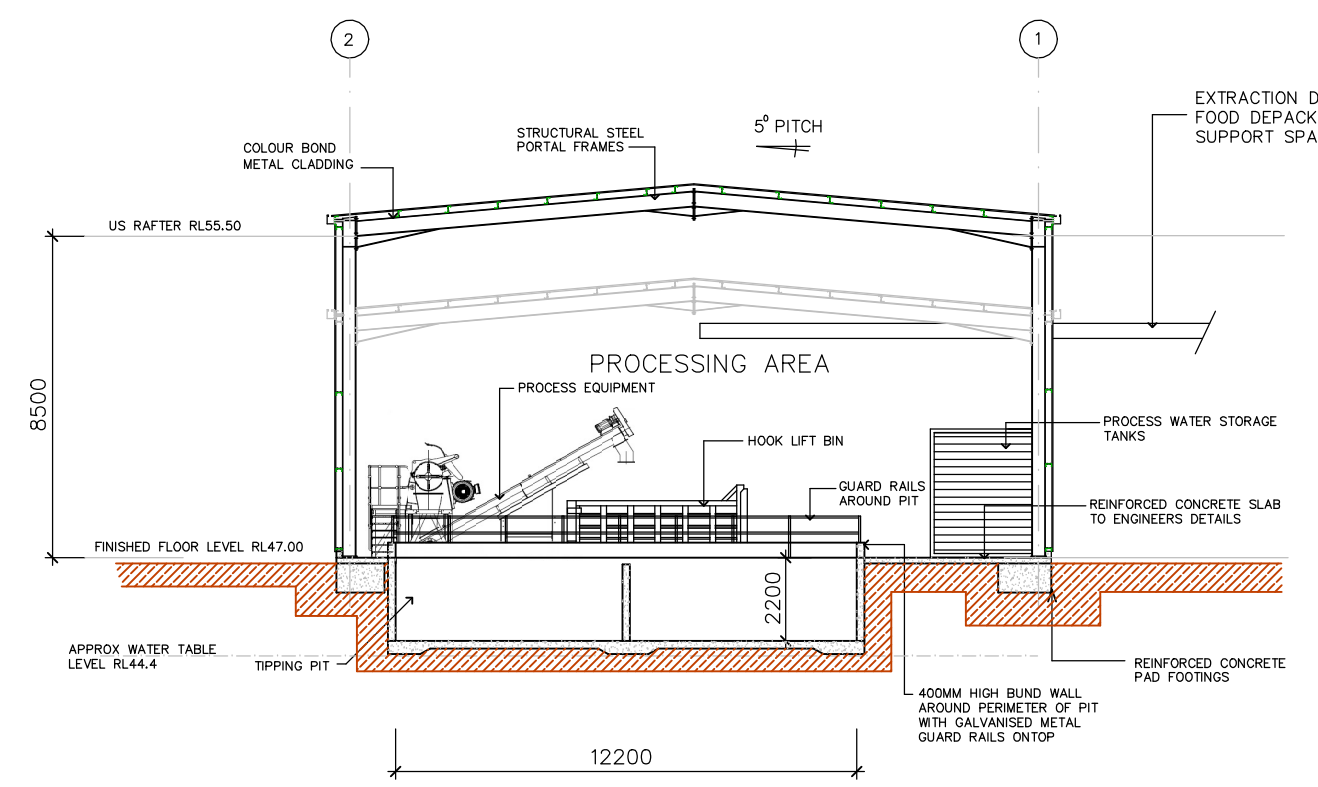
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		SHEET NO.	C02
		ISSUE	B



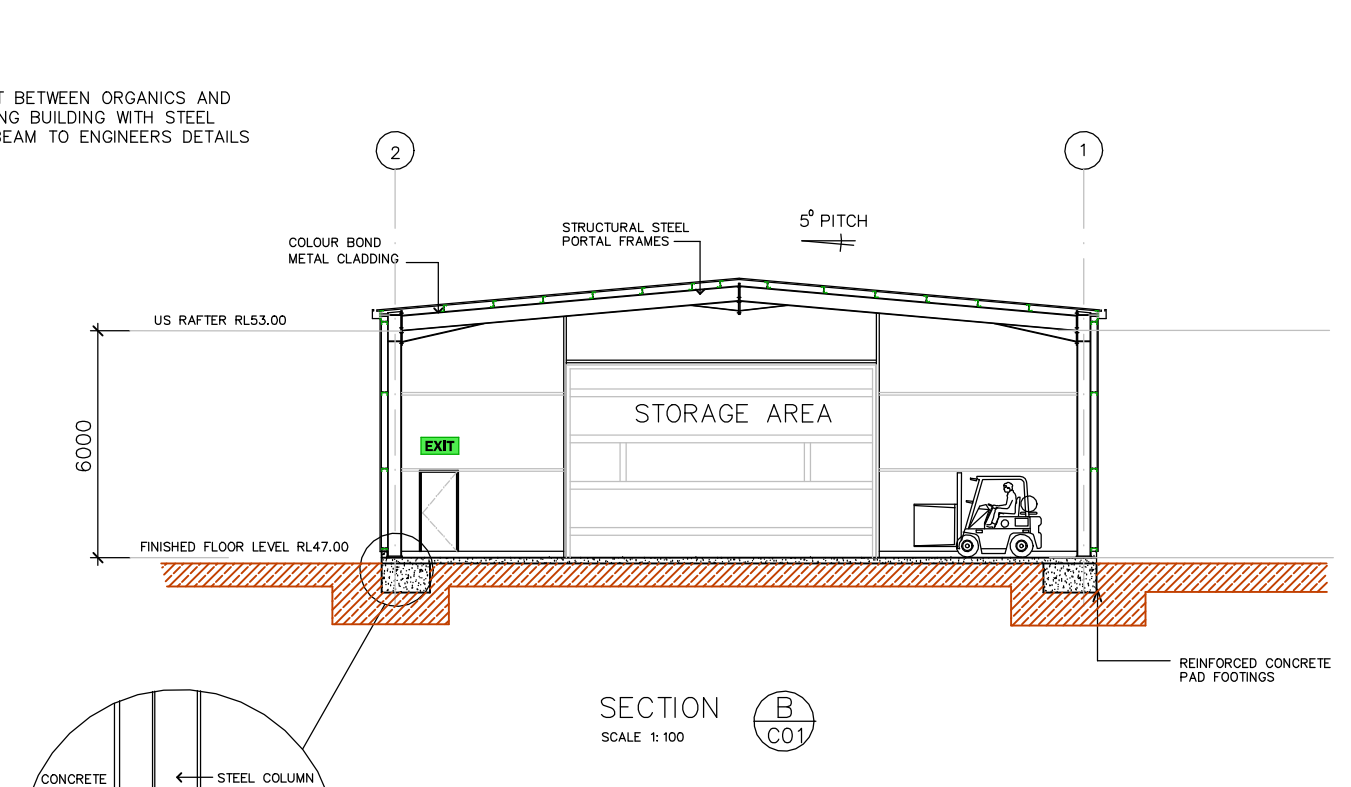
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SCALE 1:100



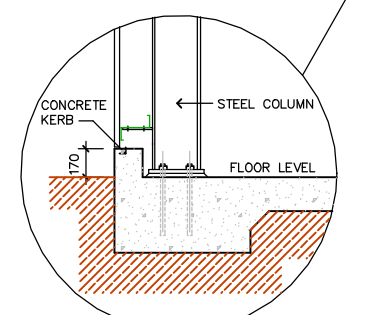
WEST ELEVATION
SCALE 1:100



SECTION A C01
SCALE 1:100



SECTION B C01
SCALE 1:100



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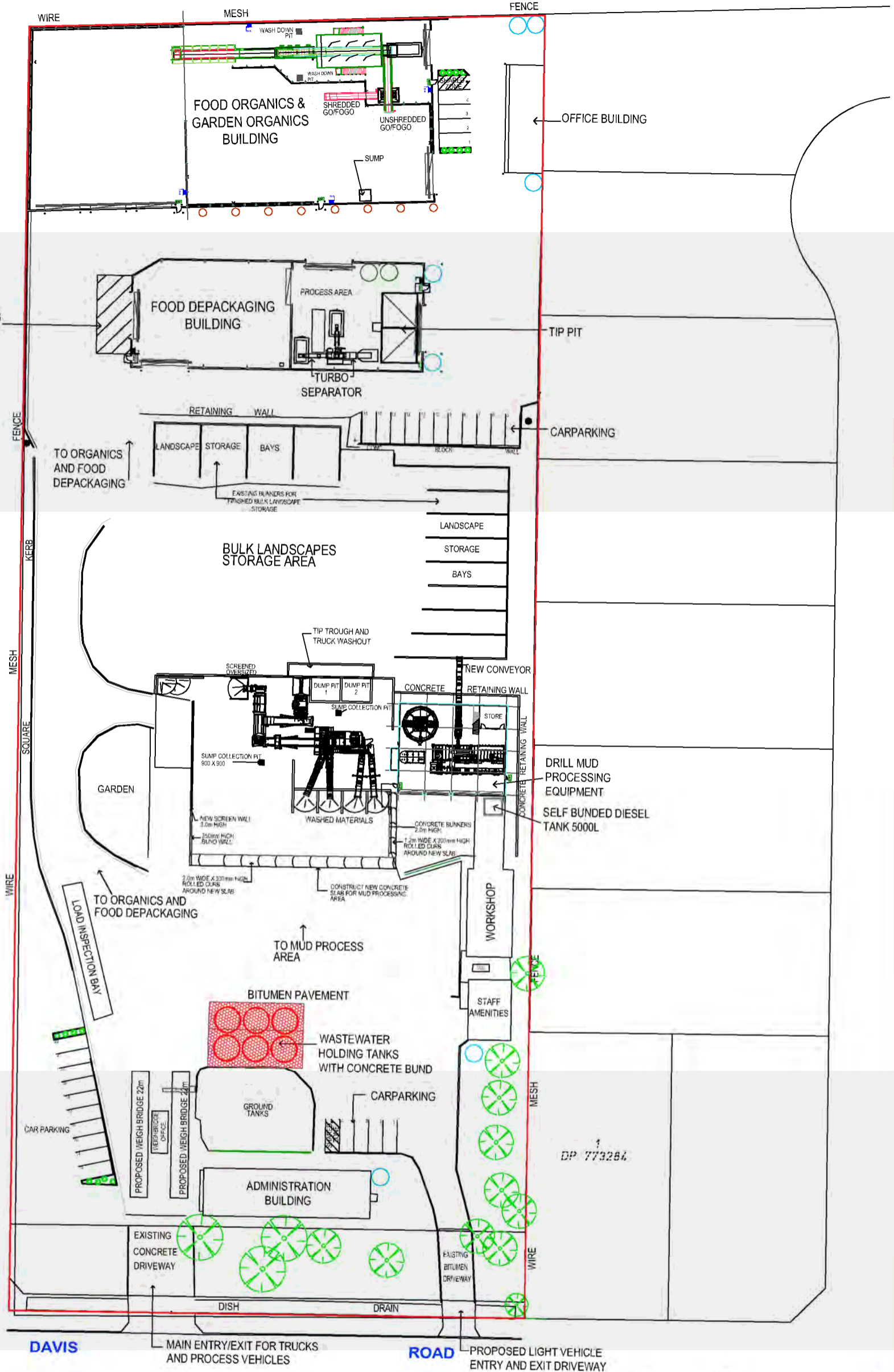
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TITLE	FOOD DEPACKAGING AND PROCESS BUILDING ELEVATIONS	JOB NO.	0604-16
		SHEET NO.	C03
		ISSUE	B



TRUCK LOADING BAY



17
DP 249417

1
DP 773284

0 10 25 50
SCALE 1 : 750 (A3)



TITLE: FIGURE 8: PROPOSED SITE LAYOUT - PLAN VIEW

LOCATION: DAVIS RD WETHERILL PARK

DATUM: GDA 94
PROJECTION: MGA ZONE 56

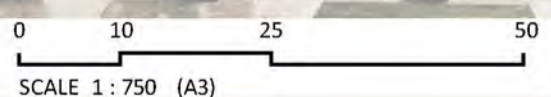
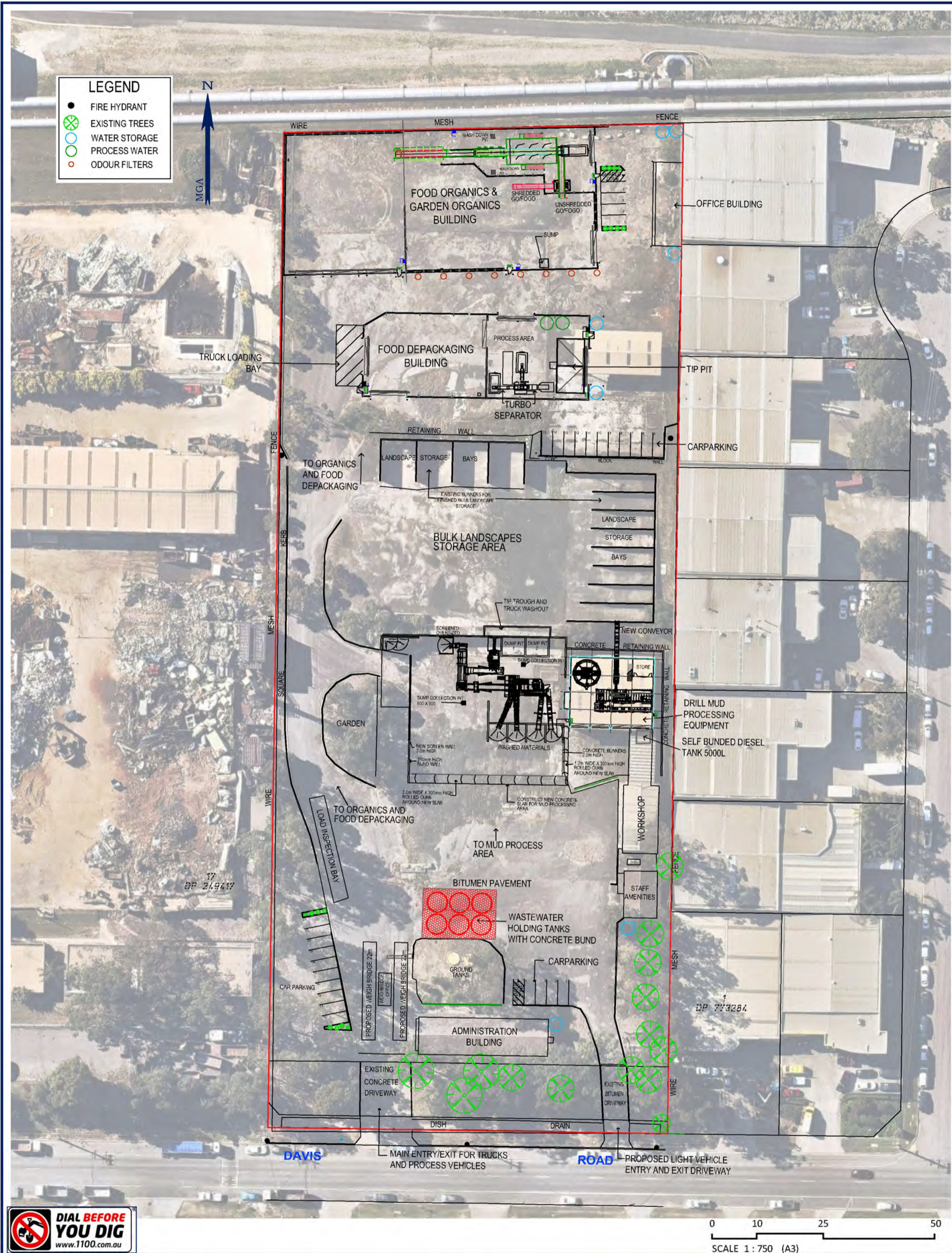
DATE: 9/08/2017
PURPOSE: PLANNING

CAD REF: J:\JOBS\1274\127695 Wetherill Park\10 - Drafting\Acad Drawing File
VERSION: D A3 (JH-NW-SS)

CLIENT: BETTER GROW
JOB REF: PR127695

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


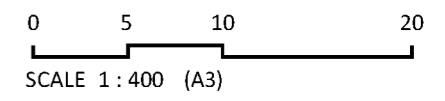
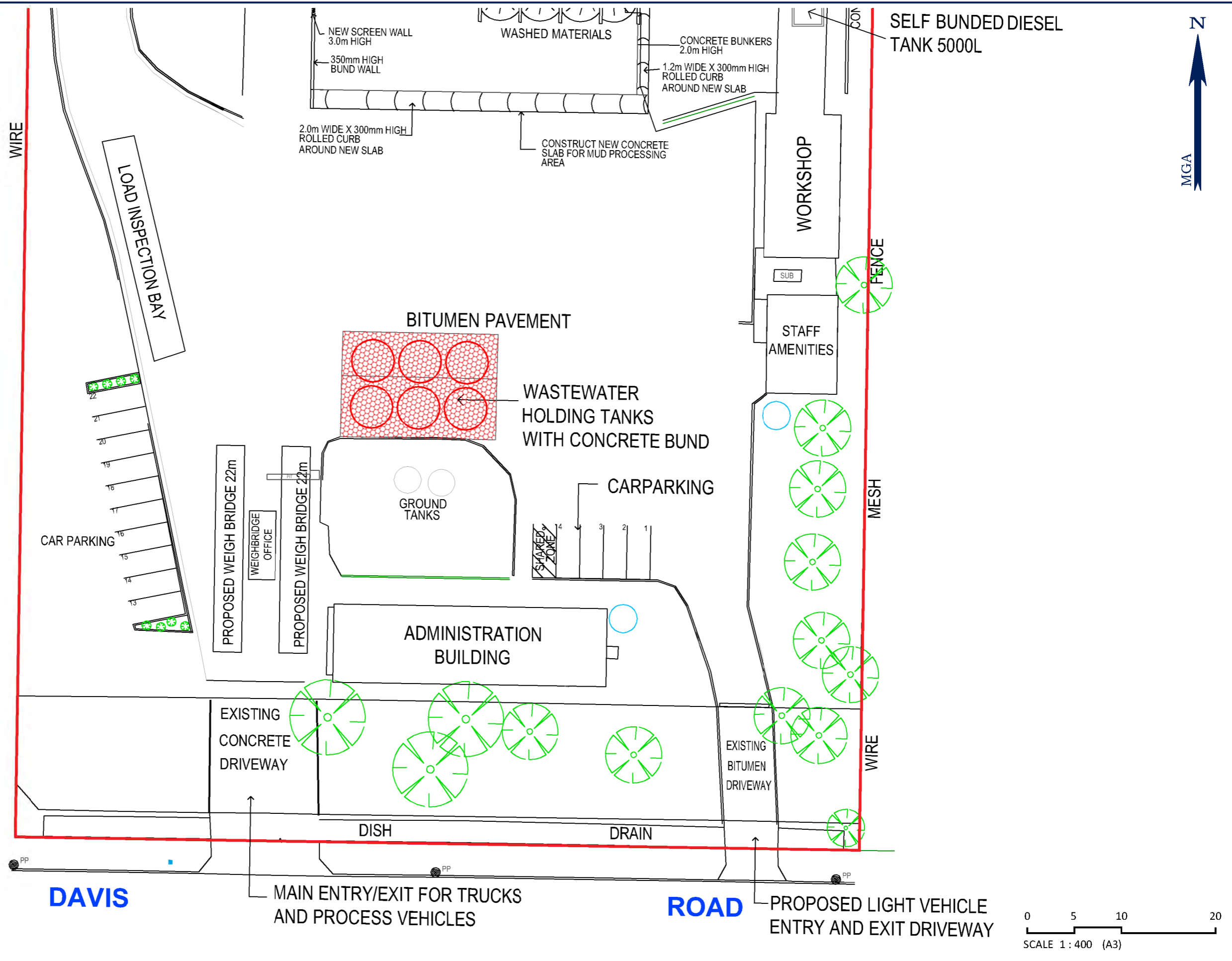


TITLE: FIGURE 9: PROPOSED SITE LAYOUT - AERIAL VIEW | LOCATION: DAVIS RD WETHERILL PARK | DATUM: GDA 94 | DATE: 9/08/2017 | CAD REF: I:\C85\127\127695 Wetherill Park\10 - Drafting\Acad...\127695-Wetherill Park - Site Plan_MG | PROJECTION: MGA ZONE 56 | PURPOSE: PLANNING | VERSION: D A3 (JH-NW-SS)

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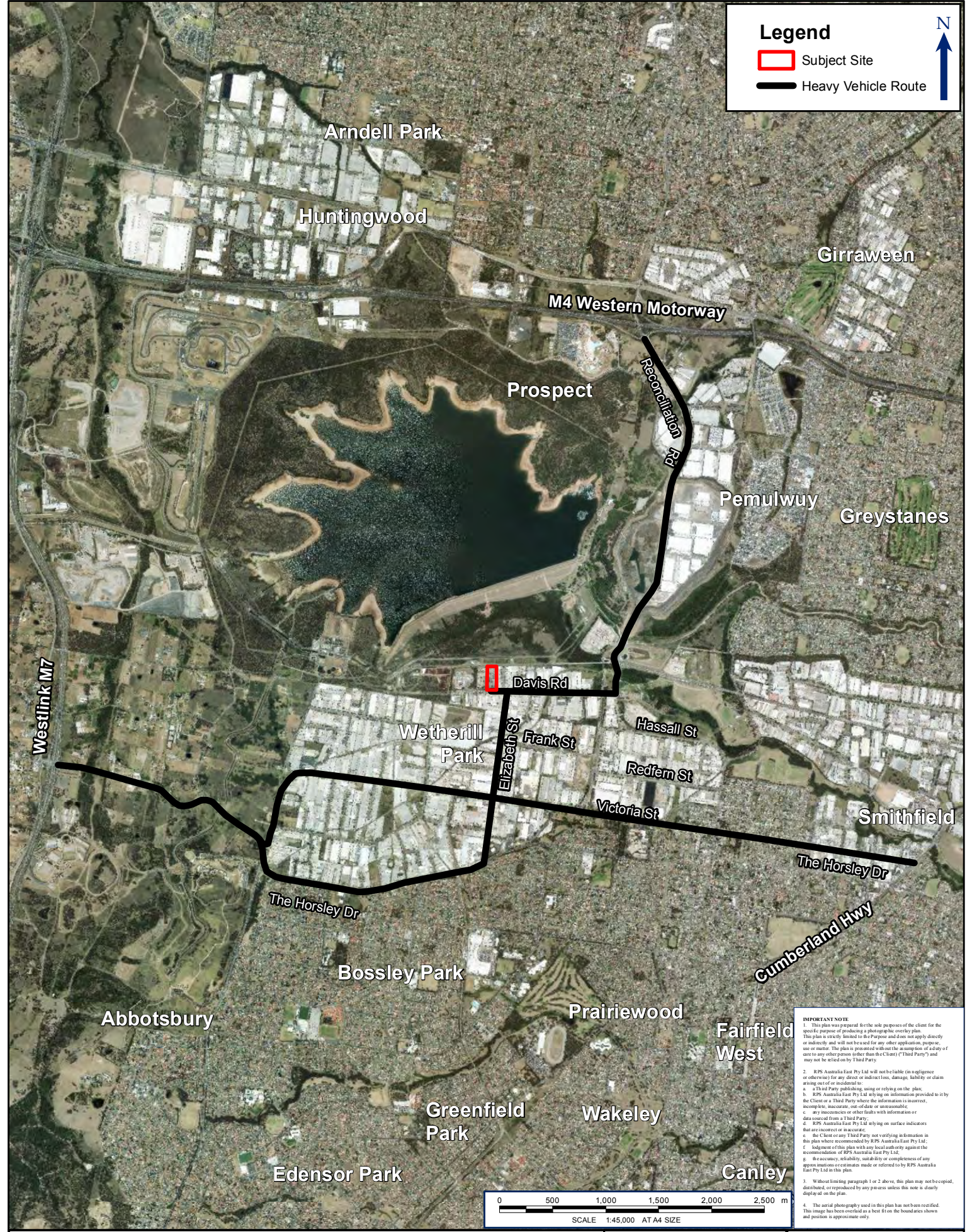
LEGEND

-  EXISTING TREES
-  WASTE WATER
-  WATER STORAGE



TITLE: FIGURE 12: PROPOSED SITE LAYOUT LOWER LEVEL | LOCATION: DAVIS RD WETHERILL PARK | DATUM: GDA 94 | DATE: 09/08/2017 | AUTOCAD REF: J:\JOBS\127695 Wetherill Park\10 - Drafting\Acad Drawing Files | VERSION: D A3 | PURPOSE: PLANNING

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Legend

- Subject Site
- Heavy Vehicle Route

N
↑

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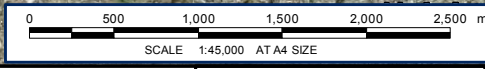


FIGURE A: HEAVY VEHICLES ROUTES

LOCATION: WETHERILL PARK	DATUM: GDA94
JOB NO.: 127695	PROJECTION: MGA Zone 56
PURPOSE: PLANNING	Data Sources: RPS Land and Property Information 2015
Technician: Natalie Wood	Date: 9/08/2017



Appendix 3

Noise and Vibration Addendum Report

6 July 2017

Bettergrow Pty Ltd
48 Industry Road
Vineyard NSW 2765
Attention: Neil Schembri

Dear Neil,

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

1 INTRODUCTION

The Environmental Impact Statement (EIS) for a proposed resource recovery and recycling centre located at 24 Davis Road, Wetherill Park, NSW (SSD 15_7401) was placed on exhibition from 4 May 2017 to 2 June 2017. Two submissions were received regarding noise as follows:

1. Noise contours extending onto the adjacent Western Sydney Parklands area to the north of the site at Prospect Reservoir were requested; and
2. The NSW Department of Planning and Environment (DP&E) requested a vibration assessment including mitigation measures.

