West Nowra Recycling and Waste Facility

Landfill Closure and Rehabilitation Plan

Report Number 610.15781 Shoalhaven LC&RP-R07

09 August 2018

Shoalhaven City Council

36 Bridge Road

Nowra

NSW 2541

Version: v1.0

West Nowra Recycling and Waste Facility

Landfill Closure and Rehabilitation Plan

PREPARED BY:

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DOCUMENT CONTROL

Reference	Date	Prepared	Checked	Authorised
610.15781 Shoalhaven LC&RP-R07-v1.0	9 August 2018	Danielle O'Toole	John Postlethwaite	John Postlethwaite
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610.15781 Shoalhaven LC&RP-R07-v0.1	28 November 2017	I-hui Waung	John Postlethwaite	

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1 INTRODUCTION

1.1 General

Shoalhaven City Council (SCC) currently operates and manages the West Nowra Recycling and Waste Facility (Facility) at Flatrock Road, Mundamia (**Figure 1**).

The Facility operates in accordance with a Landfill Environmental Management Plan (LEMP) prepared in 2008 by SCC (Document Reference 7/28/2008) and an Environmental Protection Licence (EPL) Number 5877, issued by the NSW EPA (EPA). SCC is applying for a variation of EPL Number 5877 conditions to extend landfilling operations into Stage 4 land (south east) at the facility (**Figure 2**). An updated LEMP, dated 11 September 2017, has been prepared to include the proposed Stage 4 extension.

This Landfill Closure and Rehabilitation Plan (LCRP) has been prepared by SLR Consulting Australia Pty Ltd (SLR) in support of the Environmental Impact Statement (EIS), which will be submitted as part of the EPL variation application for the Stage 4 extension.

This LCRP is in relation to Stage 4, as it is understood that closure and rehabilitation of the existing Stages 1 to 3 of the Facility will be carried out in accordance with the existing EPL and approval conditions for Stages 1 to 3, and under a closure and rehabilitation plan separate from this plan.

1.2 Purpose and Scope

This LCRP has been prepared to ensure that adequate landfill closure and rehabilitation measures are implemented and monitoring procedures are continued as necessary following the operational life of Stage 4 of the Facility. The scope of this LCRP covers:

- Final landform and land use for Stage 4, following closure of the Facility;
- Stage 4 rehabilitation objectives;
- Closure and rehabilitation measures for Stage 4;
- Post-closure monitoring requirements for Stage 4, including surface water, groundwater and landfill gas; and
- Criteria which demonstrate that the landfilled waste in Stage 4 is stable and non-polluting.

1.3 Regulatory Overview

This LCRP has been prepared within the regulatory framework described below.

1.3.1 Department of Planning & Environment Secretary's Environmental Assessment Requirements (SSD 15_7187)

Under Section 78A(8A) of the *Environmental Planning and Assessment Act 1979* and Schedule 2 of the *Environmental Planning and Assessment Regulation 2000,* the Secretary's Environmental Assessment Requirements (SEARs) for State Significant Development (SSD) Application Number 15_7187 requires the EIS to address (among others) a "Key Issue" of Rehabilitation by providing:

- "a detailed description of how the site would be progressively rehabilitated, revegetated, and integrated into the surrounding landscape, including measures to ensure that the final landform is free draining;
- a justification for the proposed final landform and use, taking into consideration any relevant strategic land use planning or resource management plans or policies; and
- a detailed description of the measures that would be put in place to ensure sufficient resources are available to implement the proposed rehabilitation measures, and the ongoing management of the site following the cessation of landfilling activities."

1.3.2 Environmental Guidelines: Solid Waste Landfills, Second edition 2016 (NSW EPA)

Section 10.1 of the EPA (2016) *Environmental Guidelines: Solid Waste Landfills Second edition 2016* (the Guidelines) requires a written closure plan to be submitted to the EPA for approval no later than 12 months before the completion of a landfill's waste receipt operations. The closure plan should:

- specify the steps taken, or to be taken, in closing and stabilising the landfill and the time frame for doing so;
- specify the detailed design, materials to be used and construction quality assurance plan for the final capping;
- specify post-closure management and monitoring measures for leachate, stormwater, landfill gas, odour, dust, litter and final cap integrity;
- identify any proposed future use of the site;
- be consistent with all applicable conditions of the development consent or other planning approvals that apply to the premises;
- make sure that neighbouring residents are advised of the contact persons for discussing problems with the landfill during the closure and post-closure monitoring period; and
- make sure that waste is not received for disposal at the site after landfill operations cease.

1.4 Review of Landfill Closure and Rehabilitation Plan

This LCRP is not a static document. It is a working document that requires review and updating to ensure ongoing suitability for the proposed closure and rehabilitation of the Facility.

This LCRP shall be reviewed and updated:

- to remain consistent with waste / landfill regulations / guidelines;
- should improvements to closure and/or rehabilitation measures be required;
- to take advantage of new technologies, innovations and methodologies that are superior to current closure and/or rehabilitation measures, or
- after changes are made with regards to the operation, landform etc. at the Facility and its surroundings that may affect closure and/or rehabilitation measures in the current version of the LCRP.

Changes made to the LCRP, as well as the reasons for the changes made, shall be documented by SCC as part of the review process.

Copies of the original LCRP, as well as all future versions of the LCRP, shall be retained by SCC.

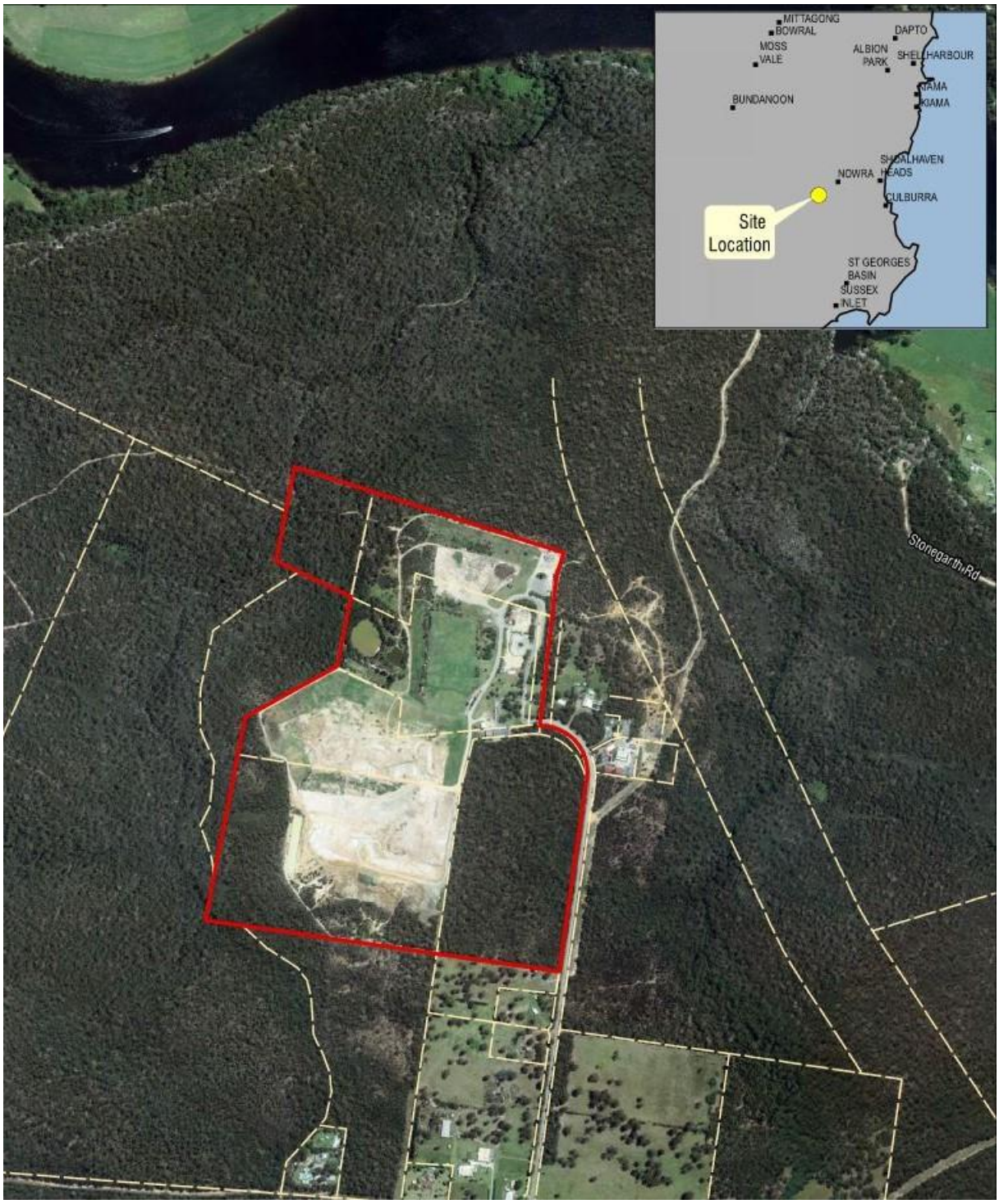

Figure 1 Facility Location

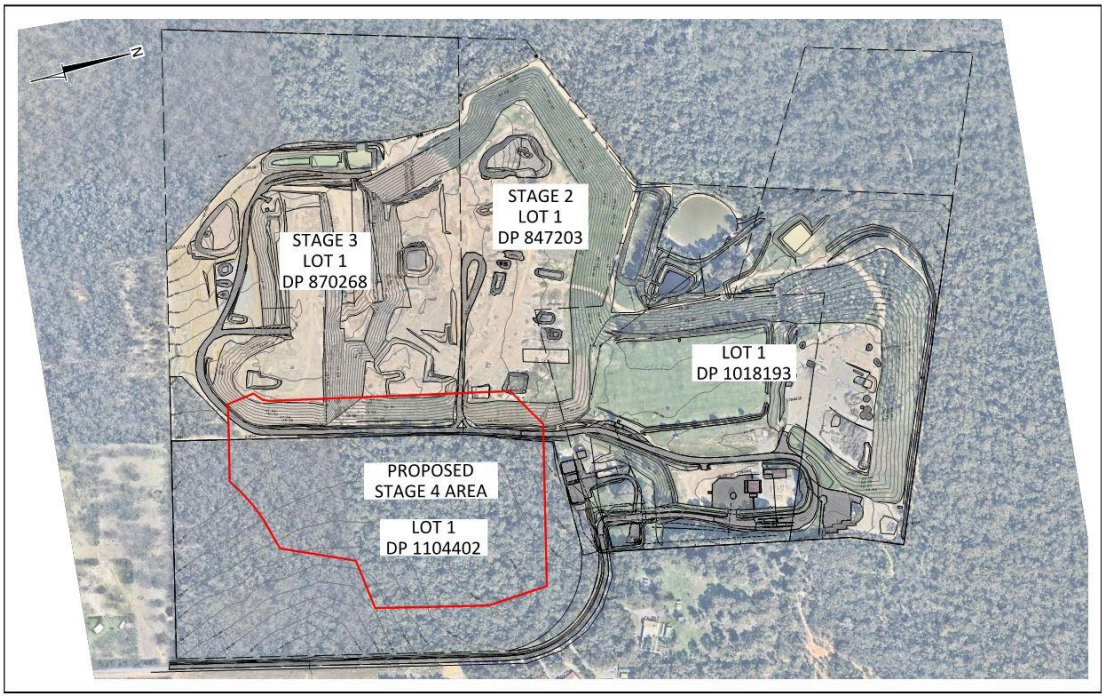

Figure 2 Stage 4 Extension

2 FACILITY DETAILS

2.1 General Description

The Facility is located at the northern end of Flatrock[1] Road, Mundamia (**Figure 1**) and encompasses approximately 65 hectares of land.

The Facility commenced operations in 1979, accepting domestic, industrial, commercial liquid, solid wastes and hazardous wastes including asbestos and oil. Landfilling practices originally involved the excavation and filling of a series of trenches. Operations have since progressed to comply with the EPA Guidelines, as well as the former EPA (1996) *Environmental Guidelines: Solid Waste Landfills*. The Facility no longer accepts liquid wastes and only small quantities of asbestos waste.

Operationally, the Facility is divided into several stages (**Figure 2**):

- Stage 1: "Old" unlined landfill, stockpile and irrigation areas, and landfill gas extraction comprising the northern portion of the Facility.
- Stage 2: Completed lined landfill areas, now used for stockpiling and landfill gas extraction.
- Stage 3: Active lined landfilling of solid waste and wet weather tipping areas, and future landfill gas extraction area.
- Stage 4: Proposed lined landfilling areas for solid waste, and future landfill gas extraction.

The proposed Stage 4 area of the Facility is a State Significant Development (SSD Application Number 15_7187) identified by the *State Environmental Planning Policy (State and Regional Development) 2011*.

Development of a nearby Resource Recovery Park (RRP) is currently being considered by SCC. Should the RRP be constructed, it is understood that diversion of material to the RRP will reduce the amount of waste being landfilled at the Facility.

There are no permanent surface water courses within the Facility. An ephemeral drainage line is located at the eastern side of Stage 4, which flows in an easterly direction and ultimately discharges into Cabbage Tree Creek.

There are 26 groundwater monitoring wells located around the Facility to monitor the groundwater flow and provide information on potential environmental impacts to groundwater. Locations of groundwater monitoring wells are shown in the Landfill Environmental Management Plan (LEMP).

2.2 Adjacent Land Uses

The Facility is bordered to the south by rural residential properties, with the closest being approximately 65m[2] from the site boundary. Other surrounding land is predominantly undeveloped bushland, which includes a gazetted nature reserve (Bamarang Nature Reserve) immediately west of the Facility.

2.3 Environmental Protection Licence

Environment Protection Licences are issued under Section 55 of the Protection of the Environment Operations (POEO) Act 1997. A copy of EPL Number 5877, dated 7 December 2017, is presented in **Appendix A**.

[1] This spelling is as per the street sign. The road is recorded as "Flat Rock Road" in the Environmental Protection Licence for the site.
[2] Note: SCC has advised this is an illegal dwelling. All legal dwellings are 250m from the Stage 4 landfill footprint.

2.4 Regional Environment Plan

The Illawarra Shoalhaven Regional Plan (the Plan) (DPE, 2015) provides a clear vision for the sustainable growth of the region over the next 20 years guided by a strategic policy, planning and decision-making framework. The Stage 4 extension (the Proposal) aligns with the strategy in that it would provide waste disposal services to support the growing populations proposed in the Shoalhaven region.

2.5 Post-closure Uses

Post-closure uses for Stage 4 being considered by SCC include, but are not limited to:

- passive recreation;
- green waste processing facility; and
- other approved activities.

SLR understands that SCC will continue to review and assess a variety of post-closure uses for Stage 4 of the landfill.

3 CLOSURE AND REHABILITATION

3.1 Objectives and Strategy

The objectives of closure and rehabilitation are to:

- implement measures to monitor, detect and mitigate in respect of any impact on the surrounding environment from Stage 4 and to minimise any degradation of the management infrastructure;
- provision such that the final landform remains stable and is suitable for the adopted post-closure land use; and
- implement measures so that Stage 4 has no adverse or continuing impact on the surrounding environment.

The strategy for closure and rehabilitation (**Table 1**) comprises the final capping works, installation of infrastructure (e.g. landfill gas management systems) and subsequent post-closure management and monitoring. Post-closure management and monitoring is to be conducted until Stage 4 is demonstrated to be stable and non-polluting (**Section 3.3**).

Table 1 Closure and Rehabilitation Strategy

Closure and Rehabilitation Stage	Components
Stage 4 Closure and Rehabilitation Works	• Monitoring of surface water, groundwater and leachate; • Operation and maintenance of surface water and erosion controls; • Monitoring of landfill gas, odour, dust, noise, litter and pests; • Incident recording and reporting procedures (including Customer Relationship Management System); • Waste emplacement including progressive installation of final capping over Stage 4 to the EPA-approved final landform; • Final stage of installation of landfill gas management system; and • Revegetation works.
Post-Closure Management and Monitoring	• Monitoring of surface water, groundwater and leachate; • Operation and maintenance of surface water and erosion controls; • Incident recording and reporting procedures (including Customer Relationship Management System); • Monitor integrity of final capping and implement any remediation measures as necessary; and • Monitoring of landfill gas system.

3.2 Closure

3.2.1 Final Landform

The Stage 4 landfill final landform concept (**Figure 3**) has been designed to complement Stage 3 and facilitate draining of surface water in an easterly direction to discharge to the existing ephemeral watercourse.

The Stage 4 final landform will include:

- side batter slopes with gradients no greater than 33.3% (1V:3H);
- an easterly fall of 1% across the crown; and
- a maximum height of RL 59m at the western boundary (equivalent to the maximum height of Stage 3).

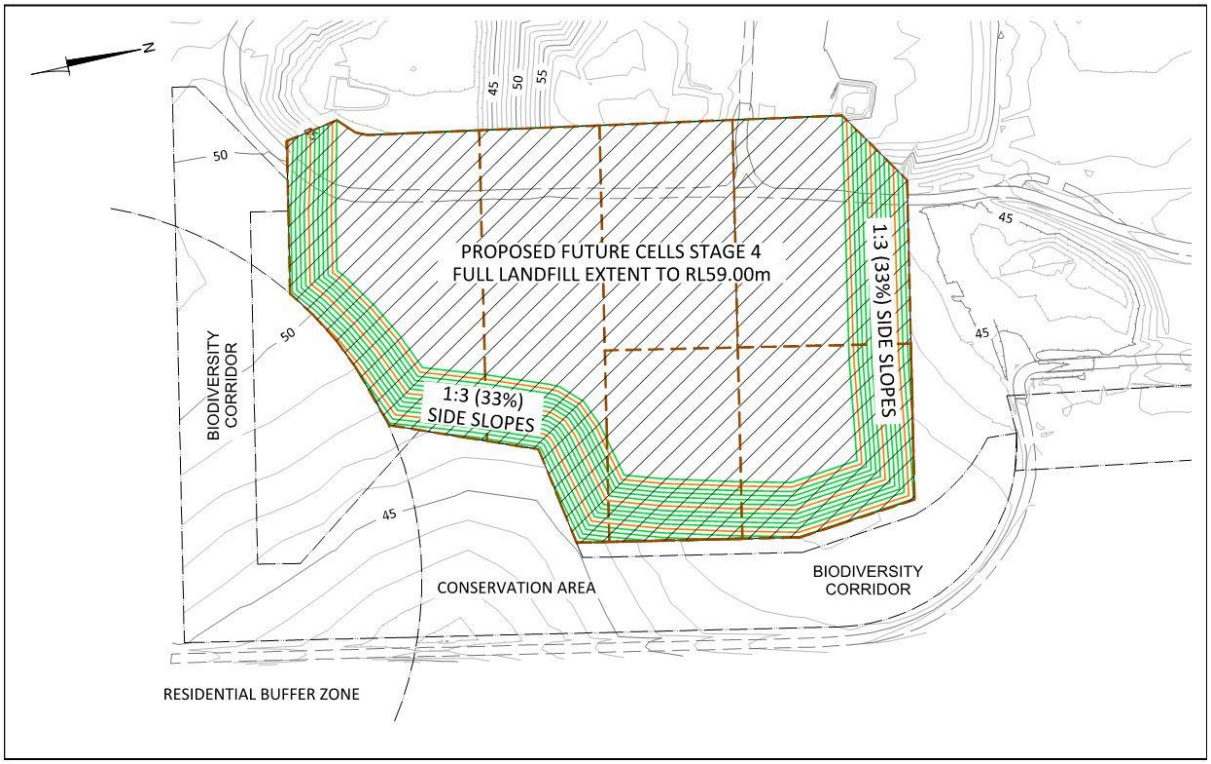

Figure 3 Stage 4 Final Landform (Concept)

3.2.2 Final Capping

3.2.2.1 Objectives of Final Capping

The final capping layer shall achieve the following requirements:

- reduce rainwater infiltration into the waste (total annual rainwater infiltration to be less than 5% of the annual rainfall), thereby minimising the generation of leachate;
- stabilise the surface of the landfill cell;
- reduce sediment and contaminated water runoff (compared to pre-capping levels);
- minimise the egress of untreated landfill gas;
- minimise odour emissions, dust, litter, presence of scavengers and vermin and risk of fire; and
- prepare the site for its future use, including protecting people, fauna and flora on, or near, the site from exposure to pollutants still contained in, or escaping, the landfill.

3.2.2.2 Design of Final Capping

As Stage 4 is expected to receive waste at least up to 2026, a detailed design for the final capping layer based on standards, methodologies and technologies current at the time of this LCRP may not represent an optimal final capping layer solution for Stage 4 at the time of its final closure.

EPL Number 5877 currently requires the final cap of the landfill cells to comprise:

- 300mm thick gas drainage layer;
- 500mm thick clay sealing layer;

- 300mm thick infiltration drainage layer; and
- 100mm thick revegetation layer.

A conceptual design of the Stage 4 capping has been developed in line with the current Guidelines and comprises:

- a seal bearing surface 300mm thick to provide a firm, stable, smooth surface of high bearing strength on which to install the cap. Engineered fill shall be used.
- a sealing layer comprising:
  - a 2mm low density polyethylene flexible membrane (i.e. LDPE) or approved alternative; and
  - a geosynthetic clay liner;
- a 1,000 mm revegetation layer, the top 200mm of which should be topsoil (and may include compost to support vegetation growth).

