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

The LZ Environmental Company Pty Limited
T/A Zambelli Environmental
luke@zambellienvironmental.com.au
Providing environmental stewardship for industry today

Document Control

Document name	Environmental Management Plan for Greenspot Wetherill Park	Version	1.0

Person Responsible

	Name	Position
Author	Luke Zambelli	Director / Environmental Engineer
Contributing Author(s)		
Reviewing Officers(s)	John Vyse	Projects
Authorised by	Neil Schembri	Director

Revision History

Version	Issue Date (dd/mm/yy)	Amendment Details	Author	Authorised By
1	27/02/17	First Issue	Luke Zambelli	Neil Schembri

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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
EPL	Environmental Protection Licence
EPA	Environmental protection Authority
FCC	Fairfield City Council
Environmental nuisance	Unreasonable interference or likely interference caused by— • aerosols, fumes, light, noise, odour, particles or smoke; or • an unhealthy offensive or unsightly condition because of contamination.
PM_{10}	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 Receival 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 Receival 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 Fairfield City Council (FCC). 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.

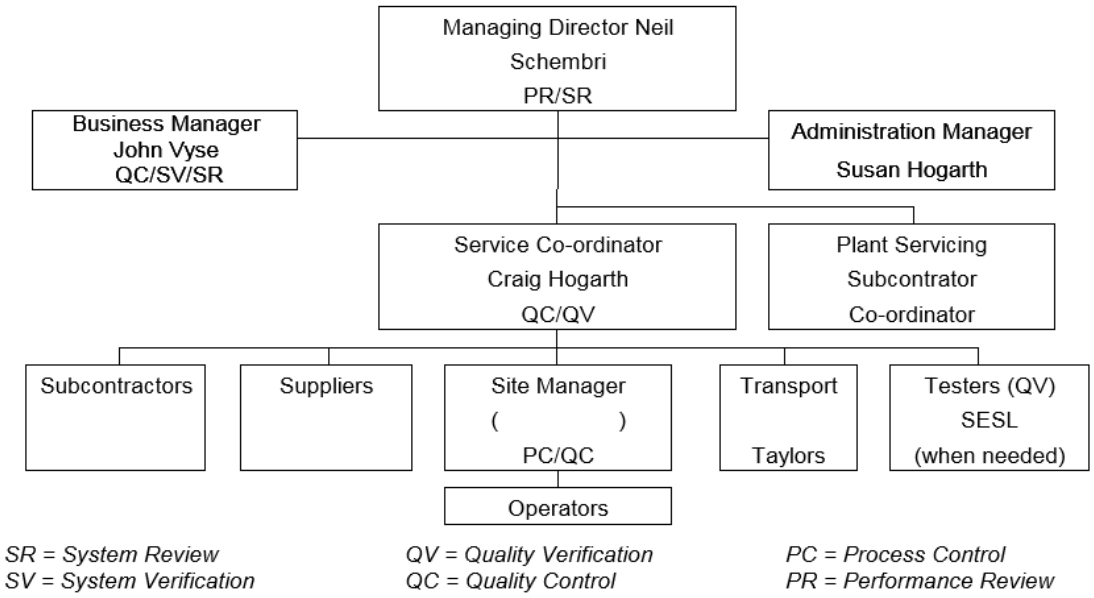
2 Environmental Commitments and Policy

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.

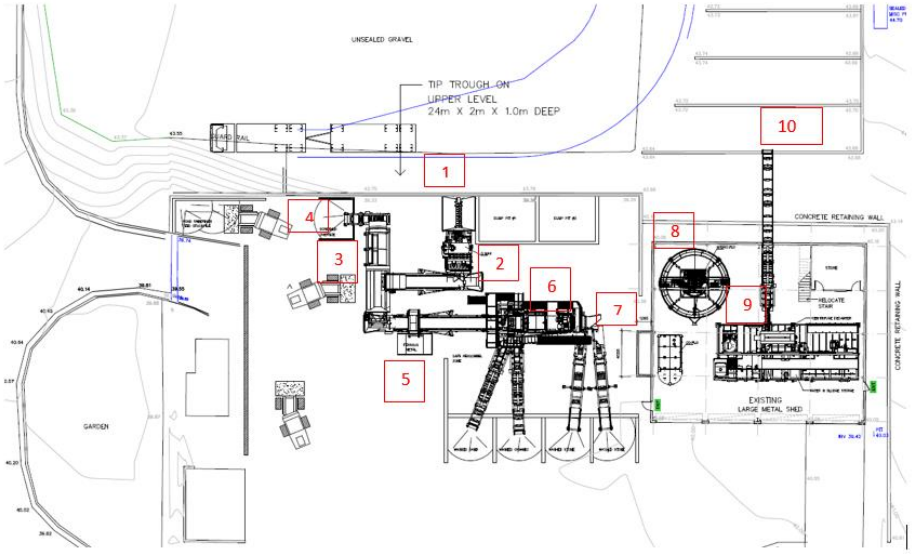


Figure 1: Key Locations of Hydro-excavation and Drill Mud/Fluid Process

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/rro14-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 224m^3 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, bunded 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 receival, 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 an 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 receival 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

	(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 odourous 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 mobiles 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:

- 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 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:

(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 too. 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 PM_{10}) 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/m^3 averaged over a 24 hour period or 8 µg/m^3 averaged over one year;
- PM_{10} should be equal to or less than 50 µg/m^3 averaged over 5 days during a year; and
- TSP should be a result of 90 µg/m^3 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 supress 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. 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 supress 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:

- 27 m^3 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:

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

Global Acoustics Pty Ltd | PO Box 3115 | Thornton NSW 2322
Telephone +61 2 4966 4333 | Email global@globalacoustics.com.au
ABN 94 094 985 734

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, $L_{Aeq,period}$ 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 L_{A90} dB	Intrusiveness Criterion $L_{Aeq,15minute}$ dB	Acceptable Amenity Criterion[3] $L_{Aeq,period}$ dB	Project Specific Noise Levels $L_{Aeq,15minute}$ 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 L_{A90} dB	Intrusiveness Criterion $L_{Aeq,15minute}$ dB	Acceptable Amenity Criterion[3] $L_{Aeq,period}$ dB	Project Specific Noise Levels $L_{Aeq,15minute}$ 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 if 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.

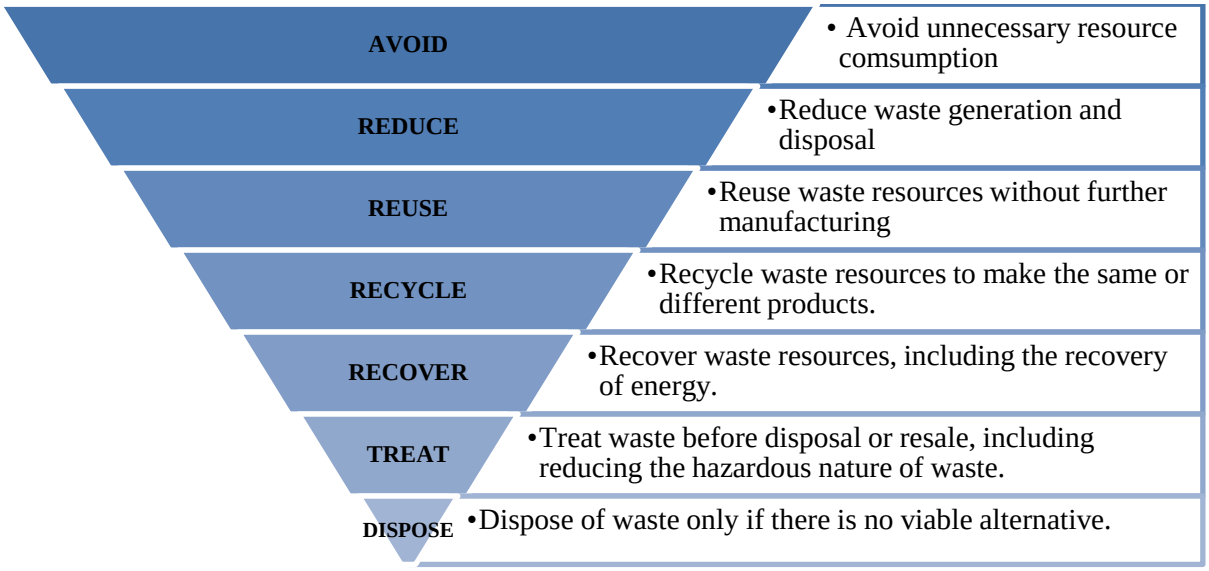


Figure 2: Waste and resource management hierarchy

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 m^3 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 of 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.