This letter addresses the two submissions received.

2 WESTERN SYDNEY PARKLANDS

Vacant land located immediately north of the subject site and south of Prospect Reservoir is understood to form part of the Western Sydney Parklands, and is used for recreational purposes by the general public.

The NSW Industrial Noise Policy (INP) lists an amenity criterion for areas specifically reserved for passive recreation. The acceptable L_{Aeq} noise level, averaged over the relevant time period (day, evening or night), should not exceed 50 dB. The criterion applies 'when in use'.

Noise contours were generated over the Western Sydney Parklands area for the morning shoulder/day operational scenario, as this represents the worst case for long term operational noise impact. $L_{Aeq,period}$ noise contours are shown in Figure 1.

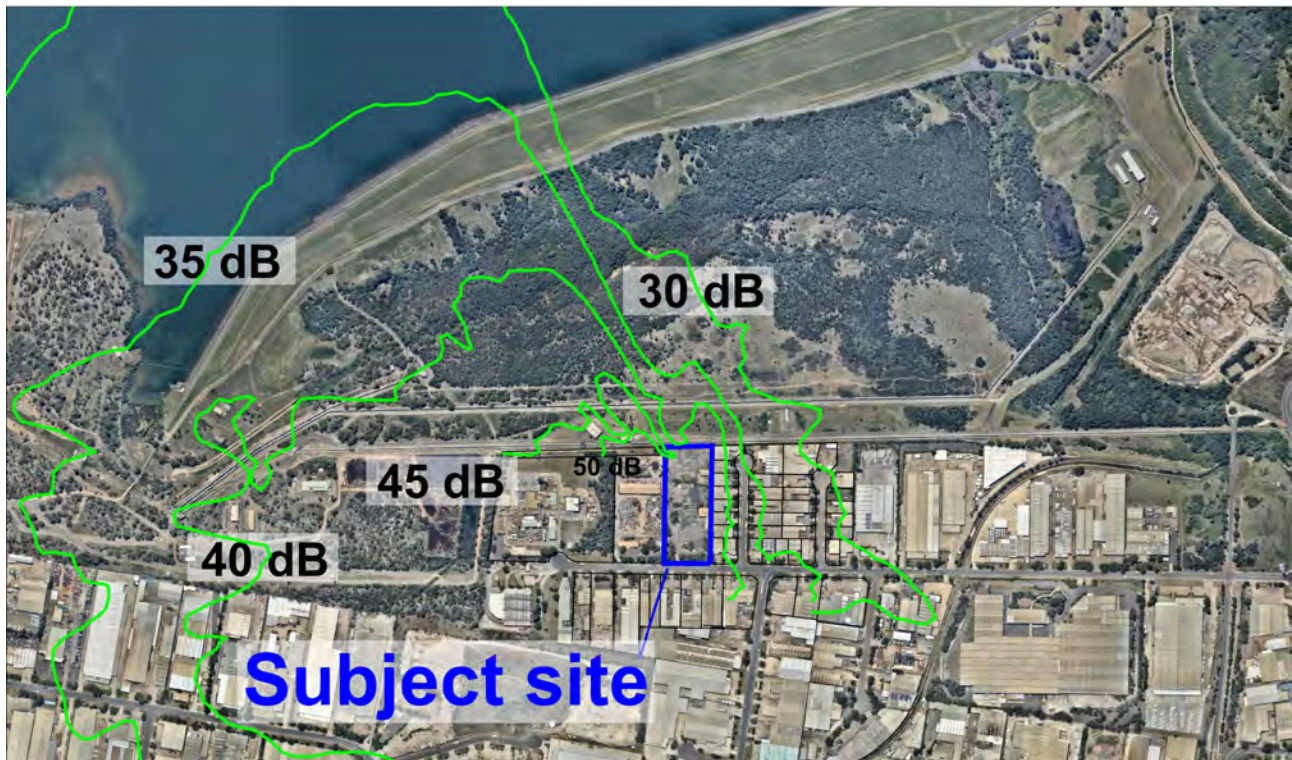


Figure 1: Noise Contours, $L_{Aeq,period}$ dB

The noise contours show predictions for the majority of the vacant land area are less than $L_{Aeq,period}$ 45 dB. A small area immediately north-west of the subject site exceeds 50 dB; however this area is located between two pipelines and is unlikely to be used for recreation.

Neighbouring industrial premises may increase total noise emission to the north-west. Assuming contributions from neighbouring premises are similar to the subject site, cumulative levels would be 3 dB higher than shown in the above figure (the logarithmic sum of two equal noise sources causes an increase of 3 dB). Therefore, the cumulative 50 dB contour line would fall between the 45 and 50 dB contour lines in Figure 1. Due to the proximity of pipe lines and roads in that relatively small area, it is unlikely to be used for recreation.

This assessment indicates the proposal would not impact noise amenity in the Western Parklands Recreation area.

3 VIBRATION ASSESSMENT

Ground borne vibration can be generated by industrial machinery, construction and excavation equipment, and mobile operational equipment such as trucks and loading units. Vibration can cause community annoyance, health effects and structural damage to buildings. Individuals can detect building vibration values that are well below those that can cause any risk of damage to the building or its contents. The level of vibration that affects amenity is lower than that associated with building damage.

This assessment considers vibration from construction equipment, fixed plant and mobile operational sources such as trucks and loading units.

Vibration criteria in NSW are outlined in the guideline *Assessing Vibration: A Technical Guideline*, published by the NSW Department of Environment and Conservation (DEC, 2006).

3.1 Construction Vibration

Vibration generated by short term construction works such as vibrating roller compaction, pile driving and rock/concrete breaking (if required), are generally assessed as intermittent activities.

The guideline does not include consideration of structural damage to buildings. “Construction Vibrations and Their Impact on Vibration-Sensitive Facilities” (Amick & Gendreau, ASCE, 2000) provides a generic model of vibrations as a function of distance. This is reproduced in Figure 2.

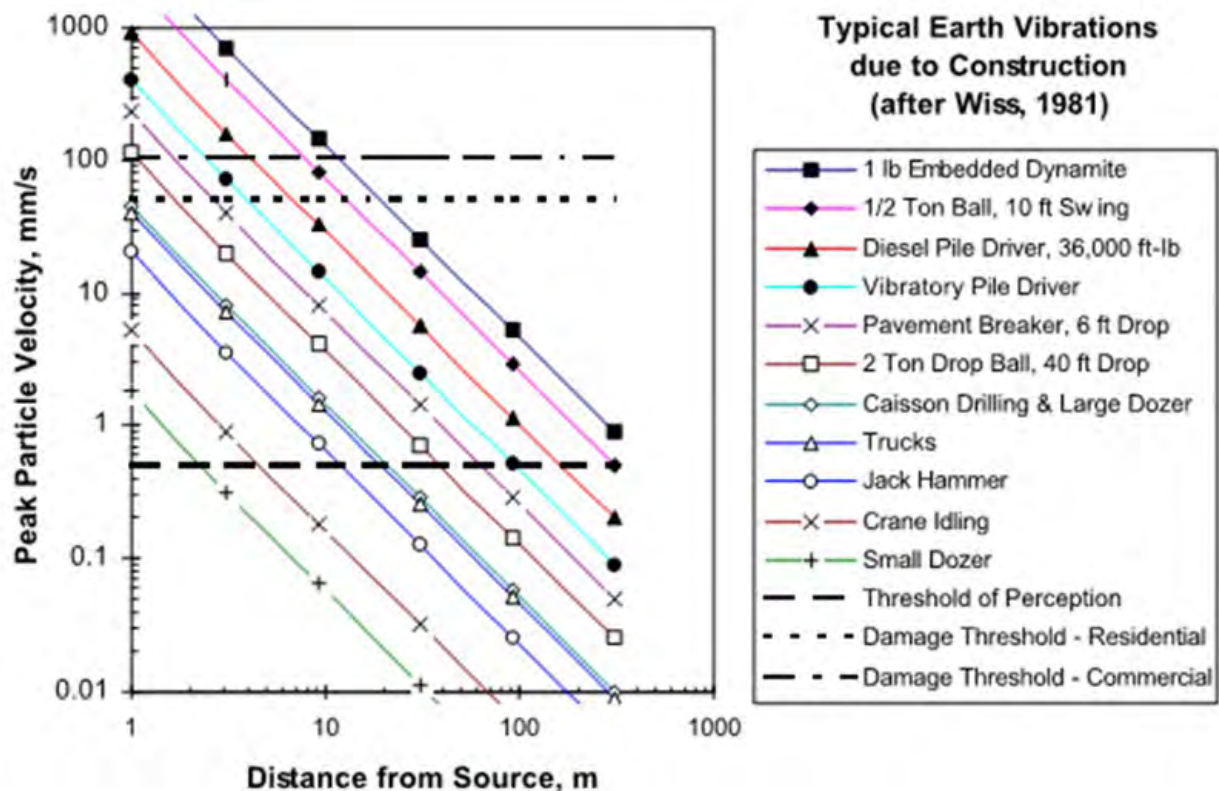


Figure 2: Construction Vibration as a Function of Distance (Amick and Gendreau 2000)

Figure 2 shows the damage threshold for commercial buildings is 100 mm/s. All equipment listed in the figure with the exception of dynamite and a ½ ton swing ball could operate within 2 metres of commercial buildings without causing structural damage. Structural damage to the adjacent commercial buildings is considered highly unlikely provided general best practice work methods are employed.

3.2 Operational Vibration

Relevant vibration criteria for evaluation of human comfort are contained within the DEC vibration guideline. The guideline is based on British Standard BS 6472 “Evaluation of Human Exposure to Vibration in Buildings (1 Hz to 80 Hz)”, and presents maximum vibration values for use in assessing human responses to vibration, and provides recommendations for measurement and evaluation techniques. The guideline recommends that “the criteria presented are non-mandatory: they are goals that should be sought to be achieved through the application of all feasible and reasonable mitigation measures”.

Operational vibration sources proposed include shredding and screening equipment associated with FOGO and C+I organics processing, truck loading activities, and, screens and a centrifuge in the drilling mud and hydro-excavation waste processing area.

Fixed plant would not typically operate continuously, and are classed as “intermittent vibration” in accordance with the guideline. That is, these sources operate intermittently, but would produce continuous vibration if operated continuously. The technical guide indicates that this type of vibration should be assessed using vibration dose values (VDVs). The VDV method is a useful means of calculation of vibration dose where vibration conditions are regularly repeated throughout the day, as in the case of fixed plant. VDV accumulates the vibration energy received over the day and night periods and is calculated as the fourth root of the integral with respect to time of the fourth power of the acceleration after it has been frequency weighted. The use of the fourth power method makes the VDV more sensitive to peaks in the acceleration waveform.

Table 3.1 indicates preferred and maximum allowable vibration criteria. Adverse comments or complaints may be expected if vibration values approach the maximum values.

Table 3.1: ACCEPTABLE VIBRATION DOSE VALUES FOR INTERMITTENT VIBRATION (m/s^{1.75})

Location	Daytime (0700 to 2200)		Night-time (2200 to 0700)	
	Preferred Value	Maximum Value	Preferred Value	Maximum Value
Critical areas	0.10	0.20	0.10	0.20
Residences	0.20	0.40	0.13	0.26
Offices, schools, educational institutions and places of worship	0.40	0.80	0.40	0.80
Workshops	0.80	1.60	0.80	1.60

Source: DEC (February 2006) “Assessing Vibration: A Technical Guideline” Table 2.4

1. Critical areas include hospital operating theatres and precision laboratories where sensitive operations are occurring. These criteria are only indicative, and there may be a need to assess intermittent values against the continuous or impulsive criteria for critical areas.

The preferred value of $0.80 \text{ m/s}^{1.75}$ for workshops is considered the relevant criterion for neighbouring industrial buildings.

The wet screening system associated with processing of drilling muds and hydro-excavation waste is the fixed plant item with greatest potential to generate vibration. The proponent provided a noise and vibration assessment report for an equivalent machine in operation in Cookstown, Northern Ireland. Vibration measurements were taken at a distance of 1 metre at four points around an S:Max SRU:15 portable wet screening system. Measurement results are listed in Table 3.2.

Table 3.2: VIBRATION MEASUREMENT RESULTS

Measurement Location	PPV mm/s^2	VDV $\text{m/s}^{-1.75}$
A	0.25 mm/s^2 @15Hz	0.51 $\text{m/s}^{-1.75}$
B	0.22 mm/s^2 @18Hz	0.54 $\text{m/s}^{-1.75}$
C	0.33 mm/s^2 @19Hz	0.85 $\text{m/s}^{-1.75}$
D	0.21 mm/s^2 @17Hz	0.51 $\text{m/s}^{-1.75}$

The calculated cumulative vibration dose value at 1 metre from the unit based on the highest of the four measurement positions was $0.85 \text{ m/s}^{1.75}$, which slightly exceeds the preferred value of $0.80 \text{ m/s}^{1.75}$. However, this is the vibration dose value at 1 metre from the unit. Vibration dose value would be well below the preferred value at the nearest commercial buildings.

Figure 2 shows the threshold of perception for vibration occurs at a peak particle velocity of 0.5 mm/s. The threshold of perception for trucks is 11 metres, and for small dozers and loading units is approximately 2 metres. It is unlikely that vibration from mobile equipment would be perceptible within adjacent commercial buildings. Peak particle velocities for these items at 1 metre from a building are well below the damage threshold for commercial buildings, indicating structural damage is highly unlikely to occur.

3.3 Mitigation Measures

Based on the results of this assessment, no vibration mitigation measures should be required. However, it is recommended vibration testing of vibration generating equipment be undertaken upon commissioning to ensure relevant limits are achieved at the nearest industrial receivers. In the unlikely event that limits are exceeded, the following mitigation controls could be implemented:

- Equipment causing the vibration could be isolated on resilient mounts from any connective structures;
- Inertia blocks could be used to add system mass to reduce vibration; and
- Balance weights could be used to correct rotation of poorly balanced parts.

Where flexibility exists in positioning of vibration generating sources, consideration should be given to locating these as far as is practical from neighbouring industrial buildings. Mountings for all high vibration generating equipment should be installed so that there are no rigid connections between the equipment and the supporting structure.

4 CLOSURE

I trust this information meets your requirements. If you have any questions or need further details please contact me.



Prepared: Jeremy Welbourne
Civil Engineer (Acoustics)



QA review: Tony Welbourne
Director



Appendix 4

Revised Environmental Management Plan

Environmental Management Plan for Greenspot Wetherill Park

**Located at 24 Davis Road,
Wetherill Park, NSW, 2164**

On lands described as Lot 18 on DP249417

Written on behalf of

Bettergrow Pty Ltd

By

The LZ Environmental Company Pty Limited

Document Control

Document name	Environmental Management Plan for Greenspot Wetherill Park	Version	1.0
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Person Responsible

	Name	Position
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Revision History

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Appendix 1:	Workplace and Emergency Procedures
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Glossary and Acronyms

BPEM	Best Practice Environmental Management
BLSA	Bulk Landscaping Supply Area
DHFPA	Drill mud and Hydro-excavation Fluids Processing Area
DPE	Department Planning and Environment
EPL	Environmental Protection Licence
EPA	Environmental protection Authority
FCC	Fairfield City Council
Environmental nuisance	<p>Unreasonable interference or likely interference caused by—</p> <ul style="list-style-type: none"> • aerosols, fumes, light, noise, odour, particles or smoke; or • an unhealthy offensive or unsightly condition because of contamination.
PM₁₀	Particulate matter with an equivalent aerodynamic diameter of not more than 10 microns (µm).
PM_{2.5}	Particulate matter with an equivalent aerodynamic diameter of not more than 2.5 microns (µm).
NFRS	NSW Fire and Rescue Service
EMP	Environmental Management Plan
GWP	Greenspot Wetherill Park
GO	Garden Organics
FO	Food Organics
FOGO	Combined Food Organics Garden Organics
C&IO	Commercial and Industrial Organics
POEO Act	Protection of Environment Operations Act 1997
ORPB	Organics Reival and Processing Building
FDB	Food Depackaging Building

1 Introduction

The following Environmental Management Plan (EMP) has been written for Bettergrow Pty Ltd (Bettergrow) who is authorised to receive up to 200,000 tonnes of various materials for processing at 24 Davis Road, Wetherill Park, Sydney (the site), as defined below:

- 60,000 tonnes per year of hydro-excavation and directional drilling muds/liquids for storage, separation and consolidation within the Drill mud and Hydro-excavation Fluids Processing Area (DHFPA);
- 40,000 tonnes per of various bulk landscaping products for short term storage whilst awaiting to be delivered into the Sydney market;
- 70,000 tonnes of Garden Organics (GO) or combined GO and Food Organics (FO), (FOGO) to be processed and consolidated within the Organics Reveal and Processing Building (ORPB); and
- 30,000 tonnes per year of other source separated commercial and industrial organics (C&IO) organics to be processed and consolidated within the Food Depackaging Building (FDB).

The above activities are to be performed on land more specifically known as Lot 18 on DP249417. This land constitutes Greenspot Wetherill Park (GWP) which will also be referred to herein as the 'Facility' or 'the Site'.

It is to be noted that Bettergrow intends to provide a waste management service that will provide savings to clients within the immediate and surrounding areas of Wetherill Park. Bettergrow also intends to supply the immediate area with bulk landscaping supplies, including aggregates.

The following Environmental Management Plan (EMP) has been prepared by the LZ Environmental Company Pty Limited (trading as Zambelli Environmental) on behalf of Bettergrow to cover its obligations under the *Protection of the Environment Operations Act 1997 (POEO Act)* and also any relevant environmental performance conditions of the development approval issued by Department of Planning and Environment (DPE). As such, this document may be amended from time to time to ensure all pertinent conditions that are current are addressed and managed accordingly.

Readers are made of aware of the fact that the subject site was formerly utilised as an emolium asphalt manufacturing plant which was subject to contamination. Whilst remediation has occurred, all site personnel must not perform any unauthorised excavation or digging work until management has approved such works. Similarly, if Employees notice or observe any contamination expressing itself from any on or at the Facility, management must be notified promptly.

It is essential that all Facility Employees are aware that within this EMP there are important requirements as part of conducting activities which need to be adhered to. This EMP is designed to

describe the activities that are being conducted as well as day-to-day procedures which when followed will ensure that the Facility is managed in compliance with all relevant environmental regulations and requirements. Therefore, it is of crucial importance that all Facility Employees are familiar with this EMP in its entirety and the commitments made within it.

This EMP is presented with three appendices, specifically, **Appendix 1 – Workplace and Emergency Procedures** encompassing the stated measures for Facility Employees to comply with when engaged in activities at the Facility in order to ensure that human health and the receiving environment are protected and not negatively impacted. **Appendix 2 – Forms and Checklists** contains the forms and checklists which must be used by the Facility Employees in conjunction with the aforementioned procedures.

Appendix 3 – Figures contains various images that are related to the facility. It is to be noted that the site layout has been provided in three images. **Figure 1a** details the layout of the Kerbside Organics Processing and Food Depackaging Buildings. **Figure 1b** details the layout of the Directional Drill Mud and Hydro-excavation Area with **Figure 1c** detailing the entry to the site with associated car parking.

Figure 2 – Drainage Plan highlights the pre-existing onsite drainage network. This has been provided purely for its historical value in case needed. **Figure 3 – Stormwater Catchment Areas** indicates the separation of catchments where **Figure 4** details the internal and external drainage of respective ORPB and FDB. **Figure 5** details the internal and external drainage of the drill mud processing area and bulk landscaping area, whilst **Figure 6** details the stormwater drainage at the entrance to the site.

This EMP has been written with consideration of the following documents:

- Greenspot Resource Recovery and Recycling Facility, Environmental Impact Statement SSD 7401, prepared by RPS Australia East Pty Limited;
- Resource Recovery and Recycling Centre, Wetherill Park NSW, Noise and Vibration impact assessment, September 2016, prepared by Global Acoustics;
- Greenspot Wetherill Park – Odour Assessment January 2017, prepared by Advanced Environmental Dynamics; and
- Surface Water Assessment for 24 Davis Road, Wetherill Park, Proposed Resource Recovery and Recycling Centre, prepared by Northrop.

It is to be noted that this EMP has been prepared with consideration also of the Secretary's Environmental Assessment Requirements issued by the NSW Government – Planning & Environment, dated 16.12.15.

It is important to note that this EMP is controlled by the following listed documents that co-ordinate Bettergrow's Quality Management System:

-
- The Management System Manual;
 - Environmental Management Plan; and
 - WHS Management Plan.

It is to be noted that the integrated QA/WHS/Environmental Management Plan has been established to meet the requirements of ISO90001: 2008, ISO140001: 2015 & AS4801: 2015 plus WHS and environmental legislation as specified in service delivery contracts from time to time.

It is to be noted that to ensure quality management occurs, specific information is required to be collected and retained so that it can be demonstrated that environmental impacts have been minimised or prevented throughout the course of carrying out activities. As such, it needs to be recognised that auditing and recording must occur as required within this EMP and the above listed Plans and Manual.

1.1 Purpose of this Environmental Management Plan

The purpose of this EMP is to document and describe management practices conducive to Best Practice Environmental Management (BPEM) that will be adopted at the Facility in order to reduce or eliminate any risk of the activities causing environmental harm. Furthermore, the purpose of this EMP is to:

- set the environmental objectives or standards to be achieved so as to avoid, minimise and if necessary, offset the potential impacts of the development;
- identify the potential environmental harm which may occur from routine operations and establishes and documents measures to avoid this harm as far as practicable;
- identify extraordinary factors (i.e. abnormal operation, emergencies) that may cause environmental harm and establishes adaptive management protocols and documents contingency plans to deal with these;
- ensure all persons carrying out the activity are aware of the environmental risks, and are trained in the measures and contingency plans to deal with them;
- implement monitoring of environmental performance to ensure the effectiveness of the measures and contingency plans;
- assist the communication of environmental information throughout the organisation and to the administering authority; and
- provide for continual improvement.