In order to allow SCC to take advantage of future innovations and technology in landfill cap designs and materials, it is recommended that this general capping design be reviewed, alternative designs (where appropriate) developed, approval from the EPA obtained and this LCRP revised to include the updated and approved final capping designs. Final capping designs should be approved no later than six months prior to the scheduled date of cessation of waste deliveries to Stage 4.

3.2.2.3 Surface Water Management

The design of the final landform is anticipated to incorporate the following surface water management controls:

- sediment dams to manage potential sediment-laden runoff; and
- sediment and erosion control measures across side batter slopes (coir logs, sediment fences etc.).

A conceptual erosion and sedimentation control plan is shown in **Figure 4**.

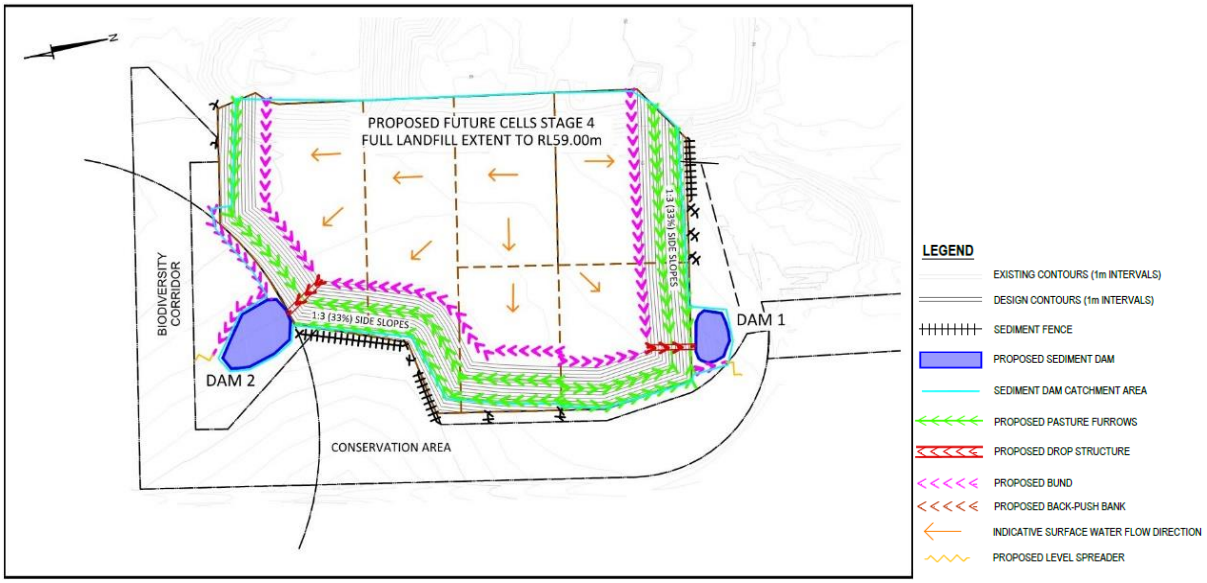

Figure 4 Conceptual erosion and sedimentation control plan

3.2.2.4 Stabilisation of Final Capping

While the detailed design of the final cap is still to be prepared, it is nonetheless anticipated that the final cap for Stage 4 would be stabilised with vegetation.

Vegetation on Stage 4 shall achieve the following requirements:

- provide effective protection against erosion for the final capping layer;
- allow effective monitoring and maintenance of the capping layer; and
- comprise vegetation types that will not present a risk to the integrity of the capping layer.

Primary vegetation for the revegetation layer will comprise a combination of annual and perennial native grasses, planted within an erosion-resistant and moisture-retaining mulch matrix. It is recommended that the seed be dispersed by hand broadcasting (or, alternatively, by hydro-seeding with a blend of seed, fertiliser and paper or wood pulp), with mulch laid on top of the seeded areas.

Secondary vegetation will comprise shrubs and, potentially, small trees. To avoid damage to, or interference with the integrity of the sealing layer, shrub and tree species selected for secondary vegetation are to have root systems which do not extend deeper than the revegetation layer.

3.2.3 Landfill Gas Management

There is an existing landfill gas (LFG) extraction, cogeneration (generator) and treatment (flare) system operating at the Facility, which manages LFG generated from Stages 1 to 3. LFG generated from Stage 4 is anticipated to be managed by the existing system (to be confirmed during the detailed design for Stage 4).

While details of the LFG management system for Stage 4 are still to be designed, it is anticipated the system would include the following features:

- gas extraction wells installed at regular intervals to achieve even coverage over the Stage 4 footprint. Spacing between wells would likely be between 50m and 100m, but will vary depending on the morphology of the landfill and efficiency of the gas extraction, cogeneration and treatment system;
- well head stations connected to the extraction wells to collect the gas; and
- a ring main system connecting the well heads back to the cogeneration and treatment systems.

A conceptual LFG management system for Stage 4 is shown in **Figure 5**.

As gas extraction wells would be installed progressively and prior to installation of the final cap, a bentonite seal should be used around each gas extraction well to maintain the integrity of the intermediate capping (**Figure 6**).

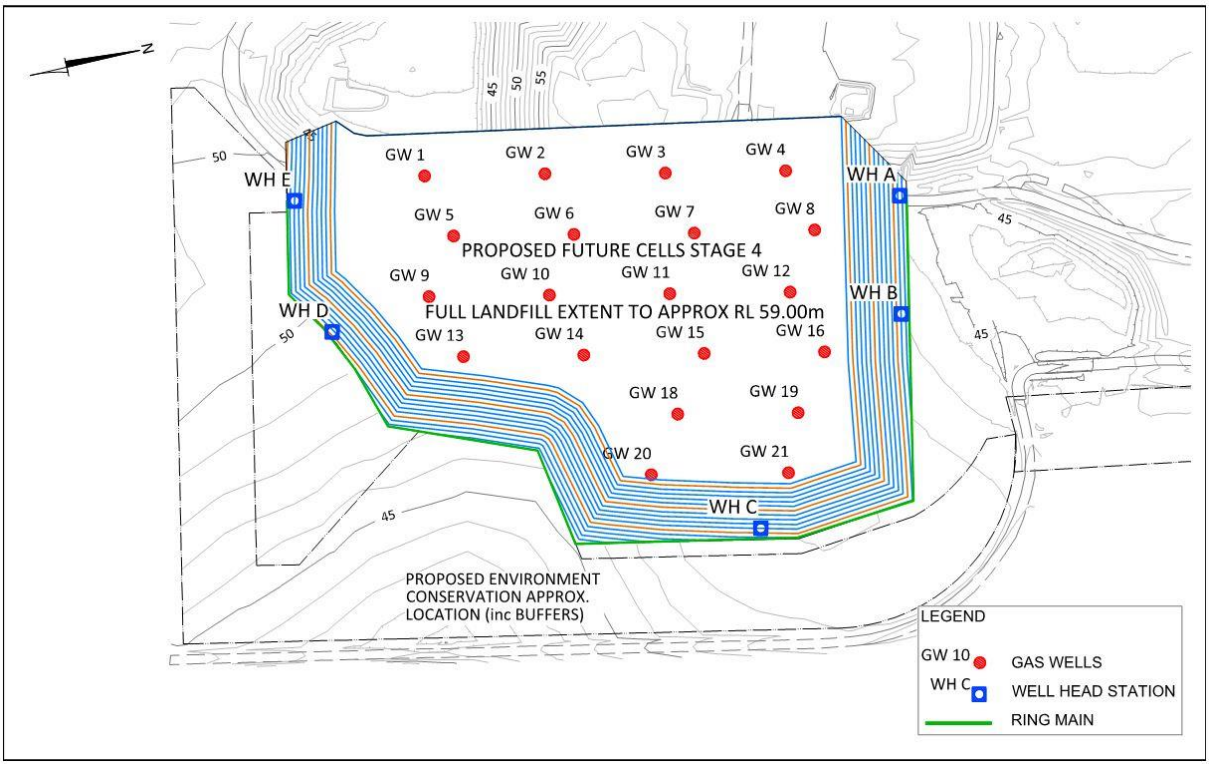

Figure 5 Conceptual landfill gas management for Stage 4

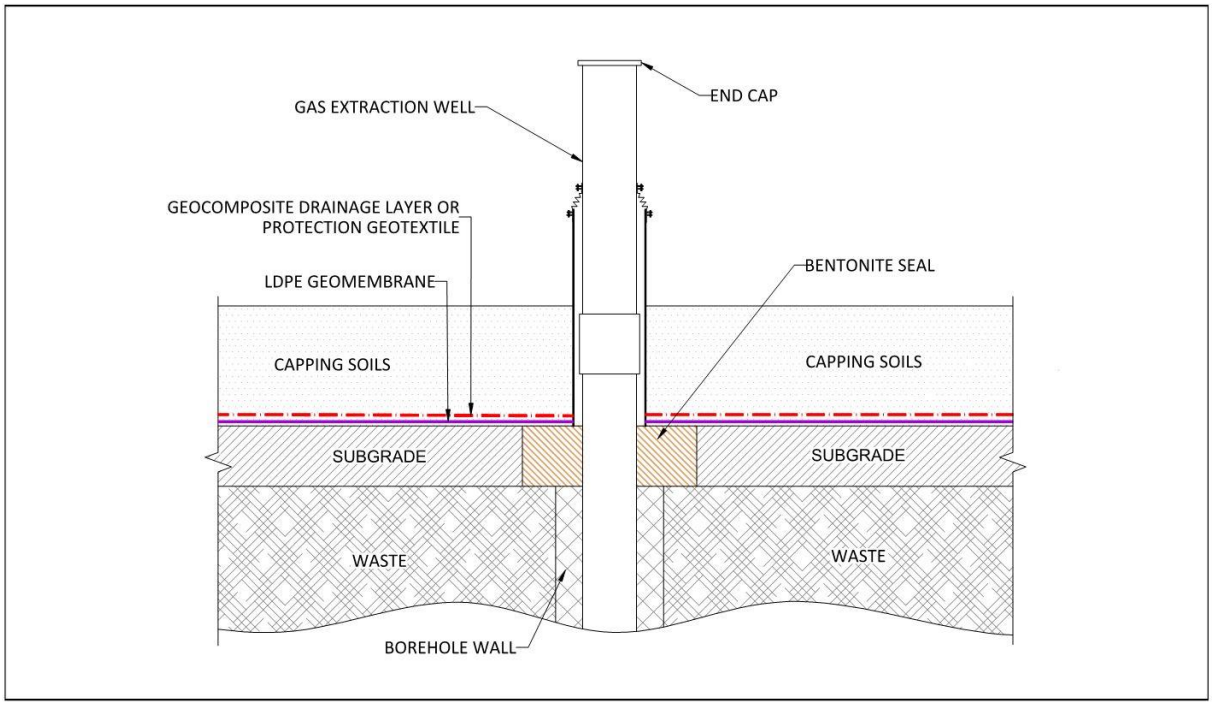

Figure 6 Typical construction of a gas extraction well

3.2.4 Construction Quality Assurance Protocols

Construction of the final capping of Stage 4 shall be undertaken by an appropriately qualified, competent and experienced contractor under the supervision of an independent Construction Quality Assurance (CQA) engineer/consultant.

3.2.4.1 Construction Quality Assurance Plan

Prior to commencement of final capping works, a Construction Quality Control Plan (CQAP) shall be submitted to the EPA for approval. Typically, the CQAP is submitted as part of a package along with detailed construction drawings and specifications.

3.2.4.2 Construction Quality Assurance Report

A CQA report is to be submitted to the EPA for approval within four weeks following the issue of a Practical Completion certificate for the final capping works.

The CQA report will include works survey plans, works-as-executed drawings, daily inspection reports, photographic records, soil and compaction test results and other relevant information to demonstrate that construction of the final cap was in accordance with the approved design. The CQA report will also include a declaration by the CQA engineer/consultant that there is sufficient information to demonstrate that the final capping was constructed in accordance with the approved designs and specifications.

3.3 Post-Closure Management

Post-closure management of Stage 4 will involve maintenance and repair of the final landform and final capping and environmental monitoring until such time the landfilled waste in Stage 4 is demonstrated to be stable and non-polluting.

3.3.1 Maintenance and Repair of Final Landform and Final Capping

SCC will take all required measures to maintain the integrity of the final landform and capping for Stage 4, including:

- monitoring the condition and efficacy of sediment erosion control measure and sedimentation dams, and undertaking repairs where necessary;
- replacement of vegetation, where necessary, to maintain the required vegetation cover density;
- filling of any cracks that may occur in the final capping layer;
- filling of depressions created by settlement of the landfilled waste (to avoid ponding of surface water); and
- repairing erosion scours.

It is recommended that the final landform and capping be inspected on a monthly basis for the first 12 months; followed by 6 monthly inspections until rehabilitation is fully established.

3.3.2 Environmental Monitoring and Reporting

Environmental monitoring comprises individual monitoring programs for:

- discharges to air;
- surface water quality;
- groundwater quality; and
- leachate.

These monitoring programs, which have been developed to comply with environmental monitoring requirements of EPL Number 5877, include programmed monitoring rounds and event-based sampling. Details for the environmental monitoring programs undertaken at Stage 4 (as well as for the Facility) are provided in the LEMP.

These monitoring programs are to be continued during the closure and post-closure of Stage 4. Any modifications to the monitoring programs are to be approved by the EPA.

Throughout the post-closure monitoring period, SCC is to continue reporting and managing environmental incidences as per the LEMP and Pollution Incident Response Management Plan (PIRMP) (**Appendix B**). SCC will also continue to prepare and submit an Annual Return in accordance with Page 4, Page 5 and Condition R1 of EPL Number 5877 throughout the post-closure monitoring period (refer to Section 5 of the LEMP).

3.3.3 Cessation of Post-Closure Management and Monitoring

Environmental management and monitoring of Stage 4 will continue to be undertaken by SCC until it has been demonstrated the waste is stable and non-polluting. Such an end-point shall be demonstrated by SCC submitting a certified statement of completion for approval by EPA, which shows the following criteria as having been met:

- gas concentration levels in all perimeter gas wells have fallen to less than 1% methane (v/v) and less than 1.5% carbon dioxide for a period of 24 months;
- analysis of the leachate composition indicates low levels of contamination posing no hazard to the environment and surface water and groundwater monitoring indicates no water pollution. These matters should be addressed in accordance with published water quality guidelines that are relevant at that time;
- the landfill final capping has been assessed over some years and found to be in good condition and stable, with acceptable stormwater drainage and with no evidence of erosion, cracking, dead vegetation, water ponding, differential settlement or slope instability;
- the level of sediments in stormwater run-off from the final capping shall be less than 50 mg/L;
- the methane gas concentrations at the surface of the final capping shall not exceed 500 ppm at any point;
- the closed landfill no longer poses an adverse amenity risk. It does not generate offensive or excessive odour, dust, noise, litter or debris, present a fire risk, or attract scavengers and vermin; and
- all other requirements of the LCRP and Surrender Notice have been completed and/or satisfied.

4 ESTIMATED CLOSURE SCHEDULE

Detailed designs for Stage 4 are yet to be prepared and, as such, there is currently insufficient information to provide a detailed closure schedule. A broad closure plan based on current information is presented in **Table 2**. However, it is anticipated that the closure plan will be revised and refined over time and as additional information becomes available.

Table 2 Stage 4 Closure Plan

Item	Description	Estimated Duration	Estimated Completion Timing*
1	Construct sedimentation dams.	1 month	2026
2	Landfilling of Stage 4 sub-stages. Apply intermediate cover over completed sub-stages.	264 months	2034
3	Progressive installation of LFG extraction wells and associated LFG management infrastructure in completed Stage 4 sub-stages.	264 months	2040
4	Progressive installation / construction of surface water and erosion controls.	264 months	2040
5	Design and approve final capping.	6 months	2039
6	Construction of final capping.	6** months	2040
7	Environmental monitoring.	On-going	Until no longer required (**Section 3.3.3**).
8	Maintenance of final cap, final landform and environmental management controls.	On-going	Until no longer required (**Section 3.3.3**).

* Based on the worst case scenario adopted in the EIS which involves the landfill opening in 2026 and closing in 2034.

** Construction of final capping may be carried out as a single phase of work, or carried out in a staged approach (e.g. final capping constructed over completed sub-stages while landfilling is still occurring in active sub-stages).

5 CONTACT DETAILS

SCC will provide a Customer Service telephone contact number that is notified to the public, in particular the neighbouring residents, for the purpose of receiving queries and feedback during the closure and post-closure monitoring period.

For every customer query and / or feedback received via the Customer Service telephone line, SCC will record (as a minimum):

- date and time the correspondence was received.
- correspondence notification method.
- any personal details of the correspondent, if provided.
- nature of the correspondence.
- subsequent investigations and actions taken by SCC.
- if no action was taken, the reason why no action was taken.

All correspondence received over the course of a reporting year will be reported to the EPA in the annual report to the EPA and on their request.

6 WASTE DISPOSAL AFTER CLOSURE

Clean and inert waste materials that are intended for use in rehabilitation works will be documented and reported in the same method used during the operation of the landfill.

SCC will implement measures in the post-closure phase of the Facility that will ensure that waste materials for landfilling are not received for disposal at the Facility after cessation of landfilling operations. In accordance with Section 5, SCC are to provide signage that include Council contact details for neighbouring residents to report any illegal dumping of materials at the Site after cessation of the landfilling operations.

7 FINANCIAL ARRANGEMENTS

SCC has formal financial arrangements to provide for the costs associated with the remediation and closure of their landfill assets. The accounts are published in Council's Annual Reports.

The funds are managed by Council and reviewed on a five year basis. The amounts set aside are accounted for using present day and future costs, by applying the net present value method over the life of the facilities.

The current cost plan allows for closure of Stages 1, 2 and 3 of the Facility. It is recommended that SCC update the account to provide for Stage 4 closure works (once approved) in the next round of their funding review.

8 REFERENCES

NSW Environment Protection Authority *Environmental Protection Licence* (Number 5877).

NSW Environment Protection Authority (2016) *Environmental Guidelines Solid Waste Landfills Second edition 2016.*

Shoalhaven City Council (2008) *Landfill Environmental Management Plan West Nowra Recycling and Waste Facility.*

Shoalhaven City Council (2015) *Pollution Incident Response Management Plan West Nowra Recycling and Waste Facility*

NSW Department of Planning and Environment (2015)*, Illawarra-Shoalhaven Regional Plan*

ENVIRONMENTAL PROTECTION LICENCE EPL 5877

Environment Protection Licence

Licence - 5877

Licence Details	
Number:	5877
Anniversary Date:	30-October

Licensee
SHOALHAVEN CITY COUNCIL
PO BOX 42
NOWRA NSW 2541

Premises
WEST NOWRA RECYCLING & WASTE FACILITY
FLAT ROCK ROAD
MUNDAMIA NSW 2540

Scheduled Activity
Composting
Waste disposal (application to land)
Waste processing (non-thermal treatment)
Waste storage

Fee Based Activity	Scale
Composting	> 5000-50000 T annual capacity to receive organics
Non-thermal treatment of general waste	Any annual processing capacity
Waste disposal by application to land	Any capacity
Waste storage - other types of waste	Any other types of waste stored

Region
Waste & Resource Recovery
59-61 Goulburn Street SYDNEY NSW 2000
Phone: (02) 9995 5000
Fax: (02) 9995 5999
PO Box A290 SYDNEY SOUTH
NSW 1232

Environment Protection Licence

Licence - 5877

Environment Protection Licence

Licence - 5877

Environment Protection Licence

Licence - 5877

Information about this licence

Dictionary

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

Responsibilities of licensee

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

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

Variation of licence conditions

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

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

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

Duration of licence

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

Licence review

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

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

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

Environment Protection Licence

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

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

Transfer of licence

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

Public register and access to monitoring data

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

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

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

This licence is issued to:

SHOALHAVEN CITY COUNCIL
PO BOX 42
NOWRA NSW 2541

subject to the conditions which follow.

Environment Protection Licence

Licence - 5877

1 Administrative Conditions

A1 What the licence authorises and regulates

A1.1 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

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

Scheduled Activity	Fee Based Activity	Scale
Composting	Composting	> 5000 - 50000 T annual capacity to receive organics
Waste processing (non-thermal treatment)	Non-thermal treatment of general waste	Any annual processing capacity
Waste disposal (application to land)	Waste disposal by application to land	Any capacity
Waste storage	Waste storage - other types of waste	Any other types of waste stored

A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
WEST NOWRA RECYCLING & WASTE FACILITY
FLAT ROCK ROAD
MUNDAMIA
NSW 2540
LOT 436 DP 808415, LOT 437 DP 808415, LOT 1 DP 847203, LOT 1 DP 870268, LOT 1 DP 1018193
EXCLUDING THE GAS GENERATOR AND GAS FLARE AS SHOWN ON PLAN REFERENCE NO. 2824_182 DATED 18 AUGUST 2011 (EPA REFERENCE DOC11/38133)

A3 Information supplied to the EPA

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

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

the issuing of this licence.

A3.2 The document titled "Draft Landfill Environment Management Plan (LEMP), West Nowra Recycling & Waste Depot, Flatrock Road, West Nowra; Ref No. 9723127.G; December 1997" submitted to the EPA on 19 December 1997 is not to be taken as part of the documentation in A3.1, other than those parts specifically referenced in this licence.