Workplace Procedures

Emergency Procedures

2 Workplace Procedures

<table>
<tr><th colspan="2">Workplace Procedure 1 – Dust and Particulate Management</th></tr>
<tr><td colspan="2">Environmental Commitment:

• To ensure that activities at the Facility do not cause environmental harm or nuisance.</td></tr>
<tr><td>Identification of Issues:

• Dust and particulate release from loading/unloading operations within the bulk landscaping area.</td><td>Potential Impacts:

• 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.</td></tr>
<tr><td>• Dust fogger(s) have not been maintained properly resulting in them being inefficient/ ineffective.</td><td>• 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.</td></tr>
<tr><td>• 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.</td><td>• 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.</td></tr>
<tr><td>• Complaint received regarding nuisance at a dust sensitive place.</td><td>• 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:
o Dust deposition = 133.33 mg/m^2 /day –AS 3580.10 of 1991;</td></tr>
<tr><td>• Too much landscaping material that has the potential to release dust is stored on site.</td><td>• Offsite complaint resulting in enforcement action being taken.</td></tr>
</table>

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.

- 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.

Relevant Legislation:

- *Protection of the Environment Operations Act 1997*.

Workplace Procedure 2 – Vector Attraction Management

Environmental Commitment:

- The receival 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:	**Possible Impact:**
• Allowing prohibited (odorous waste (i.e. waste in and advanced stage of decay)) waste to be delivered to the Facility.	• 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 Receival 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 receival 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:	**Possible Impact:**
• Prohibited waste(s) is/are allowed to be accepted and unloaded at the Facility.	• 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 scrutinisation (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.

• Oily water or contaminated drill fluids are received at the facility for storage and consolidation. • Prohibited liquid waste is received.	• 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.
• Waste characteristics (i.e. tonnage/type of incoming waste(s) not recorded).	• Unknown quantity/quality of incoming waste. • Contravention of a permit condition & possible enforcement action by administering authority.
• Prohibited asbestos or small packaged dangerous goods have been received within the ORPB.	• 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.
• Vehicles delivering landscaping materials to the facility do not have tarpaulins securely fastened or in place.	• Release of dust and particulate that creates environmental nuisance. • Enforcement action taken by the administering authority.
• Recording of waste received has not occurred.	• 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.

Control Measures:

- 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 Receival 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 ladened stormwater that compromises the species richness of receiving waters.

• Contaminants have been released such that the functioning of the stormwater treatment devices has been compromised.	• Release of contaminants that causes environmental harm.
• The sediment first flush containment system servicing the bulk landscaping supply area has not been promptly emptied after a rainfall event.	• 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.
• The gradient of natural flow paths has been compromised resulting in the ponding or pooling of stormwater.	• 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.
• 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.	• Contamination of stormwater which results in environmental harm. • Enforcement action taken by the administering authority. • Huge financial loss.
• 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.	• Contamination of stormwater flow paths. • Enforcement action taken by the administering authority.
• The delivery of drill mud/liquid has not occurred at the designated receival point and a spill has occurred.	• Contamination of stormwater flow paths has occurred.

	• 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.
• Prohibited waste has been stored in open top skips or containers outside bunded areas and rainfall has resulted in an overtopping.	• Contamination of stormwater. • Release of a contaminant to receiving waters which results in environmental harm. • Enforcement action taken by the administering authority.
• The stormwater improvement devices are not maintained as designed.	• Stormwater quality has been compromised.
• Bunding has not been supplied that provides 110% containment of the largest tank/vessel located within the bunded area.	• 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.

Control Measures

- 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 receival 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

- 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.

Record Keeping

- 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**.

Responsibility and Communication

- 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.

Relevant Legislation

- *Protection of the Environment Operations Act 1997*.

Workplace Procedure 5 – Odour Management	
Environmental Commitment: • The receival of waste must not cause environmental harm or nuisance by generating offensive or noxious odours.	
Identification of Issues: • Allowing prohibited (odorous waste) 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.
• 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. • Unpleasant working conditions. • 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 outside the ORPB.	• 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.
• Stormwater pollutant control devices have become a point source of odour.	• Contravention of a permit condition & possible enforcement action by the administering authority. • Odour nuisance experienced at a sensitive receptor.
• Receival of contaminated or odourous muds.	• Contravention of a permit condition & possible enforcement action by the administering authority. • Odour nuisance experienced at a sensitive receptor.

• 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 odourous C&IO prior to removal to the ORPB.	• Contravention of a permit condition & possible enforcement action by the administering authority. • Odour nuisance experienced at a sensitive receptor.
• Air extraction system is not operating when doors are opened at the ORPB so as to receive GO and or FOGO.	• Release of offensive odour that results in nuisance complaints with enforcement action being taken.
• Outside misting sprays located above door openings are not operated when doors are opened so as to disperse inoculum.	• No ability to ameliorate any fugitive emissions and odour nuisance is created. • Enforcement action taken by EPA.
• Not enough high grade activated carbon is present on site so as to be able to replace two x FC900 units.	• Release of offensive odour that results in nuisance complaints with enforcement action being taken.
• The exit velocity of treated air has become low and attention has not be given to its rectification.	• Increase in ground concentration of VOC's
• Plant and equipment have not been washed down and sanitised regularly.	• Plant and equipment become point sources of odour.
• Filter media has not been replaced when VOC sensors have indicated a 2 ppm concentration after filtration.	• Release of offensive odour that results in nuisance complaints with enforcement action being taken.
• Not enough room is available in the ORPB or the FDB for unloading and storage and unloading and storage has occurred outside.	• 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 supress 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 Receival 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:

- 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 6 – Noise Management

Environmental Commitment:

- To ensure that activities conducted at the Facility do not cause noise pollution.

Identification of Issues	Potential Impacts
• Onsite equipment is being operated with an ineffective muffler systems.	• Noise complaint from noise sensitive place. • Enforcement from the administering authority.
• Tonal noise from the operation of the Turbo separator or the CD Enviro unit is occurring.	• Dependant on frequency, noise nuisance could occur, which could result in possible noise complaints. • Enforcement from the administering authority.
• Impact noise from works performed on site, especially after hours. • Construction of new buildings/facilities or processes.	• Could result in noise levels being emitted greater than background for the area. • Enforcement from the administering authority.

Control Measures:

- 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**).

Record Keeping:

- 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 *Noise Guide for Local Government* (latest edition published by the NSW EPA).

Responsibility and Communication:

- All Facility staff members that are engaged in the above mentioned activities are responsible for ensuring control measures are met.

- 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

<table>
<tr><th colspan="2">Emergency Procedure 1 – Pollution Incident Management</th></tr>
<tr><td colspan="2">Environmental Commitment:

• To ensure that in the event of a pollution incident that it is managed in accordance with the PIRMP and the relevant legislation.</td></tr>
<tr><td>Identification of Issues:</td><td>Potential Impacts:</td></tr>
<tr><td>• The relevant authorities are not notified ‘immediately’ or are not notified at all of a notifiable pollution incident.</td><td>• Contravention of the Protection of the Environment Operations Act 1997 (POEO Act); and
• Enforcement action taken by the EPA.
• Conviction and maximum penalty of $2,000,000.</td></tr>
<tr><td>• The landowner has not been ‘immediately’ notified or is not notified at all of a notifiable pollution incident.</td><td>• Contravention of the Protection of the Environment Operations Act 1997 (POEO Act).
• Enforcement action taken by the EPA.</td></tr>
<tr><td>• Neighbours are not notified of the pollution incident after the EPA has requested Bettergrow to notify them.</td><td>• Contravention of the Protection of the Environment Operations Act 1997 (POEO Act); and
• Enforcement action taken by the EPA.
• Conviction and maximum penalty of $2,000,000.</td></tr>
<tr><td>• False or misleading monitoring results are supplied to the EPA or the public.</td><td>• Contravention of the Protection of the Environment Operations Act 1997 (POEO Act); and
• Enforcement action taken by the EPA.
• Conviction and maximum penalty of $1,000,000.</td></tr>
<tr><td colspan="2">Control Measures:

A pollution incident is classified as “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.”

• Ensure that the pollution incident response flow chart below is followed (refer to Figure 1).
• 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.