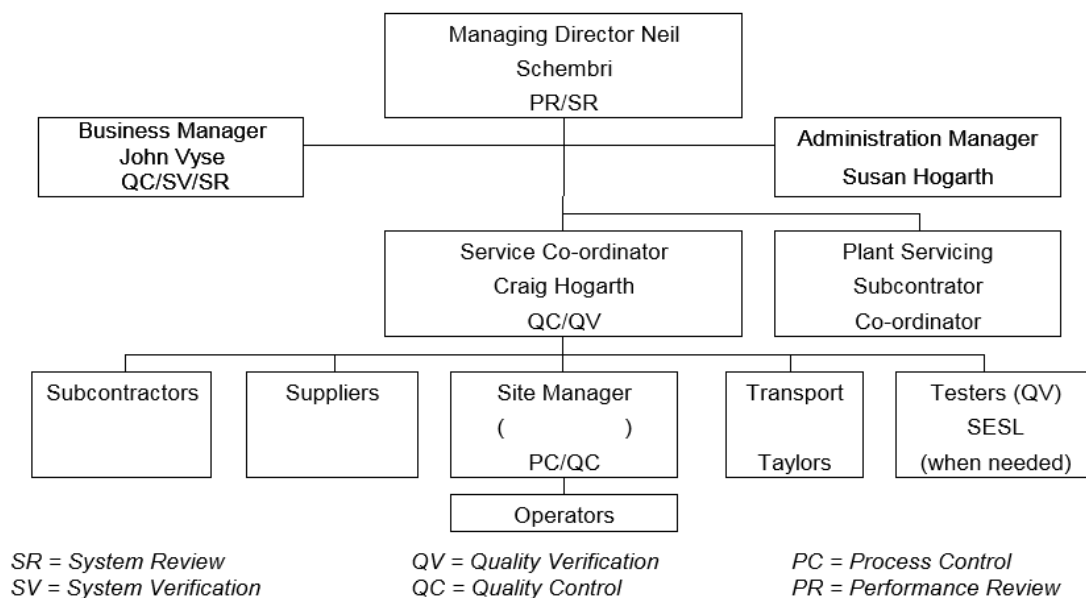
2 Environmental Commitments and Policy

Bettergrow is committed to operating in compliance with all environmental limits and operating the Facility with little or no impact to the receiving environment. Bettergrow is also committed to achieving the lowest possible emissions to the receiving air and noise environments and the lowest possible releases to the water and land environments within economic reason, while maintaining the minimum level of offsite complaints regarding the activity in line with the principles of BPEM. This will ensure that persons are not adversely affected in their place of residence or occupation.

Section 3 below shows the planned organisational structure that must be in place at the Facility to manage the associated activities. It should be noted that all Facility Employees must be trained in the workplace and emergency procedures contained in **Appendix 1** and are to become familiar with this document in its entirety including the environmental commitments made within.

Training of the Facility Employees must also be undertaken such that all employees are fully aware of their obligations and duties to ensure that the highest level of environmental protection is maintained. Furthermore, a continuous improvement process is also provided within this EMP, to be adopted at the site to ensure that the above commitment occurs over time, i.e. that the highest level of environmental protection is maintained.

3 Organisational Structure



3.1 General Contact Detail

Table 1: General Contact Details

	Managing Director	Site Manager
Name:	Neil Schembri	TBA
Mobile:	0419 636 088	
Phone:	(02) 4587 7852	
Fax:	(02) 4577 2603	
Email:	neil@bettergrow.com.au	

3.2 Roles and Responsibilities

Position: Managing Director

Responsibilities:

- Has overall responsibility of the Facility;
- Ensures that Facility Employees are trained in and have a sound knowledge of the practical and operational aspects of this EMP;
- Oversees the implementation of the workplace and emergency procedures;
- Makes decisions regarding the management of stormwater at each of the Facilities, including but not limited to, onsite safety and environmental control measures;
- Ensures that the provision exists for performing regular audits and review of the EMP and associated documents;
- Ensures that appropriate records are kept; and
- Is responsible in the first instance to notify the EHP of any potential or actual environmental harm.

Position: Site Manager

Responsibilities:

- Daily operational management of the Facility;
- Ensures that the Managing Director is promptly notified of any issues potentially causing environmental harm or nuisance;
- Ensures that all Facility Employees engaged in operations associated with the activity have been appropriately trained before commencement of the activity and that such training is recorded;
- Implementation of the workplace and emergency procedures on a daily basis and is encouraged to make suggestions for continuous improvement;

-
- Ensures that all contingency measures are in place in the event an emergency occurs;
 - Ensures that the regular auditing and review of the EMP occurs with findings being presented to the Managing Director;
 - Ensures that appropriate records are kept so as to be made available upon request; and
 - Ensures all records are collected at appropriate times and kept orderly for perusal by a representative of the EHP.

Position: Facility Employees

Responsibilities:

- Follow workplace and emergency procedures to ensure effective and safe environmental outcomes from the activity being conducted; and
- Ensure that the Site Manager is promptly notified of any breaches of the procedures outlined in the workplace and emergency procedures or issues potentially causing environmental harm or nuisance and are encouraged to make suggestions for continuous improvement.

4 Description of Activities

The following sections provide detail on the various aspects associated with the Facility.

4.1 Hydro-excavation and Drill mud/fluids processing

Hydro-excavation and drill muds/fluids will enter the site via the weighbridge whereby the consignment will be scrutinised and vetted. The following image and description below are provided to assist one's understanding with the hydro-excavation and drill mud/fluids processing activity.

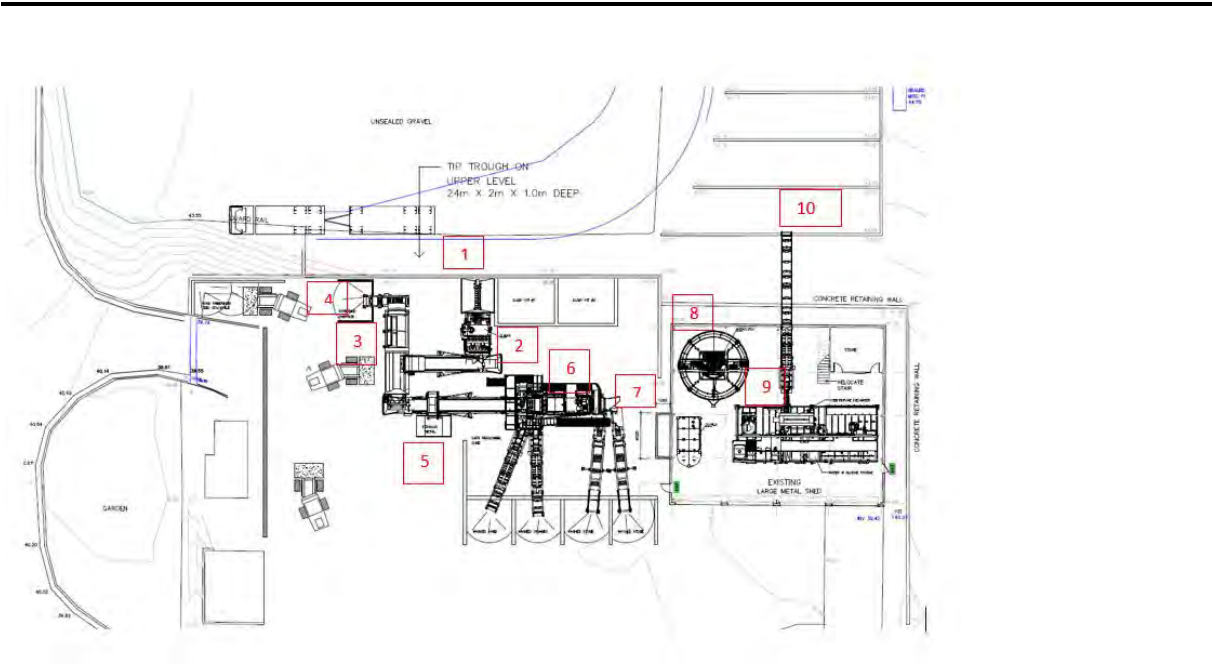


Figure 1: Key Locations of Hydro-excavation and Drill Mud/Fluid Process

It is to be noted that approximately 60,000 tonnes / year (on average 164 tonnes / day) of drill mud/fluid waste will be delivered, which will contain approximately 40 % solids and 60 % water. The objective of the treatment is to remove solids for consolidation and offsite use.

Dry, wet and “semi-dry” waste (i.e. directional drilling muds / hydro excavation waste) is to be deposited into the tip trough at location (1). In periods where the tip trough approaches its capacity, unloading to the sump pits will occur. A long arm excavator, equipped with a clam shell bucket will remove mud and some water for it to be placed back into the tip trough when appropriate. Accumulated water in the sump pits will be pumped to the tip trough.

All material will enter the hopper adjacent to the tip trough which will deliver material to the GMax shaker screen at location (2). The initial screening will separate the larger mud conglomerates and aggregates from smaller fractions, including water whereby larger aggregates and pieces of mud will be conveyed to the Trommel (location 3). The smaller fraction including water will be pumped to the hydro-cyclone component whereby further separation of the finer aggregates and particles occur. The hydro-cyclone discharges aggregates and particles to a finer screen of the GMax that feeds the conveyor leading to the Trommel. Some water is expelled at this time also which continues to the Rotomax (location 6). The hydro-cyclone will also discharge dirty water to the Rotomax component.

Oversize material generated at location (3) is to be stockpiled at location (4) and the rest of the material is then conveyed to a wash box and fluidised by the addition of the recycled process water. This fluidised mixture is then discharged into the AggMax attrition system where the Rotomax, the first element of the AggMax system is located (location 6). The Rotomax has twin counter rotating

shafts to scrub contaminated material. At the same time, any light weight organic waste or plastic is removed using an integrated upward flow classification system. This system is adjustable to ensure the optimum floatation point is achieved.

Any ferrous metals present within received muds and fluids are removed by a magnet (location 5) before the Rotomax. Depending on the particle sizes the solids are separated into the 4 remaining storage bays at location (6). All liquid and light material floats over a weir and is screened out, whilst all heavy materials sink to the bottom and which are run over another screen at location (7). The liquid that passes through the screen is then pumped to the clarifier (location 8).

The clarifier (8) thickens the solids before being pumped into the centrifuge (9). The centrifuge creates clean water for sewer discharge or storage for reuse within the process and the solids created are deposited in the load out storage bay (location 10) with an approximate solids content of 45-55%.

To assist with treating water, polymers will be utilised. It is to be noted that recycled water can be used in mixing of the polymers but it is unreliable and can cause the system to work inefficiently. As such 12,000 - 20,000 litres of potable water will be utilised for the mixing of polymers unless treated water is determined to be suitable for such use.

There is provision for the storage of 200,000 litres of treated water storage which will be stored for either, discharge to sewer, for reuse in the process or within other aspects of the facility (i.e. garden watering or wash-downs) or if required, removal offsite.

The average weight delivered to the site will equate to 4.2 tonnes / truck which will equate to approximately 24 deliveries / day or 48 truck movements / day. Bettergrow will have the storage capacity for 400 tonnes of solids at any one time (i.e. 4 days' worth of storage) prior to processing.

It is to be noted that no other wastes are authorised to be processed through the plant described above as by doing so may prevent the recovered muds/soil, aggregates and sands from being utilised due to contamination. Employees are encouraged to report to the Site Manager any instances where objectionable or chemical type odours are experienced to be emanating from received muds and fluids or where visual observation determines that material is contaminated or that a reaction is occurring for example (i.e. gassing, popping, fizzing).

All consignments of drill muds and fluids that enter the site for unloading and treatment, must be determined as being devoid of any hazardous and toxic contaminants such as asbestos (all forms) prior to unloading. All loads will be tested for pH and electrical conductivity before unloading occurs. Observations will occur to determine if there is any physical or chemicals reactions occurring (i.e. any signs of fizzing, popping, heating and odour or fume release). Samples will be retained for 14 days.

Generators of incoming loads must be questioned to determine if incoming loads are originating from contaminated land sites or from areas and locations whereby such contaminants are likely to be present. In such instances NATA accredited analytical data must be provided which demonstrates no hazardous or toxic contaminants are present. If such data cannot be provided, then the load is to be rejected.

Section 4.5 of the NSW EPA Resource Recovery Order –The Treated Drilling Mud Order, 2014 states that:

The processor must not supply treated drilling mud to any person if, in relation to any of the chemical and other attributes of the treated drilling mud waste:

4.5.1. The concentration or other value of that attribute of any sample collected and tested as part of the routine or one-off sampling, of the treated drilling mud exceeds the absolute maximum concentration or other value listed in Column 3 of Table 1, or

4.5.2. The average concentration or other value of that attribute from the routine or one-off sampling of the treated drilling mud (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 2 of Table 1.

Section 4.6 further states:

The absolute maximum concentration or other value of that attribute in any treated drilling mud supplied under this order must not exceed the absolute maximum concentration or other value listed in Column 3 of Table 1.

Table 1 mentioned above has been reproduced below as Table 2.

The Site Manager is responsible for ensuring that all of the requirements mentioned in the abovementioned order are adhered to. Furthermore, the Site manager must be familiar with the requirements of the associated NSW EPA Resource Recovery Exemption – The Treated Drilling Mud Exemption 2014. For further information readers are directed to the respective order and exemption at the following internet addresses respectively.

<http://www.epa.nsw.gov.au/resources/waste/rr014-drilling-mud.pdf>

<http://www.epa.nsw.gov.au/resources/waste/rre14-drilling-mud.pdf>

Column 1	Column 2	Column 3
Chemicals and other attributes	Maximum average concentration (mg/kg 'dry weight' unless otherwise specified)	Absolute maximum concentration (mg/kg 'dry weight' unless otherwise specified)
1. Mercury	0.5	1
2. Cadmium	0.5	1
3. Lead	50	100
4. Arsenic	20	40
5. Chromium (total)	50	100
6. Copper	50	100
7. Nickel	30	60
8. Zinc	100	200
9. Electrical Conductivity	1.5 dS/m	3 dS/m
10. pH *	6 to 9	5.5 to 10
11. Total Polycyclic Aromatic Hydrocarbons (PAHs)	20	40
12. Benzo(a)pyrene	0.5	1
13. Total Petroleum Hydrocarbons (TPHs)	250	500
14. Total Chlorinated Hydrocarbons	0.5	1

*Note: The ranges given for pH are for the minimum and maximum acceptable pH values in the treated drilling mud.

Table 2: Portraying Chemical and other Attributes with Maximum Average and Absolute Maximum Concentrations (Source: NSW EPA Resource Recovery Order).

The Drill Mud Processing Facility is to be set down within a bunded area to contain all surface water runoff which is to be internally reticulated. The bunded containment volume has been sized in accordance with EPA guidelines to cater for the 1 in 20 year average reoccurrence interval (ARI) 24hr storm event. A minimum containment volume of 224m³ is to be provided via a 280mm set down into the area. Overflow from the Drill Mud Processing Facility is to be discharged to sewer to avoid any potential stormwater contamination.

With an average water content of approximately 60%, approximately 98,400 litres of liquid will be generated at the facility / day. On average it is expected that 64,944 litres of treated water will be discharged to sewer / day. Depending on daily requirements however and the quality of water produced, this amount maybe more or sometimes less. In any event, emphasis must be given to ensuring that plant

and equipment are operated efficiently such that the best quality water can be produced as failing to do so may result in excessive waste water disposal charges.

Recovered muds, aggregates and sands will be transported from the Facility in 32 tonne consignments as and when required during hours of operation. The maximum amount of consolidated mud, aggregates and sands to be contained on site at any one time will be 2,500 tonnes. At 40 tonne production / day, this would equate to 62.5 days of production. If continuous removal was to occur, 1 consignment of 32 tonnes would be removed / day for 2 truck movements / day.

In all, this aspect of the proposal would see on average 50 truck movements / day for the delivery and removal of consolidated solids. Some removal of treated liquid may occur on a non-routine basis and truck movements may equate to 4 movements / week of 22 tonne consignments.

4.2 Organic Material Receival and Processing

Organic materials will be received at two separate locations at the Facility for processing and consolidation for on sending to Bettergrow's composting facility, located in the Hunter Valley.

Firstly, the Kerbside Organic Receival and Processing Building (ORPB) will receive, process and consolidate Garden Organics and combined Food Organics and Garden Organics (FOGO) generated from kerbside collections. Secondly, Commercial and Industrial Organics (C&IO) will be received at the Food Organics Depackaging and Processing Building (FDB) for processing, product destruction and consolidation. The following sections provide further detail on the separate activities.

4.2.1 Kerbside Garden Organics and Combined Food Organics and Garden Organics

Garden Organics (GO) or combined GO and Food Organics (FOGO) from kerbside collections will be delivered to Bettergrow's Davis Road facility by the contractor's kerbside collection vehicles. The site will be open for receival of kerbside collection material 24 hours/day, 7 days/week, and will be actively staffed six (6) days/week (including public holidays) between the hours of 6.00am to 10.00pm.

GO/FOGO will be weighed into the site using a vehicle-unique swipe card connected to a dedicated inbound weighbridge. The date and time of vehicle entry, the load weight and the collection vehicle's subsequent outbound time will be recorded. This will aid tracking pick-up location of any loads presenting abnormal issues for recycling. Drivers will be guided to the organics building on site from the weighbridge by line marking in addition to constant positive contact UHF radio communication with each vehicle.

Drivers will be instructed to unload kerbside organics through one of three high-speed roller doors accessing an enclosed, dedicated, controlled-environment Kerbside Organics Receival and Processing

(KORP) building. This building will only receive organics from kerbside collections. Vehicles will reverse through the roller doors before unloading onto a concrete sorting floor, banded and drained. The maximum turn-around time for collection vehicles entering and leaving the site will be no more than 20 minutes. The Davis Road KORP facility may receive and process up to 70,000T/year of GO/FOGO material, providing ample service capacity for Council.

Unloaded material will first be checked and decontaminated for gross contamination by staff operating a single, rubber-tyred front-end loader (FEL). Gross contamination will be stockpiled within the building before being loaded into skip bins also located inside the building for disposal at landfill.

Following gross decontamination, organics will be effectively “loosened” following their compaction inside collection vehicles. This is a very important step for releasing any contamination bound within the organics, thereby maximising recovery and minimising generation of Residual Material to be sent to landfill.

De-compacted material will be moved from the de-compacter unit up an inclined conveyor to an elevated Picking Station, where secondary, smaller pieces of contamination will be manually removed by plant operators and dropped down chutes into a skip bin below for disposal at landfill.

From the Picking Station, organics will be moved by rubber conveyor to a slow-speed Shredder to prepare a mulched material ready for composting. Shredding also permits greater compaction of organics onto outbound transport for composting at one of the licensed composting facilities, minimising daily transport movements.

Once shredded, organics will be moved again by conveyor to a single deck Star Screen, which bounces over-sized organics off its deck for collection, whilst at the same time permitting finely shredded material to be moved to the short-term stockpile area within the enclosed building via front end loader. Collected oversized material will be returned to the beginning of the process line to be rechecked for contamination and re-shredded to maximise resource recovery and minimise generation of Residual Material for landfill.

The building will have capacity to stockpile shredded organics for up to two (2) operational days at peak delivery period, although it is Bettergrow’s intention to only store material on-site for up to 24 hours at a time. Collected leachate from inside the building will be re-applied to the shredded material prior to transport off-site. This will help maintain moisture content of material and minimise generation of fine, airborne particulate matter.

Stockpiled, shredded material will be loaded daily into high-volume road transport for Bettergrow’s composting facility in the Hunter Valley.

Bettergrow intends to minimise transport movements by back-loading in-bound bulk road transport delivering materials for the company's bulk landscaping supplies business also located on the Davis Road site. Use of high-volume, efficient walking floor trailers and B-Double units also minimises the nett impact of the project on road pavements, and reduces carbon emissions and transport noise generated by site activities.

Outbound road transport will pass over a separate, dedicated weighbridge on-site, capable of weighing-off 19 metre vehicles and trailers. Data will similarly be electronically recorded by use of individual transport swipe cards.

Organics receipt, processing and out-loading will all be conducted in a purpose-built tilt panel construction fully enclosed concrete building of approximately 2,400 m² floor area (refer to **Figure ... of Appendix 3**). The building will be provided with a ventilation system under negative pressure which will include odour abatement via the use of high grade activated carbon filters, impregnated with lime to reduce H₂S and thus minimise the risk of fugitive odour and or particulate matter release.

4.2.2 C&IO - Food Depackaging

The Davis Road site will be capable of receiving and processing up to a further 30,000 T/year of other source-separated Commercial and Industrial (C+I) organics within the Food Organics Depackaging and Processing Building (FDB).

Food Organics will be received at site from a number of different sources including but not limited to the following:

- Large commercial waste collection contractors
- Skip bin operators and small commercial collectors who provide dedicated pre consumer organics collection services
- Specific companies with product requiring secured product destruction

All food organics irrespective of nature or source will enter the site via the weighbridge and following weighing will proceed up to the dedicated Food organics depackaging and processing building which is separate to the GO and FOGO processing building. The source and nature of the incoming products will dictate what processing is required and determine the respective drop off location.

All incoming bulk solid food organics from commercial collectors will be tipped into the dedicated drop off pits on the eastern end of the depackaging building (refer to **Figure of Appendix 3**). The material will then be lifted, via a dedicated fixed excavator located on the rim of the pits, into the feed hopper of the Turbo Separator. The Turbo Separator and subsequent screen separate the liquid and solids fractions as well as remove any packaging for disposal to landfill.

The solids organic fraction will be collected in hook lift bins and transferred to the main GO and FOGO organics processing building for blending the shredded organics prior to despatch. The liquid fraction will be pumped into on site dedicated liquid organics storage vessels for temporary storage. Once 30,000 litres or more of liquid organics is being held in the storage vessel this will then be removed from site via a liquid tanker for transfer to either an approved land application site for soil injection or to one of Bettergrow's licenced composting operations for further processing.

All incoming liquids will be received and consolidated in dedicated receiving vessels whereby liquids will be either blended with the outgoing shredded organics before being transferred offsite to one of the company's licensed composting facilities or will be tankered to an approved facility approved for soil injection.

Any truck arriving to site with palletised solid or liquid organics will be directed to the secure product storage area entered from the western end of the depackaging building. Trucks will be unloaded using a fork lift and product will be temporarily securely stored prior to being processed through the Turbo Separator. Glass containing liquids will not be processed through the Turbo Separator. Initially, glass containing liquids will be processed at Bettergrow's facility located at Vineyard. If depending on feedstock volume, a glass crusher is required, then a designated plant would be introduced to the depackaging/destruction area.

The de-packaging systems being adopted including the use of the Turbo Separator and screen will ensure maximum FO recovery from the dedicated source separated systems which are being implemented and promoted by the EPA.

The food organics processing line has been designed to accept 30,000 tpa of a mixture of solids and liquid food organics.

The majority of solids and liquid food organics will be received between the hours of 5.0 am and 5.00 pm. To assist with traffic flows and collection the depackaging building will be available to nominated reputable operators between the hours of midnight and 5.0 am. The Davis road site will be manned 24 hours per day and on site staff will be trained and capable of managing incoming loads of organics to ensure no operational or environmental incidents occur.

During the course of the day, or later if the food is not perishable, the material is fed through the turbo separator to remove the packaging. Depending on type, the packaging will either be recycled or disposed of to landfill.