2 Discharges to Air and Water and Applications to Land

P1 Location of monitoring/discharge points and areas

P1.1 The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.

Air

EPA identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
24	Gas accumulation monitoring		Inside all buildings within 250 meters of deposited waste as shown on drawing 2824_16 referenced as EPA WOF 9346.

P1.2 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

P1.3 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

Water and land

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
1	Leachate Quality Monitoring		Leachate dam LD1 as shown on drawing 2824_16 referenced as EPA WOF9346
2		Overflow drain	Overflow from first flush dam DP2 as shown on drawing 2824_16 referenced as EPA WOF9346
3	Overflow drain	Overflow drain	Overflow from sedimentation dam 1 DP3 as shown on drawing 2824_16 referenced as EPA WOF9346
5	Surface water monitoring		Immediately downstream from the leachate dam at the boundary of the site as shown on drawing 2824_16 referenced as EPA WOF9346
6	Surface water monitoring		Upstream of site in Sandy Creek as shown on drawing 2824_16 referenced as EPA WOF9346.

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7	Surface water monitoring		Downstream of site in Sandy Creek as shown on drawing 2824_16 referenced as EPA WOF9346.
8	Groundwater monitoring		Groundwater monitoring well labelled BH1 on diagram titled "Bore Location Plan" dated 17/01/14 (DOC14/6276-01) E275936 N6137766
9	Groundwater monitoring		Groundwater monitoring well labelled BH2 on diagram titled "Bore Location Plan" dated 17/01/14 (DOC14/6276-01). E275914 N6137656
11	Groundwater monitoring		Groundwater monitoring well labelled BH4A on diagram titled "Bore Location Plan" dated 17/01/14 (DOC14/6276-01) E275896 N6137573
13	Groundwater monitoring		Groundwater monitoring well labelled BH6 on diagram titled "Bore Location Plan" dated 17/01/14 (DOC14/6276-01) E275871 N6137469
14	Groundwater monitoring		Groundwater monitoring well labelled BH7 on diagram titled "Bore Location Plan" dated 17/01/14 (DOC14/6276-01) E275872 N6137469
17	Groundwater monitoring		Groundwater monitoring well labelled BH10 on diagram titled "Bore Location Plan" dated 17/01/14 (DOC14/6276-01) E275775 N6137366
18	Groundwater monitoring		Groundwater monitoring well labelled BH11 on diagram titled "Bore Location Plan" dated 17/01/14 (DOC14/6276-01) E275830 N6137492
20	Groundwater monitoring		Groundwater monitoring well labelled BH13 on diagram titled "Bore Location Plan" May 17/01/14 (DOC14/6276-07) E275996 N6137489
21	Groundwater monitoring		Groundwater monitoring well labelled BH14 on diagram titled "Bore Location Plan" dated 17/01/14 (DOC14/6276-01) E276421 N6137653
25	Leachate Volume Monitoring		Pipeline from Leachate Dam (LD1) to irrigation area as shown on drawing 2824_16 referenced as EPA WOF 9346
26		Utilisation Area	Irrigation area as shown on drawing 2824_16 referenced as EPA WOF9346

27	Leachate Volume and Quality	leachate pumphouse for Stage 3
29	Groundwater monitoring	Groundwater monitoring well labelled BH16 on diagram titled "Bore Location Plan" dated 17/01/14 (DOC14/6276-01) E275750 E6137137
30	Groundwater monitoring	Groundwater monitoring well labelled BH17 on diagram titled "Bore Location Plan" dated 17/01/14 (DOC14/6276-01) E275750 N6137142
31	Groundwater monitoring	Groundwater monitoring well labelled BH18 on diagram titled "Bore Location Plan" dated 17/01/14 (DOC14/6276-01) E275707 N6137202
32	Groundwater monitoring	Groundwater monitoring well labelled BH19 on diagram titled "Bore Location Plan" dated 17/01/14 (DOC14/6276-01) E276132 N6137061
33	Groundwater monitoring	Groundwater monitoring well labelled BH20 on diagram titled "Bore Location Plan" dated 17/01/14 (DOC14/6276-01) E276171 N6137736
34	Groundwater Monitoring	Groundwater monitoring well labelled BH21 on diagram titled "Bore Location Plan" dated 17/01/14 (DOC14/6276-01) E275742 N6136900
35	Groundwater monitoring	Groundwater monitoring well labelled BH22 on diagram titled "Bore Location Plan" dated 17/01/14 (DOC14/6276-01) E275821 N6136791
36	Groundwater monitoring	Groundwater monitoring well labelled BH23 on diagram titled "Bore Location Plan" dated 17/01/14 (DOC14/6276-01) E275942 N6136774

3 Limit Conditions

L1 Pollution of waters

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

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L2 Concentration limits

L2.1 For each monitoring/discharge point or utilisation area specified in the table\s below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.

L2.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.

L2.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table\s.

L2.4 Water and/or Land Concentration Limits

POINT 2

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
pH	pH				6.5-8.5
Total suspended solids	milligrams per litre				50

POINT 3

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
pH	pH				6.5-8.5
Total suspended solids	milligrams per litre				50

L3 Waste

L3.1 The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled “Waste” and meeting the definition, if any, in the column titled “Description” in the table below.
Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled “Activity” in the table below.
Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled “Other Limits” in the table below.
This condition does not limit any other conditions in this licence.

Code	Waste	Description	Activity	Other Limits
NA	General solid waste (non-putrescible)	As defined in Schedule 1 of the POEO Act, as in force from time to time	Waste disposal (application to land) Waste storage Composting Waste processing (non-thermal treatment)	NA
NA	General solid waste (putrescible)	As defined in Schedule 1 of the POEO Act, as in force from time to time	Waste disposal (application to land)	NA
NA	Asbestos waste	As defined in Schedule 1 of the POEO Act, as in force from time to time	Waste disposal (application to land)	NA
NA	Waste tyres	As defined in Schedule 1 of the POEO Act, as in force from time to time	Waste disposal (application to land)	NA
NA	Waste	Any waste received on site that is below licensing thresholds in Schedule 1 of the POEO Act, as in force from time to time	-	NA

L3.2 The stockpiles of waste or recovered materials must not exceed the following limits at any one time:
a) Processed and unprocessed garden waste and/or wood waste – 5,000 tonnes;
b) Processed and unprocessed building and demolition waste – 10,000 tonnes;
c) Scrap metal – 5,000 tonnes; and
d) Glass – 5,000 tonnes.

L3.3 The licensee must not dispose of any tyres on the premises which;
a) have a diameter of less than 1.2 metres; and
b) are delivered at the premises in a load containing more than 5 whole tyres; and
c) became waste in the Sydney Metropolitan Area.

L3.4 Tyres stockpiled on the premises must:
a) not exceed fifty (50) tonnes of tyres at any one time; and
b) be located in a clearly defined area away from the tipping face; and
c) be managed to control vermin; and
d) be managed to prevent any tyres from catching fire.

L4 Potentially offensive odour

L4.1 The licensee must not cause or permit the emission of offensive odour beyond the boundary of the premises.

4 Operating Conditions

O1 Activities must be carried out in a competent manner

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

O2 Maintenance of plant and equipment

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

O3 Dust

O3.1 All operations and activities occurring at the premises must be carried out in a manner that will minimise the emission of dust from the premises.

O4 Emergency response

O4.1 The licensee must have in place and implement procedures to minimise the risk of fire at the premises.

O4.2 The licensee must extinguish fires at the premises as soon as possible.

O5 Processes and management

O5.1 The licensee must take all practicable steps to control entry to the premises.

O5.2 The licensee must ensure that all gates are locked whenever the landfill is unattended.

O6 Waste management

O6.1 Leachate impounded in the surface leachate storage ponds and leachate collected by the subsurface leachate collection system may be irrigated on the following utilisation area(s):
a) Point No. 26 - Irrigation Area; and
b) Irrigation at tip face.

O6.2 The volume of leachate directed to the utilisation area must not exceed the capacity of the area to

assimilate the leachate.

O6.3 The landfill surface must be contoured to ensure that stormwater is managed separately from leachate.

O6.4 Cover material must be Virgin Excavated Natural Material.
a) Daily cover
Cover material must be applied to a minimum depth of 15 centimetres over all exposed landfilled waste prior to ceasing operations at the end of each day.
b) Intermediate cover
Cover material must be applied to a depth of 30 centimetres over surfaces of the landfilled waste at the premises which are to be exposed for more than 90 days.
c) Cover material stockpile
At least two weeks cover material must be available at the premises under all weather conditions. This material may be won on site, or alternatively a cover stockpile must be maintained adjacent to the tip face.

O6.5 The licensee must have in place and implement procedures to identify and prevent the disposal of any waste not permitted by this licence to be disposed of at the premises.

O6.6 Vehicles leaving the premises must not track materials to external surfaces.

O6.7 The licensee must only dispose of waste at the premises in Landfill Cells Stage 3D-2, 3E-1 or the Wet Weather Area unless the EPA amends this licence to expressly permit waste disposal elsewhere at the premises.

Note: For the purposes of this condition, “Wet Weather Area” refers to the area labelled "Wet Weather Tipping Area 1" and "Wet Weather Tipping Area 2" on the drawing “West Nowra Recycling and Waste Facility – Wet Weather Tipping Areas - Site Plan” (Plan Reference: 2824_252) dated 11 December 2014 (EPA Reference DOC14/308730).

O6.8 The licensee must not exhume any landfilled waste unless approved in writing by the EPA.

O6.9 The licensee must obtain approval from the EPA prior to constructing any landfill cells at the premises.

O6.10 The licensee must provide a report to the EPA which details the design, construction, operation and rehabilitation of any new landfill cell. This report must be submitted to the EPA at least six months before the licensee intends to construct the cell, and it must include details on a QA/QC program which can demonstrate that the cell was constructed to meet its design specifications.

O6.11 The licensee must construct landfill cell 3E-2 in accordance with the designs, specifications, methods and construction quality assurance plan contained in "Landfill Cell Stage 3E - Preliminary Design and Construction Specifications - West Nowra Recycling and Waste Facility (Facility) - Proposed Landfill Cell Stage 3E (Sub-section 3E-2)" dated 1 June 2016 and associated drawings. This includes a leachate barrier on the cell floor and walls comprising, from bottom to top:
a) a prepared sub-grade;
b) a geosynthetic clay liner;
c) a geomembrane;
d) a protection geotextile;
e) a leachate collection layer comprising 300 mm of gravel and collection pipework; and
f) a separation geotextile.

O6.12 Following construction of landfill cell 3E-2, the licensee must submit a Construction Quality Assurance Report on the quality assurances that were implemented to ensure that the works comply with the approved designs, specifications and methods.

O6.13 The licensee must not deposit any waste in landfill cell 3E-2 until the EPA has approved the Construction Quality Assurance Report in writing.

O6.14 The licensee must ensure that the landfill cells are capped progressively during operations and specifically at times when the level of waste reaches final heights.

O6.15 The licensee must ensure that the final capping of all landfill cells is in accordance with EPA's "Environmental Guidelines: Solid Waste Landfills, Second Edition") dated 2016.

O6.16 The last licensee must prepare and submit to the EPA within six months prior to the last load of waste being landfilled, a closure plan in accordance with section 76 of the Protection of the Environment Operations Act 1997.

5 Monitoring and Recording Conditions

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.

M1.2 All records required to be kept by this licence must be:
a) in a legible form, or in a form that can readily be reduced to a legible form;
b) kept for at least 4 years after the monitoring or event to which they relate took place; and
c) produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:
a) the date(s) on which the sample was taken;
b) the time(s) at which the sample was collected;
c) the point at which the sample was taken; and
d) the name of the person who collected the sample.

M2 Requirement to monitor concentration of pollutants discharged

M2.1 For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

M2.2 Air Monitoring Requirements

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POINT 24

Pollutant	Units of measure	Frequency	Sampling Method
Methane	percent by volume	Every 6 months	Special Method 1

M2.3 Water and/ or Land Monitoring Requirements

POINT 1

Pollutant	Units of measure	Frequency	Sampling Method
Alkalinity (as calcium carbonate)	milligrams per litre	Yearly	Grab sample
Aluminium	milligrams per litre	Yearly	Grab sample
Arsenic	milligrams per litre	Yearly	Grab sample
Barium	milligrams per litre	Yearly	Grab sample
Benzene	milligrams per litre	Yearly	Grab sample
Bicarbonate	milligrams per litre	Yearly	Grab sample
Cadmium	milligrams per litre	Yearly	Grab sample
Calcium	milligrams per litre	Yearly	Grab sample
Carbonate	milligrams per litre	Yearly	Grab sample
Chloride	milligrams per litre	Yearly	Grab sample
Chromium (hexavalent)	milligrams per litre	Yearly	Grab sample
Chromium (total)	milligrams per litre	Yearly	Grab sample
Cobalt	milligrams per litre	Yearly	Grab sample
Conductivity	microsiemens per centimetre	Yearly	Probe
Copper	milligrams per litre	Yearly	Grab sample
Ethyl benzene	milligrams per litre	Yearly	Grab sample
Fluoride	milligrams per litre	Yearly	Grab sample
Lead	milligrams per litre	Yearly	Grab sample
Magnesium	milligrams per litre	Yearly	Grab sample
Manganese	milligrams per litre	Yearly	Grab sample
Mercury	milligrams per litre	Yearly	Grab sample
Nitrate	milligrams per litre	Yearly	Grab sample
Nitrite	milligrams per litre	Yearly	Grab sample
Nitrogen (ammonia)	milligrams per litre	Yearly	Grab sample
Organochlorine pesticides	milligrams per litre	Yearly	Grab sample
Organophosphate pesticides	milligrams per litre	Yearly	Grab sample
pH	pH	Yearly	Probe
Phosphate	milligrams per litre	Yearly	Grab sample
Phosphorus (total)	milligrams per litre	Yearly	Grab sample

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Polycyclic aromatic hydrocarbons	milligrams per litre	Yearly	Grab sample
Potassium	milligrams per litre	Yearly	Grab sample
Sodium	milligrams per litre	Yearly	Grab sample
Sulfate	milligrams per litre	Yearly	Grab sample
Toluene	milligrams per litre	Yearly	Grab sample
Total dissolved solids	milligrams per litre	Yearly	Grab sample
Total organic carbon	milligrams per litre	Yearly	Grab sample
Total petroleum hydrocarbons	milligrams per litre	Yearly	Grab sample
Total Phenolics	milligrams per litre	Yearly	Grab sample
Total suspended solids	milligrams per litre	Yearly	Grab sample
Xylene	milligrams per litre	Yearly	Grab sample
Zinc	milligrams per litre	Yearly	Grab sample

POINT 3

Pollutant	Units of measure	Frequency	Sampling Method
pH	pH	Daily during any discharge	Grab sample
Total suspended solids	milligrams per litre	Daily during any discharge	Grab sample

POINT 5,6,7

Pollutant	Units of measure	Frequency	Sampling Method
Biochemical oxygen demand	milligrams per litre	Quarterly	Grab sample
Conductivity	microsiemens per centimetre	Quarterly	Probe
Dissolved Oxygen	milligrams per litre	Quarterly	Probe
Nitrogen (ammonia)	milligrams per litre	Quarterly	Grab sample
pH	pH	Quarterly	Grab sample
Potassium	milligrams per litre	Quarterly	Grab sample
Total dissolved solids	milligrams per litre	Quarterly	Grab sample
Total organic carbon	milligrams per litre	Quarterly	Grab sample

POINT 9,11,14,17,18,20,21,29,30,31,32,33,34,35,36

Pollutant	Units of measure	Frequency	Sampling Method
Alkalinity (as calcium carbonate)	milligrams per litre	Quarterly	Grab sample
Aluminium	milligrams per litre	Yearly	Grab sample
Arsenic	milligrams per litre	Yearly	Grab sample
Barium	milligrams per litre	Yearly	Grab sample
Benzene	milligrams per litre	Yearly	Grab sample

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Bicarbonate	milligrams per litre	Yearly	Grab sample
Cadmium	milligrams per litre	Yearly	Grab sample
Calcium	milligrams per litre	Quarterly	Grab sample
Carbonate	milligrams per litre	Yearly	Grab sample
Chloride	milligrams per litre	Quarterly	Grab sample
Chromium (hexavalent)	milligrams per litre	Yearly	Grab sample
Chromium (total)	milligrams per litre	Yearly	Grab sample
Cobalt	milligrams per litre	Yearly	Grab sample
Copper	milligrams per litre	Yearly	Grab sample
Ethyl benzene	milligrams per litre	Yearly	Grab sample
Fluoride	milligrams per litre	Yearly	Grab sample
Lead	milligrams per litre	Yearly	Grab sample
Magnesium	milligrams per litre	Yearly	Grab sample
Manganese	milligrams per litre	Yearly	Grab sample
Mercury	milligrams per litre	Yearly	Grab sample
Nitrate	milligrams per litre	Yearly	Grab sample
Nitrite	milligrams per litre	Yearly	Grab sample
Nitrogen (ammonia)	milligrams per litre	Quarterly	Grab sample
Organochlorine pesticides	milligrams per litre	Yearly	Grab sample
Organophosphate pesticides	milligrams per litre	Yearly	Grab sample
pH	pH	Quarterly	Probe
Phosphate	milligrams per litre	Yearly	Grab sample
Polycyclic aromatic hydrocarbons	milligrams per litre	Yearly	Grab sample
Potassium	milligrams per litre	Quarterly	Grab sample
Redox potential	millivolts	Yearly	Probe
Sodium	milligrams per litre	Quarterly	Grab sample
Standing Water Level	metres	Quarterly	In situ
Sulfate	milligrams per litre	Quarterly	Grab sample
Toluene	milligrams per litre	Yearly	Grab sample
Total dissolved solids	milligrams per litre	Quarterly	Grab sample
Total organic carbon	milligrams per litre	Quarterly	Grab sample
Total petroleum hydrocarbons	milligrams per litre	Yearly	Grab sample
Total Phenolics	milligrams per litre	Yearly	Grab sample
Xylene	milligrams per litre	Yearly	Grab sample
Zinc	milligrams per litre	Yearly	Grab sample

POINT 13

Pollutant	Units of measure	Frequency	Sampling Method
2,3,4,5-Tetrachlorophenol	nanograms per litre	Yearly	Grab sample

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2,3,4,6-Tetrachlorophenol	nanograms per litre	Yearly	Grab sample
2,3,4-trichlorophenol	nanograms per litre	Yearly	Grab sample
2,3,5,6-tetrachlorophenol	nanograms per litre	Yearly	Grab sample
2,3,5-trichlorophenol	nanograms per litre	Yearly	Grab sample
2,3,6-trichlorophenol	nanograms per litre	Yearly	Grab sample
2,3-dichlorophenol	nanograms per litre	Yearly	Grab sample
2,4,5-trichlorophenol	nanograms per litre	Yearly	Grab sample
2,4,6-trichlorophenol	nanograms per litre	Yearly	Grab sample
2,4-Dichlorophenol	nanograms per litre	Yearly	Grab sample
2,5-dichlorophenol	nanograms per litre	Yearly	Grab sample
2,6-dichlorophenol	nanograms per litre	Yearly	Grab sample
2-Chlorophenol	nanograms per litre	Yearly	Grab sample
3,4-dichlorophenol	nanograms per litre	Yearly	Grab sample
3,5-dichlorophenol	nanograms per litre	Yearly	Grab sample
3-chlorophenol	nanograms per litre	Yearly	Grab sample
4-Chlorophenol	nanograms per litre	Yearly	Grab sample
Alkalinity (as calcium carbonate)	milligrams per litre	Quarterly	Grab sample
Aluminium	milligrams per litre	Yearly	Grab sample
Arsenic	milligrams per litre	Yearly	Grab sample
Barium	milligrams per litre	Yearly	Grab sample
Benzene	milligrams per litre	Yearly	Grab sample
Bicarbonate	milligrams per litre	Yearly	Grab sample
Cadmium	milligrams per litre	Yearly	Grab sample
Calcium	milligrams per litre	Quarterly	Grab sample
Carbonate	milligrams per litre	Yearly	Grab sample
Chloride	milligrams per litre	Quarterly	Grab sample
Chromium (hexavalent)	milligrams per litre	Yearly	Grab sample
Chromium (total)	milligrams per litre	Yearly	Grab sample
Copper	milligrams per litre	Yearly	Grab sample
Ethyl benzene	milligrams per litre	Yearly	Grab sample
Fluoride	milligrams per litre	Yearly	Grab sample
Lead	milligrams per litre	Yearly	Grab sample
Mercury	milligrams per litre	Yearly	Grab sample
Nitrate	milligrams per litre	Yearly	Grab sample
Nitrite	milligrams per litre	Yearly	Grab sample
Nitrogen (ammonia)	milligrams per litre	Quarterly	Grab sample
Organochlorine pesticides	milligrams per litre	Yearly	Grab sample
Organophosphate pesticides	milligrams per litre	Yearly	Grab sample
Pentachlorophenol	nanograms per litre	Yearly	Grab sample
pH	pH	Quarterly	Probe
Phosphate	milligrams per litre	Yearly	Grab sample