Table 1: Management contact details</td></tr>
</table>

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*' is there is a risk of '*material harm to the environment*', which is defined as:

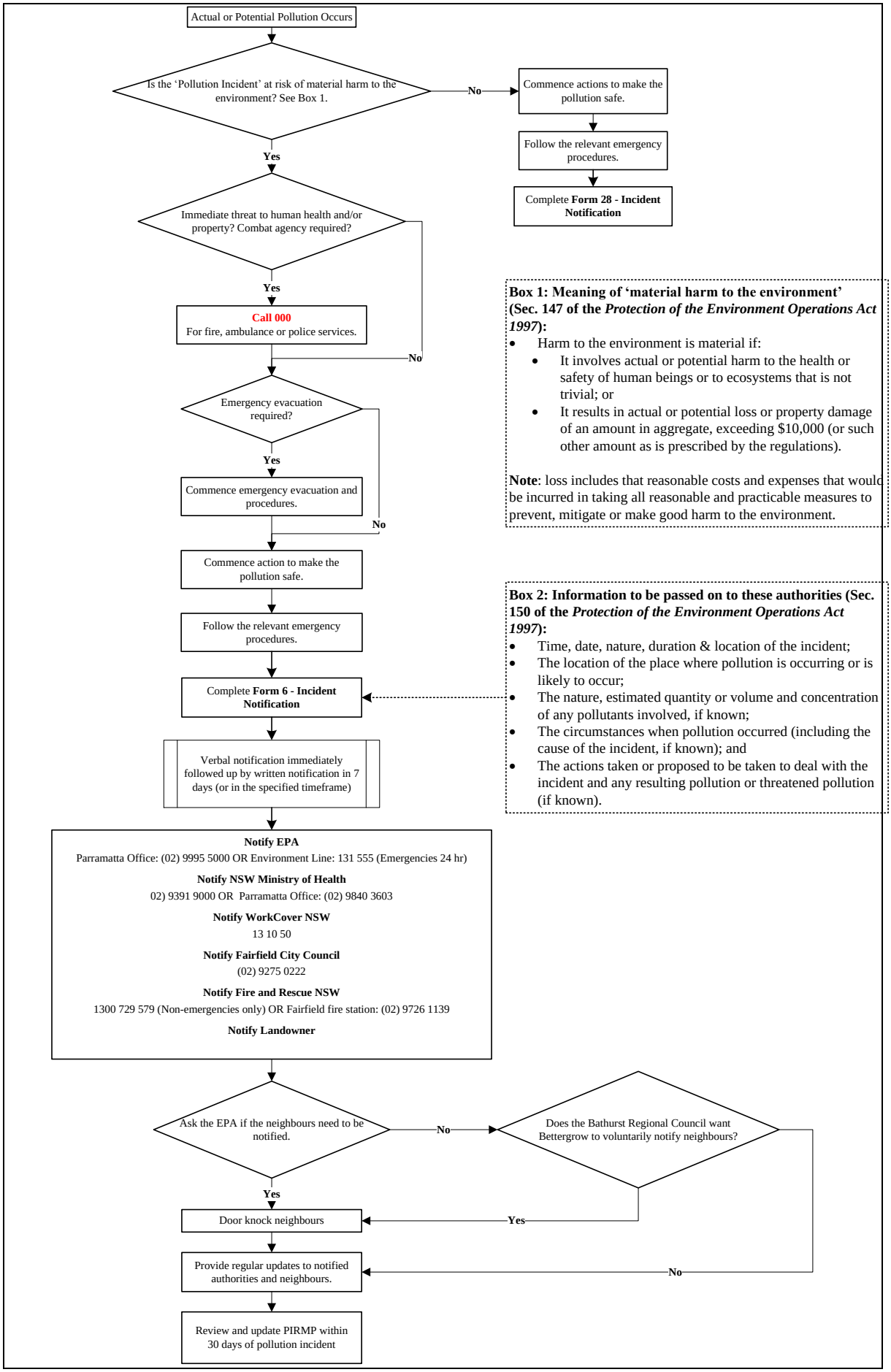
(a) harm to the environment is material if:
  (i) it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or
  (ii) it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000 (or such other 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 Services[1]	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) Parramatta Office or Westmead Hospital (after hours)	(02) 9391 9000 OR 02) 9840 3603 or 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] Fairfield Fire Station	1300 729 579 OR (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 is they were initially contacted as a combat agency.	

Figure 1:Pollution incident response flow chart


Actual or Potential Pollution Occurs
Is the 'Pollution Incident' at risk of material harm to the environment? See Box 1.
No
Commence actions to make the pollution safe.
Follow the relevant emergency procedures.
Complete Form 28 - Incident Notification
Yes
Immediate threat to human health and/or property? Combat agency required?
Yes
Call 000
For fire, ambulance or police services.
No
Emergency evacuation required?
Yes
Commence emergency evacuation and procedures.
No
Commence action to make the pollution safe.
Follow the relevant emergency procedures.
Complete Form 6 - Incident Notification
Verbal notification immediately followed up by written notification in 7 days (or in the specified timeframe)
Notify EPA
Parramatta Office: (02) 9995 5000 OR Environment Line: 131 555 (Emergencies 24 hr)
Notify NSW Ministry of Health
02) 9391 9000 OR Parramatta Office: (02) 9840 3603
Notify WorkCover NSW
13 10 50
Notify Fairfield City Council
(02) 9275 0222
Notify Fire and Rescue NSW
1300 729 579 (Non-emergencies only) OR Fairfield fire station: (02) 9726 1139
Notify Landowner
Ask the EPA if the neighbours need to be notified.
No
Does the Bathurst Regional Council want Bettergrow to voluntarily notify neighbours?
Yes
Door knock neighbours
Yes
Provide regular updates to notified authorities and neighbours.
No
Review and update PIRMP within 30 days of pollution incident
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 appraised 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 appraised 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.

- 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	Potential Impacts
• Failure to contain spilled substance.	• 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.
• Stormwater runoff is allowed to come into contact with spilt substance resulting in generation of contaminated stormwater.	• 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.
• Waste has been spilt such that it is impeding stormwater flow paths.	• 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.
• Wastes have been spilt and allowed to directly or indirectly enter onsite drains or stormwater improvement devices.	• 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.
• Inappropriate training has resulted in a spill of waste to the stormwater drainage system.	• Enforcement action taken by the administering authority with a requirement to clean up. • Financial loss.
• Items contained within Spill kits have not been replaced when utilised. • Spill kits have been used to store rubbish.	• 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.

- 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:	**Potential Impacts:**
• Failure to contain a spilt substance.	• 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.
• Inappropriate or ineffective infrastructure in place to prevent a release. • Infrastructure to control releases has not been maintained.	• A release occurs that results in environmental harm. • Enforcement action taken by the EPA. • Requirement to remediate and rehabilitate at huge cost.
• Appropriate management of contained stormwater has not occurred and an uncontrolled release occurs.	• Accentuation of the extent of environmental harm caused. • Enforcement action taken by the EPA.
• Insitu monitoring has not occurred for the required sampling location.	• 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.
• Monitoring probes have been irregularly calibrated.	• 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.

- 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.

• Prohibited waste is stored onsite such as solvents, oxidisers or tyres and a fire occurs.	• Accentuation of fire with inability to control. • Fire spreads into adjoining property causing huge financial loss. • Enforcement action taken.
• Electrical/mechanical fault causes fire.	• 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.
• Access to fire hydrants is limited/impeded due to obstructions being in place.	• Inability to rapidly apply water and supress fire.

Control Measures:

- If necessary (larger fires) contact Fire & Rescue NSW for assistance and advice.
- Ensure that no smoking is permitted in areas which are not specifically designated for smoking.
- Ensure that Facility is secure when no one is present on site.
- Ensure that plant and equipment are regularly maintained in accordance with supplier or manufacturer's recommendations.
- Ensure onsite fire procedures are followed, including evacuation if necessary.
- Do not store prohibited substances on site.
- Every effort should be made to contain fire water on site. Drains must be blocked as soon as possible, while it is safe to do so, thereby minimising or preventing offsite drainage of contaminated water.
- Prior to utilising fire retardants, advice must be sought from Fire and rescue NSW.
- Ensure that appropriate fire extinguisher types are located on site.
- Ensure fire hydrants are not obstructed at any time so access to firefighting water is provided.
- All personnel must be trained in effective firefighting skill with resulting competency being achieved recorded.

Record Keeping:

- All releases to air are to be reported to the EPA as soon as practicable via telephone after becoming aware a release has occurred that is likely to result in nuisance or harm at any odour or dust sensitive place.
- All releases to the air are to be recorded (refer to **Appendix 2 – Forms and Checklist, Form 4 – Dust and Particulate Monitoring Form).**

- Sensitive receptors must be monitored, AT THEIR LOCATION (i.e. offsite) after an incident, to determine if nuisance or harm is occurring or is likely to occur (refer to **Appendix 2 – Forms and Checklists, Form 4 – Dust and Particulate Monitoring**).
- Record all complaints received (refer to **Appendix 2 – Forms and Checklist, Form 3 – Complaint Investigation Form).**

Responsibility and Communication:

- All Facility staff members that are engaged in the above mentioned activities are responsible for ensuring control measures are met.
- The Site Manager is to promptly report to the Managing Director any variance from the control measures that may result in environmental harm or nuisance.
- The Managing Director is responsible for advising the relevant administering authority of all fire incidents in the first instance.
- The Site Manager is responsible for advising the relevant administering authority if the Managing Director is un-contactable to do so.
- The Site Manager is responsible for controlling the incident unless an administering authority, such as Fire and Rescue NSW or the EPA for example declares itself as the "incident controller".
- The Site Manager or relevant Supervisor must carry out any necessary action, as directed by any administering authority attending the incident.
- 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 relevant administering authority a written report surrounding the incident, what measures were taken to minimise or prevent environmental harm and what measure are to be taken to minimise or prevent a recurrence.