No processed wet food waste will be stored in the depackaging building for longer than 24 hours except for quantities of less than a truck load left over at day's end on a Friday. Such material will be held in

a covered bunker over the weekend and will be the first material to be dispatched the following Monday morning.

Dry food waste will either be blended into the garden organics or potentially in the future recovered as stock feed, depending on quality. If the quality is not good enough for inclusion in stock feed it will be blended with the garden organics for transfer to one of the Bettergrow composting facilities.

Packaged food waste will be de-packaged using the turbo separator and allocated as above, depending on its type and quality.

A range of long term and well established markets for branded compost, mulch and soil improvement products have been developed and maintained by BetterGrow over a 35 year period. These are bulk supply markets for products that comply with the NSW EPA 2014 resource recovery orders and exemptions for both blended and unblended composts and include:

Organic Garden Mix, Soil Conditioners and Decorative Mulches suitable for home gardens, Resoil, Bio-N-Rich Compost, Mine Mix and Soil Conditioners suitable for broad scale agriculture and rehabilitation projects and Better Mulch suitable for application in rehabilitation and lower grade landscaping projects.

4.3 Bulk Landscaping Supply Area

The third aspect of the Facility is Bettergrow's intention to operate a bulk landscaping supply area with bulk loads of materials brought to the site for dispatch into the immediate and surrounding areas. Purpose built bays will be constructed as shown within **Appendix 3 – Figure 1** whereby unloading, storage and load out activities will occur. The materials that will be stored will be soil, bark, compost, sands, rocks and gravels.

The bulk landscape supplies will provide for 8 truck movements / day on average for a combined total of 51 truck movements / day when including what is estimated to occur for the receipt of Hydro-excavation and drill muds/fluids and C&D waste.

4.4 Wastes Authorised to be Received at the Facility

It is essential that all site personnel involved in accepting wastes are aware of the waste types allowed to be accepted at the Facility.

Table 3: Wastes Authorised to be received at the Facility and the associated waste tracking codes (alphabetically listed)

Waste Description	Is the waste trackable?	Waste Tracking Code
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	(Yes / No)	
Hydro-excavation and drill muds and fluids	No	
Kerbside Garden Organics and Food Organics in combination with Garden Organics (FOGO)	No	
C&I Organics	No	

5 Identification of Environmental Issues and Potential Impacts

It is important that Facility Employees are aware of the potential environmental impacts that could arise if the procedures and protocols highlighted within this document and in the workplace and emergency procedures are not properly implemented or followed.

The potential actions or conditions which could result in these environmental impacts are also summarised in the subsections below so that Facility Employees can appreciate that due care must be taken when performing their respective duties.

5.1 Air

If not properly managed, the activities at the Facility have the potential to cause environmental harm or nuisance as a result of uncontrolled emissions to air that leave the Facility and which are deposited at an odour or dust sensitive receptor. Unpleasant odours could become pronounced from the processing of GO, FOGO and C&IO if protocols and management techniques mentioned in this EMP are not followed and which could result in offsite nuisance. Ordinarily, unpleasant odours will not be experienced from the processing of drill muds/fluids and hydro-excavation fluids and from the bulk landscaping area.

Employees must understand that any experience of offensive or noxious odour must be reported to the Site Manager immediately as it is likely something prohibited or at least something that is not authorised to be received has occurred or that there has been a change in processing requirements that has resulted in the change of the odour climate or emission profile. If loads are observed to be liberating offensive or noxious odours at the time of entry to the Facility then unloading is not to occur and the offending vehicle is to be turned away from the site.

Ordinarily, dust should not be generated to the point whereby offsite sensitive receptors are affected from the activities performed onsite albeit that the bulk landscaping area could be a cause for dust liberation if certain protocols and management techniques expressed within this EMP are not followed or adhered to.

It is essential to note that the time of day and prevailing wind conditions plays a major role in whether or not dust and particulates or odour emissions will result in environmental harm or nuisance at a remote sensitive receptor. Employees must be aware that when certain climatic conditions occur, mitigation techniques must be employed to mitigate or prevent releases that create offsite nuisance.

A level of awareness and understanding of the above mentioned conditions will assist personnel when responding to a release to the air environment in order to prevent environmental impacts from occurring. The environmental impacts that may result following a release to the air environment and which should be noted by onsite personnel are listed below:

- Reduction in the aesthetics of the air environment at the location of a sensitive receptor;
- Potential health impacts to onsite personnel or at the location of a sensitive receptor;
- Environmental harm or nuisance at the location of a sensitive receptor; and
- Reduction in the health and biodiversity of ecosystems.

The conditions and actions listed below have been identified as some of the precursors to the impacts outlined above. Facility Employees must work collectively to ensure that these conditions do not occur.

- Failure to conduct activities in the appropriate manner, location or at the appropriate time (i.e. as specified in the procedures);
- Dust and particulate liberation from site traffic movements or from the mismanagement of bulk landscaping materials;
- Windblown litter; and
- Allowing highly odorous waste types to be unloaded or in any way stored at the Facility.

The above issues are addressed in *Section 6.1 Air Management* below and in the relevant workplace procedure (refer to **Appendix 1, Section 2, Workplace Procedure 1 – Dust and Particulate Management** and **Workplace Procedure 5 – Odour Management**).

5.2 Water

The types of waste accepted at the Facility, if not adequately managed have the potential for causing detrimental impacts on the receiving water environment. For example, releases of certain oxygen-demanding contaminants such as leachate generated from the GO and FOGO processing activity to water, can cause fish kills due to oxygen depletion, and if prolonged, could threaten the sustainability of fish and invertebrate life in the downstream aquatic system.

Similarly, the release of organic matter that has been received or processed through the ORPB or FDB or stored within the bulk landscaping supply activity (i.e. compost or mulch) to waters can have the

same deleterious effect as described above due to the decomposition of organic matter by micro-organisms thus creating a Biological oxygen Demand (BOD) within receiving waters.

Suspended particles that are contained within drill mud and fluids and landscaping products, if released via stormwater could create worsening conditions for benthic organisms that reside in the substrate of streams and creeks when deposition of sediment eventually occurs.

Collectively, the environmental impacts that may result following a release of poor-quality water to the receiving water environment (surface waters and groundwater) are as follows, particularly if the releases are prolonged:

- A decrease in the water quality that results in:
 - A reduction in the aesthetic value of the receiving waters;
 - Potential health impacts to livestock or persons utilising the waters downstream, either directly or indirectly; and
 - Reduction in the health (species richness) and biodiversity of the receiving ecosystems.

It is therefore of paramount importance for Facility Employees to adhere to the procedures in this EMP. The procedures provide a framework for BPEM which when implemented minimises the likelihood of any adverse impacts to the receiving water environment.

The mechanisms and actions outlined below have been identified as potential precursors to the environmental impacts and all onsite personnel must work collectively to ensure that they do not occur.

- Failure to conduct activities in the appropriate manner, location or at the appropriate time (i.e. as specified in the procedures);
- Release of contaminants to surface water or groundwater as a result of:
 - a spill being ineffectively managed;
 - an overtopping of an onsite bund due to the volume of stormwater required to be managed being in excess of the design capacity of the stormwater containment system;
 - a crack in the walls or base of a bund;
 - the storage of wastes outside defined areas, particularly in areas where stormwater can mobilise contaminants on contact; or
 - the poor maintenance of bunds, storage tanks, gross pollutant trap (GPT), the first flush system servicing the bulk landscape supply area, including the sediment fore-bay or stormwater drains; and
- Tracking out of mud or dirt on vehicle wheels that could lead to a reduction in the water quality of the receiving environment.

The above issues are addressed in *Sections 6.2 Water Management* and *9.3 Spill Response*, below, and in the relevant procedures (refer to **Appendix 1, Section 2, Workplace Procedure 4 – Stormwater Management**, and **Section 3, Emergency Procedure 2 – Spill Management**).

5.3 Noise

Facility Employees must recognise that if operations are not properly managed noise emissions from the Facility may occur at a level which is intrusive and as such is the cause for environmental nuisance. The environmental impacts that may result following a noise release are:

- Intrusive noise is experienced at a sensitive receptor at a level which causes environmental harm or nuisance; and
- A decrease in the aesthetic enjoyment of the environment surrounding the Facility or at a location of a sensitive receptor.

It is essential for Facility Employees to adhere to the procedures in this EMP, as they provide a framework for BPEM which when implemented minimise the likelihood of any adverse environmental impacts to the receiving environment. The mechanisms or actions by which the above impacts may occur are highlighted below and all Facility Employees must work as a team to ensure that they do not occur.

- Failure to conduct activities in the appropriate manner, location or at the appropriate time (i.e. as specified in procedures);
- Use of faulty or malfunctioning plant and/or equipment (e.g. excavator with loose bucket or ill-maintained silencing system);
- Impact or impulsive noise occurring during night time hours such loading or maintenance activities;
- Inappropriate alarm sounding or audible vehicle warning system during night time operations;
- Tonal noise (e.g. constant whining or screeching) from the operation of plant or equipment such as air filters that is not addressed promptly; and
- Pumps utilised to transfer liquids are faulty or not appropriately attenuated.

These issues are addressed in *Section 6.3 Noise management* below and in the relevant workplace procedure (refer to **Appendix 1, Section 2, Workplace Procedure 5 – Noise Management**).

5.4 Land

Facility Employees must recognise that if activities are not appropriately managed they have the potential to cause detrimental impacts to the receiving land environment. Impacts that could arise are listed below:

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- Reduction in the aesthetics onsite;
 - Reduction in soil quality and health;
 - Loss or reduction of regional ecosystems;
 - Loss or reduction of vegetation; and
 - Increased erosion of the soil.

The following situations have been identified as precursors to the above listed impacts and therefore Facility Employees must work cooperatively to ensure that they do not occur so as to avoid or minimise impacts to the receiving environment.

- Failure to conduct activities in the appropriate manner, location or at the appropriate time (i.e. as specified in procedures);
- Spills are not immediately contained and cleaned up in accordance with **Emergency Procedure 2 – Spill Management**, and contaminated soil has not been removed and disposed of;
- Disturbance of or removal of vegetation from regional ecosystem; and
- Disturbance of areas vulnerable to land erosion.

These issues are addressed in *Section 6.4 Land Management* below, although it should be noted that there is no specific workplace procedure to address these issues however they are addressed throughout the other procedures.

5.5 Waste

Employees must understand that if waste generated or received at the Facility is not appropriately managed it has potential to negatively impact the receiving environment. The potential impacts to the air, water and land environments that have been identified as a result of improper management of waste are outlined below:

- Reduced aesthetic appeal from litter beyond the boundary of the Facility;
- Hazardous or unpleasant working conditions at the Facility;
- Attraction and proliferation of pests and/or vectors;
- Loss of species richness and/or biodiversity of receiving waters, due to an increase in contaminants released to such waters;
- Contamination of land; and
- Reduced quality of the air environment within or beyond the boundary of the Facility.

The conditions and actions listed below have been identified as potential precursors to the above impacts, and all Facility Employees must work together to ensure that these do not occur.

-
- Failure to conduct activities in the appropriate manner, location or at the appropriate time (i.e. as specified in procedures);
 - Spills of waste are not immediately contained and cleaned up in accordance with **Emergency Procedure 2 – Spill Management** (refer to **Appendix 1, Section 3 – Emergency Procedures**);
 - General waste generated on site is not managed appropriately, i.e. is not placed into receptacles/containers which are emptied when full and the waste disposed of or recycled, and;
 - is allowed to proliferate beyond the boundary of the Facility.
 - is allowed to enter the air, water or land receiving environments.
 - accumulates causing a fire hazard on or offsite.
 - Lit cigarettes are not appropriately extinguished prior to disposal causing a fire incident;
 - Waste is placed in the stormwater flow paths resulting in the inappropriate direction of stormwater and possible movement of waste to onsite stormwater drainage and pollutant control infrastructure and thus compromising their performance or to receiving waters;
 - Prescribed wastes generated on site such as oil, lubricants or coolant are not removed in a timely manner and accumulate;
 - Tyres are accumulated on site;
 - Prescribed wastes are not removed from the facility by an approved operator in accordance with waste transport management requirements, including tracking requirements;
 - Prohibited waste is received such as putrefying organics, solvents, batteries or asbestos or any item listed in Schedule 1 of the POEO Act; and
 - Waste received for consolidation is not sent to an appropriate facility.

These issues are addressed in *Sections 6.5 Waste Management* below and *9.3 Spill Response* below and the relevant procedures (refer to **Appendix 1, Section 2, Workplace Procedure 3 – Incoming Waste Management** and **Section 3, Emergency Procedure 2 – Spill Management**).

6 Environmental Management

The subsections below describe the management procedures and control measures that must be implemented at the Facility in order to minimise or prevent environmental harm or nuisance, including the environmental impacts outlined in *Section 5 Identification of Environmental Issues and Potential Impacts* above.

6.1 Air Management

All onsite employees must be aware that the following objectives must be maintained when performing onsite activities:

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- (a) the qualities of the air environment that are conducive to protecting the health and biodiversity of ecosystems; and
 - (b) the qualities of the air environment that are conducive to human health and wellbeing; and
 - (c) the qualities of the air environment that are conducive to protecting the aesthetics of the environment, including the appearance of buildings, structures and other property.

It is highly unlikely that there will be any discernible impact to the quality characteristics presented above if control measures are adhered to. Adequate control measures are in place to safeguard for future generations. The methods proposed within this EMP and supported by measures contained within the Workplace Procedures will ensure that human health or the environment is in no way affected.

Under normal operating conditions the activity will not see any deleterious effect on the aesthetics of the surrounding environment including natural vegetation. In no way is surrounding property or infrastructure to be affected.

Facility Employees will be made aware of the relevant contaminants referenced nationally for health and wellbeing and the aesthetic enjoyment of places for their visual and local amenity which may be affected from releases from the Facility.

Air quality indicators such as particulate matter (PM_{2.5} and PM₁₀) and Total Suspended Particulates (TSP) which are applicable to the approved operations and which are acknowledged are provided with their relevant air quality objectives below:

- PM_{2.5} should be equal to or less than 25 µg/m³ averaged over a 24 hour period or 8 µg/m³ averaged over one year;
- PM₁₀ should be equal to or less than 50 µg/m³ averaged over 5 days during a year; and
- TSP should be a result of 90 µg/m³ or less averaged over 1 year.

The Managing Director will ensure that the control methods outlined within this document are in place to ensure that onsite air quality is not reduced to the point where employee health and wellbeing is affected.

Reference to time weighted average values (where applicable) will assist in this regard. By achieving this, the ambient air quality should be protected.

6.1.1 Dust and Particulate Management

Dust and particulate generation as a result of activities must be minimised to the greatest possible extent. This will be achieved by adherence to the control measures and procedures outlined below.

Bettergrow is committed to ensuring that generated dust does not pass the site boundary. This performance measure is easily achieved via observation, and as such all employees are encouraged to cease activities that are producing dust to the extent that visible dust is seen to be passing the site boundary.

Incoming loads of bulk landscaping materials must be scrutinised for the propensity to release dust. If there is a possibility that dust could be released, the designated fogging unit or sprinkling units located at either end of the bulk landscaping area must be operated. Consideration should be given to the operation of fogging units if sprinklers are not effective under certain wind conditions.

Enough water must be present such that sprinkler or fogging units can effectively knock out dust from the air environment. It is preferable to have sprinklers or fogging units directed at the designated load at the time of its unloading.

Driveways and haulage paths must be regularly swept so that dust and or particulate is not re-entrained during windy periods.

All loads incoming and outgoing loads of bulk landscaping materials must be effectively tarped such that dust and or particulate is not released during transit.

If required bulk landscaping supplies must be wetted so as to minimise the release of dust at the time of unloading or loading. This will be achieved by utilising water that has been siphoned from the drill mud storage and separation process or from rainwater that is harvested off the roof of onsite buildings.

6.1.2 Odour Management

It is important to note that **No** noxious or offensive odourous materials are approved to be received at the Facility and as such it is not expected that odours will be generated to the point where environmental nuisance will be caused.

The greatest potential for odour nuisance from the Facility is from the mismanagement of GO, FOGO and C&IO whilst it is delivered, sorted, consolidated processed or depackaged. It is essential that the following management techniques are adhered to, to ensure that odour nuisance is not created during the above mentioned aspects:

- All incoming consignments are to be unloaded within the ORPB or the FDB;
- No GO, FOGO or C&IO is to be stored outside the ORPB or the FDB;
- Any movement of processed C&IO to the ORPB for consolidation must be contained or covered so that fugitive emissions are not released during the transfer. Moreover, prior to the movement of C&IO, proprietary inoculums must be applied to suppress any volatile odour;

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- When doors are opened to receive incoming GO, FOGO or C&IO, air extraction must be operating to direct odours to one of the designated high grade activated carbon filters installed. Moreover, when doors are opened, the outdoor misting sprays, positioned above door openings must be operated whereby a proprietary inoculum will be dispersed into the air to suppress any fugitive volatile odour emissions;
 - All plant and equipment utilised for the processing of organic material must be regularly cleaned down so that they do not become a point source of pollution. Proprietary inoculum must be utilised to sanitise and deodorise equipment;
 - If FOGO is displaying elevated levels of volatile organic compounds, then spray with inoculum;
 - When the breakthrough sensor attached to the high grade activated carbon filter indicates that VOC concentration is > 2 ppm, filter media must be changed within 24 hours;
 - Enough high grade activated carbon filter media (filter media) must be stored on site so as to be able to exchange two units; and
 - Spent filter media must be incorporated in to the consignment of FOGO that is to be removed from the Facility.

Further to the above, all stormwater improvement devices must be regularly maintained and serviced such that anaerobic conditions do not occur. If for some reason stormwater improvement devices become a point source of odour, microbial inoculums, oxidising agents (recommended as hydrogen peroxide 30%) or pH adjusters must be considered. However, before application occurs, consultation with an appropriately qualified person must occur to ensure that environmental harm does not occur to the receiving environment from such addition.

Any odourous (prohibited) wastes unintentionally received and observed after the offending transporter has vacated the site must be promptly dealt with and placed into a receptacle for prompt removal off site. Offending material must be treated with a suitable proprietary product to ensure odour nuisance is not created. No such waste will be allowed to remain on site.

If at the time of unloading, prohibited waste is observed, then the offending transporter must remove the said material from the site promptly.

If in the unlikely chance drill mud received is odourous the use of proprietary products will occur to minimise or eliminate the said odour. Odourous mud could be encountered if the generation point is a swampy location or contains reducing dissolved organic matter for example. Such odours could pertain to sulphides (rotten egg gas).

All general waste generated at the Facility must be contained in an appropriate waste receptacle and be removed from the site regularly. Waste must not become a point where vectors such as birds or vermin are attracted.

6.2 Stormwater Management

Bettergrow is aware of the importance of managing stormwater that is contaminated onsite and is therefore committed to implementing effective stormwater management at the Facility.

All onsite employees must be aware that the following objectives must be maintained when performing onsite activities:

- (a) the qualities of the water environment that are conducive to protecting the health and biodiversity of ecosystems; and
- (b) the qualities of the water environment that are conducive to human health and wellbeing; and
- (c) the qualities of the water environment that are conducive to protecting the aesthetics of the environment, including the visual appearance of receiving waters, recreational contact whether primary or secondary.

The following measures must be implemented to prevent or minimise the generation of contaminated stormwater and further to prevent or minimise releases of contaminated stormwater to the receiving environment.

Key to the management of stormwater at the site is the implementation of the strategy defined by Northrop within the document titled Surface Water Assessment for 24 Davis Road, Wetherill Park, Proposed Resource Recovery and Recycling Centre and in particular Section 5.5. Essentially, the following is to be noted:

- Roof water runoff is to be directed via downpipes to above ground rainwater harvesting tanks which have been size to maximise the Site's reuse potential;
- Surface water runoff from the hardstand areas in conjunction with the tank overflow is to be conveyed via the stormwater network in a southerly direction across the site;
- Surface water runoff from the Bulk Landscaping Supplies area is to be directed to a first flush sediment trap with a minimum storage volume of 32kL. The system has been designed in accordance NSW EPA guidelines to capture a 20mm first flush of rainfall from across the area;
- Prior to release from site, the piped stormwater network is to be directed to a proprietary STC-27 Humeceptor system. The Hydrodynamic Humeceptor system is an underground, precast concrete stormwater separator that utilises flotational and gravitational separation to efficiently remove total suspended solids for a wide range of particle sizes, including fine sediments (<100 microns). This also means that particulate bound nitrogen, phosphorous and hydrocarbon will also be removed (Humes, 2016). The system has been designed to provide:

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- 27 m³ of storage including an oil storage volume of ~ 4000L in case of onsite spillages; and
 - Removal efficiencies of 98% of oils and hydrocarbons, 30% total nitrogen and 30 % of total phosphorous.
 - From the Humeceptor, the existing outlet connection point of stormwater into Fairfield City Councils stormwater system along Davis Road will be maintained.

Appendix 3, provides a number of Figures which detail stormwater drainage infrastructure. It is to be noted that **Figure 2** is provided to portray the historical drainage on site, should it ever be required to be referred to.

In assessing the stormwater management for the site, Northrop decided to split the entire catchment of the site into three sub-catchments to adequately cater for the three levels that exist (refer to **Figure 3** of **Appendix 3**). The top catchment incorporates the ORPB and the FDB (refer to **Appendix 3, Figure 4**). The middle catchment (**Figure 5** of **Appendix 3**) includes the Bulk Landscaping Supply Area (BLSA) and Drill mud and Hydro-excavation Fluids Processing Area (DHFPA) and the bottom catchment that fronts the site (**Figure 6** of **Appendix 3**) incorporates the front office and weighbridge complex.

It is to be noted that **Figure 4** also provides detail of the internal drainage of the ORPB and the FDB for the management of leachate and wash-down waters generated within each building. **Figure 4** also highlights the location and size of rainwater tanks that have been incorporated into that sub-catchment. Tanks are in place for water harvesting that is to occur on site to displace the requirement for potable water.

Figure 5 of **Appendix 3** highlights the location and associated drainage of the first flush sediment trap that is to service the BLSA. The same figure highlights the internal drainage associated with the DHFPA. The area surrounding the drill mud/fluid separation process is bunded so that any spills or wash-down waters can be contained, collected and then passed back through the drill mud/fluid separation process. Accordingly the DHFPA has been roofed to exclude the accumulation of rainfall.

Following on from above, **Figure 6** of **Appendix 3** portrays the location of the rainwater harvesting tank servicing the Front Site Office Building and the Humeceptor and associated drainage.

The Site Manger will ensure that all personnel required to be familiar with the stormwater drainage network will be. This is essential for times when spills may occur and prompt attention is required.

Surface gradients and drainage must not be altered in any way unless direction has been provided by management.

All chemicals kept onsite must be stored in the workshop or one of the surrounding sheds in a bunded area. The chemical storage area must have a concrete floor. Care must be taken to ensure that incompatible chemicals are stored in separate bunded areas to prevent any adverse reactions in the event of a spill. Incompatibilities can be identified on the Safety Data Sheet (SDS) provided by the chemical manufacturer. All bunding must be constructed and maintained with a capacity to contain a minimum of 110% of the largest container or vessel which is stored within it.

All stormwater infrastructure, including the respective stormwater improvement devices and bunding must be regularly inspected to ensure that it is maintained in a structurally integral state. Any observations which indicate that any of the said infrastructure is compromised must be reported to the Site Manager for corrective action. All observations must be recorded within **Form 7 – Stormwater Infrastructure Performance Checklist** contained with **Appendix 2**.

Section 8.3 Maintenance Practices and Procedures below outlines the importance of performing regular maintenance for bunding and stormwater infrastructure installed at the site.

Any spills that occur must be managed in accordance with *Section 9.3 Spill Response* below and **Emergency Procedure 2 – Spill Management** contained within **Appendix 1, Section 3**.