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Polycyclic aromatic hydrocarbons	milligrams per litre	Yearly	Grab sample
Potassium	milligrams per litre	Quarterly	Grab sample
Redox potential	millivolts	Yearly	Probe
Sodium	milligrams per litre	Quarterly	Grab sample
Standing Water Level	metres	Quarterly	In situ
Sulfate	milligrams per litre	Quarterly	Grab sample
Total dissolved solids	milligrams per litre	Quarterly	Grab sample
Total organic carbon	milligrams per litre	Quarterly	Grab sample
Total petroleum hydrocarbons	milligrams per litre	Yearly	Grab sample
Total Phenolics	milligrams per litre	Yearly	Grab sample
Xylene	milligrams per litre	Yearly	Grab sample
Zinc	milligrams per litre	Yearly	Grab sample

POINT 27

Pollutant	Units of measure	Frequency	Sampling Method
Alkalinity (as calcium carbonate)	milligrams per litre	Yearly	Grab sample
Aluminium	milligrams per litre	Yearly	Grab sample
Arsenic	milligrams per litre	Yearly	Grab sample
Barium	milligrams per litre	Yearly	Grab sample
Benzene	milligrams per litre	Yearly	Grab sample
Bicarbonate	milligrams per litre	Yearly	Grab sample
Cadmium	milligrams per litre	Yearly	Grab sample
Calcium	milligrams per litre	Yearly	Grab sample
Carbonate	milligrams per litre	Yearly	Grab sample
Chromium (hexavalent)	milligrams per litre	Yearly	Grab sample
Chromium (total)	milligrams per litre	Yearly	Grab sample
Cobalt	milligrams per litre	Yearly	Grab sample
Conductivity	microsiemens per centimetre	Yearly	Probe
Copper	milligrams per litre	Yearly	Grab sample
Ethyl benzene	milligrams per litre	Yearly	Grab sample
Fluoride	milligrams per litre	Yearly	Grab sample
Lead	milligrams per litre	Yearly	Grab sample
Magnesium	milligrams per litre	Yearly	Grab sample
Manganese	milligrams per litre	Yearly	Grab sample
Mercury	milligrams per litre	Yearly	Grab sample
Nitrate	milligrams per litre	Yearly	Grab sample
Nitrite	milligrams per litre	Yearly	Grab sample
Nitrogen (ammonia)	milligrams per litre	Yearly	Grab sample
Organochlorine pesticides	milligrams per litre	Yearly	Grab sample

Organophosphate pesticides	milligrams per litre	Yearly	Grab sample
pH	milligrams per litre	Yearly	Probe
Phosphate	milligrams per litre	Yearly	Grab sample
Phosphorus (total)	milligrams per litre	Yearly	Grab sample
Polycyclic aromatic hydrocarbons	milligrams per litre	Yearly	Grab sample
Potassium	milligrams per litre	Yearly	Grab sample
Sodium	milligrams per litre	Yearly	Grab sample
Sulfate	milligrams per litre	Yearly	Grab sample
Toluene	milligrams per litre	Yearly	Grab sample
Total dissolved solids	milligrams per litre	Yearly	Grab sample
Total organic carbon	milligrams per litre	Yearly	Grab sample
Total petroleum hydrocarbons	milligrams per litre	Yearly	Grab sample
Total Phenolics	milligrams per litre	Yearly	Grab sample
Total suspended solids	milligrams per litre	Yearly	Grab sample
Xylene	milligrams per litre	Yearly	Grab sample
Zinc	milligrams per litre	Yearly	Grab sample

M2.4 For the purposes of the above table, Special Method 1 means methane monitoring in accordance with Benchmark Technique Number 18 of the Environmental Guidelines: Solid Waste Landfills (1996).

M3 Testing methods - concentration limits

M3.1 Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with:
a) any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or
b) if no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or
c) if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.

Note: The *Protection of the Environment Operations (Clean Air) Regulation 2010* requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".

M3.2 Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

M4 Recording of pollution complaints

M4.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

M4.2 The record must include details of the following:
a) the date and time of the complaint;
b) the method by which the complaint was made;
c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
d) the nature of the complaint;
e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
f) if no action was taken by the licensee, the reasons why no action was taken.

M4.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M4.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M5 Telephone complaints line

M5.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.

M5.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.

M5.3 The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.

M6 Requirement to monitor volume or mass

M6.1 For each discharge point or utilisation area specified below, the licensee must monitor:
a) the volume of liquids discharged to water or applied to the area;
b) the mass of solids applied to the area;
c) the mass of pollutants emitted to the air;
at the frequency and using the method and units of measure, specified below.

POINT 25

Frequency	Unit of Measure	Sampling Method
Monthly	cubic metres	Flow meter and continuous logger

POINT 27

Frequency	Unit of Measure	Sampling Method

Monthly	cubic metres	Flow meter and continuous logger

M7 Other monitoring and recording conditions

M7.1 The licensee must monitor the remaining disposal capacity (in cubic metres) of the landfill.

6 Reporting Conditions

R1 Annual return documents

R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:
1. a Statement of Compliance,
2. a Monitoring and Complaints Summary,
3. a Statement of Compliance - Licence Conditions,
4. a Statement of Compliance - Load based Fee,
5. a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan,
6. a Statement of Compliance - Requirement to Publish Pollution Monitoring Data; and
7. a Statement of Compliance - Environmental Management Systems and Practices.

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

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

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

R1.3 Where this licence is transferred from the licensee to a new licensee:
a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

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

R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:
a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.

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

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

R1.7 Within the Annual Return, the Statements of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:
a) the licence holder; or
b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R1.8 The Annual Return must be accompanied by / or include an Annual Report which must contain an assessment of environmental performance relevant to licence conditions including:

a) tabulated results of all monitoring data required to be collected by this licence;
b) a graphical presentation of data from at least the last three years (if available) in order to show variability and / or trends. Any statistically significant variations or anomalies should be highlighted and explained;
c) an analysis and interpretation of all monitoring data;
d) an analysis of and response to any complaints received;
e) identification of any deficiencies in environmental performance identified by the monitoring data, trends or incidents and of remedial action taken or proposed to be taken to address these deficiencies; and
f) recommendations on improving the environmental performance of the facility.

R2 Notification of environmental harm

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

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

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

R2.3 The licensee must notify the EPA within 24 hours in accordance with condition R2.1 if any landfill gas monitoring required by this licence detects methane concentrations above 1.25% (v/v), and increase the frequency of monitoring to daily, until the EPA determines otherwise.

R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
a) where this licence applies to premises, an event has occurred at the premises; or
b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,
and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

R3.3 The request may require a report which includes any or all of the following information:
a) the cause, time and duration of the event;
b) the type, volume and concentration of every pollutant discharged as a result of the event;
c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
g) any other relevant matters.

R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

R4 Other reporting conditions

R4.1 The licensee must record the following data in relation to fires occurring at the premises:
a) Time and date when the fire started.
b) Whether the fire was authorised by the licensee, and, if not, the circumstances which ignited the fire.
c) The time and date that the fire burnt out or was extinguished.
d) The location of fire (eg. clean timber stockpile, putrescible garbage cell, etc).
e) Prevailing weather conditions at the time of the fire.
f) Observations made in regard to smoke direction and dispersion.
g) The amount of waste that was combusted by the fire.
h) Action taken to extinguish the fire;
i) Action taken to prevent a reoccurrence.

The data must be recorded on each day that the fire is burning.

R4.2 The licensee or its employees or agents must notify the occurrence of all fires on the premises in accordance with conditions R2.1 and R2.2 as soon as practical after becoming aware of the fire.

7 General Conditions

G1 Copy of licence kept at the premises or plant

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

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

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

Environment Protection Licence

Licence - 5877

Dictionary

General Dictionary

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

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

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

Ms Debbie Maddison

Environment Protection Authority

(By Delegation)

Date of this edition: 01-December-2000

Environment Protection Licence

Licence - 5877

End Notes

1	Licence varied by notice 1013108, issued on 04-Jan-2002, which came into effect on 29-Jan-2002.
2	Licence varied by notice 1031238, issued on 05-Dec-2003, which came into effect on 30-Dec-2003.
3	Licence varied by change to DEC Regopm allocation, issued on 03-Mar-2006, which came into effect on 03-Mar-2006.
4	Licence varied by notice 1069250, issued on 02-May-2007, which came into effect on 02-May-2007.
5	Licence varied by notice 1081780, issued on 19-Mar-2008, which came into effect on 19-Mar-2008.
6	Condition A1.3 Not applicable varied by notice issued on <issue date> which came into effect on <effective date>
7	Licence varied by notice 1090155, issued on 15-Dec-2008, which came into effect on 15-Dec-2008.
8	Licence varied by notice 1099238, issued on 03-Apr-2009, which came into effect on 03-Apr-2009.
9	Licence varied by notice 1111694, issued on 17-May-2010, which came into effect on 17-May-2010.
10	Licence varied by notice 1115110, issued on 06-Aug-2010, which came into effect on 06-Aug-2010.
11	Licence varied by notice 1124489, issued on 03-Feb-2011, which came into effect on 03-Feb-2011.
12	Licence varied by notice 1129470, issued on 05-Jul-2011, which came into effect on 05-Jul-2011.
13	Licence varied by notice 1500746 issued on 23-Sep-2011
14	Licence varied by notice 1504597 issued on 01-May-2012
15	Licence varied by notice 1506324 issued on 11-Jan-2013
16	Licence varied by notice 1513038 issued on 22-Mar-2013
17	Licence format updated on 11-Oct-2013
18	Licence varied by notice 1520254 issued on 28-Aug-2015
19	Licence varied by notice 1533849 issued on 29-Sep-2015
20	Licence varied by notice 1535751 issued on 23-Nov-2015
21	Licence varied by notice 1537080 issued on 11-Jan-2016

Environment Protection Licence

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22	Licence varied by notice 1544674 issued on 28-Sep-2016

Shoalhaven City Council

POLLUTION INCIDENT RESPONSE MANAGEMENT PLAN

West Nowra Recycling and Waste Facility

February 2015

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APPENDICES

1. INTRODUCTION

The West Nowra Recycling and Waste Facility (Depot) is located at 120 Flatrock Road, Mundamia. Refer to Figure 1.1 for the Depot Location Plan. The Depot operates under an *Environment Protection Licence* (*EPL*) as a general solid waste (putrescible and non-putrescible) landfill. The *EPL* number is *5877*[1].

The principal Depot operations include, but are not limited to:

- landfilling operation (Stage 3 – southern portion of the Depot),
- public buyback centre / recycling area,
- recycling and processing materials stockpile areas,
- public transfer station,
- leachate irrigation over an approved area, and
- sedimentation and leachate dams along the western boundary of the Depot.

Refer to Drawing Number 1.1 for the Depot Layout Plan (Stages 1, 2 and 3).

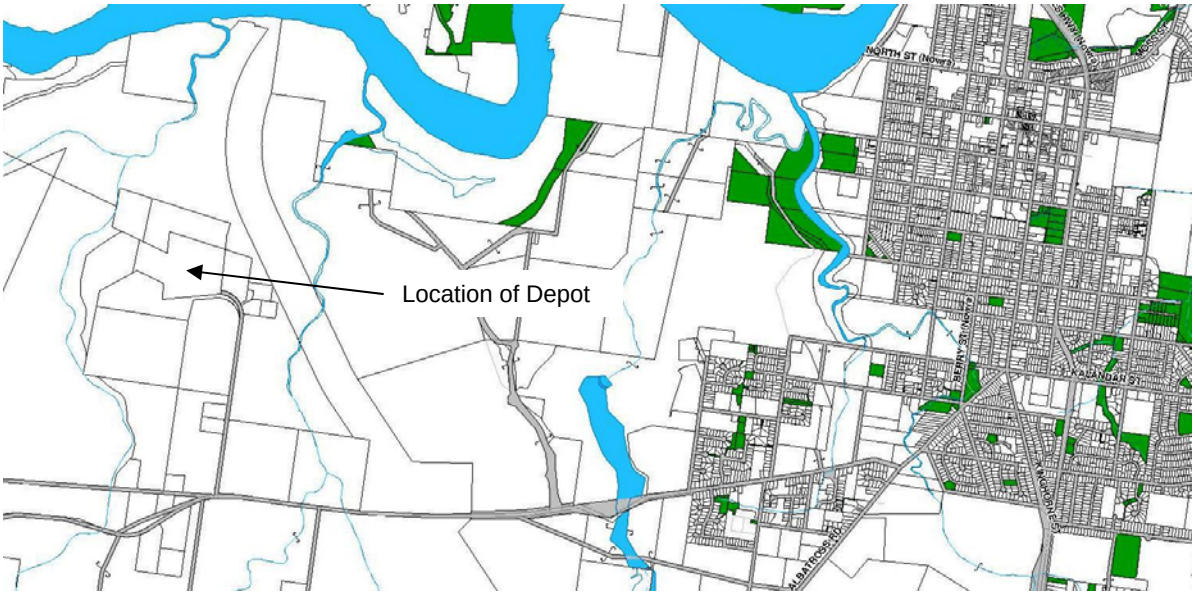


Figure 1.1: Depot Location Plan.

2. PURPOSE of the POLLUTION INCIDENT RESPONSE MANAGEMENT PLAN (PIRMP)

The purpose of the PIRMP is to ensure compliance with the requirements of the *Protection of the Environment Legislation Amendment Act 2011 (POELA Act)*[2].

The PIRMP shall:

- ensure comprehensive and timely communication about a pollution incident to staff at the Depot, the Environment Protection Authority (EPA), other relevant authorities specified in the *POELA Act* (such as local Councils, NSW Ministry of Health, WorkCover NSW, and Fire and Rescue NSW) and people outside the Depot who may be affected by the impacts of the pollution incident;
- minimise and control the risk of pollution incident at the Depot by requiring identification of risks and the development of planned actions to minimise and manage those risks, and
- ensure that the PIRMP is properly implemented by trained staff, identifying persons responsible for implementing it, and ensuring that the PIRMP is regularly tested for accuracy, currency and suitability.

This PIRMP has been prepared in accordance with the EPA's *Environmental Guidelines: Preparation of Pollution Incident Response Management Plans, 2012*[3].

The PIRMP is a working document, and the management strategies outlined are intended for review from time to time, and where necessary, changed as new strategies and technologies become available.

2.1 Definition of 'Pollution Incident'

The definition of a 'Pollution Incident' is:

'Pollution Incident' means 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.

A pollution incident is required to be notified if there is a risk of '*material harm to the environment*', which is defined in Section 147 of the POEO Act 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.

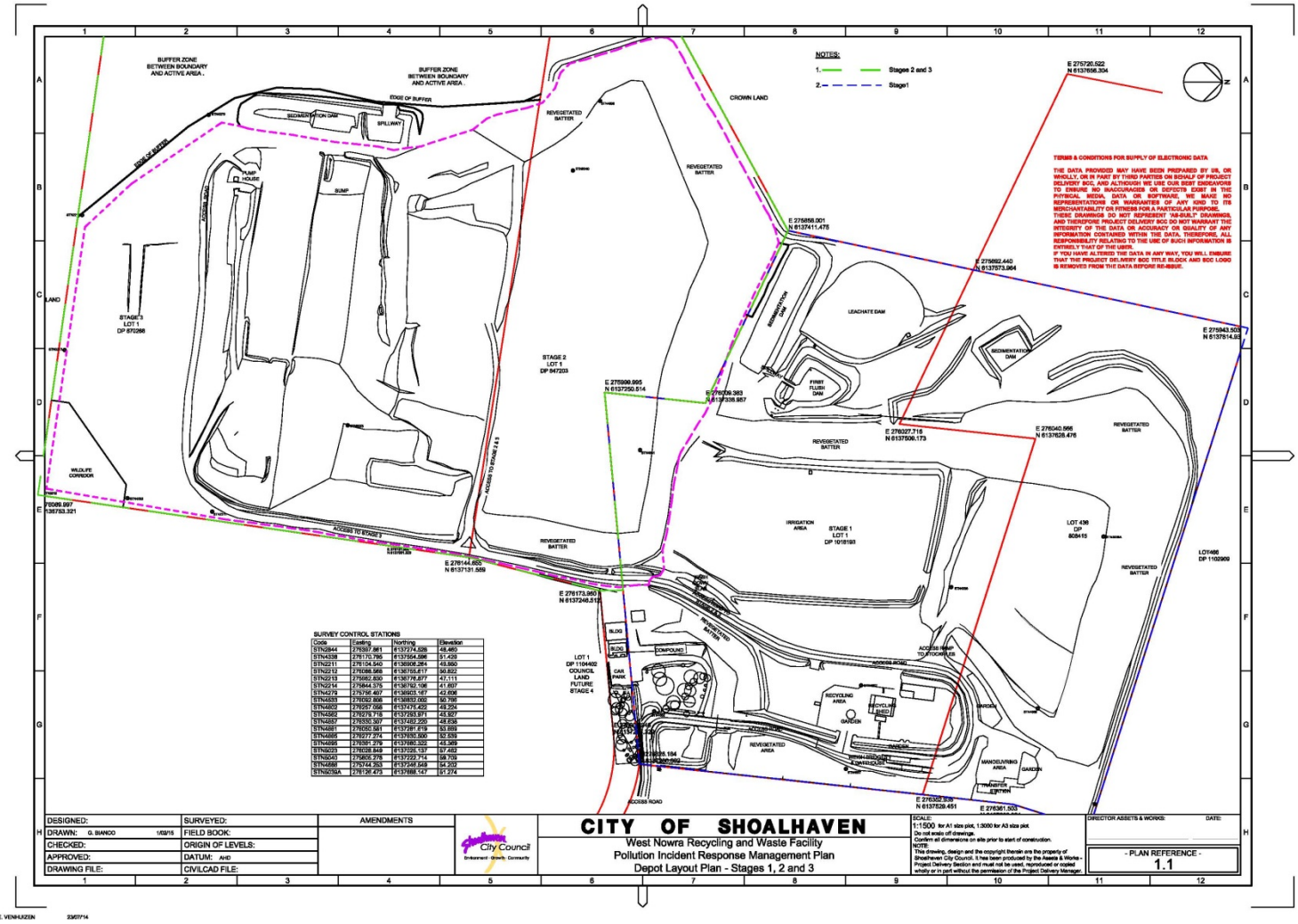
The Depot is now required to report pollution incidents '*immediately'* to the EPA, NSW Health, Fire and Rescue NSW, WorkCover NSW and the local Council. '*Immediately*' has its ordinary dictionary meaning of promptly and without delay.

2.2 Regulation

An amendment to the POEO(G) Regulation was made (by the Protection of the Environment Operations (General) Amendment (Pollution Incident Response Management Plans) Regulation 2012) with the object of specifying additional matters that need to be included in PIRMPs.

2.3 Obligations and Transitional Period for Complying with the Requirements

Holders of an existing *EPL* need to prepare and be able to implement the PIRMP by 1 September 2012. New licensees will need to have a PIRMP in place prior to commencing operations.



Drawing Number 1.1: Depot Layout Plan – Stages 1, 2 and 3.

3. DEPOT OVERVIEW

3.1 Property Description

The Depot is located on parcels of land owned by Shoalhaven City Council and includes land for a future proposed Resource Recovery Park. Refer to Drawing Number 1.1 for the Depot Layout Plan (Stages 1, 2 and 3). The Lot and DP numbers, and zoning are summarised in Table 3.1.

Property Owner	Lot Number	DP Number	Zoning	Area (ha)
Shoalhaven City Council	437	808415	E3	4.35
Shoalhaven City Councill	436	808415	SP2	8.29
Shoalhaven City Council	1	1018193	SP2	13.04
Shoalhaven City Council	1	847203	SP2	8.96
Shoalhaven City Council	1	870268	SP2	20.33
Shoalhaven City Council	1	1104402	SP2	14.52

Table 3.1 – Property description.

The principle environmental planning instrument applying to properties in the Shoalhaven Local Government Area (LGA) is the Shoalhaven City Council *Shoalhaven Local Environmental Plan (SLEP) 2014*[4].

The Depot is divided into several zones. They are:

- Zone E3 Environmental Management, and
- Zone SP2 Infrastructure – waste / resource management facilities.

3.2 Buildings / Structures and Infrastructure

There are a number of permanent buildings / structures at the Depot, they include the following:

- gate house and two weighbridges (entry and exit),
- staff amenities building,
- plant and equipment sheds,
- storage sheds,
- buy-back centre shed,
- recycling materials storage shed, and
- pump sheds.

The Depot's main infrastructure is the landfill cell. Landfill cell stages, since 1996, have been constructed in accordance with the *Environmental Guidelines: Solid Waste Landfills*[5]. Each landfill cell stage is constructed using the following purchased materials:

- VENM clay (won on site or imported),
- HDPE liner (minimum 1.5mm thickness),
- Non-woven geotextile,
- Drainage gravel (+20mm and +70mm), and
- HDPE pipes (minimum 200mm diameter).