Relevant Legislation:

- *Protection of the Environment Operations Act 1997*.

Appendix 2

Forms and Checklists

Please note that the following forms are indicative only, and merely outline the information that is required to be recorded by Bettergrow and provided to the administering authority, as and when required. This information may be recorded by other means as long as the pertinent information is captured.

Forms

Form 1 – Daily Running Sheet

Date	Time	Initials	Description of Daily Events Include normal day to day event and or extraordinary events such as non-compliances or emergencies, as well as the removal of all waste from the Facility and necessary information (transporter, volumes, etc.). This should link with information contained in other forms.
			e.g. normal operating conditions occurred today, weather did not lead to offsite nuisance or release of contaminants, observations confirmed pollution control measures were adequate oil water generated onsite removed via Company X.

Form 2 – Daily Weather Conditions

Date and initials	Description of Weather Incorporate any changes throughout the working day, a weather vane measuring wind direction and a rainfall gauge should be installed on site. Include previous night-time conditions, e.g. overnight rainfall should be measured and recorded.			
	Rainfall (mm)	Wind direction and general weather description and location when observed		
		Morning	Noon	Afternoon

Form 3 – Complaint Investigation Form

Note: The information on this form must be completed as soon as possible following a complaint. All details must be completed and the form filed and any necessary actions about resolution of the complaint must be filed with it.

Date and time of the complaint:	……../……../…… ……am/pm
Complainant Contact Details	
Name of the complainant:	
Complainant's address:	
Complainant's phone numbers:	**Landline**: **Mobile**:
Complaint Details	
Is the incident presenting any immediate safety risk to others, e.g. other road users or bystanders?	
Yes / No (Please circle answer)	
If yes, has the Police or Queensland Fire and Rescue been notified? Call 000, if there is any possible safety risk.	
Yes / No (Please circle answer)	
Reason for the complaint:	
Detail any investigation undertaken:	
Conclusions formed:	

Complaint Resolution
Name of Employee responsible for complaint resolution:
Employee's phone number(s): **Mobile**: **Landline**:
Have any actions been taken to resolve the complaint?
Has this action been successful?
Not at all / Somewhat / Prevented further release(s) (Please circle answer)
Name of Employee responsible for complaint resolution:
Employee's phone number(s): **Mobile**: **Landline**:
Has the cause of the complaint caused or does it threaten serious or material environmental harm? *Refer to* **Appendix 1, Section 3, Emergency Procedure 1 – Incident Management** *for the definitions of serious and material environmental harm.*
Yes / No (Please circle answer)
Is yes, then Form 6 – Incident Notification Form must be completed and the relevant authorities must be notified.
Notes

Form 4 – Dust and Particulate Monitoring Form

Date, Time and Initials	**Wind Direction**	**Wind Speed**	**Location of Dust Monitoring** (including whether upwind or downwind)	**Dust or Particulates Observed Migrating Beyond Boundary** (Yes/No and if yes, describe the extent)
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				
Sunday				

Beaufort scale number	Descriptive term	Units (km/h)	Description on Land
0	Calm	0	Smoke rises vertically.
1-3	Light winds	19 or less	Wind felt on face; leaves rustle; ordinary vanes moved by wind.
4	Moderate winds	20 - 29	Raises dust and loose paper; small branches are moved.
5	Fresh winds	30 - 39	Small trees in leaf begin to sway; crested wavelets form on inland waters.
6	Strong winds	40 - 50	Large branches in motion; whistling heard in telephone wires; umbrellas used with difficulty.
7	Near gale	51 - 62	Whole trees in motion; inconvenience felt when walking against wind.
8	Gale	63 - 75	Twigs break off trees; progress generally impeded.
9	Strong gale	76 - 87	Slight structural damage occurs -roofing dislodged; larger branches break off.
10	Storm	88 - 102	Seldom experienced inland; trees uprooted; considerable structural damage.
11	Violent storm	103 -117	Very rarely experienced - widespread damage.
12+	Hurricane	118 or more	

Form 5 – Fogger and Sprinkler Usage Recording Form

Date	Fogger Usage	Sprinkler Usage	Hours of operation

Form 6 – Incident Notification Form

The following form must be completed following an incident, fire, release or spill (> 10 litres), and a copy must be sent to the EHP and the landowner with 24 hours. *If necessary*, a copy of this completed form must be sent to all other relevant authorities within 7 days of the incident.

Company Name:
Permit Number:
Incident Details
Date and time of the incident: ……../……../…… ……am/pm
Is the incident presenting any immediate safety risk to others, e.g. other road users or bystanders?
Yes / No (Please circle answer)
If so has the Police or NSW Fire and Rescue been notified? Call 000, if there is any possible safety risk.
Yes / No (Please circle answer)
Nature of the incident:
Nature of the pollutants involved, including concentrations (if known):
Approximate volume of the spill/release or area affected?
..... litres or m^2
Location of incident, where is pollution occurring or likely to occur?
Street address:
Location description: .....
Circumstance of the incident and suspected cause:

Has Form 2 – Daily Weather Conditions for the day of the incident been attached to this form?
Yes / No (Please circle answer)
Have any samples been collected?
Yes / No (Please circle answer) *If a contaminant is being released to the air or water after a spill, collect a sample in a sample container or take a photograph of the release to the air or water. Ensure sample is marked with the date, time and name of the person taking sample. Ensure sample is handed to the Manager responsible.*
Details of samples collected: .....
Have any actions been taken to minimise/mitigate the environmental effects of the incident, e.g. blocked drains?
Has this action been successful?
Not at all / Somewhat / Prevented further release(s) (Please circle answer)
Name of the Manager responsible:
Manager's contact phone number(s): **Mobile**: ..... **Landline**:	
Waste Transporter Details (if applicable)
Permit Number:
Vehicle type:
Vehicle registration number:
Name of driver:
Contact number of driver:

Notification of Incident	
	(Please circle answers)
Has the EPA been notified?	Yes / No
Has the landowner(s) been notified?	Yes / No
Has the Local Government Authority been notified?	Yes / No
Has the Local Public Health Unit been notified?	Yes / No / Not applicable
Has WorkCover been notified?	Yes / No / Not applicable
Has the NSW Fire and Rescue Service been notified?*	Yes / No / Not applicable
**Notes* NSW Fire and Rescue Service should be not notified if they were contacted in the first instance to combat the incident.*	
Notes	

Form 7 – Stormwater Infrastructure Performance Checklist

Date and initials	Rainfall (mm)	Performance of stormwater drains Any cracks or blockages evident?	Performance of onsite 1st flush system at collecting and containing sediment and liquid	Performance of Humeceptor (i.e. ability to remove oil and sediment)?	Any erosion onsite or to onsite bunding?	Performance of Bunding?	Performance of drill mud receival area at containing spills and excluding external stormwater?	Performance of hardstand pads Any ponding or pooling evident?

Form 8 – Odour Monitoring

Date & Time & initials	Location	Intensity (0- 6)	Characteristics	Hedonic Tone – degree of pleasantness or unpleasantness	Duration (Seconds / Minutes)
Monday					
Tuesday					
Wednesday					
Thursday					
Friday					
Saturday					

Note:
Intensity:
0 = not perceptible;1 = very weak;2 = weak;3 = distinct;4 = strong;5 = very strong; &6 = extremely strong.
Characteristics: The character of the odour e.g. describing the odour as similar to rotten eggs or putrescible waste etc.
Hedonic tone: The degree to which the odour is perceived as pleasant or unpleasant rated on a scale of -50 to +50 see below (after T.Hummer *et al* (1996):

-50------- -40------ -30-------- -20-------- -10---------0-------+10---------+20---------+30--------+40---------+50
Absolutely Unpleasant unpleasant slightly unpleasant neutral slightly pleasant pleasant Absolutely pleasant

Form 9 – Daily Equipment/Machinery Start Up Checklist

Date	Equipment or Machinery Item	Is there any change in apparent noise output, if so describe it?	Are there any broken or loose fitting items?	What is the next service or calibration date?	Is there any fuel or liquid leakage?

Form 10 – Continuous Improvement

(Page 1 of 2 – see page 2 for instructions on how to complete)

DATE:	**ACTIVITY:**
IDENTIFIED BY:	**IDENTIFIED TO:**
ISSUE: **RATIONALE:**	
PROPOSED RESOLUTION:	
SUPERVISOR'S COMMENTS:	
FOLLOW-UP/RESOLUTION (please date):	
SIGNATURE OF IDENTIFIER	**SIGNED (Site Manager)** **DATE ISSUE RESOLVED:**

Copies:
Original to staff member who lodged form.

Copy to supervisor for personnel file.

Copy to be brought forward as agenda item for staff meetings.