Facility Employees must understand that the control measures and management procedures outlined in this EMP have been designed to ensure that the above listed objectives are achieved and by doing so, compliance will be achieved. Furthermore, Employees are directed to the PIRMP for explicit detail on what is required when an emergency incident is declared on the site. No variance from instructions provided will be acceptable during such an incident.

6.3 Noise Management

It needs to be understood that the NSW Industrial Noise Policy (INP) states that objectives for environmental noise are to account for intrusive noise and to protect the amenity of a particular land use. It is also important to note that applicable intrusiveness and amenity limits are derived independently. These are then compared to determine project specific noise levels (PSNL) (Global Acoustics; s 2.4; 2016). The lower of the two apply and are adopted as PSNL.

It is to be noted that the intrusiveness criterion is expressed as:

$$\text{Laeq, 15minute RBL} + 5$$

Where Laeq,15 minute is the Laeq noise level from the source, measured over 15 minutes and RBL is the rating background level (Global Acoustics; 2016).

It is important to understand that whilst the activity is governed by the intrusiveness criterion mentioned above, within the aforementioned report prepared by Global Acoustics it was stated that:-

An amenity criterion caps industrial noise levels. Amenity criteria are recommended for various land uses.

According to the INP, an urban area is an area with an acoustical environment that:

- is dominated by ‘urban hum’ or industrial source noise;*
- has through traffic with characteristically heavy and continuous traffic flows during peak periods;*
- is near commercial districts or industrial districts; or*
- has any combination of the above.*

Where ‘urban hum’ means the aggregate sound of many unidentifiable, mostly traffic-related sound sources.

The Global Acoustic report stated that nearest residential area to the subject site (Maugham Crescent) meets these criteria, and is classified urban in accordance with INP definitions. Recommended amenity limits from the INP for residences in urban areas were tabled in the said report and shown in Table 7. The said limits are reproduced below for one’s understanding of what are acceptable and maximum values (expressed as $L_{Aeq, period}$ dB) that can be experienced during the day, evening and night time periods.

Table 7 URBAN AMENITY CRITERIA, $L_{Aeq, period}$ dB

Period	Acceptable	Maximum
Day	60	65
Evening	50	55
Night	45	50

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Table 4: Urban Amenity Criterion (reproduced from Global Acoustics Report, circa 2016)

Whilst it is important not to produce sound at a level where the amenity criterion of an urban dwelling is exceeded, it is equally important not to create disturbance to neighbouring industrial uses, when they are in use. It is important to note that the amenity criterion for neighbouring industrial uses is not as stringent as the criterion set for urban dwellings. Be that as it may, every effort should be taken to

attenuate intrusive noise for the protection of onsite personnel and visitors. The following table is reproduced from the Global Acoustic's report detailing the amenity criterion for industrial receptors.

Table 8: AMENITY CRITERIA FOR OTHER LAND USES, LAeq,period dB

Type of Receiver	Period	Acceptable	Maximum
Industrial	When in use	70	75

Table 5: Industrial Amenity Criterion (reproduced from Global Acoustics Report, circa 2016)

The following tables from the Global Acoustic report are reproduced for quick reference for one's understanding of the PSNL that apply to the activity.

Table 9: PROJECT SPECIFIC NOISE LEVELS – NM2/R01

Period ^{1,2}	RBL LA90 dB	Intrusiveness Criterion LAeq,15minute dB	Acceptable Amenity Criterion ³ LAeq,period dB	Project Specific Noise Levels LAeq,15minute dB
Day	46	51	60	51
Evening	45	50	50	50
Night	39 ²	44	45	44

Notes:

1. Day 7:00 am 6:00 pm ~ Evening: 6:00 pm to 10:00 pm ~ Night: the remaining periods; and
2. Lowest measured ABL adopted in place of RBL. Refer to Section 2.2.2.

Table 10: PROJECT SPECIFIC NOISE LEVELS – OTHER RESIDENTIAL RECEIVERS

Period ^{1,2}	RBL LA90 dB	Intrusiveness Criterion LAeq,15minute dB	Acceptable Amenity Criterion ³ LAeq,period dB	Project Specific Noise Levels LAeq,15minute dB
Day	35	40	60	40
Evening	30	35	50	35
Night	30	35	45	35

Notes:

1. Day 7:00 am 6:00 pm ~ Evening: 6:00 pm to 10:00 pm ~ Night: the remaining periods.

Table 6: Project Specific Noise Levels for Nearest Residential Receiver and Other Residential Receivers (reproduced from Global Acoustics, circa 2016)

Noise generation at the Facility will be kept to minimum through the utilisation of plant and equipment which is not defective and which emits a sound pressure level such that applicable intrusiveness and amenity limits are not exceeded. The Site Manager will be responsible for ensuring that plant and equipment meets this requirement and where necessary will organise for appropriate attenuation to be installed. Readers are directed to the Global acoustic report prepared for the approval of this facility

which indicates the types of plant and equipment utilised for noise prediction modelling. When considering the purchase of plant and equipment, it must be determined that the noise environment will in no way be worsened from the operation of such plant and equipment.

To be clear, the use of machinery and equipment associated with all activities conducted at the Facility will be managed in a manner that prevents noise emissions being created at levels greater than the rating background level + 5dB(A) during daytime hours of operation when measured as an L_{Aeq} , 15 minute experienced at any urban noise sensitive place.

All onsite employees must be aware that the following objectives must be maintained when performing onsite activities:

- (a) the qualities of the acoustic environment that are conducive to protecting the health and biodiversity of ecosystems; and
- (b) the qualities of the acoustic environment that are conducive to human health and wellbeing, including by ensuring a suitable acoustic environment for individuals to do any of the following—
 - a. sleep;
 - b. study or learn;
 - c. be involved in recreation, including relaxation and conversation; and
- (c) The qualities of the acoustic environment that are conducive to protecting the amenity of the community.

It is crucial that strict adherence to the control measures occurs so as to minimise any environmental nuisance. Achievement of the above objectives will ensure compliance is achieved. **Workplace Procedure 5– Noise Management** must be reviewed by all onsite employees engaged in performing activities on site.

Furthermore, Facility Employees must be made aware of the ambient noise levels that are experienced in the area and that the activities performed on site must not produce noise that is intrusive to sensitive receptors or that may impact the enjoyment of their place of residence. The operations require the following plant and equipment to be used at various times of operation:

- Front end loader and excavator for sorting and segregation activities, loading and removal of segregated muds;
- Pumps for the transfer of liquids; and
- Foggers for dust management.

All plant and equipment utilised at the Facility must be serviced and maintained in accordance with the manufacturer's specifications. In addition to this, daily machinery start up checks must occur to demonstrate that plant and equipment are not generating excessive noise. A record of daily start up checks must occur by filling in **Form 9 – Daily Equipment/Machinery Start Up Checklist** contained within **Appendix 2**. The Site Manager must be informed of any noises observed that are not normally present so as to enact prompt attention. Plant and equipment deemed to be defective must not be used until the problem is rectified unless there is an absolute need, such as in an emergency and in which safety can be assured.

Excessively noisy plant or equipment must not be used unless it has to be used to respond to an emergency, such as the movement of spilt waste from a stormwater flow path or to extinguish a fire. Trucks transporting materials to and from the Facility are required to be appropriately silenced. Drivers of trucks with defective mufflers must be warned that they will not be allowed to return to the site until any defects are rectified.

Bettergrow is aware that in the event of a valid noise complaint, the EPA may request Bettergrow to perform noise monitoring. The Site Manager must engage a suitably qualified and experienced person to carry out the required monitoring as specified by the administering authority and within the timeframe stated should this become necessary.

Work that generates noise must not occur outside normal hours of operations unless there is an immediate need to do so.

If noise is identified to be creating environmental nuisance appropriate attenuation must be installed in the form of acoustic barriers, including the use of shipping containers. Barriers must be strategically placed so that the sound transmission is effectively intercepted.

6.4 Land Management

Land on and offsite will be largely protected by the siting of the activities where described throughout this document. Furthermore, land degradation will not occur due to the stormwater management practices that are to be adopted on site.

Vegetation (not including weeds) that is located on site must in no way be affected by activities occurring on site.

Stormwater must be managed such that erosion or mass movement of sediment does not occur.

All spills must be cleaned up promptly using dry methods of clean up such that contaminants are not released to land.

Whilst the site has been rehabilitated, no bulk excavations are to occur on site until authorised by management. There should not be a necessity to do such excavations in any event.

In order to prevent a reduction in aesthetics onsite the site must be maintained in a clean and tidy manner in accordance with *Section 6.5 Waste management* below.

6.5 Waste Management

Whilst the Facility will generate some wastes on a daily basis, Bettergrow is committed to prioritising the management of waste generated and processed at the Facility in accordance with the waste and resource management hierarchy, which is outlined in the figure below.

It is to be understood that waste avoidance, reduction, reuse, recycling, recovery or treatment, as opposed to direct disposal, represent management practises higher in the preferred order of adoption in the waste and resource management hierarchy (refer to *Figure 2* below) and it is Bettergrow's intention to optimise avoidance by adopting, reuse, recycling and recovery.

It is essential then that when sorting, segregation and consolidation occurs within the ORPB and the FDB, cross contamination with undesirable contaminants (i.e. any physical item that cannot be composted) does not occur. All undesirable items must be segregated and stored for on sending to a facility that is approved to accept such material.

It is essential that contaminated drill muds are not accepted at the Facility such that non- contaminated muds become contaminated, resulting in a huge financial burden on the Facility to rectify which may include treatment and disposal of waste and decontamination of plant and equipment. If at any time one is not sure as to the validity of the consignment delivered then the Site manager must be notified before unloading occurs. Observations that might lead to such notification could relate to any noxious or toxic fumes emanating from the consignment, any fizzing, cracking or popping noises being experienced or expression of heat or smoke being observed.

General wastes must be disposed of in the general waste bins, which must be regularly emptied and the waste disposed of using either a regular council or private waste collection service. Where possible recyclable wastes must be separated and deposited in designated recycling bins. Recyclable wastes must be collected from the site for recycling by either a council or private waste collection service. Alternatively, the Site Manager may arrange for the wastes to be transferred to an appropriate recycling facility once there is an economically viable quantity for transport.

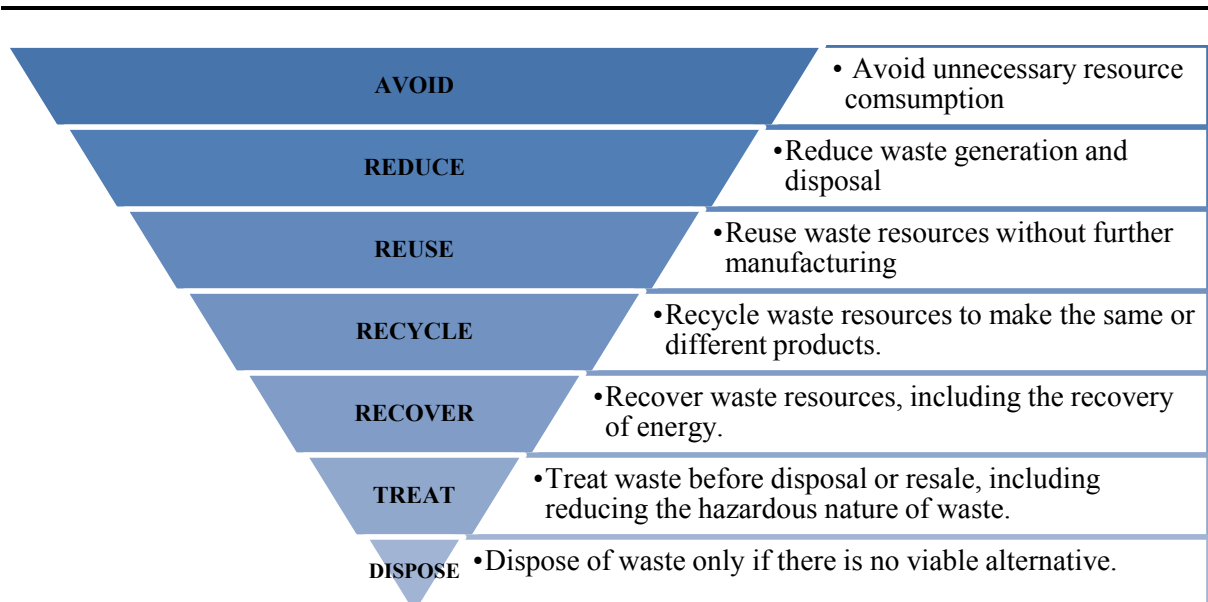


Figure 2: Waste and resource management hierarchy

The Facility must be maintained in a tidy manner and be free of wind-blown litter. The Site Manager must organise a general clean-up of the site as and when required.

All waste that is received at the Facility must be recorded. Records will assist in determining whether the waste levy is applied to the Facility as and when required. It is the intention not to store wastes for any length of time onsite such that the waste levy is not imposed. It is to be noted that a liability is activated when waste is received and the liability is extinguished once the waste is sent offsite for lawful recycling, reuse or disposal. The liability becomes payable when waste is stockpiled at the Facility for more than 12 months. As such all waste received, processed and removed from the Facility must also be recorded. Essentially, a mass balance must be demonstrated when requested by the administering authority.

6.5.1 Waste Tracking

Schedule 1 of the *Protection of the Environment Operations (Waste) Regulation 2005* (the Waste Regulation) lists the types of waste that must be tracked. It is essential that all scheduled wastes leaving the facility (such as waste oil generated from the servicing of plant and equipment, oily water, hydrocarbons, lubricants and coolants) are characterised appropriately so that should certain waste types require tracking, they can be.

Any prescribed waste that is generated on site must be removed from the facility by an approved transporter. All consignments must be accompanied by waste transport certificate.

Before transporting waste from one place to another a consignment authorisation for the waste movement is required and a waste transport certificate for the load is completed. Waste will be only

removed from the vehicle after the waste transport certificate is provided to the facility receiving the waste and the facility agrees to receive the waste.

The online tracking system of the NSW EPA is to be utilised unless the transporter does not use the approved online tracking system. As such official waste transport certificates must be used and kept for four years. Waste tracking certificates must have all required prescribed information contained within the waste tracking docket.

6.5.2 Prohibited Waste Management

Prohibited waste is defined as waste that is not listed in the waste acceptance criteria of the DA or EPL for the Facility. Examples of prohibited wastes are contaminated soil, asbestos, putrescible waste or any scheduled wastes as defined in Schedule 1 of the Waste Regulation. The exclusion of prohibited waste must be achieved by the efficient vetting performed at the site office/weighbridge complex and during the unloading of waste loads within the ORPB and or the FDB or within the receival area of the drill mud and hydro-excavation management area. Any loads or part loads of prohibited waste discovered must be recorded using **Form 13 – Prohibited Waste Characteristic Report** contained within **Appendix 2**.

Any prohibited waste which is discovered after unloading should be immediately reloaded in the respective transport vehicle and transported to a facility that can lawfully accept it. Alternatively, if the vehicle has already left the Facility, the Site Manager must determine the waste transport company who delivered the waste. The Site Manager must as soon as practicable contact the said company as soon as possible with the expectation that the company will collect the prohibited waste and transport it to a facility that can lawfully accept such waste.

Dependent upon circumstances such as with the potential to cause material environmental harm, the Site Manager will contact the EPA in instances involving the unintentional acceptance of prohibited waste.

All prohibited waste that requires waste tracking as described in the previous section must occur.

7 Best Practise Environmental Management

The definition of best practice environmental management (BPEM) is the “... *management of the activity to achieve an ongoing minimisation of the activity’s environmental harm through cost effective measures currently used nationally and internationally for the activity.*”

Today more than ever emphasis is being placed on the incorporation of a BPEM philosophy into waste management activities. Bettergrow recognises that adopting BPEM methods means that financial

resources are spent efficiently to gain beneficial environmental outcomes in any given situation. Bettergrow is committed to installing fit for purpose machinery and equipment that achieves effective waste management.

Bettergrow understands that the adoption of BPEM will result in a fully compliant facility and this must be acknowledged by all employees. As part of achieving BPEM and compliance with environmental legislation, the workplace procedures have been designed as an easily accessible and easy to understand guide to assist employees conduct daily duties in accordance with the principles of BPEM. It is to be noted that workplace procedures will be reviewed and amended from time to time, but before implementation of any new practices occur, the said procedure must be authorised by the Managing Director.

8 Management Procedures

8.1 Routine Procedures

Bettergrow is committed to providing routine operating procedures to prevent or minimise environmental harm or nuisance, however occasioned or caused during normal operations.

Daily routine operations must therefore be carried out with the safe systems of work provided within the above mentioned procedures so that the Facility can be operated effectively with no or little impact to the receiving environment. The workplace and emergency procedures contained within **Appendix 1** are listed in the table below:

Table 7: Workplace and emergency procedures

Workplace Procedure Title	Procedure Number
Dust and Particulate Management	1
Vector Attraction Management	2
Incoming Waste Management	3
Stormwater Management	4
Noise Management	5
Odour Management	6
Emergency Procedure Title	Procedure Number
Pollution Incident Management	1
Spill Management	2
Uncontrolled Release to Water	3
Fire Incident	4

The workplace procedures encompass information that helps Facility Employees complete their work so that unplanned maintenance is minimised. All employees are encouraged to discuss potential changes to any facets of the operation with the Site Manager in order to gain efficiency (refer to *Section 12 Continuous Improvement and Periodic Review of Environmental Performance*).

8.2 Staff Training

Bettergrow believes that no employee should be allocated a task to perform without adequate training. The safety of employees is paramount and essential for the successful operation and as such Bettergrow commits to ensuring that all employees receive sufficient training in their respective tasks to undertake them competently and safely. In some instances, third party consultants may be engaged to provide training.

During training, emphasis must be placed on making Facility Employees aware of the potential environmental impacts that could occur when activities are improperly conducted and of the penalties associated with the contravention of the *POEO Act*.

Practice drills may be used as part of training and to enable personnel to become familiar and competent with the emergency procedures (refer to **Appendix 1, Section 3 – Emergency Procedures**). When required to do so, staff must attend training sessions. All Facility Employees must be trained in the use of all emergency procedures and equipment, and it must be recorded that such training has been given and competencies reached.

The Site Manager must ensure that all Facility Employees read and understand that the workplace and emergency procedures before engaging in the respective activities. Bettergrow must also provide a copy of this EMP to Facility Employees which can be accessed at their place of work. The workplace and emergency procedures must be laminated and placed in strategic positions around the site for the purpose of ease of access, such as in particular machinery or equipment.

Facility Employees are encouraged to offer suggestions for improvements to any procedures or activities being carried out through filling in **Form 10 – Continuous Improvement** and submitting it to Management or their respective supervisor (refer to **Appendix 2 – Forms and Checklists**).

8.3 Maintenance Practices and Procedures

Sorting, segregation and treatment cannot be conducted effectively if machinery or equipment has not been maintained in good working order. Therefore, Bettergrow is committed to providing machinery and equipment that is fit-for-purpose and safe. There must be no compromise on quality of operations at the Facility due to machinery and equipment not operating properly.

All machinery and equipment must be operated in accordance with the manufacturer's specifications, and scheduled services must be adhered to. The Site Manager is responsible for ensuring that servicing and maintenance is conducted when required.

If more efficient practices can be obtained, routine maintenance for certain aspects of the activity may be lessened.

8.3.1 Daily Equipment/Machinery Start-up Checklist & Daily Running Sheet

The use of the Daily Equipment/Machinery Start-up Checklist will assist Bettergrow in continually maintaining and improving machinery and equipment, through regular observation and inspection and the systematic recording of faults. It will also provide protection for Facility Employees from machinery or equipment that may be operating with minor faults, which could lead to greater operational risk.

Form 1 – Daily Running Sheet is provided for the recording of any observations made, including extraordinary events or emergencies albeit that other forms required to be completed (i.e. in the event of spills, incidents, complaints and emergencies) must also be. The Daily Running Sheet can also be utilised for the recording of when training is provided or when tool box meetings occur (refer to **Appendix 2 – Forms and Checklists**).

The Daily Running Sheet can be utilised by all personnel to record when actions or certain events occur. This will strengthen all recording performed. All Facility Employees are required to report any observation of an activity or practise being performed on site that has the potential or which is causing environmental harm, including nuisance to the Site Manager for attention and appropriate action. The Site Manager is then to provide instruction on what necessary corrective action is to occur in abating or eliminating the said activity or practice observed to be the potential or the cause of the said harm or nuisance.

8.3.2 Infrastructure

Apart from the maintenance of machinery and equipment attention must also be given to the infrastructure present onsite, such as:

- Drainage channels;
- Hardstand areas;
- Bunding (temporary or permanent); and
- Stormwater Quality Improvement Infrastructure.

It is essential that once installed the above infrastructure is regularly inspected to ensure their structural and functional integrity in order to divert clean waters, contain any contaminated stormwater and prevent the release of contaminated water to the receiving environment.

Form 7 – Stormwater Infrastructure Performance Checklist is to be utilised to record the performance of the respective pieces of infrastructure associated with stormwater control and management. The Site Manager is responsible for ensuring that this information is regularly collected.

8.3.2.1 Drainage Channels

Drainage channels are important for the drainage and direction of stormwater (clean or contaminated) across the Facility. Drains and flow paths must be visibly inspected regularly (particularly after rainfall events) for evidence of cracking, blocking or a build-up of sediment or vegetation resulting in the inefficient drainage of waters and the ponding or pooling of waters in the drains. The drainage channels or surface gradients must be maintained such that stormwater is directed as desired.

Form 7 – Stormwater Performance Checklist has been provided for the recording of observation about the performance and integrity of the stormwater control system and must be utilised when identifying short falls with the onsite drainage system (refer to **Appendix 2 – Forms and Checklists**). Any cracks or leaks found along the drainage channels or undesirable surface gradients must be repaired or rectified promptly.

8.3.2.2 Bunding

The purpose of bunding is either to contain contaminated stormwater generated as a result of conducting activities or chemicals, or to exclude clean stormwater from the Facility or storage locations. Therefore, it is crucial that the integrity of all bunding is maintained to minimise the generation of contaminated stormwater. The bunding must be visually inspected for cracks or gaps and report any deficiencies to the Site Manager via **Form 7 – Stormwater Performance Checklist** (refer to **Appendix 2 – Forms and Checklists**).

8.3.2.3 Sediment Fore-bay and First Flush System

The sediment fore-bay and first flush system located within the bulk landscaping area must be inspected after rainfall events to ensure that they have functioned as intended and are also cleaned and emptied so as to be ready of the next rainfall event.

All observations must be recorded using **Form 7 – Stormwater Performance Checklists** and reported to the Site Manager (refer to **Appendix 2 – Forms and Checklists**). Clean outs must be recorded within **Form 1 – Daily Running Sheet**.

8.3.2.4 STC-27 Humeceptor

The Humeceptor is a key piece of stormwater infrastructure that must be inspected regularly to ensure optimal operational conditions. Northrop described the Humeceptor as a hydrodynamic separator which has the ability to remove hydrocarbons and fines suspended solids (≥ 10 microns) from stormwater. The unit will also assist in the events of spills and minimising non-point source pollution entering downstream waterways after release from the site (Northrop; 2016).

The Humeceptor has the capacity to store 20 m³ of sediment and 4,290 l of oil for a total storage volume of 27,270 litres.

All observations must be recorded using **Form 7 – Stormwater Performance Checklists** and reported to the Site Manager (refer to **Appendix 2 – Forms and Checklists**). Clean outs must be recorded within **Form 1 – Daily Running Sheet**.

8.3.2.5 Concrete/Bitumen Hardstand Areas

Well designed and properly functioning hardstand areas are essential for the efficient operation of the Facility. If the structural integrity of the bitumen or concrete hardstand areas are not maintained then they can become a point source of groundwater pollution or due to the site's history facilitate groundwater pollution by accentuating the movement of any remaining or residual contaminants through the soil profile.