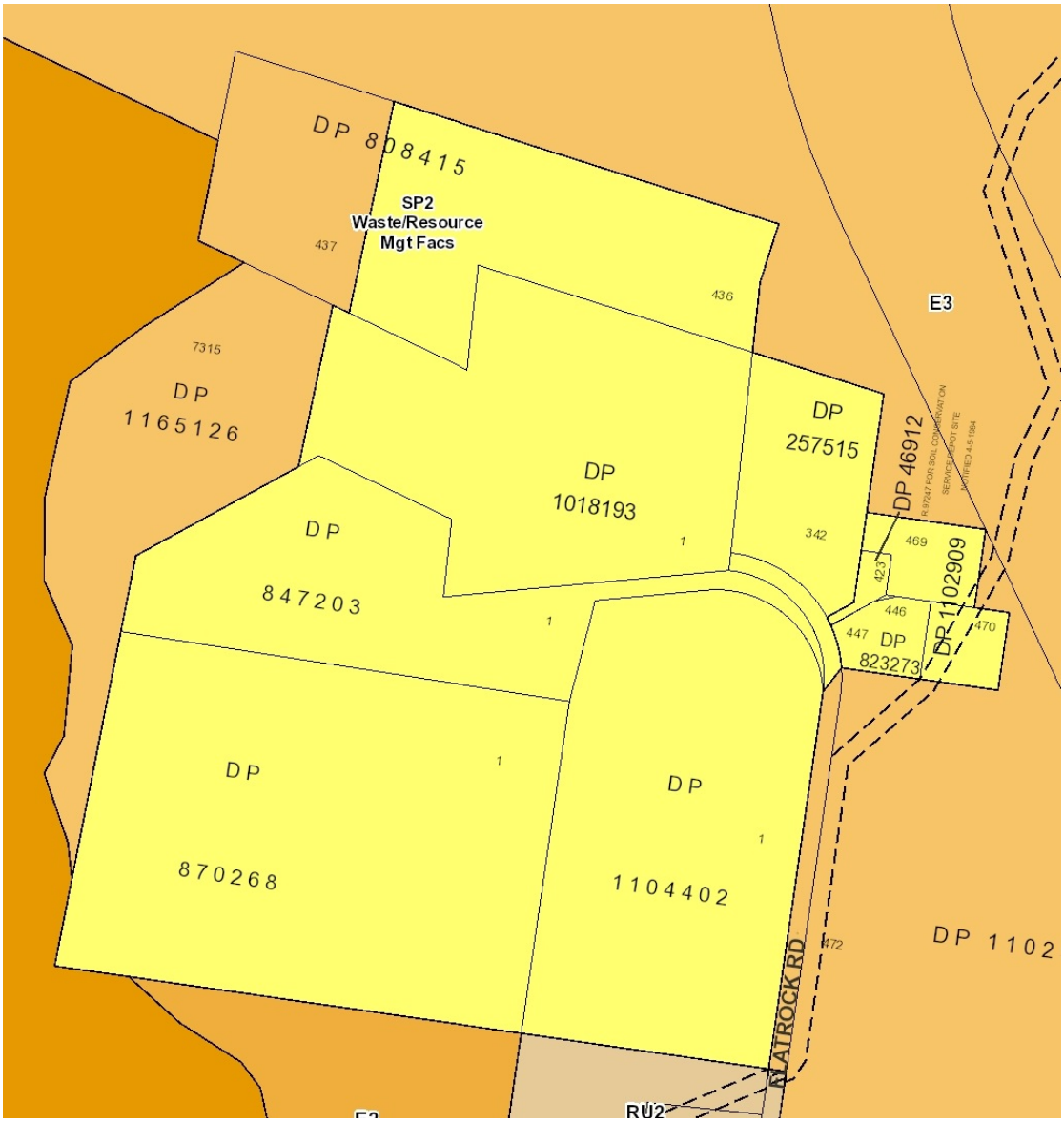


Figure 3.1: Property Description.

4 Legislative Requirements and Regulatory Controls

The specific requirements for pollution incident response management plans are set out in *Part 5.7A of the POEO Act*[6] and the *Protection of the Environment Operations (General) Regulation 2009 (POEO(G) Regulation)*[7]. In summary:

- all holders of EPLs must prepare a PIRMP (Section 153A, POEO Act),
- the PIRMP must include the information detailed in the POEO Act (Section 153C) and be in the form required by the POEO(G) Regulation (Clause 98B),
- EPL holders must keep the PIRMP at the Depot to which the EPL relates (Section 153D, POEO Act),
- EPL holders must test the PIRMP in accordance with the POEO(G) Regulation (Clause 98E), and
- if a pollution incident occurs in the course of an activity so that material harm to the environment is caused, or threatened, EPL holders must immediately implement the PIRMP (Section 153F, POEO Act).

The Depot is a licensed general solid waste (putrescible and non-putrescible) landfill facility under the *Protection of the Environment Operations Act (POEO) Act 1997*[8].

A copy of the Depot's current EPL is included as Appendix 1.

5. PIRMP General Requirements

5.1 Form of PIRMP

(Reference: POEO Act – Section 153D, and POEO(G) Regulation – Clause 98B(1))

The purpose of the PIRMP is to improve the management of pollution incidents and facilitate better co-ordination with the relevant response agencies. The PIRMP must be in a written form, be prominently displayed at the weighbridge office / gatehouse, and be made available to any person responsible for its implementation and an authorised EPA Officer on request.

5.2 Relationship with Other Emergency Plans

(Reference: POEO(G) Regulation – Clause 98B(2))

The Depot already has an equivalent emergency plan in place. This emergency plan is titled; *Site Emergency Procedures Manual – West Nowra Recycling and Waste Facility*, *31 May 2013*[9]. The Depot's PIRMP has been prepared to comply with other legislation such as the *Work Health and Safety Regulation 2011*[10].

A copy of the current *Site Emergency Procedures Manual – West Nowra Recycling and Waste Facility*, *31 May 2013* is included as Appendix 2.

5.3 Details to be Included in PIRMP

An EPL holder, except for waste transporters, must include the following information as a minimum. Holders of waste transporter licences have separate requirements.

5.3.1 Description and Likelihood of Hazards

(Reference: POEO(G) Regulation – Clause 98C(1)(a) and (b))

A PIRMP must provide a description of the main hazards to human health or the environment associated with the activity being performed at the Depot, the likelihood of any such hazards occurring, including details of any circumstances or events that could, or would, increase that likelihood.

If the Depot is near a sensitive environment, such as a densely populated area, school, hospital or water body, the PIRMP must consider the increased risks of environmental or health impacts of a pollution incident.

If the Depot is located near other facilities which handle dangerous or explosive materials, the PIRMP must consider the likelihood of any impacts on neighbouring facilities and consider employing measures to reduce or minimise impacts from a pollution incident which could set off a pollution incident at those facilities.

5.3.2 Pre-emptive Actions to be Taken

(Reference: POEO(G) Regulation – Clause 98C(1)(c))

A PIRMP must include detailed descriptions of the pre-emptive actions to be taken to minimise or prevent any risk of harm to human health or the environment arising from the activities undertaken at the premises. Pre-emptive actions may include the provision and use of spill containment kits, the installation and operation of stormwater cut-off valves, and the installation and use of fire containment water tanks.

5.3.3 Inventory of Pollutants

(Reference: POEO(G) Regulation – Clause 98C(1)(d) and (e))

A PIRMP must include an inventory of potential pollutants kept at the Depot or used in carrying out activities at the Depot, including the maximum quantity of any potential

pollutant that is likely to be stored or held at the Depot. Pollutants can include, but are not limited to, chemicals used in cleaning or production purposes, fuels and lubricants used for equipment or machinery, gas cylinders, waste materials or wastewater, effluents and sediment contaminated stormwater.

Details of the pollutant storage locations, including underground storage tanks and storage methods, must also be included.

5.3.4 Safety Equipment

(Reference: POEO(G) Regulation – Clause 98C(1)(f))

A PIRMP must include a description of the safety equipment or other devices that are used to minimise the risks to human health or the environment and to contain or control a pollution incident. Specific details must be provided in relation to any site or activity specific safety equipment and must include the location where this equipment is stored and the material safety data information for any chemicals or fuels used or stored at the Depot. For example, this could include specific personal protective equipment (PPE) required for the handling of hazardous chemicals or radioactive substances, specific gas monitoring meters used to monitor gas leaks from tanks, floating booms used to contain spills on water bodies, and specific spill containment equipment.

5.3.5 Contact Details

(Reference: POEO(G) Regulation – Clause 98C(1)(g) and (h))

A PIRMP must included the names, position titles and 24 hour contact details of those key individuals who are responsible for activating the PIRMP and managing the response; those authorised to notify relevant authorities, including all relevant authorities under *Section 148* of the *POEO Act*; and those responsible for managing the response to a pollution incident.

In addition, the PIRMP must include the contact details of the EPA, the local Council, NSW Ministry of Health, WorkCover NSW, and Fire and Rescue NSW, relevant to the EPL holder's Depot. The contact details of any other organisations or agency that needs to be advised of the incident should also be included in the PIRMP, for example; the Department of Planning and Infrastructure, and Department of Primary Industry.

5.3.6 Communicating with Neighbours and the Local Community

(Reference: POEO(G) Regulation – Clause 98C(1)(i))

Communicating with neighbours and the local community is an important element in managing the response to any incident. The PIRMP must include details of the mechanisms that will be used for providing early warnings and regular updates to the owners and occupiers of premises who may be affected by an incident occurring at the Depot. Communication mechanisms may include incident notifications placed on the EPL holder's web-site or social media networks (such as; Twitter or Facebook); the use of telephone calls or SMS or other messaging systems; emails to community representatives (for example; a protocol agreed to via a community consultative committee process); and letterbox drops and doorknocking of affected community members, as appropriate to the circumstances.

The PIRMP must also include any specific information that could be provided to the community so it can minimise the risk of harm. For example; this could include instructions to close windows and doors and remain inside for incidents involving emission of air pollutants, or avoiding the use of water in creeks or rivers affected, or likely to be affected, by a pollutant discharge.

The EPL holder must consider the types of pollution incidents that are likely to occur at the Depot. Examples are; discharge of a pollutant to a stormwater system or creek, or an unplanned release of an air pollutant into the atmosphere. In the example; of the discharge to the stormwater system, the EPL holder must notify premises that are adjacent to the stormwater system or creek and consider any downstream users, such as holders of water irrigation licences, recreational water facilities and oyster growers.

In determining the extent of community notification for potential air emissions, the EPL holder shall consider aspects such as the type of pollutant, prevailing winds, height and magnitude of an emission, as well as the location of any on-site fallout or off-site impacts, the likelihood of the pollutant reaching ground level, and possible impacts on sensitive receptors.

As the location, geography and proximity to neighbours varies for individual depots, each EPL holder must consider the types of pollutant incidents that are likely to occur at the Depot and the extent to which those incidents may have an impact on neighbouring industrial, residential or community premises. Consideration must be given to notifying any sensitive premises in close proximity, such as schools, pre-schools, nursing homes and hospitals.

5.3.7 Minimising Harm to Persons at the Depot

(Reference: POEO(G) Regulation – Clause 98C(1)(j))

A PIRMP must include any actions or arrangements that will be in place to minimise the risk of harm to any persons who will be at the Depot or who are likely to be at the Depot should an incident occur. These can include the activation of evacuation procedures, clearly advertising muster locations to site personnel, or activating visible and / or audible warning alarms. Consideration shall also be given to having available at short notice suitable consultants to provide expert medical, toxicology or environmental impact advice.

5.3.8 Maps

(Reference: POEO(G) Regulation – Clause 98C(1)(k))

A PIRMP must include a detailed map (or set of maps) showing the location of the Depot, the surrounding area that is likely to be affected by a pollution incident, the location of potential pollutants at the Depot, the location of any stormwater drains at the Depot, and the discharge locations of the stormwater drains to the nearest watercourse or water body.

5.3.9 Actions to be Taken During or Immediately After a Pollution Incident

(Reference: POEO(G) Regulation – Clause 98C(1)(l))

A PIRMP must include detailed descriptions of the actions that will be taken by the licence holder immediately after a pollution incident to reduce or control any pollution. These should include, as a minimum, early warnings, updates and actions to be taken during and after an incident. Actions may include the deployment of spill containment equipment, activation of stormwater shut-off valves, and shutdown of processes or equipment. Consideration must also be given to assessing how any clean-up from an incident will be undertaken, including the procedures to be followed such as the engagement of contractors and use of clean-up equipment like waste disposal tankers and waste disposal facilities.

As the costs associated with a clean-up of an incident could be significant, consideration must also be given to funding arrangements, such as taking out appropriate insurance or having contingency funds available. The cost of any clean-

up that is undertaken by emergency response agencies and the EPA will generally be recovered from the company or individual responsible for the pollution incident.

5.3.10 Staff Training

(Reference: POEO(G) Regulation – Clause 98C(1)(m))

A PIRMP must include details on the nature and objectives of any staff training program on implementing the PIRMP. Details of the training program must include the frequency of training and how the records of any training are kept. Suitable training could include toolbox talks, formal staff training on incident management, and undertaking simulated incident exercises, including with emergency services. The training needs to be suitable for the level of risk and likelihood of incidents at the premises.

6. Making PIRMPs Available

(Reference: POEO(G) Regulation – Clause 98D)

A copy of each PIRMP must be maintained at the premises to which the relevant EPL relates, or where the relevant activity takes place, so that it is readily available to those responsible for its implementation and to an authorised officer on request.

Some sections of the PIRMPs must be made publicly available within fourteen (14) days after they have been prepared by:

- placing the PIRMP in a prominent position on a publicly accessible website of the licence holder, and
- providing a copy of the PIRMP, without charge, to any person who makes a written request for a copy if the licence holder does not have a website.

A publicly accessible website could include a website established to promote the licence holder's activities or products.

The information to be made available to the public:

- must include the procedures for contacting the relevant authorities including the EPA, local council, NSW Ministry of Health, WorkCover NSW, and Fire and Rescue NSW,
- must include the procedures for communicating with the community described in Section 5.3.6, and
- may be exclusive of any personal information within the meaning of the *Privacy and Personal Information Protection Act 1998*[11].

7. Testing PIRMPs

(Reference: POEO(G) Regulation – Clauses 98C(1)(n),(o) and (p), 98C(2)(f) and (g), 98E(1) and 98E(2))

The PIRMP must be tested routinely at least once every twelve (12) months. The testing is to be carried out in such a manner as to ensure that the information included in the PIRMP is accurate and up to date, and that the PIRMP is capable of being implemented in a workable and effective manner.

The two (2) usual methods of testing are:

1. undertake desktop simulations, and
2. practical exercises or drills.

Testing must cover all components of the PIRMP, including the effectiveness of training.

The PIRMP must include details such as:

- the manner in which they are to be tested and maintained,

- the dates on which they have been tested and the name of the staff members who carried out the testing, and
- the dates on which they are updated.

The PIRMP must also be tested within one (1) month of any pollution incident occurring in the course of an activity to which the EPL relates to assess, in the light of that incident, whether the information included in the PIRMP is accurate and up to date, and the PIRMP is still capable of being implemented in a workable and effective manner.

8. Implementing PIRMPs

If a pollution incident occurs in the course of an activity at the premises so that material harm to the environment (within the meaning of *Section 147*) is caused or threatened, the person carrying out the activity must immediately implement any pollution incident management response that was developed to meet the requirements of the *POEO Act*.

9. Actions to Meet PIRMP Requirements

9.1 Water Pollution Management

9.1.1 Description and Likelihood of Hazards

The environmental goals for Water Pollution Management are:

- preventing water pollution by leachate and sediments,
- detecting water pollution, and
- remediating water pollution.

9.1.2 Pre-emptive Actions to be Taken

The following management methods are used to prevent pollution of water by leachate and sediment:

- leachate barrier system,
- leachate collection system,
- leachate collection dam,
- swale and table drains,
- surface water and sedimentation dam, and
- leachate, surface and groundwater monitoring.

The leachate barrier and collection systems shall be constructed in accordance with the EPA's *Environmental Guidelines: Solid Waste Landfills*, *1996*.

The following methods shall be applied for early detection of groundwater and surface water pollution:

- groundwater monitoring network,
- groundwater monitoring program,
- groundwater assessment program,
- leachate collection dam monitoring program, and
- surface water monitoring program.

The objectives of the groundwater and surface water assessment programs are to identify a failure of the leachate barrier system, and demonstrate that surface water is not contaminated by the landfilling operation.

Groundwater shall be monitored and background concentrations shall be established for analytes identified in the EPL. If changes in concentration levels for any of the indicator parameters are detected, then the affected groundwater monitoring wells shall be re-sampled. Anomalies, after re-sampling, shall be notified to the EPA. The groundwater wells and surface water points across the Depot are strategically located to ensure early detection, through regular sampling and monitoring, of movement of groundwater and surface water contamination.

The purpose of a Groundwater Contamination Remediation Plan (GWCRP) is to set in place actions to be employed if groundwater or sub-soil contamination is confirmed by the early detection of groundwater pollution. The GWCRP shall describe the process to protect the groundwater resource from further contamination and nominate a means to return the groundwater to the original quality down hydraulic gradient from the landfilling operation. A suitably qualified Environmental Consultant shall be contacted immediately to assess the groundwater contamination and prepare actions to remediate the groundwater to its original quality.

9.1.3 Inventory of Pollutants

The purpose for recording the wastes received (pollutants) is to:

- quantify wastes received,
- record the quantities, types and sources of waste received, and
- estimate the potential leachate generation.

The objective of quantifying the wastes received at the Depot is to accurately obtain data on the waste quantities, types and sources for reporting and planning purposes.

The objectives of recording the quantities, types and sources of wastes received at the Depot are to enable the effective monitoring of incoming waste, estimate the potential leachate generation from wastes received, and to aid in regulatory reporting requirements.

9.1.4 Safety Equipment

Personal protective equipment (PPE) shall be worn at all times by Depot staff to ensure potential contact with leachate and sediments is minimised when carrying out inspections of the leachate and drainage systems at the Depot.

9.1.5 Contact Details

Whoever becomes aware of the pollution incident must immediately contact the individuals responsible for managing the incident response and the relevant authorities. The person(s) who may become aware of an incident are:

- Council Employee,
- Agent of Council (contractor),
- Employer or Principal (Council),
- Occupier of the Premises (Council), or
- Person carrying out an activity (not being a Council Employee or Agent).

The position titles and 24 hour contact details of individuals responsible for managing the incident response and notifying the relevant authorities are:

- **Waste Depots Supervisor** – initial point of contact or
- **Manager Waste Services** – if Waste Operations Supervisor cannot be contacted, and
- **Environmental Projects Engineer** - if Waste Operations Supervisor and Manager Waste Services cannot be contacted.

In the event that the Waste Depots Supervisor, Manager Waste Services and Environmental Projects Engineer cannot be contacted then the Council Employee or Agent of Council (contractor) shall manage the incident response and notify the relevant authorities.

If the incident presents an immediate threat to human health, environment or property then initially contact a combat agency, as applicable:

- **Fire and Rescue NSW** on telephone '**000**', and / or
- **NSW Police** on telephone '**000**', and / or
- **NSW Ambulance Service** on telephone '**000**'.

After the initial '000' contact has been made, or if the incident does not require an initial combat agency, contact shall be made to notify the relevant authorities in the following order:

- **EPA Environment Line** – on telephone **131 555**,
- **Ministry of Health – Public Health Officer** – on telephone **(02) 4221 6700** or after hours on telephone **(02) 4222 5000**,
- **WorkCover NSW** - on telephone **131 050**,
- **Shoalhaven City Council – Environmental Health Officer** – on telephone **(02) 4429 3111** or after hours on telephone **(02) 4421 3100**, and
- **Fire and Rescue NSW** – only if not contacted initially – on telephone **(02) 4421 4754** or '**000**'.

A copy of the current *Pollution Incident Notification Procedure, 16 May 2012*[12] is included as Appendix 3.

9.1.6 Communicating with Neighbours and the Local Community

Early warnings and regular updates to owners and occupiers of neighbouring properties who may be affected by a pollution incident shall be notified. The notification mechanism to be employed in the event of an incident is Shoalhaven City Council's Waste and Recycling Services website. Council's website address is www.shoalhaven.nsw.gov.au.

The notification shall provide specific information to the neighbouring properties and local community so it can minimise the risk of harm. Information could include instructions to avoid the use of water in creeks or rivers affected, or likely to be affected, by a pollutant discharge.

9.1.7 Minimising Harm to Persons on the Premises

In the event of an incident, actions and arrangements are in place to minimise the risk of harm to persons who are at the premises or are likely to be at the premises.

The actions to be followed, by the Waste Operations Supervisor, to minimise the risk of harm to persons are to:

- Follow the instructions outlined in *Site Emergency Procedures Manual – West Nowra Recycling and Waste Facility, 31 May 2013*, in particular *Section 1.4 Emergency Response and Evacuation Plan*, and
- Contact the appropriate persons and relevant authorities, as per the *Pollution Incident Notification Procedure, 4 October 2012*.

9.1.8 Maps

A copy of a detailed site plan showing the location of the Depot, and the potential location of leachate and sediments discharge is included as Appendix 4.

9.1.9 Actions to be Taken During or Immediately After a Pollution Incident

In the event of a potential failure of the Depot's landfill cell's leachate barrier system the following actions shall be taken during or immediately after identifying the pollution incident:

- Isolate the area, and ensure that there is no access,
- A Groundwater Assessment Program shall be established to determine the extent of the failure,
- The groundwater shall be monitored and background concentrations shall be established for all analytes. This shall be carried out by a qualified Environmental Consultant, and
- Any significant changes in concentration levels for any of the indicator parameters over two consecutive reporting periods (quarterly or annually) is detected, then the affected groundwater monitoring wells shall be re-sampled as soon as possible. Anomalies, after re-sampling, shall be notified to the EPA's Environment Line immediately, as required by the *EPL*.