DATE: Date that staff member completed form	**ACTIVITY:** onsite activity/work area
IDENTIFIED BY: Name of staff member	**IDENTIFIED TO:** Supervisor or Manager (Supervisor would bring this to weekly/monthly meeting, and discuss as part of agenda)
ISSUE: Staff member succinctly identifies issue (what, how, when, who, where), giving sufficient details of the concern. **RATIONALE:** Staff member identifies why he/she feels it is an issue. Provides some detail regarding history, implications, consequences	
PROPOSED RESOLUTION: Staff member identifies his/her suggestions to resolve this issue. Provides details regarding benefits, costs, implications, time lines, responsibility, and accountability to enact recommendation.	
SUPERVISOR/MANAGER'S COMMENTS: Supervisor could make comments to support or endorse idea, or may note other opinions. May provide details regarding benefits, costs, implications, time lines, responsibility, and accountability to enact recommendation.	
FOLLOW-UP/RESOLUTION (please date); Leadership team reviews the issue and resolution. May direct issue and recommendations to other work areas (i.e. Building facilities, OH&S, HR, Admin) who would then be responsible to follow up with investigation of issue and possible changes). In this area the leadership or those assigned would respond to issue, noting action taken, or not taken and rationale.	
SIGNATURE OF IDENTIFIER(s)	**SIGNED (Site Manager)** **DATE ISSUE RESOLVED:** *Note that there should be a set timeline to respond to the issue

Copies:
Original to staff member who lodged form.

Copy to supervisor for personnel file.

Copy to be brought forward as agenda item for staff meetings.

Form 11 – Waste Receival Record

Load ID # - type/date/transporter/ initials of staff member receiving waste	**Does waste description provided by transporter match the waste?** Including estimated vol/weight. and composition of waste.	**Volume or Weight of incoming waste** m^3 or litres, kg or tonnes	**Is waste releasing runoff/leachate?**		**Is waste releasing offensive odour?**		**Is waste releasing heat or other emissions?** Describe emissions, e.g. fine dust.		**Are there any disease vector attractants?** Describe vectors e.g. flies, rodents etc.	
	(y/n)		**(y/n)**	**Corrective Action**	**(y/n)**	**Corrective Action**	**(y/n)**	**Corrective Action**	**(y/n)**	**Corrective Action**
	(y/n)		**(y/n)**	**Corrective Action**	**(y/n)**	**Corrective Action**	**(y/n)**	**Corrective Action**	**(y/n)**	**Corrective Action**
	(y/n)		**(y/n)**	**Corrective Action**	**(y/n)**	**Corrective Action**	**(y/n)**	**Corrective Action**	**(y/n)**	**Corrective Action**

Form 12 – Insitu Stormwater Monitoring Record

Date and Initials	Dissolved oxygen (DO) ppm or mg/L	Electrical Conductivity (EC) µs/cm	Redox Potential	pH
	Corrective action – if so what?	**Corrective action – if so what?**	**Corrective action – if so what?**	**Corrective action – if so what?**
	Corrective action – if so what?	**Corrective action – if so what?**	**Corrective action – if so what?**	**Corrective action – if so what?**
	Corrective action – if so what?	**Corrective action – if so what?**	**Corrective action – if so what?**	**Corrective action – if so what?**
	Corrective action – if so what?	**Corrective action – if so what?**	**Corrective action – if so what?**	**Corrective action – if so what?**
	Corrective action – if so what?	**Corrective action – if so what?**	**Corrective action – if so what?**	**Corrective action – if so what?**

Form 13 – Prohibited Waste Characteristic Report

Item	Yes/No
• What is the approximate volume of the prohibited waste (e.g. how many wheelie bin loads, cubic metres or items)?	
• Is there a definable odour to the prohibited waste? If so, describe the smell:	
• Is any of the waste putrefying or badly decomposed?	
• Is there noxious or offensive odour being released from the waste?	
• Are there any obvious reactions happening to the waste? Is it smoking or steaming? Is there a lot of heat present? Is there any sound being produced e.g. "fizzing", describe what you see or hear:	
• What is the name of the transport company and name and contact details of driver, date and time of delivery and unloading of waste:	

Appendix 3

Figures

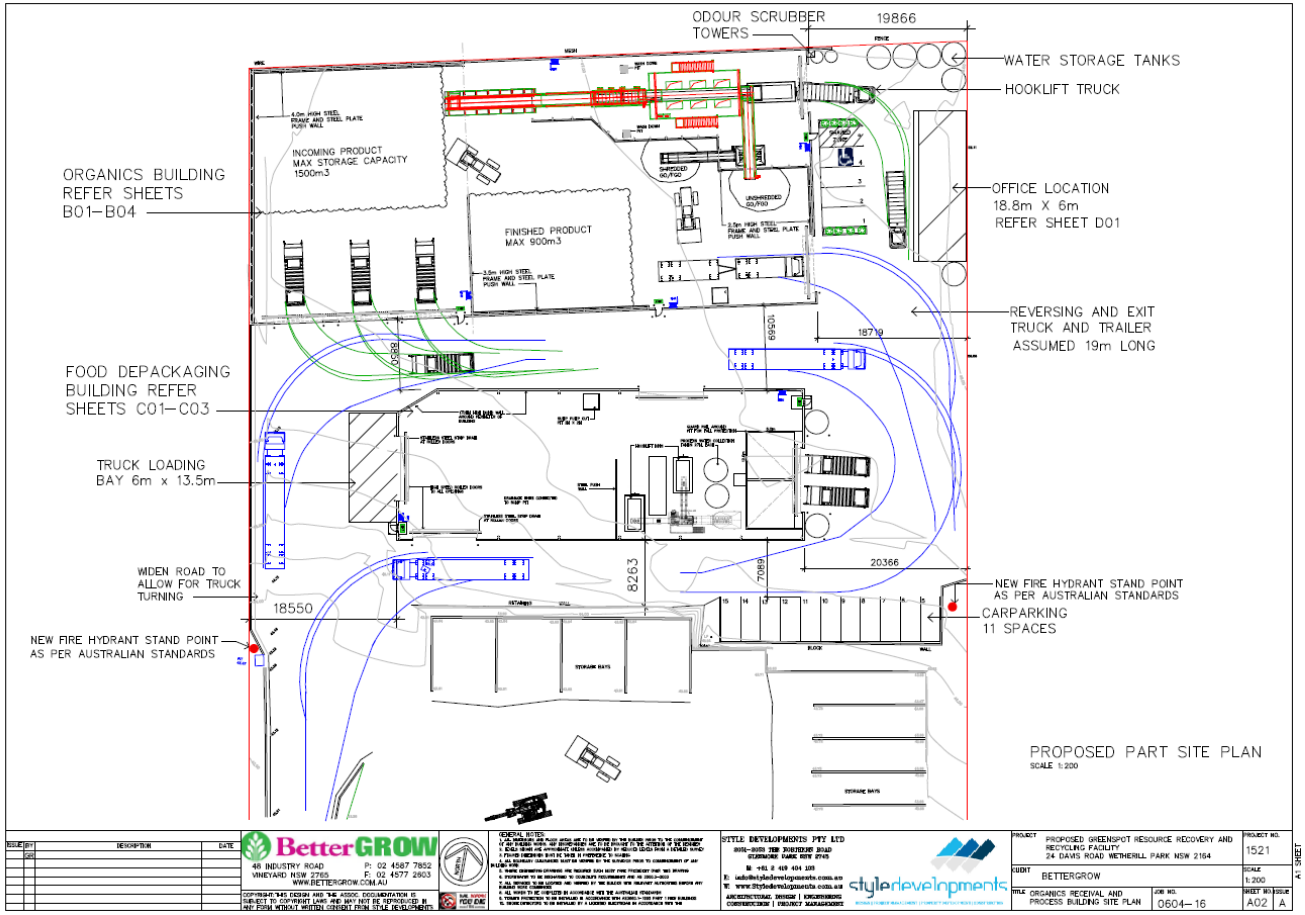


Figure 1a: Site Layout - Kerbside Organics Processing and Food Depackaging Buildings