It is essential to maintain a gradient that effectively facilitates the movement of stormwater over the surface of the hardstand areas to the respective drainage entry points or stormwater quality improvement devices.

Proper operation of a front end loader (FEL) is essential to minimise the likelihood of compromising the integrity of the hardstand areas. It is more desirable to leave minor amounts of materials on the hardstand pad surface to be removed by hand, broom and shovel or street sweepers, than to attempt removal of residual items with the FEL and risk compromising the integrity of the hardstand areas. The Site Manager is responsible for ensuring that the FEL operator is proficient in the operation of such equipment. If the integrity of the hardstand is continually compromised it must be continually repaired at an unnecessary financial cost.

8.3.3 Daily Weather Conditions

Daily weather conditions must be recorded using **Form 2 – Daily Weather Conditions** (refer to **Appendix 2 – Forms and Checklists**). Alternatively, electronic recording is acceptable. This is an extremely useful data set that can be used for example in predicting when runoff will occur under certain rainfall conditions, when possible odour nuisance could be created or when there is potential for dust to be released from activities being performed (considered remote however). Keeping daily records (i.e. ordinarily at 9 am and 3 pm or when an incident arises such as a dust release for example) will assist when enquiries are made. By keeping daily records historical events can either be negated or supported.

9 Contingency Plans and Emergency Response Procedures

In order to appropriately manage emergencies, the Managing Director is primarily responsible for the implementation of emergency procedures. This will include notifying any emergency department(s) as necessary. **Appendix 1, Section 3, Emergency Procedure 1 – Pollution Incident Management** lists the respective authorities that may be required. However, the Site Manager must implement the respective emergency procedures and undertake notification if the Managing Director is unavailable to do so.

The Site Manager must ensure that all Facility Employees follow any instruction given when responding to an emergency situation, whether those instructions are from Bettergrow managers or the assigned Incident Controller.

Appropriate first aid equipment must be readily accessible in various locations throughout the Facility and an adequate number of personnel must be trained in workplace first aid.

It is to be noted that Emergency Procedure 1 compliments the PIRMP that has been established from the site.

9.1 Environmental Incidents

An environmental incident is an event or incident that causes a breach of EPL conditions or environmental legislation which threatens or causes environmental harm. These events/incidents include, but are not limited to, the following:

- Fires and/or explosions;
- Any uncontrolled releases to receiving waters (surface waters or groundwater); and
- A spill of fuel, oil and/or chemical on land.

When an environmental incident occurs immediate action shall be taken to contain the effects of the incident and minimise the environmental impact resulting from the incident in accordance with the relevant emergency procedure (refer to **Appendix 1, Section 3 – Emergency Procedures**).

9.1.1 Environmental Incident Reporting

All Facility Employees are required to immediately inform the Managing Director or Site Manager of any risks, issues or incidents that may either a breach of the EPL conditions or cause environmental harm or nuisance. The following section is extracted from the *Protection of The Environment Operations Act 1997* that describes the meaning of material harm to the environment.

147 Meaning of material harm to the environment

- (1) For the purposes of this Part:
 - (a) harm to the environment is material if:
 - (i) it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or
 - (ii) it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (or such other amount as is prescribed by the regulations), and
 - (b) loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.
- (2) For the purposes of this Part, it does not matter that harm to the environment is caused only in the premises where the pollution incident occurs.

The administering authority (EPA) must be notified of a breach of EPL conditions or of an environmental incident that threatens or causes environmental harm. Under section 148 of the POEO Act there is a duty to report pollution incidents. This includes notifying other relevant authorities such as:

- the appropriate regulatory authority (ARA);
- the Environment Protection Authority (EPA) if they are not the ARA;
- the Ministry of Health;
- the WorkCover Authority;
- the local authority, e.g. the local council, if this is not the ARA; and
- Fire and Rescue NSW.

The Managing Director (or the Site Manager if the Managing Director is not available to do so) must verbally report the incident including the circumstances to which caused the event to the EPA (by calling 131 555) as close to the time the incident occurred. Follow up written notification must occur within 7 days of the initial notification. However, if neither manager is available to report the incident to the EPA, it is the responsibility of the individual who discovered the event to report it directly to the EPA promptly. The contact phone numbers of the EPA and other notifiable authorities are provided within **Emergency Procedure 1 – Pollution Incident Management** (refer to **Appendix 1, Section 3 – Emergency Procedures**).

Form 6 – Incident Notification Form has been designed to outline how incidents and any associated corrective action should be recorded (refer to **Appendix 2 – Forms and Checklists**). It is recommended that this form is utilised for reporting incidents to the EPA and other notifiable authorities.

9.2 Fire Prevention and Response

Safe work practices include an onsite no smoking policy, where smoking is permitted only in designated smoking areas. Additionally electrical components of onsite machinery and equipment or office accommodation must be regularly inspected and maintained to ensure fire risk is minimised.

It is important that a procedure is available to be followed in the event that general fire prevention measures fail or that a fire is caused by unforeseen circumstances. **Emergency Procedure 4 – Fire Incident** outlines some of the possible scenarios and the control processes that are adopted at the Facility in the event of a fire (refer to **Appendix 1, Section 3 – Emergency Procedures**).

In the event of a fire, water can be drawn from the onsite water tanks and fire hydrants (refer to **Appendix 3 – Figure 1a** for locations) and any necessary fire retardants may also be used in the event of a fire. Prior to utilising retardants, confirmation with Fire and Rescue NSW must occur. A sufficient number of fire extinguishers (of various types) must also exist in well-defined locations throughout the Facility. Fire extinguishers are to be regularly checked to maintain their readiness for use and a record is to be kept of scheduled inspections. All plant and equipment necessary to extinguish fires must be maintained in accordance with the manufacturer's specifications. The Site Manager is responsible for ensuring the above is achieved.

Facility Employees must be familiar with the evacuation diagram used for the Facility during fire drills which detail how employees or others present at the site must exit the Facility during a fire incident.

9.3 Spill Response

The Site Manager must ensure that the onsite spill kits are stocked so that Facility Employees can promptly and efficiently respond to any spills. Suggested items for inclusion in a spill kits are listed below:

- Shovels;
- Yard brooms;
- Kitty litter or sawdust;
- Booms (on ground booms);
- Drain covers and plugs;
- Select containers;
- FEL;
- Screens and temporary fencing; and/or
- Portable bins or wheelbarrows.

All spills must be contained immediately, cleaned-up and removed by dry methods in accordance with **Emergency Procedure 2– Spill Management** (refer to **Appendix 1, Section 3 – Emergency Procedures**). Any spills of fuel, oil or chemicals that occur at the site must not be intentionally directed to onsite stormwater flow paths unless there is a necessity to do so, such as in an emergency.

Spills to soil must be managed as outlined above, and then any contaminated soil must be placed in a sealable container and stored in a bunded area until it can be removed from the Facility and taken to a facility that can lawfully accept such waste. Ensure that if waste tracking is required (due to classification of waste/soil), it occurs. It should be noted that this type of spillage is rare and could only occur from an event such as the refuelling of vehicles or if a gearbox or hydraulic unit is ruptured.

9.4 Release Response

If a release occurs to the receiving water environment (surface waters or groundwater) from a release of contaminated stormwater occurs or a spill of fuel, oil or chemicals occurs and is not adequately contained onsite, then the release must be managed in accordance with **Emergency Procedure 3 – Uncontrolled Release to Waters** (refer to **Appendix 1, Section 3 – Emergency Procedures**).

In-situ measurements must be taken at the release point, up and down stream for the following parameters: dissolved oxygen, electrical conductivity, redox potential and pH. A water sample must then be taken from the release point, upstream and downstream of the release. The sample must be sent for laboratory analysis at a NATA accredited laboratory for determination of the concentration of the target contaminant.

The difference between the concentrations of contaminants upstream and the downstream of the release point will indicate the environmental harm caused by the release. Any laboratory results must be passed on to the nominated person at the EPA as soon as possible after they are received.

It is recommended that Bettergrow's interpretation of the laboratory results and a plan of corrective action is also passed on to the EPA in due course (refer to **Appendix 2, Form 6 – Incident Notification Form**).

9.5 Mitigation of Further Environmental Incidents

After a non-compliance with the EPL condition or an environmental incident occurs this EMP, including the workplace and emergency procedures, must be reviewed and updated to as to minimise a reoccurrence of the same non-compliance or incident again. This should occur within 30 days of the non-compliance or incident occurring.

10 Complaints Management

Any complaints received either written or verbal must be recorded using **Form 3 – Complaint Investigation Form** (refer to **Appendix 2 – Forms and Checklists**). The compliant must be investigated and corrective action taken to resolve the source of the complaint.

It should be noted that if the source of the compliant resulted in either a breach of the EPL conditions, or which threatens or has caused material or serious environmental harm. Then it is classified as an environmental incident and must be reported accordingly.

11 Auditing and Reporting

As highlighted within the introduction, this EMP is controlled by the following listed documents as part of Bettergrow's Quality Management System:

- The Management System Manual;
- Environmental Management Plan; and
- WHS Management Plan.

It is to be noted that the integrated QA/WHS/environmental management system has been established to meet the requirements of ISO90001: 2008, ISO140001: 2015 & AS4801: 2015 plus WHS and environmental legislation as specified in service delivery contracts from time to time.

Whilst this EMP specifically relates to the environmental management of potential impacts associated with the various activities to be performed at the Davis Road Facility, further auditing and recording

requirements are listed within relevant sections of the Quality management System. It is the responsibility of the Site Manager to become familiar with these requirements.

The Quality Management Systems requires auditing to be performed for all activities as and when required and that the findings of audits are recorded.

The following sections provide further detail in relation to performing audits and keeping records.

11.1 Auditing

It is essential that auditing is encompassed into the philosophy of effective environmental management. Effective auditing can assist management examine and evaluate the effectiveness and efficiency of operations to ensure that environmental impact is minimised or prevented.

Analysis of systems must occur to ensure that efficiencies of processing and treatment are optimised. This will result in savings to the Facility. Auditing will encompass the following aspects:

- completing specific recording sheets and checklists as and when required by this EMP or the Quality Management System;
- performing reviews of monitoring data from time to time to determine statistically if there is a risk to the receiving environment;
- performing analysis of the various analytical, quality or mechanical systems in place at the facility;
- performing environmental risk assessments; and
- performing investigations into emergencies and incidents such as spills, complaints or non-compliances.

Specific checklists (refer to **Appendix 2**) have been created for the effective environmental management of the potential impacts associated with the various activities being conducted at the Facility. Key performance indicators are provided within respective recording sheets and checklists so that the level of performance can be determined. This EMP has been prepared with numerous Workplace and Emergency Procedures requiring specific recording sheets and checklists to be completed at various times whilst conducting activities.

It is essential that all respective checklists and recording sheets are completed as required. This information will be collectively, a very useful data set when questioned about environmental performance by the administering authority or by the Managing Director. The Site Manager has the responsibility to ensure that all checklists and recording sheets are completed.

Further to the above, respective checklists and recording sheets associated with the Quality Management System must be completed as and when required.

11.2 Record Keeping

All records kept in the course of the operation of the Facility must be retained either as a hard copy or electronically for a minimum of five years. These records include:

- Induction and training records;
- The forms in **Appendix 2** completed as part of day-to-day operations;
- Monitoring result and any third party reports;
- Any risk assessments performed internally or by external auditors;
- Environmental incidents, non-compliance incidents and corrective action reports; and
- Complaints and corrective action reports.

The above records must be made available to the administering authority (EPA or the FCC) upon request.

12 Continuous Improvement and Periodic Review of Environmental Performance

Whilst not diminishing the importance of discussing environmental performance during daily start-up discussions or regular tools box meetings, Bettergrow must hold an annual meeting intended for the periodic review of the Workplace and Emergency Procedures to ensure that BPEM is being undertaken at the Facility.

The aim of this annual review meeting is not only to review these procedures but also to review all information collected and recorded throughout the year, as well as, any past, present or foreseeable problems associated with the way the Facility is operated.

The focus of this meeting is on improving the level of environmental protection provided and to maintain a robust and adaptive approach to BPEM. The periodic review should also address any audit findings that highlighted attention was required for achieving compliance. This should include verification that measures have been adopted that demonstrates the environmental risk is no longer apparent.

The aforementioned meeting is aimed at the continual improvement of the level of environmental protection provided at the Facility. Improvements can be made at any time however when identified by any employee by submitting **Forms 10 – Continuous Improvement** to a Manager where they believe a current workplace or emergency procedure can be improved (refer to **Appendix 2 – Forms and Checklists**).

13 References

- Government, N., 2013. *The Draft NSW Waste Avoidance and Resource Recovery Strategy 2013-21*, s.l.: s.n.
- Government, N., 2013. *The Draft NSW Waste Avoidance and Resource Recovery Strategy 2013-21*, s.l.: s.n.
- Government, N., n.d. *NSW 2021 – A Plan to Make NSW Number One*, s.l.: s.n.
- NSW, E., 2014. *Strategic Plan 2014-2017*, s.l.: s.n.
- The Brundtland Commission , 1987. *The Brundtland Report: Our Common Future, From One Earth to One World*. Oxford, Oxford University Press.
- Code Of Practice For The Safe Removal Of Asbestos 2nd Edition [NOHSC:2002(2005)]
- Code of Practice for the Management and Control of Asbestos in Workplaces [NOHSC: 2018 (2005)] (available from the <http://safeworkaustralia.gov.au> website).
- National Water Quality Management Strategy – Paper No. 4 – Australian and New Zealand Guidelines for Fresh and Marine Water Quality; Volume 1; Chapter 7 – Monitoring and Assessment; October 2000 & the Australian Guidelines for Water Quality Monitoring and Reporting; October 2000.
- NSW EPA – Resource Recovery Order – The Treated Drilling Mud Order, 2014.
- NSW EPA – Resource Recovery Exemption – The Treated Drilling Mud Exemption, 2014.

Appendix 1

Workplace and Emergency Procedures



1 Introduction

This appendix (**Appendix 1**) details workplace procedures for various day-to-day activities that will be conducted at the Facility. Stated measures contained within the respective procedures detail information for site personnel to use as a guide when conducting various activities that have the potential to cause environmental harm or nuisance.

Emergency procedures are highlighted in *Section 3* of this appendix. These procedures have been prepared for the purpose of responding to emergency incidents, such as fire, a release or a spill incident, in an environmentally responsible manner.

Appendix 2 contains the forms and checklists which must be used in conjunction with these workplace and emergency procedures. The forms outline the pertinent information that must be recorded during both day-to-day and emergency incidents, such that reporting to the administering authority can occur when requested.

The following workplace and emergency procedures are intended as a guide for Facility Employees when carrying out specific tasks whilst having due regard for the receiving environment. For the purpose of accessibility to site personnel, workplace and emergency procedures must be laminated and positioned in various locations throughout the Facility, including inside vehicles.

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2 Workplace Procedures

<u>Workplace Procedure 1 – Dust and Particulate Management</u>	
<u>Environmental Commitment:</u>	
<ul style="list-style-type: none"> To ensure that activities at the Facility do not cause environmental harm or nuisance. 	
<u>Identification of Issues:</u>	<u>Potential Impacts:</u>
<ul style="list-style-type: none"> Dust and particulate release from loading/unloading operations within the bulk landscaping area. 	<ul style="list-style-type: none"> Releases that cause environmental nuisance. On site impact to Facility employees such as to their eyes and lungs. Breach of permit conditions and enforcement action taken by the administering authority.
<ul style="list-style-type: none"> Dust fogger(s) have not been maintained properly resulting in them being inefficient/ ineffective. 	<ul style="list-style-type: none"> Increased level of dust and particulate matter emanating from the bulk landscaping area during unloading and load out activities. Releases that cause environmental nuisance. Increased level of impacts on Facility employees such as to their eyes and lungs.
<ul style="list-style-type: none"> Incoming load of landscaping material has not been scrutinised prior to unloading for the propensity to liberate dust. Incoming landscaping load has not been effectively tarped. 	<ul style="list-style-type: none"> Increased level of dust and particulate matter within the area of the bulk landscaping area. Releases that cause environmental nuisance including whilst transporting uncovered along public roads. Increased level of impacts on Facility employees such as to their eyes and lungs. Enforcement action is taken resulting in a fine or prosecution.
<ul style="list-style-type: none"> Complaint received regarding nuisance at a dust sensitive place. 	<ul style="list-style-type: none"> If serious enough, enforcement action may be taken by the administering. The administering authority may request that monitoring be performed at a dust sensitive place to determine if compliant with: <ul style="list-style-type: none"> Dust deposition = 133.33 mg/m² /day –AS 3580.10 of 1991;
<ul style="list-style-type: none"> Too much landscaping material that has the potential to release dust is stored on site. 	<ul style="list-style-type: none"> Offsite complaint resulting in enforcement action being taken.

Control Measures:

- **NO visible dust must be observed leaving the bulk landscaping area, and in particular the site boundary. Activities must cease until control measures are implemented to ensure a repeat or release does not occur.**
- When landscaping material is being loaded into the dump truck/container for movement offsite, hand held directional water sprays or one of the strategically placed foggers must be operated to scrub the air of liberated dust.
- Ensure foggers (if utilised) are positioned downwind of dust generation point.
- Ensure that landscaping material is delivered to the facility is effectively tarped or covered.
- The gate keeper (or any site staff) must ensure that trailers transporting incoming landscaping material into the Facility are properly covered with tarps or are enclosed.
- Landscape material being delivered must be inspected to ascertain how dry/dusty they are and at this time the staff member conducting the inspection must determine if the load needs to be wetted prior to unloading and that overhead misting sprays or the fogging unit is required to knock out dust and particulate from the air environment.
- Ensure bitumen and concrete hardstand areas are regularly swept clean.
- Ensure the dust fogger(s) is/are maintained correctly (in line with manufacturers conditions) to ensure that it/they is/are functioning to the highest/desired potential.
- Ensure overhead misting sprays are operated when dust generation is evident from stockpiled landscape materials.
- Ensure that the overhead misting sprays are maintained and fully operational.
- In summary, if at any time, any dust or particulate release is noticeably higher than usual and gives rise for concern by staff onsite and which are identified as coming from activities located anywhere onsite, dust monitoring must be conducted downwind to determine if excessive particulates are emanating from the site or traveling offsite. If monitoring detects particulates at a level or in a location that could lead to environmental nuisance for any offsite sensitive receptor, an investigation must be conducted to determine the source of the particulates. Only when the source has been determined and corrective action taken, can the issue be recorded as resolved.
- Wherever practicable, eliminate or minimise dust generation at the point of generation.

Record Keeping:

- Whilst activities that may liberate dust are being conducted, all necessary dust suppression techniques used must be recorded on the **Daily Running Sheet, Form 1 of Appendix 2.**
- Record daily weather conditions (dry, windy, rainy etc.) on **Form 2.**
- In the event of a dust complaint, record and investigate details of this complaint (refer to **Appendix 2 – Forms and Checklists, Form 3 – Complaint Investigation Form**) and conduct monitoring (refer to **Appendix 2 – Forms and Checklists, Form 1 – Dust and Particulate Monitoring**).
- Record when fogging units and overhead sprinklers are operating, using **Form 5 – Fogger and Sprinkler Usage Recording Form**, contained within **Appendix 2.**

Responsibility and Communication:

- It is the responsibility of all Facility employees engaged in the above activities to ensure that the above controls are carried out.
- It is the responsibility of the Site Manager to allocate tasks and ensure that control measures are implemented as required to minimise the level of release(s) that could cause/ causes environmental nuisance as well as minimising particulate levels found within the confines of the bulk landscaping area in order to maintain employee health and well-being.

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| <ul style="list-style-type: none">• The Site Manager is to promptly report to the Managing Director any variance from the control measures that may result in environmental nuisance.• The Managing Director is responsible for the prompt notification to the EPA or FCC if dust or particulates are released that is likely to cause environmental nuisance. |
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<p><u>Relevant Legislation:</u></p>
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- | |
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| <ul style="list-style-type: none">• <i>Protection of the Environment Operations Act 1997.</i> |
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Workplace Procedure 2 – Vector Attraction Management

Environmental Commitment:

- The receipt of waste must not cause environmental harm or nuisance by attracting excessive numbers of vectors such as crows, ibis, rats, mice, flies or other insects, such that they may impact the environmental health or amenity of adjacent or nearby property.

Identification of Issues:

- Allowing prohibited (odorous waste (i.e. waste in and advanced stage of decay)) waste to be delivered to the Facility.

Possible Impact:

- Contravention of a permit condition & possible enforcement action by the administering authority.
- Attraction and proliferation of pest vectors e.g. flies or vermin.
- If there is ineffective management of pests, there is a further possibility of offsite environmental nuisance, including the spreading of disease.

- Allowing waste(s) to accumulate (around machinery, edges of building, or in the loading bay) or to an unmanageable level at the unloading area/bays.

- Attraction and proliferation of pest vectors e.g. flies or vermin.
- If there is ineffective management of pests, there is a further possibility of offsite environmental nuisance

- Commingled putrescible waste has been segregated from a load and has not been placed within a sealed container or covered skip bin and or has not been removed from the Facility promptly, but rather has been allowed to sit within the enclosure on the hardstand floor or worse, outside.

- Putrescible waste putrefies and becomes a point source of odour, attracting vermin.
- Flies proliferation occurs.
- Waste is picked up and removed and dropped over neighbouring properties.

Control Measures:

- Ensure only approved wastes are accepted at the Facility; excluding all other wastes (refer to (**Workplace Procedure 3 – Incoming Waste Management** and its associated form).
- Ensure loose waste(s) that could act to harbour pest species (fly blown plastic, paper, cardboard) or waste accumulating in corners or along edges of buildings/structures, is cleaned up regularly (e.g. at least weekly).
- Engage a pest management company where and when necessary to minimise pest (insects or vermin) numbers.
- Ensure all prohibited waste is managed appropriately (refer to **Workplace Procedure 3 – Incoming Waste Management**).

- If at any time, any excessive numbers of vectors such as crows, ibis, rats, mice, flies or other insects are detected by staff onsite and which are identified as coming from site activities, an investigation must be conducted to determine the source of vector attraction. If monitoring detects vectors at a level or in a location that could lead to environmental nuisance for any offsite sensitive receptor, immediate attention is required to minimise the occurrence. Only when the source has been determined and corrective action taken, can the issue be recorded as resolved.

Record Keeping:

- Record of all incoming wastes should be kept (refer to **Workplace Procedure 3 – Incoming Waste Management** and associated form, **Form 11 – Waste Receiving Record**).
- All maintenance activities in relation to waste clean-up should be recorded (refer to **Appendix 2 – Forms and Checklists – Form 1 – Daily Running Sheet**).
- Record when vermin baits and traps are installed or implemented or when any other pest management work is carried out onsite (use **Form 1 – Daily Running Sheet**). Record instances when prohibited putrescible waste is received at the Facility. Record how much commingled putrescible waste has been removed from the Facility.
- If a complaint is received use **Form 3 – Complaint Investigation Form** to record all details of the complaint and keep these records updated as the complaint is investigated.
- Record all odour monitoring performed by using **Form 8 – Odour Monitoring** contained within **Appendix 2**.

Responsibility and Communication:

- All Facility employees that are engaged in the above mentioned activities are responsible for ensuring control measures are met.
- Communication protocols concerned with the notification of transport companies and the EPA or FCC as well as management of prohibited waste(s) once accepted at the Facility are detailed in the relevant workplace procedure (refer to **Workplace Procedure 3 – Incoming Waste Management**).