In the event of a potential surface water contamination the following actions shall be taken during or immediately after identifying the pollution incident:

- Isolate the area, and ensure that there is no access,
- The EPA's Environment Line shall be notified immediately, as required by the *EPL*, and
- A written report, to the EPA, detailing the nature and source of the contamination, and any actions taken, and future actions that will be carried out to prevent recurrence.

9.1.10 Staff Training

All Council Employees and Agents of Council (contractor) at the Premises shall be trained on the implementation of the PIRMP as follows:

- Existing Council Employees – during the regular toolbox meetings,
- New Council Employees – as part of the employee's induction at the Premises,
- Existing Agents of Council (contractors) – during regular contractor toolbox meetings, and
- New Agents of Council (contractors) – as part of the contractor's employee induction at the Premises.

Refresher training shall be conducted annually. A written record of all Council Employees trained must be kept and maintained, the same applies to all Agents of Council (contractors). Records shall be audited annually.

9.2. Air Pollution Management

9.2.1 Description and Likelihood of Hazards

The environmental goals for Air Pollution Management are:

- preventing landfill gas emissions,
- detecting landfill gas emissions,
- remediating landfill gas emissions, and
- preventing fires.

9.2.2 Pre-emptive Actions to be Taken

The management techniques used to prevent and control landfill gas emissions and fires are:

- landfill gas containment system,
- extraction and disposal of landfill gas,
- fire prevention, and
- site closure.

Each landfill cell stage shall have a highly impermeable clay cap designed to minimise landfill gas emissions and surface water infiltration. The accumulated landfill gas shall be effectively contained between gas drainage and sealing layers, due to the clay capping, and over time the landfill gas should move laterally through these layers.

The objectives of extracting and disposing of landfill generated gas are to:

- reduce the risk of explosion and fire,
- reduce the contribution to greenhouse gases, and
- lower the level of toxic organic compounds emitted from the landfill.

The opportunities for utilising landfill generated gas is directly dependent on the degree to which the gas is cleaned. The use of landfill generated gas at the Depot already exists:

- Power generation. Small scale gas turbines are used to generate green power for use in the electricity grid.

As the quantities of landfill gas fluctuate over time, other options or combination of options may be used. Ongoing monitoring of landfill gas volumes and disposal methods may be necessary if there is a large buildup of gas.

The following methods shall be applied for the detection of landfill gas:

- surface gas emissions monitoring - the monitoring objective is to demonstrate the effectiveness of the capping design and construction, and
- gas accumulation monitoring - the monitoring objective is to monitor gas build-up which may have the potential to be detrimental.

If the concentration of methane (landfill generated gas) is detected to be greater than 1.25% (v/v) during the surface or building monitoring, the EPA and all relevant authorities shall be notified immediately. A written assessment of the emissions and management controls implemented, or proposed to be implemented to prevent further emissions, shall be provided to the EPA within the regulatory period required.

The objectives of fire prevention are to:

- Minimise emissions to the atmosphere, and
- Increase the level of safety at the Depot.

The following minimum control measures shall be addressed to prevent fires:

- Signs shall be erected and displayed at the Depot advising customers that liquid and hazardous wastes are not permitted to be disposed at the site. The weighbridge operator shall also advise customers and carry out visual inspections of all loads,
- Stockpiles of approved combustible wastes (tyres and green wastes) shall be in piles and windrows no higher than 3 metres and away from working and public areas,
- Landfill cell construction, compaction and covering of waste shall use materials not conducive to a landfill fire,
- All empty drums accepted at the Depot shall be washed clean and punctured in order to not contain any residual chemical fuels,
- All fuels and flammable solvents used for operational purposes shall be stored in suitably ventilated and secure storage area, and
- Waste oil shall be stored within a bund of 110% capacity of the volume of those flammable liquids so that any release of raw or burning fuel will not cause a fire in landfilling areas or impact on stormwater.

The Depot shall be closed, subject to EPA approval, in a manner that minimises the emission of landfill gases, and minimises the production of leachate. The design and construction of the final capping and revegetation layers are intended to decrease the potential for gas emissions and leachate production.

9.2.3 Inventory of Pollutants

The purpose for recording the wastes received (pollutants) is to:

- quantify wastes received,
- record the quantities, types and sources of waste received, and
- manage composting operations and storage of pollutants.

The objective of quantifying the wastes received at the Depot is to accurately obtain data on the waste quantities, types and sources for reporting and planning purposes.

The objectives of recording the quantities, types and sources of wastes received at the Depot are to enable the effective monitoring of incoming waste, minimise the potential risk of fire from wastes received, and to aid in regulatory reporting requirements.

9.2.4 Safety Equipment

Personal protective equipment (PPE) shall be worn at all times by Depot staff to ensure potential contact with landfill gas emissions is minimised when carrying out inspections of the gas extraction system at the Depot.

9.2.5 Contact Details

Whoever becomes aware of the pollution incident must immediately contact the individuals responsible for managing the incident response and the relevant authorities. The person(s) who may become aware of an incident are:

- Council Employee,
- Agent of Council (contractor),
- Employer or Principal (Council),
- Occupier of the Premises (Council), or
- Person carrying out an activity (not being a Council Employee or Agent).

The position titles and 24 hour contact details of individuals responsible for managing the incident response and notifying the relevant authorities are:

- **Waste Depots Supervisor** – initial point of contact, or
- **Manager Waste Services** – if Waste Operations Supervisor cannot be contacted, and

- **Environmental Projects Engineer** - if Waste Operations Supervisor and Manager Waste Services cannot be contacted.

In the event that the Waste Operations Supervisor, Manager Waste Services and Environmental Projects Engineer cannot be contacted then the Council Employee or Agent of Council (contractor) shall manage the incident response and notify the relevant authorities.

If the incident presents an immediate threat to human health, environment or property then initially contact a combat agency, as applicable:

- **Fire and Rescue NSW** on telephone '**000**', and / or
- **NSW Police** on telephone '**000**', and / or
- **NSW Ambulance Service** on telephone '**000**'.

After the initial '000' contact has been made, or if the incident does not require an initial combat agency, contact shall be made to notify the relevant authorities in the following order:

- **EPA Environment Line** – on telephone **131 555**,
- **Ministry of Health – Public Health Officer** – on telephone **(02) 4221 6700** or after hours on telephone **(02) 4222 5000**,
- **WorkCover NSW** - on telephone **131 050**,
- **Shoalhaven City Council – Environmental Health Officer** – on telephone **(02) 4429 3111** or after hours on telephone **(02) 4421 3100**, and
- **Fire and Rescue NSW** – only if not contacted initially – on telephone **(02) 4421 4754** or '**000**'.

A copy of the current *Pollution Incident Notification Procedure, 16 May 2012* is included as Appendix 3.

9.2.6 Communicating with Neighbours and the Local Community

Early warnings and regular updates to owners and occupiers of neighbouring properties who may be affected by a pollution incident shall be notified. The notification mechanism to be employed in the event of an incident is Shoalhaven City Council's Waste and Recycling Services website. Council's website address is www.shoalhaven.nsw.gov.au.

The notification shall provide specific information to the neighbouring properties and local community so it can minimise the risk of harm. Information could include instructions to remain with buildings or close all windows and doors likely to be affected, by a pollutant discharge.

9.2.7 Minimising Harm to Persons on the Premises

In the event of an incident, actions and arrangements are in place to minimise the risk of harm to persons who are at the premises or are likely to be at the premises.

The actions to be followed, by the Waste Operations Supervisor, to minimise the risk of harm to persons are to:

- Follow the instructions outlined in *Site Emergency Procedures Manual – West Nowra Recycling and Waste Facility, 31 May 2013*, in particular *Section 1.4 Emergency Response and Evacuation Plan*, and
- Contact the appropriate persons and relevant authorities, as per the *Pollution Incident Notification Procedure, 4 October 2012*.

9.2.8 Maps

A copy of a detailed site plan showing the location of the Depot, and the potential locations of landfill gas emissions is included as Appendix 5.

9.2.9 Actions to be taken During or Immediately After a Pollution Incident

In the event of a potential failure of the Depot's landfill gas collection and extraction systems the following actions shall be taken during or immediately after identifying the pollution incident:

- Isolate the area, and ensure that there is no access,
- Surface gas monitoring of final capped landfill cell surfaces and surrounding buildings shall be carried out as per requirements of the *EPL*,
- If the concentrations of gas exceed the allowable limits of methane at any point on the landfill cell surface and surrounding buildings, the following actions shall be taken:
    - Repair or replace the final capping material and layer, and
    - Adjust or install gas collection and extraction equipment, and
- Continuation of ongoing inspection, maintenance, testing and monitoring of whole gas collection and extraction system.

In the event of a potential fire, at the Depot, the following actions shall be taken during or immediately after identifying the pollution incident:

- Isolate the area, and ensure that there is no access,
- Stockpiles of combustibles, fuels and flammable solvents shall be inspected on a daily (combustible wastes), weekly (fuels) and quarterly (flammable solvents) basis for fire risk, and
- Any fire occurring at the Depot shall be investigated and the causes, damage and impact shall be fully documented. The cause of any fires shall be determined and appropriate work procedures shall be put in place to minimise re-occurrence.

9.2.10 Staff Training

All Council Employees and Agents of Council (contractor) at the Premises shall be trained on the implementation of the PIRMP as follows:

- Existing Council Employees – during the regular toolbox meetings,
- New Council Employees – as part of the employee's induction at the Premises,
- Existing Agents of Council (contractors) – during regular contractor toolbox meetings, and
- New Agents of Council (contractors) – as part of the contractor's employee induction at the Premises.

Refresher training shall be conducted annually. A written record of all Council Employees trained must be kept and maintained, the same applies to all Agents of Council (contractors). Records shall be audited annually.

REFERENCES

1. **Environment Protection Authority,** ***Environment Protection Licence Number 5877***
   http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33139&SYSUID=1&LICID=5877
2. **State of NSW,** ***Protection of the Environment Legislation Amendment Act, 2011 No. 63***
   http://www.legislation.nsw.gov.au/sessionalview/sessional/act/2011-63.pdf
3. **State of NSW and Environment Protection Authority,** ***Environmental Guidelines: Preparation of Pollution Incident Response Management Plans, 2012***
   http://www.epa.nsw.gov.au/resources/legislation/201200227egpreppirmp.pdf
4. **Shoalhaven City Council Shoalhaven,** ***Local Environmental Plan (SLEP) (2014),***
   http://www.shoalhaven.nsw.gov.au/LepRegisterDocuments/Lep/244/1_SLEP2014_Gazettal.pdf
5. **State of NSW and Environment Protection Authority,** ***Environmental Guidelines: Solid Waste Landfills, 1996***
   http://www.environment.nsw.gov.au/resources/waste/envguidlns/solidlandfill.pdf
6. **State of NSW,** ***POEO Act – Part 5.7A Duty to Prepare and Implement Pollution Incident Response Management Plans***
   http://www.austlii.edu.au/au/legis/nsw/consol_act/poteoa1997455/
7. **State of NSW,** ***Protection of the Environment Operations (General) Regulation, 2009***
   http://www5.austlii.edu.au/au/legis/nsw/consol_reg/poteor2009601/
8. **New South Wales Consolidated Acts,** ***Protection of the Environment Operations Act 1997***
   http://www.austlii.edu.au/au/legis/nsw/consol_act/poteoa1997455/
9. **Shoalhaven City Council,** ***Site Emergency Procedures Manual – West Nowra Recycling and Waste Facility, 31 May 2013***
10. **New South Wales Consolidated Regulations,** ***Work Health and Safety Regulation 2011***
    http://www.legislation.nsw.gov.au/maintop/view/inforce/subordleg+674+2011+cd+0+N
11. **New South Wales Consolidated Acts,** ***Privacy and Personal Information Protection Act 1998***
    http://www.austlii.edu.au/au/legis/nsw/consol_act/papipa1998464/
12. **Shoalhaven City Council,** ***Pollution Incident Notification Procedure, 4 October 2012***

APPENDICES

APPENDIX 1

Environment Protection Licence (EPL)

APPENDIX 2

Site Emergency Procedures Manual – West Nowra Recycling and Waste Facility

Site Emergency Procedures Manual

Shoalhaven City Council

West Nowra Recycling & Waste Depot

Table of Contents

Notification of Manual Change

FORWARD TO: WHS Unit

** NOTE:* *To action a change in either the Position Name or Change of Occupant please photocopy this page prior to completion and leave the original in this manual.*

POSITION NAME CHANGE

Old Name of Assigned Position:……..……..…..

New Name of Assigned Position:……..…..…….

Location: …… Manual No. ……

Occupant Name:……..

Signature:…… Date: ……

OCCUPANT CHANGE

Assigned Position for this Manual:…….

Location:…… Manual No. ……

Previous Occupant's Name:…….……..

NEW OCCUPANT:

Surname:…… Given Name:……

Signature:……..…… Date:.……

Maintaining this Manual is the responsibility of the occupant of the position to which it is assigned.

REQUEST FOR CHANGE OR NEW PROCESS

Requested by: ..... Date ……..

Document Name: .....

Policy No. ..... (TRIM): ……..

Reason for change:

Direct to Chairman, (Committee of Safety Review or Group WHS Committee):

Comments:

.....

.....

Change Request Outcome: Rejected Accepted

Employee Rep and/or CSR Chairman Signatures:

Direct to WHS Co-ordinator:

Issue Release ……

Manual Revision

Whenever these emergency procedures are reviewed and/or amended, details must be recorded on this page.

Date	Revision Summary

15/03/10 15/05/13	Version 2 adopted – minor changes, evacuation diagram updated Version 3 adopted – ECO structure changed, reflecting Council operating weighbridge, evacuation diagram changed to emergency response diagram

About this Manual

SCOPE

This manual details the emergency plan and procedures in place at:

Client Name Shoalhaven City Council
Location West Nowra Recycling & Waste Depot

PURPOSE

This manual has been prepared for Council's waste depot operational personnel and other staff to use as a reference source of useful emergency-related information.

It provides guidance on immediate actions and important considerations in the event of an emergency situation or critical incident occurring on site.

DOCUMENT DESIGN

This Manual is divided into 3 Sections :

Emergency Plan

This section provides an overview of the elements of the emergency plan, incidents addressed in the procedures, site emergency-related resources, emergency response and evacuation processes and post-incident considerations.

Emergency Procedures

This section provides response guidelines for various emergency situations/critical incidents.

Appendices

This section is reserved for useful (variable) reference information (e.g. emergency control organisation personnel, emergency contact numbers, location map, hazardous materials register etc.)

DOCUMENT ISSUE & CONTROL

The Waste Services Manager is the controlling authority for this Manual and all its contents.

The Waste Services administration unit will issue notification of changes to any part of the Manual.

The Waste Operations Supervisor is responsible for updating this Manual when notices of revision are received.

Emergency Plan

1.1 Introduction

Purpose

The purpose of the Emergency Plan is to enable management and staff of Council's West Nowra Recycling & Waste Depot to quickly and decisively respond to an actual or potential emergency.

Objectives

To facilitate a prompt, decisive, coordinated and appropriate initial response to an emergency;

To provide a framework in which key persons can develop the competencies to effectively respond to an on-site emergency; and

To provide a mechanism for assuring the continued accuracy and relevance of the Emergency Plan & Procedures and the on-going competency of key persons to effectively implement these procedures.

References

- NSW Work Health & Safety Act 2011
- NSW Work Health & Safety Regulation 2011
- Relevant Codes of Practice or Advisory Standards, including but not limited to:
    - NSW WorkCover Code of Practice – Managing the work environment and facilities
    - NSW WorkCover Code of Practice – How to manage and control asbestos in the workplace
    - NSW WorkCover Code of Practice – Managing the risk of falls at workplaces
    - Safe Work Australia Code of Practice – Managing risks of plant in the workplace
    - Safe Work Australia Code of Practice – Managing risks of hazardous chemicals in the workplace
    - Safe Work Australia Code of Practice – Managing electrical risks in the workplace
    - Safe Work Australia Code of Practice – First aid in the workplace
- Australian Standard AS 3745-2010 "*Planning for emergencies in facilities*"
- Australian Standard AS/NZS ISO 31000-2009 "*Risk management - Principles and guidelines*"
- Shoalhaven City Council Corporate Emergency Evacuation Procedure

Definitions

Assembly Area an	A safe location which evacuees proceed to in the event of evacuation.
Emergency is	For the purposes of this Emergency Plan, an 'Emergency' defined as: *Any incident which could:* • *jeopardise the safety of or traumatise persons on or near the site,* • *result in significant damage to property or equipment on-site, or* • *significantly disrupt normal site operations.*
Emergency Control Organisation *or* **ECO**	The collective name given to staff who perform emergency warden and other emergency-related roles.
Emergency Control Point	The Assembly Area.
Emergency Warden within the	The generic name given to personnel who fulfil roles Emergency Control Organisation.
Customer purchase	A person using the site to deposit waste or to browse or goods from the buyback centre.
Visitor provide a service or learn institution.	A person visiting the site to do work, inspect, on behalf of an organisation or
Contractor site.	A person employed by a third party to carry out work at the

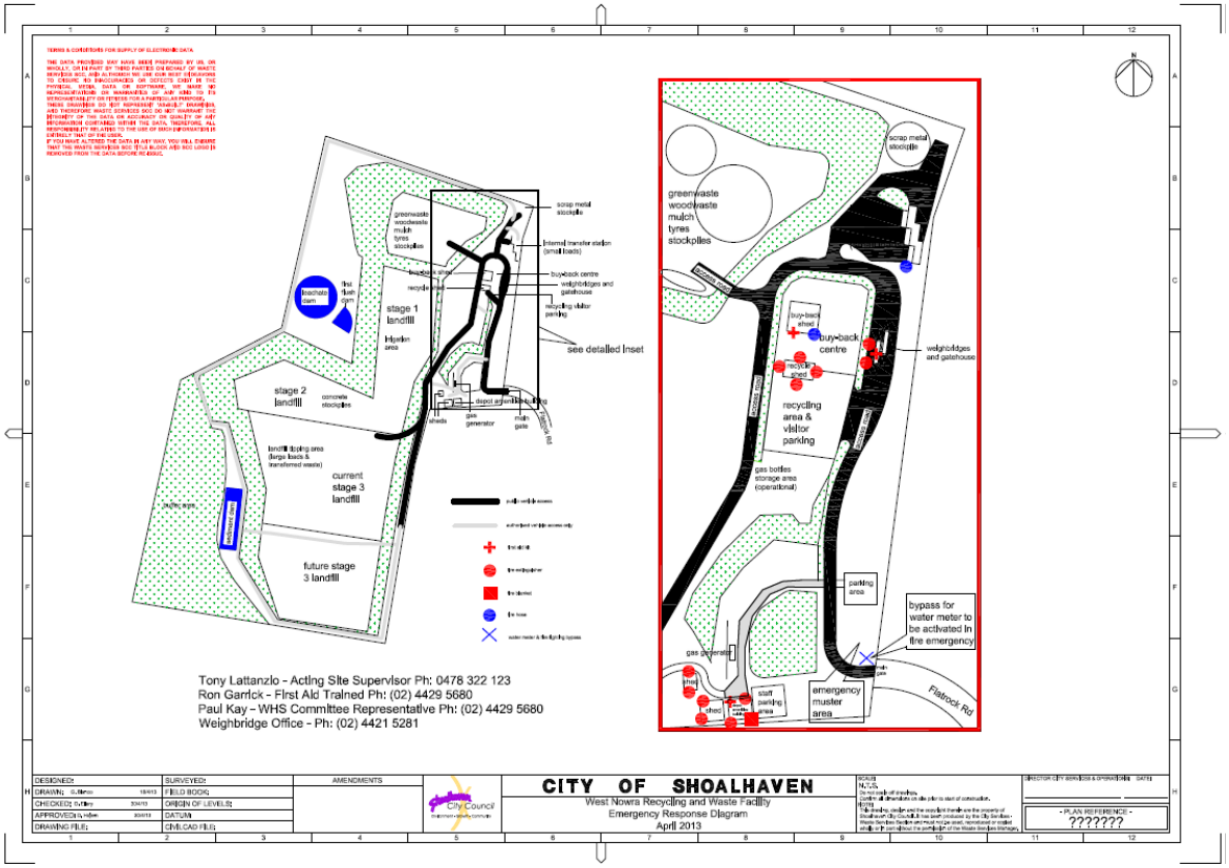
Types of Incidents

This Emergency Plan addresses the following incidents:

- Armed Hold up
- Assault
- Bombs – Threat/Found
- Chemical Spill Hazards
- Dust Storms
- Deceased Person
- Evacuation
- Explosion
- Fire – Building, Tip face, Bushfire, Vehicle
- Flooding
- Hostage Siege
- Medical Emergency
- Motor Vehicle or Plant Accident
- Power Failure
- Seismic Disturbance
- Suspected Biological Hazard (Methane gas)
- Structural Failure
- Threats – Written/Verbal
- Thunderstorms and Lightning strikes
- Tsunami
- Water Leakage

1.2 Site Evacuation Plan

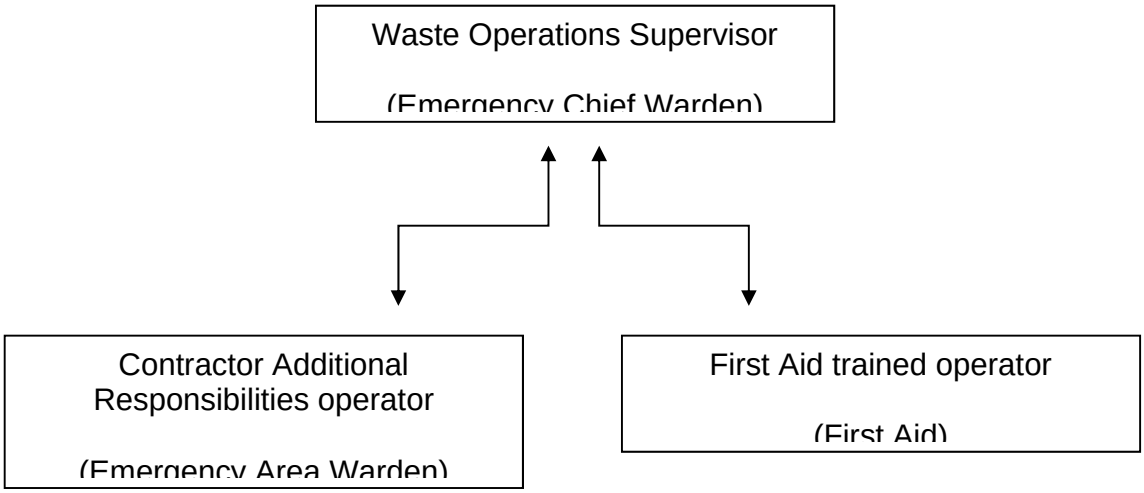
(Include A3 copy here in hardcopy manuals)



1.3 Organisational Structure

The Emergency Control Organisation (ECO)

Structure



Note: Given the nature of the Waste Depots, **one person** will be the nominated emergency chief warden. The appointed Council Responsible Operator (ie operator in charge) will undertake this role when the Waste Operations Supervisor is not on site. All staff shall be trained in emergency procedures to cover the event of being the only staff member on duty in the event of an emergency. The "Kit" for emergency procedures shall be available at the site for staff should an emergency occur, and will be located next to the fire extinguisher in the staff amenities building foyer.