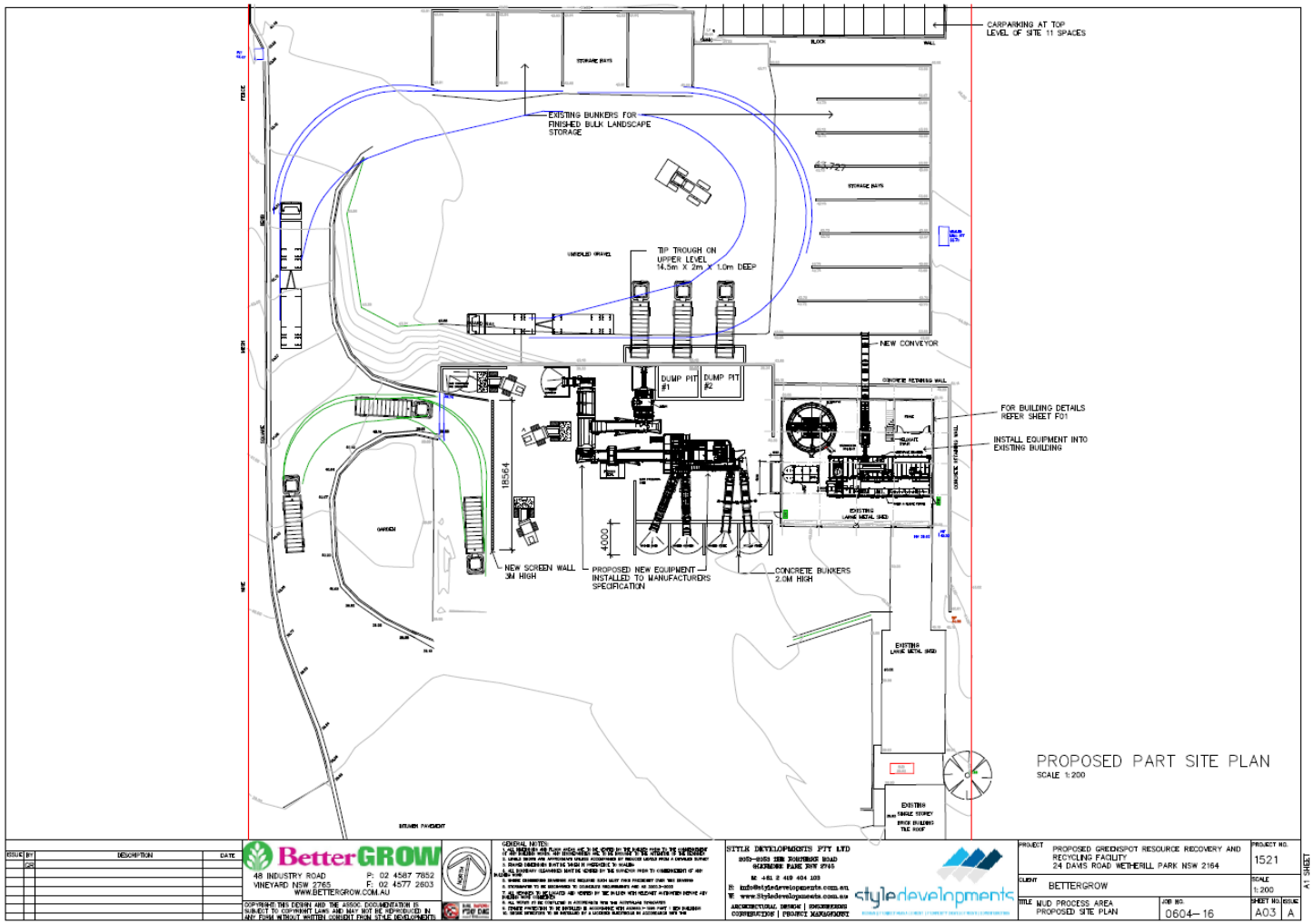


Figure 1b: Site Layout – Drill Mud and Hydro-excavation Area

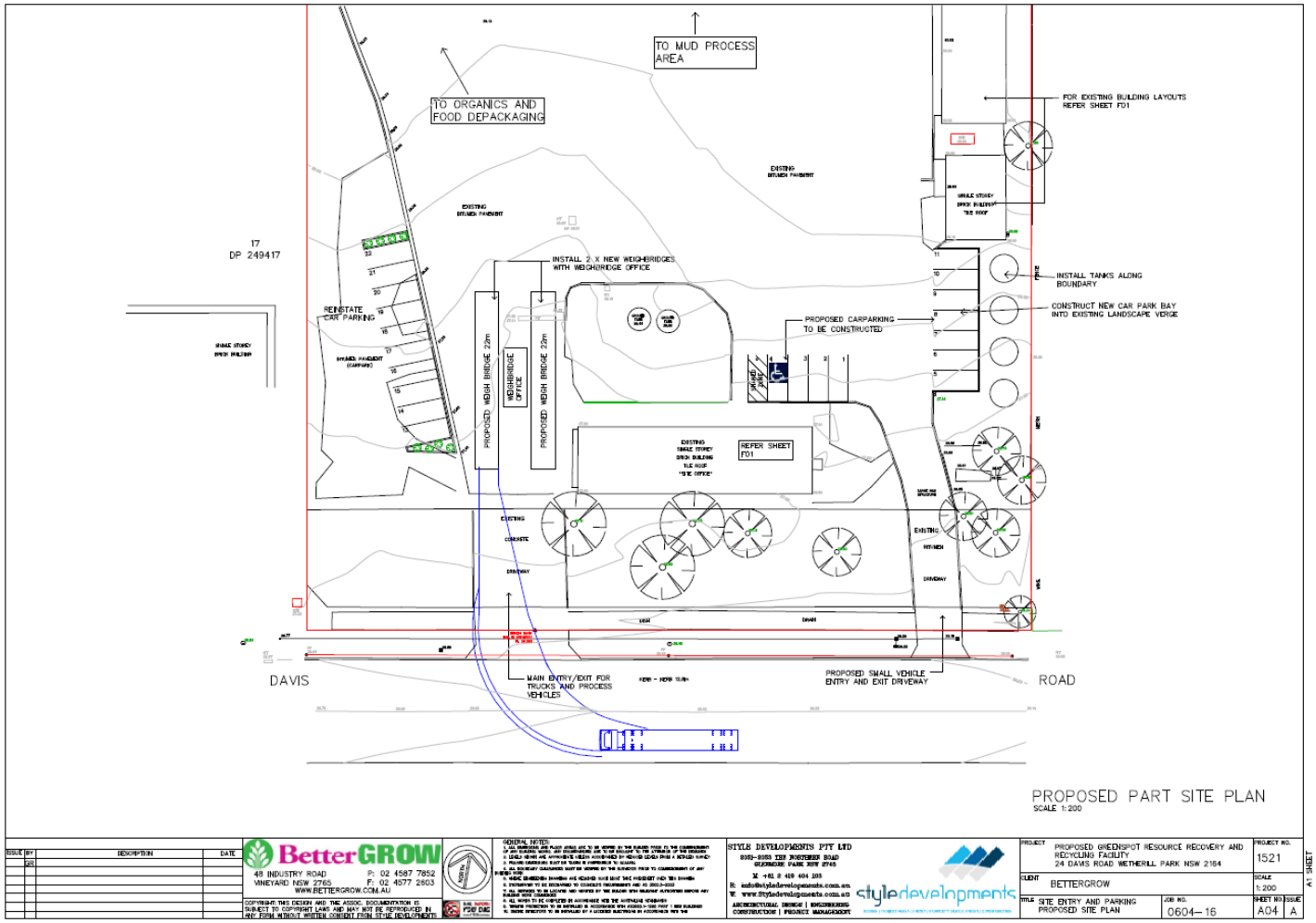


Figure 1c: Site Layout - Site Entry and Parking