Relevant Legislation:

- *Protection of the Environment Operations Act 1997.*

Workplace Procedure 3 – Incoming Waste Management

Environmental Commitment

- To ensure that the only wastes received at the Facility are those approved to be accepted and that the receipt of such waste does not result in environmental harm.

Note: For the purpose of this Facility prohibited waste refers to any waste not listed in Section 4.4 of the EMP.

Identification of Issues:

- Prohibited waste(s) is/are allowed to be accepted and unloaded at the Facility.

Possible Impact:

- Contravention of a permit condition & possible enforcement action by the administering authority.
- Spillage of the prohibited waste contaminates land or receiving waters.
- Environmental nuisance (e.g. odour nuisance) is caused.
- Workplace health & safety of Facility employees may be compromised by the acceptance of prohibited waste.

- Not enough room exists for the unloading of GO or FOGO (s) for sorting, segregation and consolidation. The delivered waste has in fact been unloaded incorrectly (i.e. not inside the ORPB but rather outside the building).

- Environmental nuisance (e.g. odour nuisance, dust or vector attraction) is caused.
- Possible generation of contaminated stormwater following contact with waste(s).
- Placing a contaminant in a position whereby environmental harm maybe caused.
- Enforcement action taken by the administering authority.

- Incoming waste has not been subjected to two point scrutinsation (i.e. at the gatehouse and at the point of deposition).

- Unknown type of waste being delivered.
- Acceptance of prohibited waste.
- Enforcement action taken by the administering authority.

<ul style="list-style-type: none"> • Oily water or contaminated drill fluids are received at the facility for storage and consolidation. • Prohibited liquid waste is received. 	<ul style="list-style-type: none"> • Breach of permit resulting in enforcement action being taken by the administering authority. • Requirement to clean – up and or remove waste to an approved facility at huge financial cost. • Sites becomes contaminated with a requirement to remediate. • Health and safety of onsite personnel is compromised.
<ul style="list-style-type: none"> • Waste characteristics (i.e. tonnage/type of incoming waste(s) not recorded). 	<ul style="list-style-type: none"> • Unknown quantity/quality of incoming waste. • Contravention of a permit condition & possible enforcement action by administering authority.
<ul style="list-style-type: none"> • Prohibited asbestos or small packaged dangerous goods have been received within the ORPB. 	<ul style="list-style-type: none"> • Unnecessary risk to onsite personnel. • Contamination of clean value added product with the requirement to dispose of at an approved waste disposal Facility. • Financial impact. • Enforcement action taken by the administering authority.
<ul style="list-style-type: none"> • Vehicles delivering landscaping materials to the facility do not have tarpaulins securely fastened or in place. 	<ul style="list-style-type: none"> • Release of dust and particulate that creates environmental nuisance. • Enforcement action taken by the administering authority.
<ul style="list-style-type: none"> • Recording of waste received has not occurred. 	<ul style="list-style-type: none"> • Unknown quantity and detail of accepted waste. • Acceptance of unauthorised prescribed waste. • Enforcement action taken by the administering authority. • Requirement to pay levy on stored waste even though it is likely that was is no longer present on site.
<p><u>Control Measures:</u></p> <ul style="list-style-type: none"> • All incoming waste must traverse the weighbridge prior to entering the Facility to unload. • Only hydro-excavations fluids, drill muds and liquids are to be received for processing, consolidation and storage. • No other liquid waste is to be stored at the Facility except for leachate generated within the ORPB or the FDB. • Designated loads of putrescible waste must not be received. • Toxic or hazardous waste must not be received. • A verbal and written description of waste type must be provided by every waste transporter delivering waste to the Facility. 	

- The tonnages of all incoming wastes must be recorded to accompany the above description.
- Loads of incoming waste must be visually inspected at the gate house/weighbridge complex. Consider using CCTV located above the weighbridge.
- Each load of waste must be visually inspected by a Facility employee at the point of deposition to ensure the waste type(s) meets the waste acceptance criteria for the Facility.
- A further inspection of the waste received must be undertaken by site personnel when the waste is being processed (i.e. separated, sorted and segregated) to ensure it does not contain unauthorised liquescent, putrescible or prohibited waste.
- All waste being unloaded must be supervised, in order to ensure this is done at the appropriate place and that waste loads do not contain co-mingled prohibited wastes.
- Waste that is putrefying is not to be accepted at the Facility.
- Asbestos must not be accepted.
- When receiving any kind of waste if any unpleasant or foul odours are detected or excessive dust is liberated by staff handling waste, odour or dust monitoring must be conducted downwind to determine if excessive odours or particulates are emanating from the site or travelling offsite. If monitoring detects odours or particulates at a level or in a location that could lead to environmental nuisance for any offsite sensitive receptor, an investigation must be conducted to determine the source of the odours/dust. Only when the source has been determined and corrective action taken, can waste handling continue.

Unintentional Acceptance of Prohibited Waste

- As soon as practicable after identifying that prohibited waste has been unknowingly accepted at the Facility, separate the waste and determine an appropriate temporary storage method to minimise or prevent environmental harm (e.g. prohibited waste (i.e. putrescible waste or hazardous wastes that are not authorised for acceptance must be stored in a suitable container and all prohibited waste must be stored undercover). In this instance the EPA must be notified.
- If asbestos is identified, ensure area is wetted down. Prior to removing asbestos to an appropriate container appropriate personnel protective equipment as described in the *Code of Practice for the Safe Removal of Asbestos 2nd Edition and the Code of Practice for the Management and Control of Asbestos in Workplaces (published by the National Occupational Health and Safety Commission)*.
- Loose sheets must be wrapped in thick plastic and taped so as to make wrapping secure.
- Loose fibres must be vacuumed into an appropriate bag for containment.
- Report the acceptance of prohibited waste to the Site Manager who will notify the EPA if the Managing Director is unable to do so. If the Site Manager is not available, inform leading hand who in turn will notify the EPA if the Managing Director is unable to do so.
- Determine and record details of the transporter who delivered the waste (refer to **Appendix 2 – Forms and Checklist, Form 11 – Waste Reveal Record**).
- As soon as practicable, organise for the waste to be removed and transported by an approved waste transporter to a Facility lawfully allowed to accept such waste.
- Where necessary, issue a written warning to the transporter who delivered the prohibited waste. The warning must explain the consequence of contravention of the permit and that if the transporter commits the same contravention, no further waste will be received from them.

Record Keeping:

- Keep and maintain records of the source, tonnages & composition of all waste types accepted at the Facility (refer to **Appendix 2 – Forms and Checklists, Form 11 – Waste Receival Record**).
- Ensure that required waste volume surveys are recorded and that relevant information is submitted to the EPA as required. Ensure all waste is on sent to either a recycling or waste disposal facility within 12 months upon receiving the said waste except in the instance of processed GO, FOGO or C&IO which require removal within 24 hours with the exception of deliveries being received on Saturday.
- All spillage of waste (prohibited or not) must be recorded (refer to **Appendix 2 – Forms and Checklists, Form 6 – Incident Notification Form**).
- If a complaint is received use **Form 3 – Complaint Investigation Form** to record all details of the complaint and keep these records updated as the complaint is investigated.
- Record all odour monitoring performed by using **Form 8 – Odour Monitoring** contained within **Appendix 2**.

Note: Any waste(s) unloaded external to the ORPB or the FDB or outside the drill mud and liquid receival and storage area is classified as a spill.

- Any corrective actions related to the acceptance of prohibited waste must also be recorded (e.g. how the waste was separated and temporarily stored, made safe etc.) (Refer to **Appendix 2 – Forms and Checklists, Form 6 – Incident Notification Form**).
- If required (dependent upon amount that is likely to cause environmental harm), such information will be reported to EPA using the above form.

Responsibility and Communication:

- All Facility employees engaged in the above activities are responsible for ensuring that the control measures are met.
- All incidents should be reported to the Site Manager for recording and reporting when necessary.
- If a waste transporter delivers prohibited wastes, it is the responsibility of the Site Manager to ensure appropriate corrective actions (detailed above) are implemented as well as inform the Managing Director.
- The Managing Director is responsible for informing the EPA in the first instance or the Site Manager if the Managing Director is unavailable.

Relevant Legislation:

- *Protection of the Environment Operations Act 1997.*

Workplace Procedure 4 – Stormwater Management

Environmental Commitment

- To ensure that that no contaminated stormwater is released from the Facility and that stormwater is managed effectively to prevent environmental harm.

Identification of Issues

Possible Impact

- Spill of waste (i.e. all waste external to the ORPB and FDB and or drill muds and liquid receival, storage and consolidation area) is not cleaned up promptly, or correctly.

- Stormwater becomes contaminated following contact with waste or area where spill occurred.
- Inability for Humeceptor to effectively minimise contaminant releases.
- Stormwater treatment devices become dysfunctional.
- Release of contaminants to unsaturated ground zone, ground water, land and surface water that may cause environmental harm.
- Contravention of a permit condition & possible enforcement action by the administering authority.

- Integrity of the haulage path/driveway is compromised (i.e. large cracks, pot holes or washout) which results in unsecured waste falling from the trailer or transport vehicle.

- Release of contaminants to unsaturated ground zone, ground water, land and or surface water.
- Contravention of a permit condition & possible enforcement action taken by the administering authority.
- Creation of a spill incident that may compromise receiving water quality.

- Vehicles unloading within the drill muds and liquid receival area have not cleaned wheels and undercarriages before exiting the said area.
- Stormwater flows paths have been graded such that erosive forces have been established.

- Unnecessary contamination of stormwater drainage.
- Stormwater improvements devices are compromised.
- Release of sediment laden stormwater that compromises the species richness of receiving waters.

<ul style="list-style-type: none"> Contaminants have been released such that the functioning of the stormwater treatment devices has been compromised. 	<ul style="list-style-type: none"> Release of contaminants that causes environmental harm.
<ul style="list-style-type: none"> The sediment first flush containment system servicing the bulk landscaping supply area has not been promptly emptied after a rainfall event. 	<ul style="list-style-type: none"> Unnecessary release of sediment to the Humeceptor. Breach of permit conditions due to release of sediment from Humeceptor that leads to enforcement action being taken by the administering authority. Water quality objectives have not been achieved.
<ul style="list-style-type: none"> The gradient of natural flow paths has been compromised resulting in the ponding or pooling of stormwater. 	<ul style="list-style-type: none"> Possible contamination of pond/pooled stormwater, resulting in anaerobic conditions and odour release. Proliferation of mosquitoes with associated risk to human health. Contravention of a permit condition & possible enforcement action by the administering authority.
<ul style="list-style-type: none"> Not enough space exists and prescribed waste has been stored outside bunded areas and a spill occurs. Identified prohibited waste has been stored outside bunded areas. A contaminant has been placed in a position whereby environmental harm could be caused. 	<ul style="list-style-type: none"> Contamination of stormwater which results in environmental harm. Enforcement action taken by the administering authority. Huge financial loss.
<ul style="list-style-type: none"> Consolidation of prescribed waste (generated on site) has occurred outside bunded areas. Sorting and segregation of GO and or FOGO waste has occurred outside the ORPB. 	<ul style="list-style-type: none"> Contamination of stormwater flow paths. Enforcement action taken by the administering authority.
<ul style="list-style-type: none"> The delivery of drill mud/liquid has not occurred at the designated receival point and a spill has occurred. 	<ul style="list-style-type: none"> Contamination of stormwater flow paths has occurred.

	<ul style="list-style-type: none"> • In times of rainfall, contaminants have been released to the receiving environment resulting in environmental harm. • Stormwater improvement devices are compromised. • Enforcement action taken by the Administering authority.
<ul style="list-style-type: none"> • Prohibited waste has been stored in open top skips or containers outside bunded areas and rainfall has resulted in an overtopping. 	<ul style="list-style-type: none"> • Contamination of stormwater. • Release of a contaminant to receiving waters which results in environmental harm. • Enforcement action taken by the administering authority.
<ul style="list-style-type: none"> • The stormwater improvement devices are not maintained as designed. 	<ul style="list-style-type: none"> • Stormwater quality has been compromised.
<ul style="list-style-type: none"> • Bunding has not been supplied that provides 110% containment of the largest tank/vessel located within the bunded area. 	<ul style="list-style-type: none"> • Inadequate bunding volume supplied for containment in the event of a spill or rupture and contaminants are released to stormwater drainage network. • Enforcement action taken by the administering authority.
<p><u>Control Measures</u></p> <ul style="list-style-type: none"> • All spills must be managed appropriately. Refer to Emergency Procedure 4 – Spill Incident. • Ensure the haulage path/driveways are maintained with structural integrity so that spillage of waste does not occur and that the movement of stormwater over them does not result in its contamination (i.e. re-entrainment of sediment or waste). • If the structural integrity of the haulage path is found to be compromised, the Site Manager must be informed immediately to initiate prompt rectification. • If the structural integrity of the haulage path/driveway is found to be compromised, it must be repaired promptly, by replacing reinforced concrete or bitumen. • Maintain natural flow paths such that ponding or pooling of stormwater is avoided. • Ensure that the momentum or the velocity of stormwater is such that erosive forces are not accentuated. Consider installing energy dissipation structures where required. • Do not store prescribed wastes generated on site such as used oil outside of unbunded areas. 	

- Bunded areas must be provided that contain 110 % of the largest storage vessel/tank.
- Do not consolidate prescribed wastes outside respective bunded areas.
- Do not transfer waste oil or oil water mixtures outside the covered, bunded area.
- Do not store identified prohibited waste in the open or in opened containers or skips. Prohibited wastes must be promptly removed from the Facility. The receipt of prohibited wastes must be brought to the attention of the EPA as soon as possible but preferably within two hours of the prohibited waste being identified.
- Do not sort or segregate GO, FOGO or C&IO waste outside the ORPB or the FDB.
- The Humeceptor must be regularly emptied so that sufficient sediment and oil/hydrocarbon storage exists for future rainfall events.
- If at any time, any unpleasant or foul odours are detected by staff onsite and which are identified as coming from any of the stormwater treatment devices, odour monitoring must be conducted downwind to determine if excessive odours are emanating from the site or traveling offsite. Consider utilising proprietary products to reduce odours.
- If monitoring detects odours at a level or in a location that could lead to environmental nuisance for any offsite sensitive receptor, an investigation must be conducted to determine the source of the odours. Only when the source has been determined and corrective action taken, can the issue be recorded as resolved.
- Consider utilising BioAktiv to ensure that odours are not generated from stored sediment and organics within the Humeceptor or treated drill fluid storage tanks.

The BioAktiv Water should be applied as follows:

- 0.1 kg of BioAktiv should be added to 20L of clean fresh water and applied to the Humeceptor or storage tank. Follow up doses maybe required until odour is eliminated.
- Once BioAktiv has been added to water this mixture should then be stirred thoroughly before application. It is also advisable that additional stirring is carried out during application to ensure BioAktiv does not settle out;
- Consider installing energy dissipaters to ensure that concentrated stormwater flows do not cause erosion at the point of discharge to receiving waters.
- Ensure that stormwater quality improvement devices are regularly checked for functionality (conduct repairs as necessary), particularly after rainfall events of 15 mm or more occur.
- The first flush of stormwater (20 mm) generated within the bulk landscaping supply area must be contained. Bypassed stormwater must then pass through the Humeceptor prior to releasing water to the receiving environment.
- Water quality of discharged stormwater must accord to the following parameters:

Water Quality Parameter	Limits
Dissolved oxygen (DO)	4 – 6 mg/L
pH	6.5 – 8.5
Electrical conductivity (EC)	1500 µs/cm (maximum)
Redox potential	0 – (+200) mv

Suspended solids (SS)	50 mg/L
<ul style="list-style-type: none"> Water quality is to be tested quarterly for the above parameters in the event of a release from the Humeceptor. Samples must be delivered to the NATA accredited lab performing analysis within 24 hours from when the sample was obtained. Samples must be kept cool prior to delivery of samples to the lab. Consider refrigerating if samples cannot be delivered until the next day. Delivery samples in an esky containing ice or ice bricks. Ensure Chain of Custody form accompanies samples to lab. 	
<p><u>Record Keeping</u></p> <ul style="list-style-type: none"> Record daily weather conditions (refer to Appendix 2 – Forms and Checklists, Form 2 – Daily Weather Conditions). Record all observation in relation to the movement; impediment and any points of contamination of stormwater during times of rainfall (refer to Appendix 2 – Forms and Checklists, Form 7 – Stormwater Performance Checklist). Record the water quality of stormwater release sampling events. Record any repairs or maintenance undertaken to the haulage path/driveways, grassed areas, drainage paths, first flush basin or Humeceptor (refer to Appendix 2 – Forms and Checklists, Form 7 – Stormwater Performance Checklist). If a complaint is received use Form 3 – Complaint Investigation Form to record all details of the complaint and keep these records updated as the complaint is investigated. Record all odour monitoring performed by using Form 8 – Odour Monitoring contained within Appendix 2. Record when proprietary products are utilised to reduce any odour using Form 1 – Daily Running Sheet. 	
<p><u>Responsibility and Communication</u></p> <ul style="list-style-type: none"> All Facility employees must report any contamination of stormwater to the Site Manager for attention and any necessary subsequent action. The Site Manager is responsible for ensuring any repairs required (to the haulage path/driveway, grassed areas, stormwater improvement devices, bunded areas or stormwater flow paths, including drains) are completed in a timely manner. The Site Manger is responsible for advising the Managing Director about all generated contaminated stormwater. 	
<p><u>Relevant Legislation</u></p> <ul style="list-style-type: none"> <i>Protection of the Environment Operations Act 1997.</i> 	

Workplace Procedure 5 – Odour Management

Environmental Commitment:

- The receipt of waste must not cause environmental harm or nuisance by generating offensive or noxious odours.

Identification of Issues:

Possible Impact:

<ul style="list-style-type: none"> • Allowing prohibited (odorous waste) waste to be delivered to the Facility. 	<ul style="list-style-type: none"> • Contravention of a permit condition & possible enforcement action by the administering authority. • Attraction and proliferation of pest vectors e.g. flies or vermin. • If there is ineffective management of pests, there is a further possibility of offsite environmental nuisance.
<ul style="list-style-type: none"> • Allowing waste(s) to accumulate (around machinery, edges of building, or in the loading bay) or to an unmanageable level at the unloading area/bays. 	<ul style="list-style-type: none"> • Attraction and proliferation of pest vectors e.g. flies or vermin. • Unpleasant working conditions. • If there is ineffective management of pests, there is a further possibility of offsite environmental nuisance.
<ul style="list-style-type: none"> • Commingled putrescible waste has been segregated from a load and has not been placed within a sealed container or covered skip bin and or has not been removed from the Facility promptly, but rather has been allowed to sit outside the ORPB. 	<ul style="list-style-type: none"> • Putrescible waste putrefies and becomes a point source of odour, attracting vermin. • Flies proliferation occurs. • Waste is picked up and removed and dropped over neighbouring properties.
<ul style="list-style-type: none"> • Stormwater pollutant control devices have become a point source of odour. 	<ul style="list-style-type: none"> • Contravention of a permit condition & possible enforcement action by the administering authority. • Odour nuisance experienced at a sensitive receptor.
<ul style="list-style-type: none"> • Receipt of contaminated or odorous muds. 	<ul style="list-style-type: none"> • Contravention of a permit condition & possible enforcement action by the administering authority. • Odour nuisance experienced at a sensitive receptor.

<ul style="list-style-type: none"> Sorted and segregated C&IO has been transferred to the ORPB for consolidation without being effectively covered or sealed. When required to be utilised, inoculum has not been sprayed over odorous C&IO prior to removal to the ORPB. 	<ul style="list-style-type: none"> Contravention of a permit condition & possible enforcement action by the administering authority. Odour nuisance experienced at a sensitive receptor.
<ul style="list-style-type: none"> Air extraction system is not operating when doors are opened at the ORPB so as to receive GO and or FOGO. 	<ul style="list-style-type: none"> Release of offensive odour that results in nuisance complaints with enforcement action being taken.
<ul style="list-style-type: none"> Outside misting sprays located above door openings are not operated when doors are opened so as to disperse inoculum. 	<ul style="list-style-type: none"> No ability to ameliorate any fugitive emissions and odour nuisance is created. Enforcement action taken by EPA.
<ul style="list-style-type: none"> Not enough high grade activated carbon is present on site so as to be able to replace two x FC900 units. 	<ul style="list-style-type: none"> Release of offensive odour that results in nuisance complaints with enforcement action being taken.
<ul style="list-style-type: none"> The exit velocity of treated air has become low and attention has not be given to its rectification. 	<ul style="list-style-type: none"> Increase in ground concentration of VOC's
<ul style="list-style-type: none"> Plant and equipment have not been washed down and sanitised regularly. 	<ul style="list-style-type: none"> Plant and equipment become point sources of odour.
<ul style="list-style-type: none"> Filter media has not been replaced when VOC sensors have indicated a 2 ppm concentration after filtration. 	<ul style="list-style-type: none"> Release of offensive odour that results in nuisance complaints with enforcement action being taken.
<ul style="list-style-type: none"> Not enough room is available in the ORPB or the FDB for unloading and storage and unloading and storage has occurred outside. 	<ul style="list-style-type: none"> Release of offensive odour that results in nuisance complaints with enforcement action being taken.

Control Measures:

- Ensure only approved wastes are accepted at the Facility; excluding all other wastes (refer to (**Workplace Procedure 3 – Incoming Waste Management** and its associated form).
- Ensure loose waste(s) that could act to harbour pest species (fly blown plastic, paper, cardboard) or waste accumulating in corners or along edges of buildings/structures, is cleaned up regularly (e.g. at least weekly).
- Ensure all prohibited waste is managed appropriately (refer to **Workplace Procedure 3 – Incoming Waste Management**).
- Do not unload waste of any description if offensive odour is emanating from the load.
- All incoming consignments are to be unloaded within the ORPB or the FDB.
- No GO, FOGO or C&IO is to be stored outside the ORPB or the FDB.
- Any movement of processed C&IO to the ORPB for consolidation must be contained or covered so that fugitive emissions are not released during the transfer. Moreover, prior to the movement of C&IO, proprietary inoculums must be applied to suppress any volatile odour.
- When doors are opened to receive incoming GO, FOGO or C&IO, air extraction must be operating to direct odours to one of the designated high grade activated carbon filters installed.
- When doors are opened, the outdoor misting sprays, positioned above door openings must be operating so as to disperse inoculum to mitigate any fugitive emissions.
- When the breakthrough sensor attached to the high grade activated carbon filter indicates that VOC concentration is > 2 ppm, filter media must be changed within 24 hours;
- Enough high grade activated carbon filter media (filter media) must be stored on site so as to be able to exchange two units.
- Spent filter media must be incorporated in to the consignment of FOGO that is to be removed from the Facility.
- An appropriate amount of inoculum must be on site in readiness for use.
- All plant and equipment must be operated in accordance with manufacturer's specifications.
- All plant and equipment must be regularly washed down and sanitised so that they do not become point sources of odour.

Record Keeping:

- Record of all incoming wastes should be kept (refer to **Workplace Procedure 3 – Incoming Waste Management** and associated form, **Form 11 – Waste Receiving Record**).
- All maintenance activities in relation to waste clean-up should be recorded (refer to **Appendix 2 - Forms and Checklists - Form 1 – Daily Running Sheet**).
- If a complaint is received use **Form 3 - Complaint Investigation Form** to record all details of the complaint and keep these records updated as the complaint is investigated.
- Record all odour monitoring performed by using **Form 8 – Odour Monitoring** contained within **Appendix 2**.

Responsibility and Communication:

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- All Facility employees that are engaged in the above mentioned activities are responsible for ensuring control measures are met.
 - Communication protocols concerned with the notification of transport companies and the EPA or FCC as well as management of prohibited waste(s) once accepted at the Facility are detailed in the relevant workplace procedure (refer to **Workplace Procedure 3 – Incoming Waste Management**).