ECO identification

In an emergency, ECO personnel wear colour-coded safety vest - colour-coding is as follows:

Emergency Chief Warden Emergency Area Warden (Contractor)	Red Vest Red Vest

Emergency Control Organisation Roles

Position	Emergency Chief Warden
Responsibilities	• Ascertain the nature of the emergency and determine appropriate actions • Ensure that the appropriate emergency service has been notified • If necessary, initiate evacuation and control entry to affected areas • Contact all operators, including contractor additional responsibilities operator, by Council 2-way radio • Account for all site visitors/contractors, as logged in Visitors Book at weighbridge • Account for all site customers, as entered into the waste tracking management system at the weighbridge • Ensure the progress of the response/evacuation and any action taken is recorded in an incident report form • Brief the emergency services personnel upon arrival on type, scope & location of the emergency and the status of the response/evacuation
Accountabilities	• To maintain emergency training to a minimum level, including knowledge of the site Emergency Plan and the “kit” for emergency procedures • To be available to respond to an emergency situation whilst a member of the ECO • To ensure the one up position with the ECO structure is advised during periods of scheduled absence • To ensure the one up position is notified if you are unable to perform allocated responsibilities
Position	First Aid
Responsibilities	• Ensuring that site portable and fixed first aid kits in their charge are kept adequately stocked in accordance with inventory list • Maintaining currency in first aid qualifications • Administering first aid to casualties as required until the arrival of appropriate emergency services
Accountabilities	• To maintain first aid and emergency training to a minimum level as determined by the Emergency Planning Committee • To be available to respond to an emergency situation whilst on site and a member of the ECO • To ensure the one up position is notified if you are unable to perform allocated responsibilities

Position	Emergency Area Warden
Responsibilities	• Follow direction of Emergency Chief Warden • Liaise with Emergency Chief Warden • Assist, if necessary, with initiation of evacuation of and control of entry to affected contractor work areas • Assist in accounting for all site visitors/contractors/customers
Accountabilities	• To maintain emergency training to a minimum level including knowledge of the site Evacuation Plan, assembly area, and the kit for emergency procedures • To be available to respond to an emergency situation while a member of the ECO • To ensure the Council Waste Operations Supervisor is notified if you are unable to perform allocated responsibilities

Emergency Control Areas

Internal Areas
• Weighbridge office • Staff amenities building • Plant / servicing sheds • Buyback / recycling shed (contractor work area) • Contractor lunch room (contractor work area) • Landfill gas electricity generators (ActewAGL area)
External Areas
• Tip face • Irrigation, leachate dam, stormwater runoff dam areas • Recycling stockpiles (contractor work area) • Buyback / recycling areas including carpark (contractor work area) • Transfer bins area (contractor work area) • Other grounds • Assembly area

Remarks

Given the nature of staffing within the site and the differing Council and Contractor responsibilities, a checklist is contained within the manual to assist staff in checking these areas. Refer to Appendix 3.4.

1.4 Emergency Resources

Fire Safety Systems

First attack fire fighting appliances

The site is equipped with a comprehensive suite of first attack fire fighting appliances, which are strategically located throughout the buildings and waste depot. These include:

- ✓ **Carbon dioxide extinguishers** located in meeting room and kitchen of staff amenities building, office adjoining contractor lunchroom, weighbridge office, recycled materials shed.
- ✓ **Dry chemical extinguishers** located in weighbridge office, backhoe, dozer, fuel truck, water truck, lunch room, plant/machine sheds.
- ✓ **AFFF (aqueous film forming foam) extinguishers** located in recycled materials shed.
- ✓ **Fire hose reels** at the buyback shed and transfer bins area
- ✓ **Fire blanket** in the staff lunchroom
- ✓ **External sprinkler systems containing fire retardant** fitted in some earthmoving equipment that can be activated from inside the cabin

Emergency Equipment

Item	Remarks
First Aid Kits	Council staff amenities office Weighbridge office
Emergency Warden Vests	Council: Waste Operations Supervisor's office / relevant operator PPE bags Contractor: Contractor lunch room

1.5 Emergency Response & Evacuation Plan – Key Elements

Discovering a dangerous situation

- Move persons away from any danger
- Contact emergency services **Dial 000**
- Inform the site Emergency Chief Warden
- Follow the directions of your Emergency Chief Warden or delegated personnel

Reporting an Emergency

IMPORTANT INFORMATION
When reporting an emergency, the following information should be included:

- Exact nature of the emergency
- Exact location (including area, level & room no. where applicable)
- Name of person reporting the emergency
- Contact number (where applicable)

Re-Entry

Personnel are only permitted to re-enter the affected area/building when the 'All Clear' is given by the Emergency Chief Warden in consultation with the senior emergency services person on-site.

Assembly Areas

In the event of an evacuation, persons should evacuate the site and assemble at the Assembly Area.

Your assembly area is: **GRASS VERGE NEXT TO MAIN ENTRANCE GATE**

Emergency Control Point

In the event of an evacuation or other emergency, the Emergency Chief Warden will be located at the Emergency Control Point (ECP)

The designated ECP is the Assembly Area (if safe to do so)

1.6 Emergency Response Process

Verbal Report of Emergency (providing it is safe to do so)	
Function	**Actions**
Person discovering	• Move persons away from any danger • Inform appropriate emergency services **Dial 000** • Alert site Emergency Chief Warden
Person receiving report	• Obtain the following information: - Type of emergency & exact location - Actions being taken by persons at the scene - Any persons injured (and nature of injury if known) - Have emergency service/s been notified - Name of informant & contact telephone number of informant • Note time of report • Inform Emergency Services if required • Inform the site Emergency Chief Warden if not already aware
Emergency Chief Warden	• If safe to do so proceed to the scene of the reported emergency and ensure that an appropriate response is underway or initiated • If evacuation or partial evacuation is required then: - Monitor evacuation of affected area or site - Ensure Communications Centre is notified (4421 3100) - Maintain chronological log of organisational response

1.7 Considerations in an Evacuation

Exits & Egress Routes
Must be safe & unobstructed.

Directives
Must be given in a calm, clear voice and supported by visual signals. Avoid emotive terms and actions. Avoid lengthy explanations.

Sample Directive
"Attention everyone, I'm the emergency warden for this area. There is a .....(incident & location)..... Please immediately leave this area through....(indicate exits or routes).....and proceed to.....(location)..... Thank You".

Personal Belongings
Personal belongings such as wallets, handbags, briefcases, keys, mobile phones etc. should only be taken if they are immediately and safely accessible and will not obstruct egress routes or in any way hinder a person's prompt evacuation from the affected area/building.

Persons Refusing to Leave
Do not engage in arguments. Restate the situation and your request. If persons refuse to comply, carry on with your own emergency duties and report the matter to the Emergency Chief Warden as soon as possible.

'Out of the Way' Places
Providing it is safe to do so, particular attention must be paid to toilets, storerooms, offices, leachate dam, sampling point, litter pick up areas etc. where persons could be unaware of an evacuation in progress.

Council Monies
Every effort should be made to secure Council monies and exhibits prior to the evacuation of any area. This should occur only if it is safe to do so and does not endanger the person responsible for these actions. The procedure and process for securing of any council monies should be known by all staff in the appropriate areas.

People Standing Outside
Be on the alert for persons gathering near the source of the emergency - they must be encouraged to move well away to ensure that they do not obstruct emergency services personnel or expose themselves to secondary hazards.

Entry to the Emergency Area
Be alert for persons attempting to enter the area during or following the evacuation.

Persons are not permitted to enter until the Emergency Chief Warden gives approval.

1.8 Contingencies

Informing Emergency Services

When requesting attendance of emergency services, the following information must be included:

- Name of Organisation
- Nature of Emergency
- Initial response actions
- Any casualties
- Address and nearest cross street
- Name of person making the call and contact number

First Aid

In the event of an evacuation, a portable first aid kit should be collected and taken to the Assembly Area

Should urgent assistance be required dial 000

Any injured people who can be moved safely should be taken to the Assembly Area for treatment. Those people who are trapped or are unable to be moved immediately must be protected and where possible given first aid on the spot (providing this does not expose first aiders to personal risk).

Counselling

Appropriate professional counselling services are to be made available to staff requiring their support. This service can be accessed through the Employee Assistance Program.

WHS Reporting

The Emergency Chief Warden is responsible for ensuring that the WHS Coordinator for Council is informed, at the first reasonable opportunity, of any emergency situation/critical incident and that the appropriate incident reports are completed in a timely manner. Contact the WHS Hotline on **4429 3542.**

Media Liaison

Policy

It is Shoalhaven City Council policy that no person other than the General Manager or his delegate divulges any information to the media. This extends to contractors and other service agencies and should be communicated in any site contractor agreements.

Any form of contact from the media should be referred immediately to the Emergency Chief Warden in the first instance.

General statement to media in the event of a major incident

In the event of a major incident, particularly after-hours, there may be a period of time elapsed before the designated media spokesperson is in a position to respond to media enquires. Should any staff member be approached by media representatives for a comment they are only authorised to make the following statement:

"I am sorry, but I am not authorised to make any statement at this time. The appropriate personnel are currently being briefed on the situation and a spokesperson will be available to talk to you shortly."

1.9 Persons with Disabilities - Helpful Strategies

General

Persons with disabilities are not necessarily helpless, and can serve as resources for their individual conditions and needs. Discuss with persons who have disabilities how they can best be assisted in an evacuation (e.g. lifting, carrying, and escorting from the building). Ideally, involve the person's colleagues in the planning process so that if it does become necessary to evacuate, they can directly assist the individual. In an evacuation, when offering assistance, ask the person how you can best help.

Mobility

Keep offices and passageways clear of obstructions.

Don't assume that lifting techniques will be similar for all disabled persons.

Vision

Walk evacuation routes with blind and/or vision impaired persons until they feel familiar.

During an emergency, have them take your elbow and then guide them from the building / area.

Maintain a dialogue describing the nearest exit and obstacles in their path.

Hearing

Discuss communication requirements with the individual and determine communication techniques which best suit the individual.

In an emergency and/or evacuation, ensure that the person is personally informed.

Intellectual

Explain evacuation procedures carefully and clearly, ask for feedback to ensure understanding.

In an emergency and/or evacuation, ensure that the person is personally informed.

1.10 Disaster Checklist

Emergency services shall display the disaster checklist.

ACTION	REMARKS
Emergency Services	Ensure that emergency services are promptly informed
Casualties	Seriously injured should be treated at the scene by first aiders. Persons suffering minor injuries should be treated at the Assembly Area. Those that are obviously dead must not be moved.
Fires	Appropriately trained personnel should be deployed to combat any fires pending the arrival of the Fire Brigade
Evacuation	Persons not engaged in on-scene response efforts should be evacuated to the designated assembly area (or other location as determined by the Emergency Chief Warden).
Hazards	Appropriate staff should be deployed to isolate/shut down hazardous processes, equipment or product which could pose additional hazards to rescue and recovery operations.
Search & Rescue	Emergency Services will normally perform this task - steps should be taken however to attempt to quickly account for all persons in the affected area at the time of the incident - any persons unaccounted for should be brought to the attention of emergency services.
Access Control	Only essential vehicles and personnel should be permitted on site.
Security Cordon	A minimum 200 metre radius 'no-go' zone should be placed around the scene. Only authorised persons should be permitted inside this restricted area. This reduces the risk of evidence being destroyed or interfered with or persons being unwittingly exposed to danger or sightseers hampering rescue efforts.
Evidence	All efforts must be made to preserve the physical and legal integrity of all evidence. Nothing must be touched without the permission of the senior emergency services officer present.
Building Damage	Action should be taken to quickly survey building/s for any sign of structural damage and, if suspect, placed off-limits.

1.11 Post-Incident

Termination of Emergency

Once emergency services have concluded their involvement, control of the affected area will be handed back to the Emergency Chief Warden.

In determining the suitability of the area to be re-occupied and to resume normal operations, the Emergency Chief Warden in consultation with the Senior Management should consider:

- Any residual/lingering hazards
- Any structural or process weaknesses caused by the original event, which could initiate a subsequent emergency if operations are reinstituted.
- The need to preserve the scene if there is to be a subsequent investigation.
- Occupant safety
- Industrial relations ramifications

Preservation of the Scene

In any emergency situation where there is the possibility of a subsequent statutory investigation or coronial inquiry, the Emergency Chief Warden must ensure that all evidence relating to the incident is preserved and not interfered with and that any cleaning up, movement of bodies, repairs and so on, apart from that necessary to bring the emergency under control, does not occur without approval of investigating officers.

Report

At the first practicable opportunity following the conclusion of a major emergency/incident and in any event no later than 8 hours after the incident, the Emergency Warden will ensure that a VERBAL report concerning the emergency and organisational / site response is given to Shoalhaven City Council's Chair – Emergency Planning Committee.

De-Brief

Within 7 days of the conclusion of the emergency, the Emergency Planning Committee will conduct a formal review of the events and processes affecting the emergency to ensure that the Emergency Plan and organisational / site preparedness remain appropriate and competent.

Where deficiencies or weaknesses are identified, a written strategy will be developed to rectify these together with a time frame.

This review will involve debriefing relevant personnel and compiling an appropriate report under the authority of Shoalhaven City Council's Chair – Emergency Planning Committee.

Counselling

The organisation is responsible for ensuring that appropriate counselling is offered to affected persons. Counselling is to be arranged through the Employee Assistance Program for all staff affected in the incident. HR will contact the affected area / emergency wardens to identify what support is required. Arrangements for

Emergency Procedures Response Guidelines

2.1 Armed Hold-up

Persons Involved

Don't be a HERO - stay calm. Your safety and the safety of those around you is of paramount importance. If you are not directly involved stay out of it.

- **Don't argue - obey the bandit's instructions**, but do only what you are told and no more. Do not volunteer any information.
- **Be deliberate in your actions** if you are ordered to do something by the bandit. Avoid sudden movements.
- **Don't stare at the bandit** - avoid direct eye contact.
- If possible, **make a mental note of everything you can about the bandit** -In particular note speech, mannerisms, clothing, scars or any other distinguishing features such as tattoos.
- Once the bandit has left, if you can without risk and if nobody else has already done so, **try and observe any vehicle used by the bandit**. Take particular note of the registration number, type, colour and any distinguishing features.
- **AFTER THE BANDIT HAS LEFT** :

  Activate duress alarm or raise the alarm

  Help any person who has been injured

  Inform the Emergency Chief Warden

  Record your observations in writing as quickly as you can after the Hold-Up.

The Police need individual impressions of what happened, uninfluenced by others.

Person Receiving Initial Report

Ascertain following information :

- If anyone is injured
- Is offender/s still on site
- Number of offenders (if known)
- Weapons used (if known)
- Exact location of the incident (Area of Site)
- Name of informant

Contact the following persons :

- Emergency Chief Warden
- Police
- Ambulance (if required)

Write down time of initial report and subsequent notifications.

Emergency Chief Warden

- Confirm offenders have left and obtain brief description (ensure Police are updated).
- Confirm if any persons injured and ensure appropriate medical treatment is provided.
- Secure the area where the incident occurred and don't allow anyone into the area. Nobody should be allowed into this area until the Police have checked for fingerprints and other physical evidence.
- Inform appropriate senior management
- Obtain details of all staff involved and the names, addresses and telephone numbers from all members of the public involved together with brief details of incident (including description of offender/s, estimated value of cash/valuables stolen).
- Provide a quiet place for them to sit down and offer them a cup of coffee or tea.
- Obtain names of attending police (and station) and prepare a brief incident report

Post-Incident

Counselling

The organisation is responsible for ensuring that appropriate counselling is offered to affected persons. Counselling is to be arranged through the Employee Assistance Program for all staff affected in the incident. HR will contact the affected area/wardens to identify what support is required.

Arrangements for appropriate counselling for members of the public involved should first be discussed with the WHS Coordinator.

Security Review

Management should undertake a security review of the activity and location including physical and procedural security elements to determine if security can be improved and the risk of a repeat incident reduced.

2.2 Assault

Initial Actions

- Assess the situation
- Remain calm
- Obtain assistance – if safe to do so contact the Rangers or dial **000**
- Do not provoke the assailant or aggravate the situation
- If safe to do so, assist the victim (e.g. determine if first aid or medical attention is required and action accordingly)
- Disperse any casual spectators but ask witnesses to remain
- Obtain and note details concerning the incident:
  - full details of victim
  - circumstances surrounding the incident
  - witnesses
  - description/details of assailant/s

Serious Assault

- Immediately notify the Police **dial 000** (include description of offender/s, any weapon/s, vehicle/s and last known whereabouts and direction of travel)
- Cordon off the scene of the incident
- Identify any witnesses and request them to remain until police arrive
- Where witness(es) cannot wait for Police attendance, their details are to be noted
- If offender is still present on-site, ensure that victim and witness(es) are isolated from the person
- If offender is still present on site and is considered to pose a danger to others, attempt to keep persons away from the offender and keep the offender under discrete surveillance.

Report

Refer the matter to Senior Management and ensure the appropriate incident note or report form is completed, providing information of the incident and any action taken, and sent to the WHS unit.

Should Council Rangers be contacted they will attend the site ASAP.

Upon arrival the Rangers become the Site Controller and are authorised to instigate effective management of the site under special constable status.

2.3 Bombs –Threat – Unexploded ordinance

Key Elements

Discovering a dangerous situation

- Move persons away from any danger
- Inform the Site Emergency Chief Warden
- Follow the directions of your warden personnel

Reporting an Emergency

IMPORTANT INFORMATION

When reporting an emergency, the following information should be included:

- Exact nature of the emergency
- Exact location (including area of Site)
- Name of person reporting the emergency
- Contact number (where applicable)

Assembly Areas

In the event of an evacuation, persons should evacuate the site and assemble at the Assembly Area.

Your assembly area is: **GRASS VERGE NEXT TO MAIN ENTRANCE GATE**

Re-Entry

Personnel are only permitted to re-enter the affected area/building when the 'All Clear' is given by the Emergency Chief Warden in consultation with the Senior Emergency Services Officer on-site.

Emergency Control Point

In the event of an evacuation or other emergency, the Emergency Chief Warden will be located at the Emergency Control Point

The designated ECP is the Assembly Area (if safe to do so)

General Guidelines

- Bomb threat calls must always be treated seriously.
- Police should always be informed of any bomb threat calls received.
- In the event unexploded ordinance (bombs, bullets, grenades, mines etc.) is discovered or suspected in a waste or recycling load, treat the situation as a bomb threat.
- Whenever a bomb threat call is received, staff resident in the building/area affected by the call should be notified of the call and advised of what action is being taken in relation to the call.
- Evacuate the building/area.
- Trained personnel only will search any area mentioned in the threat and undertake checks of relevant building exterior, exit routes and Assembly Area/s in response to a specific bomb threat.
- If staff are requested to check their work area in response to a bomb threat, any such search must be on a voluntary basis.
- **If evacuating in response to a suspected bomb being discovered or as a precaution**:
    - Persons should take bags & personal belongings with them
    - Where practicable, doors & windows should be left open
    - Persons must not assemble in any location that is in line of sight to a possible danger area
    - Building or area re-entry should only be considered after a thorough search has been conducted by emergency services and after consultation with police and clearance given by authorities.
- When evacuation is not considered necessary in response to a bomb threat, staff should always be given the option of leaving the building/area along with any visitors.