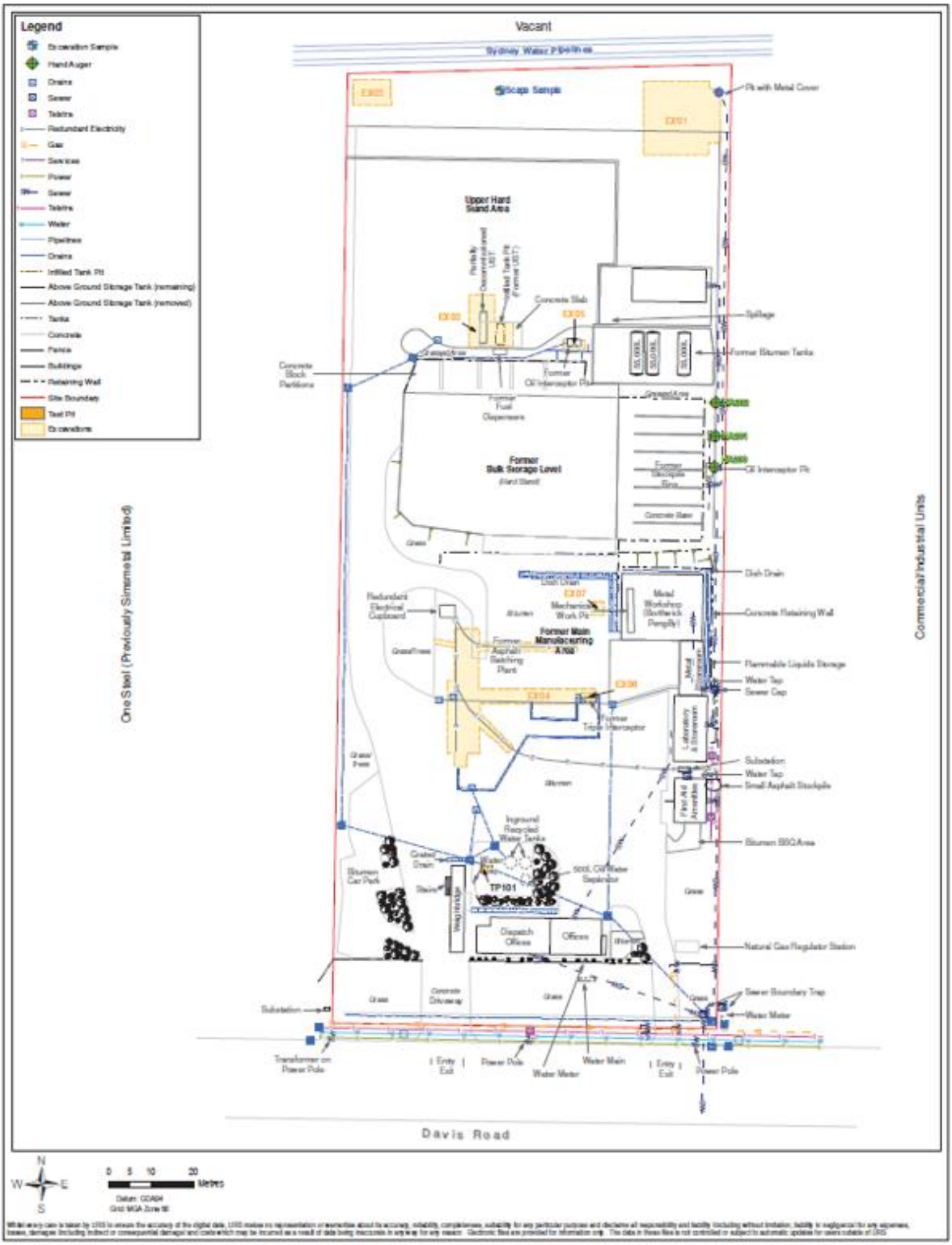


Figure 2: Historical Stormwater Drainage

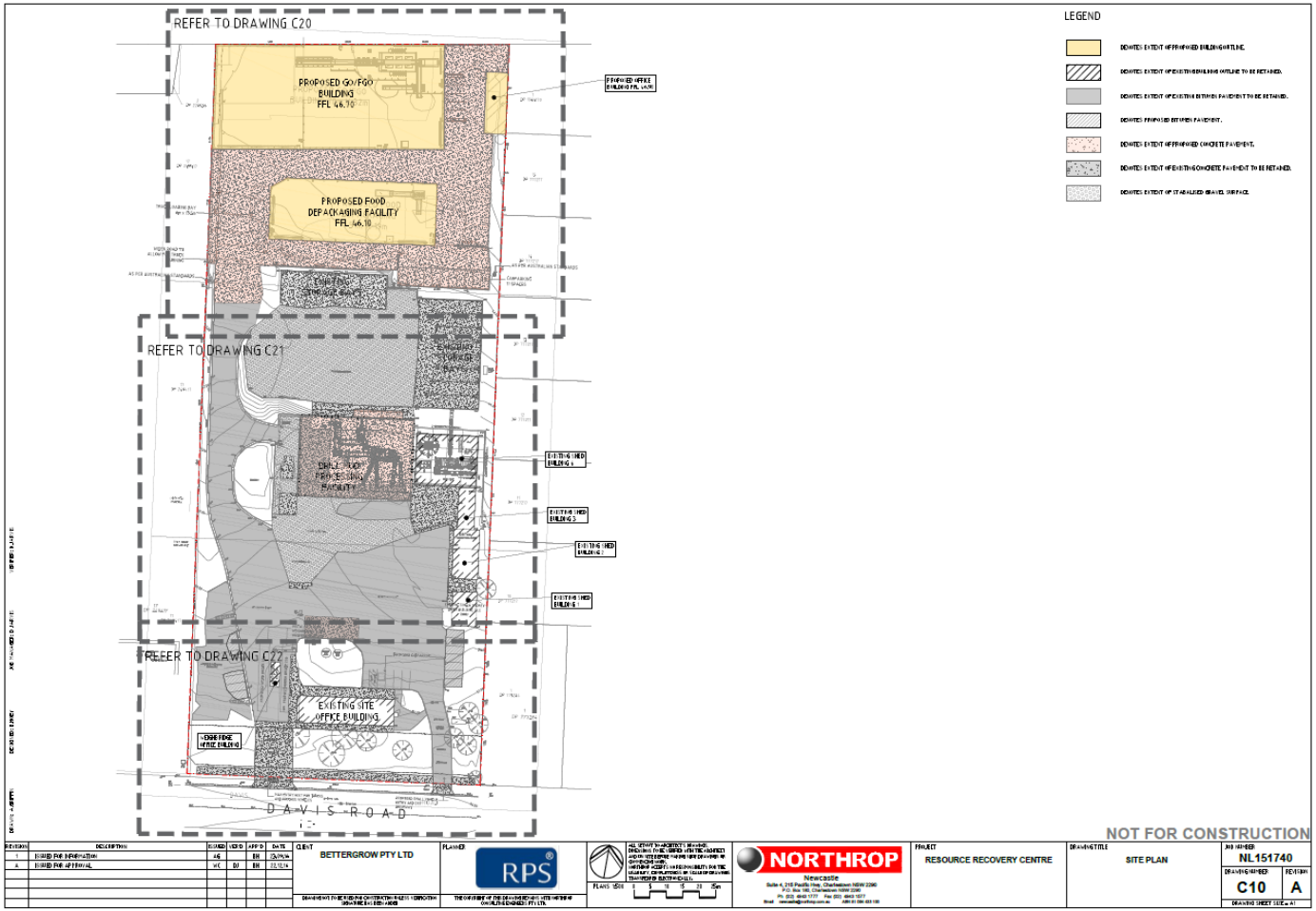


Figure 3: Stormwater Catchment Areas (source Northrop; 2016)