Relevant Legislation:

- *Protection of the Environment Operations Act 1997.*

<u>Workplace Procedure 6 – Noise Management</u>	
<u>Environmental Commitment:</u>	
<ul style="list-style-type: none"> To ensure that activities conducted at the Facility do not cause noise pollution. 	
<u>Identification of Issues</u>	<u>Potential Impacts</u>
<ul style="list-style-type: none"> Onsite equipment is being operated with an ineffective muffler systems. 	<ul style="list-style-type: none"> Noise complaint from noise sensitive place. Enforcement from the administering authority.
<ul style="list-style-type: none"> Tonal noise from the operation of the Turbo separator or the CD Enviro unit is occurring. 	<ul style="list-style-type: none"> Dependant on frequency, noise nuisance could occur, which could result in possible noise complaints. Enforcement from the administering authority.
<ul style="list-style-type: none"> Impact noise from works performed on site, especially after hours. Construction of new buildings/facilities or processes. 	<ul style="list-style-type: none"> Could result in noise levels being emitted greater than background for the area. Enforcement from the administering authority.
<u>Control Measures:</u>	
<ul style="list-style-type: none"> If noise not ordinarily present is experienced to be emanating from any machinery or equipment that is likely to cause environmental harm at any time, prompt attention should be given to rectifying the noise. The noise should cease until rectification has occurred. Ensure that the Daily Machinery Start-up Checklist is completed on a daily basis. Unnecessary noise outside of normal operating hours must not occur. Unnecessary impact noise must not occur. Unusual impulsive or tonal noise must be investigated and avoided wherever possible. Ensure that if noise monitoring is requested, a suitably qualified person is engaged to perform and report on the measured noise. If noise is occurring at a level that is intrusive to sensitive receptors, consideration will be given to the installation of block walls or shipping containers to effectively attenuate/absorb sound levels. If Bettergrow receives a complaint use Form 3 – Complaint Investigation to record all details of the complaint and keep these records updated as the complaint is investigated (refer to Appendix 2 – Forms and Checklists). 	
<u>Record Keeping:</u>	
<ul style="list-style-type: none"> Daily start up records must be taken (refer to Appendix 2, Form 9 – Daily equipment/Machinery Start Up Checklist). Record any complaint received in regard to noise (refer to Appendix 2, Form 3 – Complaint Investigation). If noise monitoring is required by the EPA, record all data as per requirements of the <i>Noise Guide for Local Government</i> (latest edition published by the NSW EPA). 	
<u>Responsibility and Communication:</u>	
<ul style="list-style-type: none"> All Facility staff members that are engaged in the above mentioned activities are responsible for ensuring control measures are met. 	

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- The Site Manager is responsible for ensuring that records are collected and maintained.
 - It is the responsibility of the Site Manager to investigate any complaints received regarding noise nuisance and to report all findings to the administering authority.
 - The Site Manager is responsible for ensuring that the Daily Machinery Start-up Checklist is filled in.
 - The Site Manager is responsible for the prompt notification to the Managing Director if noise is released that is likely to cause offensive noise being experienced at a noise sensitive receptor.
 - The Managing Director is responsible for the prompt notification to the administering authority if noise is released that is likely to cause noise pollution.

Relevant Legislation:

- *Protection of the Environment Operations Act 1997*; and
- *Protection of the Environment Operations (Noise Control) Regulation 2008*.

3 Emergency Procedures

<u>Emergency Procedure 1 – Pollution Incident Management</u>	
<p><u>Environmental Commitment:</u></p> <ul style="list-style-type: none"> To ensure that in the event of a pollution incident that it is managed in accordance with the PIRMP and the relevant legislation. 	
<p><u>Identification of Issues:</u></p> <ul style="list-style-type: none"> The relevant authorities are not notified ‘immediately’ or are not notified at all of a notifiable pollution incident. 	<p><u>Potential Impacts:</u></p> <ul style="list-style-type: none"> Contravention of the <i>Protection of the Environment Operations Act 1997 (POEO Act)</i>; and Enforcement action taken by the EPA. Conviction and maximum penalty of \$2,000,000.
<ul style="list-style-type: none"> The landowner has not been ‘immediately’ notified or is not notified at all of a notifiable pollution incident. 	<ul style="list-style-type: none"> Contravention of the <i>Protection of the Environment Operations Act 1997 (POEO Act)</i>. Enforcement action taken by the EPA.
<ul style="list-style-type: none"> Neighbours are not notified of the pollution incident after the EPA has requested Bettergrow to notify them. 	<ul style="list-style-type: none"> Contravention of the <i>Protection of the Environment Operations Act 1997 (POEO Act)</i>; and Enforcement action taken by the EPA. Conviction and maximum penalty of \$2,000,000.
<ul style="list-style-type: none"> False or misleading monitoring results are supplied to the EPA or the public. 	<ul style="list-style-type: none"> Contravention of the <i>Protection of the Environment Operations Act 1997 (POEO Act)</i>; and Enforcement action taken by the EPA. Conviction and maximum penalty of \$1,000,000.
<p><u>Control Measures:</u></p> <p>A pollution incident is classified as “<i>an incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which a substance has been placed or disposed of on premises, but it does not include an incident or set of circumstances involving only the emission of any noise.</i>”</p> <ul style="list-style-type: none"> Ensure that the pollution incident response flow chart below is followed (refer to <i>Figure 1</i>). If any Facility Employee becomes aware of a pollution incident at the Facility they must immediately inform Management, refer to the contact details provided below. <p>Table 1: Management contact details</p>	

Managing Director	Site Manager
Name: Neil Schembri	TBC
Phone: 0419 636 088	

- Alternatively, if the pollution incident presents an immediate threat to human health and/or property damage, and a combat agency (i.e. NSW Fire and Rescue, Ambulance Service or Police Force) is required, call 000, before informing your supervisor and/or management.
- All onsite Facility Employees must be notified of the pollution incident immediately.
- Ensure that if required, that an emergency evacuation of the Facility occurs safely and promptly.
- Ensure that all pollution incidents are managed in accordance with the relevant emergency procedure (refer to **Emergency Procedure 2 – Fire Management** and **Emergency Procedure 3 – Uncontrolled Release to Stormwater**).
- The Managing Director or Site Manager must determine if there is a risk of ‘material harm to the environment’, as defined below. If there is, then either of them must immediately notify the relevant authorities listed in *Table 2* below.

Note: *Immediately* means ‘promptly without delay’, but it does not mean undertaking notification ahead of doing what is necessary to make safe.

Pollution incidents are ‘notifiable’ if there is a risk of ‘material harm to the environment’, which is defined as:

- (a) harm to the environment is material if:
 - (i) it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or
 - (ii) it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (or such other amount as is prescribed by the regulations), and
- (b) loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.

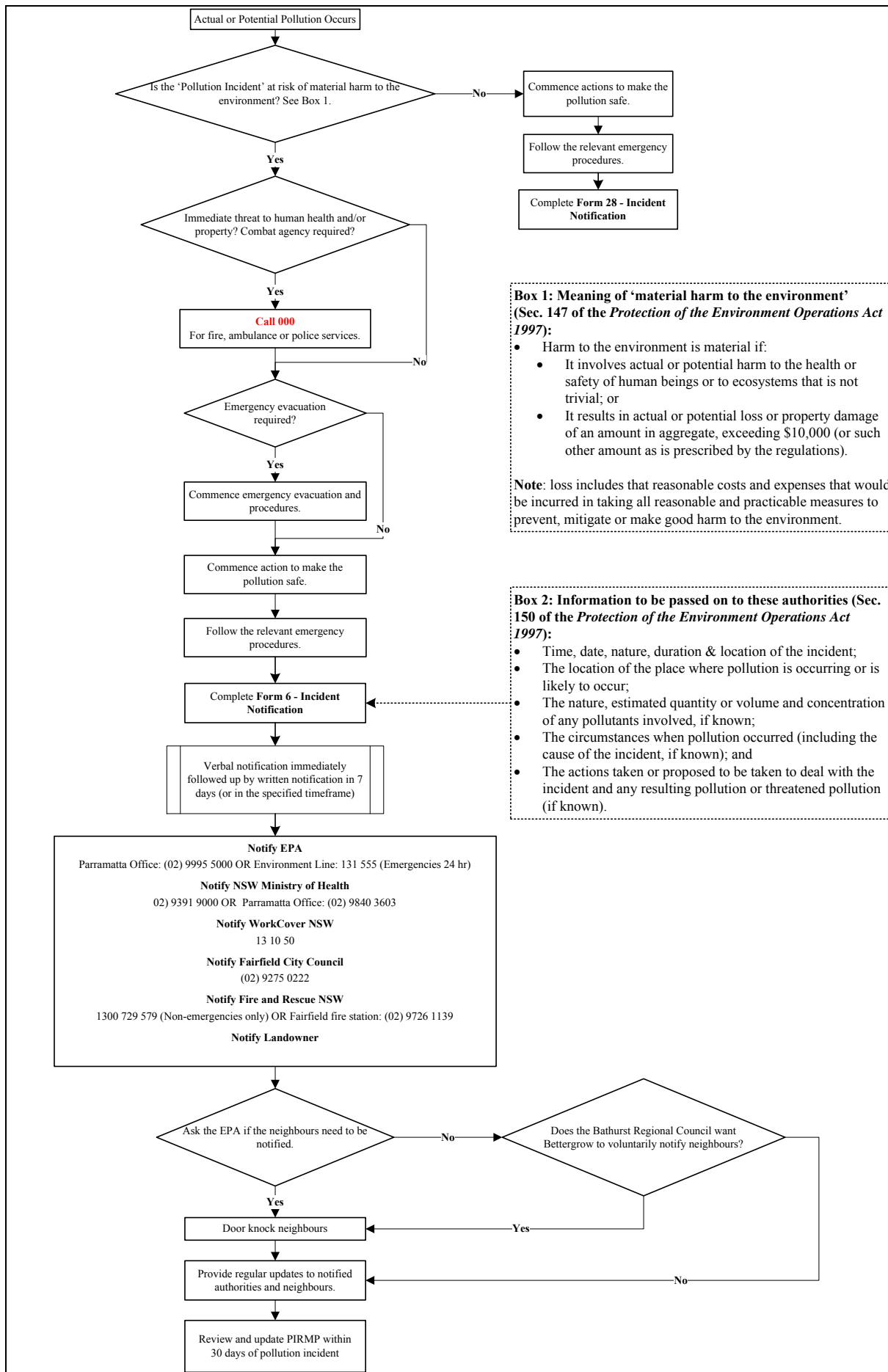
Table 2: Relevant authorities to be notified

Relevant Authority	Phone Number
1. Emergency Services¹	000 ¹
2. Environment Protection Authority (EPA)	
Parramatta Office	(02) 9995 5000
Environment Line (24 hour)	131 555
3. Ministry of Health (via the local Public Health Unit)	(02) 9391 9000 OR
Parramatta Office or	(02) 9840 3603 or after hours
Westmead Hospital (after hours)	(02) 9845 5555
4. WorkCover NSW	13 10 50
5. Fairfield City Council	(02) 9275 0222
6. Fire and Rescue NSW (Non-emergency only)²	1300 729 579 OR
Fairfield Fire Station	(02) 97261139
7. NSW Department of Primary Industries (DPI)³	1800 808 095

Notes: ¹ The Managing Director or Site Manager must call 000 if the incident is an immediate threat to human health and/or property damage, and a combat agency (i.e. Fire and Rescue NSW, Ambulance Service or Police Force) is required.

² It is not required to notify Fire and Rescue NSW if they were initially contacted as a combat agency.

Figure 1: Pollution incident response flow chart



Box 1: Meaning of 'material harm to the environment' (Sec. 147 of the Protection of the Environment Operations Act 1997):

- Harm to the environment is material if:
 - It involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial; or
 - It results in actual or potential loss or property damage of an amount in aggregate, exceeding \$10,000 (or such other amount as is prescribed by the regulations).

Note: loss includes that reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.

Box 2: Information to be passed on to these authorities (Sec. 150 of the Protection of the Environment Operations Act 1997):

- Time, date, nature, duration & location of the incident;
- The location of the place where pollution is occurring or is likely to occur;
- The nature, estimated quantity or volume and concentration of any pollutants involved, if known;
- The circumstances when pollution occurred (including the cause of the incident, if known); and
- The actions taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution (if known).

- The Managing Director or Site Manager must also inform the landowner as soon as practically possible, the landowner contact details can be found in *Table 3* below.

Table 3: Landowner’s contact details

Landowner	Contact Person and Details
	Mobile:

- Ensure that all relevant authorities (in *Table 2*) are kept apprised of the pollution incident, how it is managed and how it is resolved. It is the responsibility of the Site Manager to ensure that this occurs.
- Ensure that all relevant authorities (in *Table 2*) are kept apprised of the pollution incident, how it is managed and how it is resolved. It is the responsibility of the Site Manager to ensure that this occurs.
- Ensure that a written report of any incident including, completed copy of **Form 6 – Incident Notification Form** is provided to the relevant authorities and the landowner within 7 days of the incident (refer to **Appendix 2 – Forms and Checklists**).
- When the EPA is initially notified of the pollution event, the Managing Director or Site Manager must ask if the neighbour must be notified. If they say yes, then Facility Employees must door knock to inform the neighbours of the pollution incident, the implication to them and any recommendations.
- Alternatively, Fairfield City Council may request that Bettergrow voluntarily notify its neighbours of the pollution incident. In which case Facility Employees must door knock nearby residences and inform them of the pollution incident, the implication to them and any recommendations.
- Ensure that any monitoring undertaken as a result of a pollution incident is either published on the Bettergrow website (www.bettergrow.com.au), when the website is operational. Alternatively, until then, Bettergrow must provide a copy of the monitoring data to any member of the public that requests the data in writing.
- Ensure that monitoring data is checked for accuracy.

Record Keeping:

- All pollution incidents whether actual or potential must be recorded (use **Appendix 2 – Form 6 – Incident Notification Form**).
- Record of all premises visited in the course of doorknocking, including time and date must be recorded (use **Appendix 2 – Form 6 – Incident Notification Form**).
- Ensure that all written requests for monitoring data are recorded, and that a record is kept of when the data is provided to them and in what medium it has been provided (use **Form 1 – Daily Running Sheet** of **Appendix 2**).

Responsibility and Communication:

- All Facility Employees must report any actual or potential pollution incidents to their supervisor, the Site Manager or Managing Director.
- The Site Manager is to promptly report to the Managing Director any actual or potential pollution incidents that occur.
- The Managing Director is responsible for advising the relevant authorities of all pollution incidents in the first instance. The Site Manager is responsible for advising the EPA, if the Managing Director is unable to be contacted to do so.
- The Managing Director, Site Manager or relevant Supervisor must carry out any necessary action, as directed by any relevant authority in the course of managing a pollution incident.

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- The Site Manager or relevant Supervisor is responsible for ensuring that all employees carry out appropriate action that may be assigned to them.
 - The Managing Director is responsible for providing the EPA or FCC a written report surrounding the incident, including a completed version of **Form 6 – Incident Notification Form**, within 7 days of the incident (refer to **Appendix 2 – Forms and Checklists**).

Relevant Legislation:

- *Protection of the Environment Operations Act 1997*; and
- *Protection of the Environment Operations (General) Regulation 2009*.

Emergency Procedure 2 – Spill Management

Environmental Commitment:

- To ensure that prompt attention is given to cleaning up spills, to minimise the likelihood of causing environmental harm, including air, water or land pollution.

Identification of Issues

- Failure to contain spilled substance.
- Stormwater runoff is allowed to come into contact with spilt substance resulting in generation of contaminated stormwater.
- Waste has been spilt such that it is impeding stormwater flow paths.
- Wastes have been spilt and allowed to directly or indirectly enter onsite drains or stormwater improvement devices.
- Inappropriate training has resulted in a spill of waste to the stormwater drainage system.
- Items contained within Spill kits have not been replaced when utilised.
- Spill kits have been used to store rubbish.

Potential Impacts

- Increase in the generation of contaminated stormwater.
- Unnecessary increase in the level of contamination of Humeceptor and thus requiring extra volume to be removed.
- Release of contaminants to the air, water and land environments.
- Enforcement action by the administering.
- Increase in the generation of contaminated stormwater.
- Increase in the level of contamination of Humeceptor.
- Release of contaminants to the air, water and land environments.
- Enforcement action by the administering authority.
- Stormwater can no longer traverse along flow path, resulting in ponding and pooling and indiscriminate flow paths leading to offsite contamination.
- Release of contaminants to the air, water and land environments.
- Enforcement action by the administering authority.
- Waste entering stormwater improvement devices could negate their functionality leading to a compromised water quality being released.
- Generation and release of offensive odour.
- Enforcement action by the administering authority.
- Enforcement action taken by the administering authority with a requirement to clean up.
- Financial loss.
- Inability to manage spills.
- Release occurs when it should not have.
- Enforcement action taken by the administering authority.

Control Measures:

- Ensure that all pollution incidents are managed in accordance with **Emergency Procedure 1 – Pollution Incident Management**.
- Ensure that all wastes accepted are unloaded and managed correctly (refer to **Workplace Procedure 3 – Incoming Waste Management**).
- Ensure all spillage is contained, collected and removed promptly.
- Ensure that all operators of plant and equipment are appropriately trained.
- Always ensure sufficient quantities of spill kit materials are readily available to Facility Employees to contain and recover spills.

Cleaning Up Spills of Solid Waste

- Only dry methods of clean-up will be utilised.
- Spilt material should be contained as necessary so as it does not spread.
- The following is a typical list of materials and equipment to be utilised in the event of a spill:
 - shovels;
 - yard brooms;
 - kitty litter or sawdust;
 - booms (on-ground);
 - drain covers and plugs;
 - containers;
 - front end loader (FEL);
 - screens/temporary fencing;
 - portable bin; and/or
 - a wheelbarrow(s).

Spills that are released to receiving environment

- Sample at the point of release and have it tested for pH, dissolved oxygen (DO) – in the case of water, electrical conductivity (EC) and redox potential in the case of water. Have the sample analysed for the target compound released.
- Be sure to go up-stream and downstream of the release so as to gain samples. Obtaining up and down stream samples will assist in determining any harm (if any).

Record Keeping:

- Record all volumes spilt and actions taken to remedy the spill (refer to **Appendix 2, Form 6 – Incident Notification**).
- If a release occurs, record water quality parameters required to be tested for (refer to **Form 12 – Insitu Stormwater Monitoring Record**).
- Record if stormwater infrastructure has been compromised or is any way ineffectual (refer to **Form 7 – Stormwater Infrastructure Performance**).

Responsibility and Communication:

- All Facility Employees that are engaged in the abovementioned activities are responsible for ensuring control measures are met.
- The Site Manager is responsible for informing the Managing Director immediately upon becoming aware of a spill.
- The Site Manager is responsible for ensuring that the appropriate procedures are adopted and implemented in a timely manner in the event of a spill (i.e. monitoring, reporting and repair).
- All physical observations regarding the lack of infrastructure structural integrity must be brought to the attention of the Site Manager.
- The Site Manager is responsible for initiating action to ensure that infrastructure is effectively repaired.

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- The Site Manager is responsible for advising the administering authority about a release to the receiving environment.
 - The Managing Director is responsible for notifying the EPA of all spills, in the first instance that may result or are likely to result in environmental harm. The Site Manager is responsible if the Managing Director is unable to do so.

Relevant Legislation:

- *Protection of the Environment Operations Act 1997.*

Emergency Procedure 3 – Uncontrolled Release to Waters

Environmental Commitment:

- To ensure that uncontrolled releases to the receiving environment are monitored to gauge whether the water quality in the receiving waters is being significantly impacted.
- To ensure that any remedial action taken to address releases are monitored to gauge effectiveness.

Identification of Issues:

- Failure to contain a spilt substance.
- Inappropriate or ineffective infrastructure in place to prevent a release.
- Infrastructure to control releases has not been maintained.
- Appropriate management of contained stormwater has not occurred and an uncontrolled release occurs.
- Insitu monitoring has not occurred for the required sampling location.
- Monitoring probes have been irregularly calibrated.

Potential Impacts:

- Unnecessary generation of contaminated stormwater (from incidental rainfall).
- Contamination of stormwater network including stormwater treatment devices, unsaturated ground water zone, groundwater and land.
- Enforcement action taken by the EPA.
- Requirement to remediate spill affected areas.
- Financial loss.
- A release occurs that results in environmental harm.
- Enforcement action taken by the EPA.
- Requirement to remediate and rehabilitate at huge cost.
- Accentuation of the extent of environmental harm caused.
- Enforcement action taken by the EPA.
- Unable to accurately quantify the impact on the receiving waters in times of a release.
- Breach of EPL condition and enforcement action taken by the EPA.
- Incorrect water quality values are obtained and the extent of environmental harm is unknown.
- Improper corrective action is taken and water quality is not improved or worsens.
- Enforcement action taken by the EPA.

Control Measures:

- Ensure all incidents are managed, recorded and reported in accordance with **Emergency Procedure 1 – Pollution Incident Management**.
- Ensure that spills are immediately isolated and cleaned-up in accordance with **Emergency Procedure 2 – Spill Management**.
- Ensure that contained water is managed such there is no release.
- Ensure that stormwater infrastructure is assessed regularly for performance and in particular after an uncontrolled release occurs.
- Measure insitu parameters, pH, electrical conductivity, dissolved oxygen and redox potential at the release point, up-stream and downstream locations.

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- Ensure a sample of water is obtained during the release and analysed for the contaminant that is being released.
 - Go upstream of the release point and try to safely obtain a sample that is to be analysed for the contaminant being released
 - Go down stream of the release point and try to safely obtain a sample that is to be analysed for the contaminant being released. **N.B. collecting an upstream and downstream sample will help determine to the likelihood of environmental harm.**

Record Keeping:

- Record all observations made in relation to the performance of infrastructure particularly after an uncontrolled release event. (**Refer to Form 7 – Stormwater Infrastructure Performance Checklist**).
- Record all results obtained of sampling obtained during a release.
- Record all insitu parameters measured by using **Form 12 – Insitu Stormwater Monitoring Record**.
- Record all details as required by **Emergency Procedure 1 – Incident Management**.

Responsibility and Communication:

- All Employees that are engaged in the above mentioned activities are responsible for ensuring control measures are met.
- All releases of contaminants to waters must be brought to the attention of the EPA via the telephone as soon as practicable after becoming aware that there has been a release or there is likely to be a release that has or will cause environmental harm.
- The Site Manager is responsible for notifying the Managing Director immediately upon becoming aware that a release has occurred or a release is likely.
- The Managing Director is responsible for notifying the EPA in the first instance. The Site Manager will take responsibility if the Managing Director is unable to do so.

Relevant Legislation:

- *Protection of the Environment Operations Act 1997.*

Emergency Procedure 4 – Fire Incident

Environmental Commitment:

- To ensure that in the event of a fire at the Facility that all reasonable and practicable measures are taken to minimise or prevent environmental harm.

Identification of Issues:

Possible Impact:

- A person who is smoking onsite causes fire.

- A fire ignites causing risks to persons, property & the environment.
- Release of particulate and ash potentially causing environmental nuisance.
- Contravention of a permit condition & possible enforcement action by administering authority.

- Someone breaks into the site and commits arson.

- Fire destroys property and or equipment.
- Release of particulate and ash potentially causing environmental nuisance.
- Contravention of a permit condition & possible enforcement action by administering authority due to the storage of a prohibited item on site that is subsequently burnt.

- Prohibited substances are being stored on site and a fire occurs.

- Release of noxious or toxic vapours that results in environmental harm.
- Enforcement action taken by the administering authority.

- An inappropriate number of fire extinguishers are available.
- The wrong type of fire extinguisher is available.

- Inability to control fire with worsening conditions occurring.
- Enforcement action taken by administering authority.