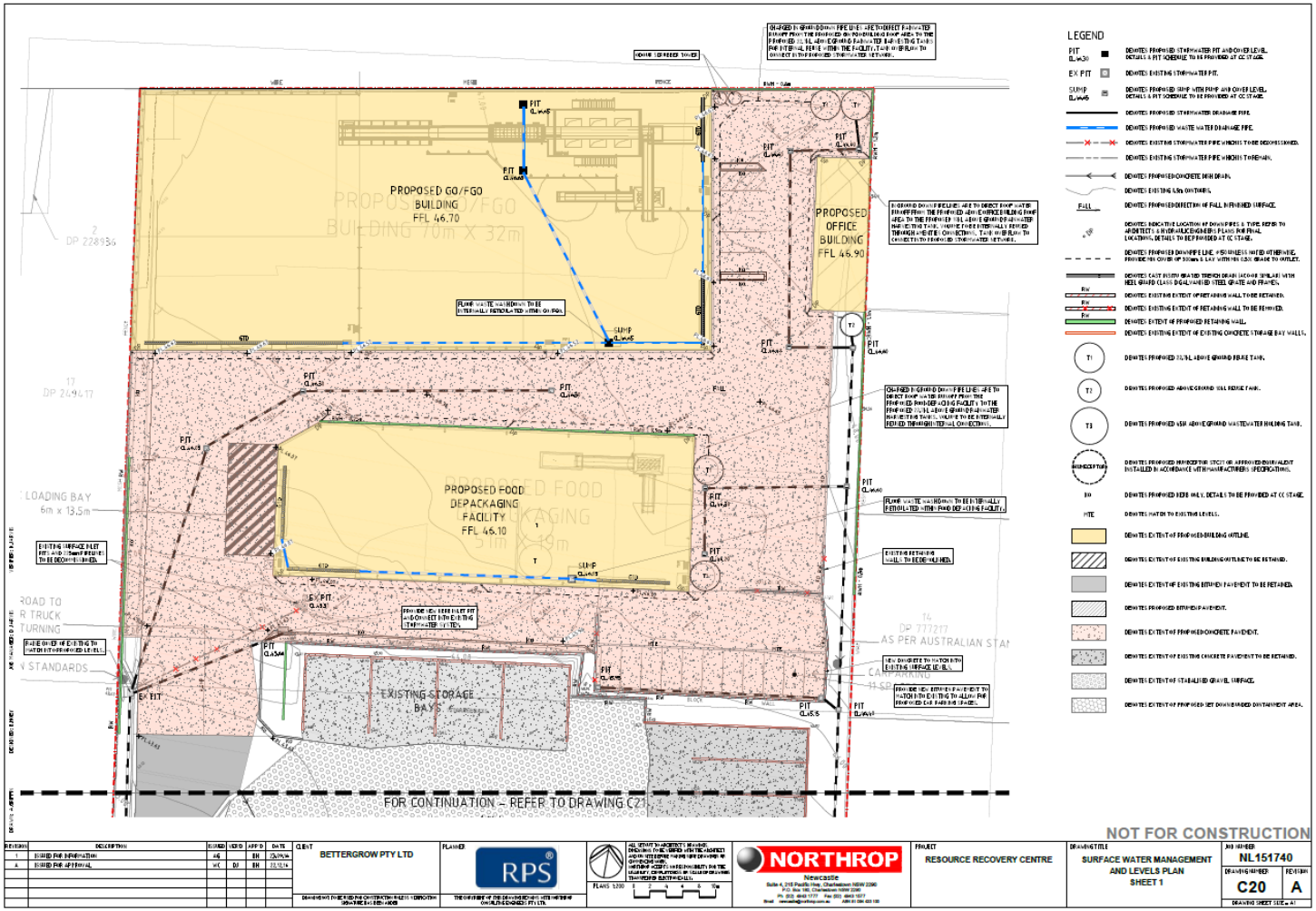


Figure 4: Internal and External Drainage of Organics Processing Buildings

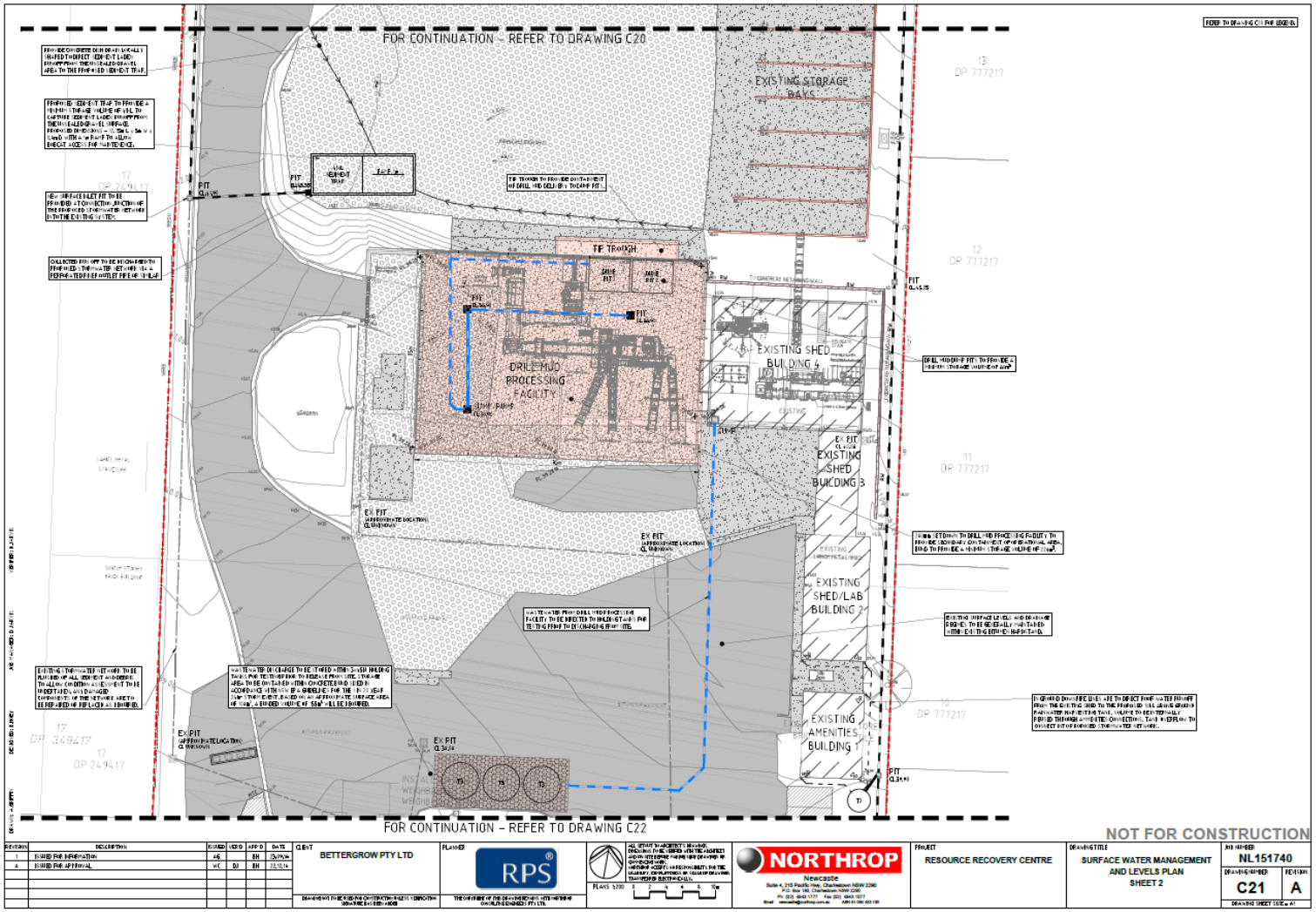


Figure 5: Internal and External Drainage of Drill Mud Processing Area & Bulk Landscaping Area

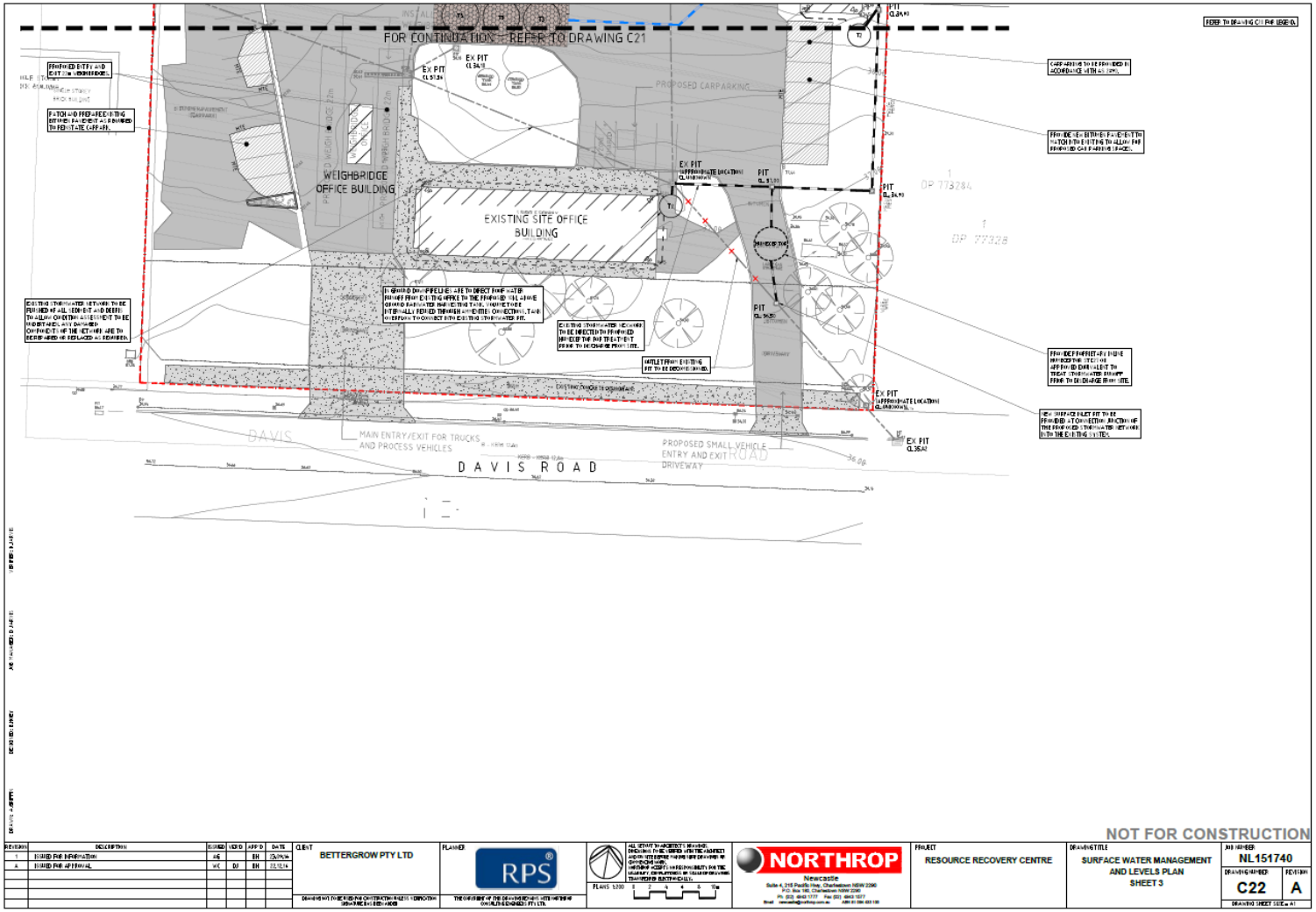


Figure 6: Stormwater Drainage at Entrance to Site