BOMB THREAT CHECKLIST

Keep calm – Don't hang up

Questions to ask caller:

1. When is the bomb going to explode?
2. Where is the bomb?
3. When did you put it there?
4. What does the bomb look like?
5. What kind of bomb is it?
6. What will make the bomb explode?
7. Did you place the bomb?
8. Why did you place the bomb?
9. What is your name?
10. Where are you?
11. What is your address?

Exact wording of threat:

……

……

……

Dial 000 immediately, if possible using a different telephone, leaving the phone on which the threat was received still connected

Don't release details to media

Recipient of call:

Name: .....

Phone Number: .....

Signature: .....

Caller's voice

Accent (specify): _____
Any Impediment (specify): _____
Voice (loud, soft, etc):_____
Speech (fast, slow, etc):_____
Diction (clear, muffled, etc):_____
Manner (calm, emotional, etc): _____
Did you recognise the voice?_____
If so, who do you think it was?_____
Was the caller from the area?_____

Threat language

Well spoken	
Incoherent	
Taped	
Message read by caller	
Abusive	
Other	

Background noises

Street noises	House noises
Aircraft	Long distance
Music	Mobile
Machinery	Local call
Other	

Other

Sex of caller:

Estimated Age:

Response Plan

Call Recipient informs Emergency Chief Warden

Where time permits:

- Emergency Chief Warden interviews the call recipient to obtain first-hand information concerning the call.
- Emergency Chief Warden informs police & assesses threat information and implements appropriate response. Proceeds to Emergency Control Point.

If building-specific and time permits, Emergency Chief Warden initiates Precautionary Search as follows:

- Utilises available warden personnel and requests their immediate attendance at the Emergency Control Point
- Confirms Emergency Control Point is safe
- Establishes 2 person search teams
- Conducts search briefing as follows:
  - *Detail threat information*
  - *Allocate search areas*
  - *Emphasize to search teams*:
    - Be methodical
    - Discretely inform staff while checking
    - If something suspicious found :
      - DO NOT TOUCH
      - KEEP PEOPLE AWAY
      - INFORM EMERGENCY CHIEF WARDEN
      - DON'T USE RADIO/MOBILE TELEPHONE
    - Report back to Emergency Control Point after search
    - CONFIRM TIME FOR COMPLETION OF SEARCH
- Remains at Emergency Control Point
- Reviews search results once teams have reported in
- Determines if further action is warranted

2.4 Chemical Spill Hazard

WARNING

CONFIRM AREA SAFE TO APPROACH

Do not enter any confined area where there is the slightest risk of being overcome by chemical fumes

Appropriate personal protective equipment as required must be worn in the area of the hazard

This may include gloves, face shield, wet weather gear and respiratory protection

General Guidelines

- First person on arrival at the scene should ensure that the affected area has been evacuated.
- Ensure that persons assemble in a well ventilated area, upwind from the spill, where they are not exposed to further risk.
- Cordon off area, preferably using some form of barrier tape, and prevent unauthorised access. Persons should remain clear of the area until it is declared safe to re-enter.
- Do not allow any ignition sources or electrical equipment to be operated in the immediate vicinity of the spill.
- Notify appropriate chemical expert(s) – the Fire Brigade.
- Update Emergency Chief Warden.
- Spill recovery will be the responsibility of the person responsible for the chemical/s on site or the Fire Brigade.
- Consideration should be given to building or site environmental conditions and a decision made by the Emergency Chief Warden as to whether further evacuation of the area is required.

2.5 Deceased Person

General Guidelines

- Remain calm
- Isolate the site where the incident has occurred
- Segregate any witnesses in private area away from incident scene
- Segregate any friends/colleagues of the deceased in private area away from incident scene
- Disperse any spectators
- Avoid contact with blood and other body fluids by using protective gloves
- If practicable, cover the body and make sure that it cannot be disturbed
- Inform the police
- Inform the ambulance
- Do not interfere with any evidence
- Comfort witnesses/colleagues
- Collect accurate information (written & photographic) about the incident

Counselling

The organisation is responsible for ensuring that appropriate counselling is offered to affected persons. Counselling is to be arranged through the Employee Assistance Program for all staff affected in the incident. HR will contact the affected area / emergency wardens to identify what support is required. Arrangements for appropriate counselling for members of the public involved should first be discussed with the WHS Coordinator.

2.6 Evacuation

Key Elements

Discovering a dangerous situation

- Move persons away from any danger
- Contact emergency services **dial 000**
- Inform the site Emergency Chief Warden
- Follow the directions of your emergency warden personnel
- Contact Council Communications Centre on 4421 3100

Reporting an Emergency

IMPORTANT INFORMATION

When reporting an emergency, the following information should be included:

- Exact nature of the emergency
- Exact location (including area of Site)
- Name of person reporting the emergency
- Contact number (where applicable)

Assembly Areas

In the event of an evacuation, persons should evacuate the site and assemble at the Assembly Area.

Your assembly area is: **GRASS VERGE NEXT TO MAIN ENTRANCE GATE**

Re-Entry

Personnel are only permitted to re-enter the affected area/building when the 'All Clear' is given by the Emergency Chief Warden in consultation with the Senior Emergency Services Officer on-site.

Emergency Control Point

In the event of an evacuation or other emergency, the Emergency Chief Warden will be located at the Emergency Control Point

The designated ECP is the Assembly Area (if safe to do so)

Verbal Report of Emergency (providing it is safe to do so)	
Function	**Actions**
Person discovering	• Move persons away from any danger • Inform appropriate emergency services **dial 000** • Alert Site Emergency Chief Warden • Alert Council Communications Centre on 44213100
Emergency Chief Warden	• Proceed to the scene of the reported emergency and ensure that an appropriate response is underway or initiated • If evacuation or partial evacuation is required, proceed to the Emergency Control Point and, if appropriate, delegate any other staff to act as Emergency Area Wardens to evacuate appropriate areas (issue checklists) • Monitor evacuation of effected area or site • Ensure Communications Centre is notified • Await further information from relevant Emergency Area Warden(s) • Maintain chronological log of organisational response
Emergency Area Warden	• If area has exits ensure that person(s) placed at exit to prevent entry • Operate first attack fire appliances if applicable, if safe to do so • Check to ensure that doors are closed in area • Evacuate area • Check to ensure that all staff and visitors have left area and report to Emergency Chief Warden

Communications Centre
or
Person receiving report
	• Obtain the following information:
	  • Type of emergency & exact location (including area of Site)
	  • Actions being taken by persons at the scene
	  • Any persons injured (and nature of injury if known)
	  • Whether or not emergency service/s have been notified
	  • Name of informant & contact telephone number of informant
	• Note time of report
	• Inform emergency services if required
	• Inform the Site Emergency Chief Warden if not already aware

Counselling

The organisation is responsible for ensuring that appropriate counselling is offered to affected persons. Counselling is to be arranged through the Employee Assistance Program for all staff affected in the incident. HR will contact the affected area / emergency wardens to identify what support is required. Arrangements for appropriate counselling for members of the public involved should first be discussed with the WHS Coordinator.

2.7 Explosion

Key Elements

Discovering a dangerous situation

- Move persons away from any danger
- Contact emergency services **dial 000**
- Inform the site Emergency Chief Warden
- Follow the directions of your Emergency warden personnel
- Contact Council Communications Centre on 4421 3100

Reporting an Emergency

IMPORTANT INFORMATION

When reporting an emergency, the following information should be included:

- Exact nature of the emergency
- Exact location (including area of Site)
- Name of person reporting the emergency
- Contact number (where applicable)

Assembly Areas

In the event of an evacuation, persons should evacuate the site and assemble at the Assembly Area.

Your assembly area is: **GRASS VERGE NEXT TO MAIN ENTRANCE GATE**

Re-Entry

Personnel are only permitted to re-enter the affected area/building when the 'All Clear' is given by the Emergency Chief Warden in consultation with the Senior Emergency Services Officer on-site.

Emergency Control Point

In the event of an evacuation or other emergency, the Emergency Chief Warden will be located at the Emergency Control Point

The designated ECP is the Assembly Area (if safe to do so)

2.8 Fire – Tip Face / Bush Fire / Plant and Equipment / Building

Due to the variety of potential fuel materials stored at the West Nowra Recycling & Waste Depot at any given time, five general locations have been identified as fire risk areas. These are:

- Tipping Face
- Transfer Bin Area
- Green Waste Stockpile Area
- On-Site Machinery, and
- Bushland surrounding the Site.

Person Discovering – First Instance

In the event of any spot fires occurring, staff at the scene are responsible for ensuring that:

- The immediate area is secured against access by the Public
- Determining whether the fire is containable using equipment at hand (if not go to Emergency and/or Evacuation below)
- The fire is extinguished using the most appropriate method, and
- Recording the incident in the Daily Diary.

In the event of any larger fires occurring, staff at the scene are responsible for ensuring that:

- The immediate area is secured against access by the public.
- The Site Emergency Chief Warden is notified immediately.
- Where and if possible, relocate machinery and equipment to a safe area.

In the event of fires occurring in garbage trucks or any of the on-site plant (i.e earth moving equipment) the operator at the scene is responsible for ensuring that:

- The machine is moved to a safe area away from public areas
- The machine is switched off
- Internal/external fire suppressants are activated where fitted. If not fitted use hand extinguisher/s fire hose etc.
- The Waste Operations Supervisor is notified.

Emergency Chief Warden

On confirming the presence of any spot fires the Site Emergency Chief Warden is responsible for ensuring:

- The fire has been fully extinguished.
- The fire fighting equipment used is replaced in a timely manner.
- The incident is recorded in the Site Daily Diary.
- Any staff member involved in the incident is aware of Council's EAP program and provided with the HR phone number, if required.

On confirming the presence of a larger fire within the site, ensure:

- Persons are evacuated from the immediate vicinity.
- Measures used to secure the affected area against access by the public are adequate.
- Rural Fire Service is immediately notified of the fire.
- All on-site staff are accounted for.
- All on-site contractors are notified of events.
- Liaison with emergency services on arrival.
- Emergency evacuation is carried out as required, in accordance with the Emergency Response and Evacuation Plan set out on page 13.
- Senior Management is advised at first available opportunity.
- Any staff member involved in the incident is aware of Council's EAP program and provided with the HR phone number if required.

On confirming the presence of fires occurring in garbage trucks or any of the on-site plant (i.e earth moving equipment), ensure:

- The fire has been fully extinguished.
- The fire fighting equipment used is replaced in a timely manner
- The incident is recorded in the Site Daily Diary.
- Any staff member involved in the incident is aware of Council's EAP program and provided with the HR phone number, if required.

General

The Waste Operations Supervisor is responsible for ensuring that:

- All fire extinguishers are periodically checked and tagged by a suitably qualified technician in accordance with regulatory requirements, and
- Regular maintenance of external fire suppression / sprinkler systems on relevant earthmoving equipment is carried out and documented on a regular basis.

The Waste Services Manager is responsible for ensuring that:

- All staff have received adequate training in fire management techniques.
- Staff's training records are kept up to date, and
- Contractors and sub-contractors are made aware of their fire management obligations.

2.9 Flooding

Key Elements

Discovering a dangerous situation

- Move persons away from any danger
- Contact emergency services **dial 000**
- Inform the site Emergency Chief Warden
- Follow the directions of your Emergency warden personnel
- Contact Council Communications Centre on 4421 3100

Reporting an Emergency

IMPORTANT INFORMATION

When reporting an emergency, the following information should be included:

- Exact nature of the emergency
- Exact location (including area of Site)
- Name of person reporting the emergency
- Contact number (where applicable)

Assembly Areas

In the event of an evacuation, persons should evacuate the site and assemble at the Assembly Area.

Your assembly area is: **GRASS VERGE NEXT TO MAIN ENTRANCE GATE**

Re-Entry

Personnel are only permitted to re-enter the affected area/building when the 'All Clear' is given by the Emergency Chief Warden in consultation with the Senior Emergency Services Officer on-site.

Emergency Control Point

In the event of an evacuation or other emergency, the Emergency Chief Warden will be located at the Emergency Control Point

The designated ECP is the Assembly Area (if safe to do so)

PRECAUTIONS

One of the main hazards during a flood is fire. Other hazards include property damage and environmental contamination. Specific hazards include:

- Electrical short circuits in broken wiring or wet electrical equipment.
- Flammable liquids floating on the surface of flood waters, carrying the threat of fire.
- Flammable gas escaping from damaged pipe work igniting.
- Release of harmful (toxic, flammable, biologically active) substances into the environment.
- Loose or floating debris.

PREPARING FOR THE FLOOD

When the flood warning is received, the Emergency Chief Warden shall ensure the following actions are taken:

- Secure all vulnerable areas against water ingress, using flood shields such as metal barriers, sandbags, etc.
- Remove fire hoses and associated equipment from areas likely to be flooded and store them in a safe and accessible location.
- Remove/secure all critical records and items of equipment (eg: files, computers, etc).
- Open flames and sources of ignition (including pilot lights) shall be extinguished/eliminated, as far as possible.
- Secure or remove vehicles.
- Goods in storage shall be secured or removed to higher levels or non-flooding areas.
- If flooding threatens, isolate electrical power to the affected area (even in the event of a power failure). Do not shut off power to the fire pumping system unnecessarily.

AFTER THE FLOOD

- Power must not be restored without inspecting main incoming electrical switch gear, and ensuring it is clean, dry and fully operational. Distribution circuits shall be inspected, cleaned, dried and tested before returning to service.
- Electrical equipment and circuits shall be cleaned, dried and checked for insulation resistance prior to return to service.
- Wiring systems in conduits should be drained, cleaned and thoroughly dried.
- The wiring shall be replaced, or the insulation resistance checked before return to service.
- Wet fuses shall be replaced.

2.10 Hostage Siege

General Guidelines

- Inform Police **dial 000**
- Confirm exact location of incident
- Keep persons away and out of sight
- If practicable, ascertain from witnesses any information concerning hostage/s (name/s, condition) and offender (name, description, type of weapon)
- Segregate witnesses
- Depending on the situation and after consultation with the police, it may be necessary to evacuate all or part of the building
- Quickly appraise staff on site as to the situation

Emergency Chief Warden

- Inform appropriate counselling service
- Determine, in consultation with police, strategy for informing next of kin of hostage/s
- Inform Shoalhaven City Council Emergency Management Team

2.11 Medical Emergency

Emergency Chief Warden

In the event of a medical emergency, the person discovering the casualty should immediately inform Emergency Chief Warden, and provide appropriate first aid.

The Emergency Chief Warden will in turn inform the nearest First Aider.

The on-site First Aider will immediately attend the scene and assist where possible.

If the patient's condition is uncertain or possibly life threatening, then the person making that judgement (whether first aid qualified or not) should **dial 000** for an ambulance.

Further information is available in Shoalhaven City Council's First Aid Procedure.

2.12 Dust Storm

Emergency Chief Warden

In the event of a dust storm emergency on site where it is deemed that visibility cannot be maintained in accordance with Waste Services “Dust Control – Landfill Sites” safe work procedure,

The Emergency Chief Warden shall:

- Evacuate the affected area
- Secure the immediate area against access by the Public
- Prevent unauthorised access to affected area

Assembly Areas

In the event of an evacuation, persons should exit the building and assemble at the Assembly Area.

Your assembly area is: **GRASS VERGE NEXT TO MAIN ENTRANCE GATE**

Re-Entry

Personnel are only permitted to re-enter the affected area/building when the 'All Clear' is given by the Emergency Chief Warden in accordance with Waste Services “Dust Control – Landfill Sites” safe work procedure

Emergency Control Point

In the event of an evacuation or other emergency, the Emergency Chief Warden will be located at the Emergency Control Point

The designated ECP is the Assembly Area (if safe to do so)

2.13 Motor Vehicle or Major Plant Accident

In the event of a motor vehicle or major plant accident occurring in the vicinity of the site, and it is deemed that assistance from the site occupants is required, the following guidelines should be followed:

- Ascertain if any person/s injured - if yes, request Ambulance. **Dial 000**.
- Determine if vehicle/s pose/s a hazard to persons nearby (e.g. leaking fuel) - if yes, request appropriate emergency services (e.g. Fire Brigade) and evacuate persons from immediate danger area.
- If no person injured and no danger, determine if vehicle/s pose/s an obstruction to normal vehicular traffic flow. If yes, request driver/s to move vehicles off road (e.g. into car park) - if vehicle unable to be moved, request driver to immediately obtain tow truck assistance.
- Obtain particulars from driver/s & witness(es) involved :
  - Names
  - Addresses
  - Telephone Numbers (Home & Work)
  - Details of registered owner/s of vehicles involved (if different from driver/s)
  - Vehicle details (registration number, type, make, colour)
  - Brief description of events
- Confirm if driver/s require Police to be called (note - if persons injured, Police must attend).

2.14 Power Failure

General Guidelines

- Establish whether power failure is local or across the whole of the Site.
- Contact appropriate maintenance personnel/power authority
- Ascertain expected time until restoration of power
- Inform staff / occupants
- Inform Emergency Management Team – Refer Page 50

Mains Power Dependent Systems & Back-Ups

Item	Remarks
Air Conditioning	
Alarms	
Lighting	
Telephone system	
Computers	
Weighbridge	

2.15 Seismic Disturbance

During The Event

STAY CALM	Remain Calm - the greatest risk is from falling debris.
SHELTER cover under a from glass and	If you are inside when the earthquake starts - remain there - take desk, table, door arch or against an inside wall. Keep well away external walls. If you are outside, move well away from buildings, high walls, electrical wires, bin discharge area and loose material stockpiles. If you're caught beside a big building, seek refuge under archways and doorways which could offer protection from falling debris. The greatest risk from falling debris is immediately outside doorways and near external walls.
NO NAKED FLAMES candles, matches, lighters after the event.	Because of the risk of ruptured gas pipes - do not use or other naked flames during or immediately
FIRES	Immediately extinguish any fires if safe to do so.
HELP OTHERS	Render assistance to those around you that require it.
EVACUATE	Evacuate the site - be careful of broken glass.
PARK	Plant away from any slopes or batters.

After The Event

UTILITIES on.	Check utilities (water, gas, electricity) for damage but do not turn
STAY OUT	Don't re-enter if site is badly damaged.
AFTER-SHOCKS	Prepare for possible after-shocks.
SEARCH & RESCUE	Do not attempt to undertake search and rescue activities on your own. If you wish to, then volunteer your services to the appropriate authorities.

INFORMATION	Monitor local radio for information and official instructions.
TELEPHONES assistance.	Do not use the telephone unless you require urgent
SIGHTSEEING	Stay well clear of disaster areas.

2.16 Structural Failure

Total or Partial Collapse

Where there is the possibility of a total or partial building collapse:

- Persons should be immediately evacuated / kept away from the building until it has been professionally inspected to determine structural integrity.
- Inform Fire Brigade.
- The area surrounding the building should be cordoned off at a sufficient distance that persons cannot be exposed to falling debris.
- Where applicable, isolate gas supply to building from external point.
- Once the building has been evacuated, determine if it is practicable and safe to isolate power to the building from an external point.
- Inform Waste Operations Supervisor and/or Senior Management.

Falling Objects

Where there is no risk of building collapse, but there is the possibility of objects falling from the building (e.g. window failure):

- Immediately cordon off the area below, to prevent persons from being injured by falling debris.
- Notify Waste Operations Supervisor and/or Senior Management.

2.17 Threats – Written/Verbal

Initial Response

In the event of receiving a threat (e.g. extortion, blackmail etc) in written or taped form, the following guidelines should be followed:

- The person discovering the threat message should preserve the evidence and immediately notify the Emergency Chief Warden.
- The Emergency Chief Warden should examine the threat material and ascertain the nature of its delivery and/or discovery.
- The Emergency Chief Warden should inform senior management and Police.
- In the case of a bomb threat, it should be dealt with per the section dealing with Bomb Threats at 2.3 of this Emergency Procedures Manual.
- Any written material should under no circumstances be photocopied.
- Shoalhaven City Council Emergency Management Team should be notified of the threat (4429 3333)

The following guidelines should be adhered to in order to preserve the evidence:

- Once the message is recognised as a threat, further unnecessary handling should be avoided.
- All materials must be saved including any envelope or container.
- Every possible effort should be made to retain evidence such as possible fingerprints, hand writing or typed writing, paper and postmarks.
- The material should be placed in a clean, clear plastic bag and handed to the Police.

2.18 Thunderstorms / Lightning

The Six most common dangerous activities associated with lightning strikes in order are:

1. Work or play in open fields
2. Boating, fishing, and swimming
3. Working on heavy farm or road equipment
4. Playing golf
5. Talking on the telephone
6. Repairing or using electrical appliances

Thunder occurs as a result of lightning. If thunder can be heard then the presence of lightning is actual, even though it may not be immediately observed.

According to the National Weather Service, a thunder storm is considered "as ended" when there has been no sounding of thunder or sighting of lightning within the last 15 minutes and the sky is no longer dark and "threatening". Unless there are evident signs of clearing, the storm should not be considered "as ended".

Emergency Chief Warden

On confirming the presence of a thunder and lightning storm the Site Emergency Chief Warden is responsible for ensuring:

- Any staff members or contractors working in open areas are aware of the threat.
- Persons are evacuated from the immediate vicinity.
- Measures used to secure the affected area against access by the public are adequate.
- Incident is recorded in the Daily Diary.
- Senior Management is advised at first available opportunity.

Re-Entry

Personnel are only permitted to re-enter the affected area/building when the 'All Clear' is given by the Emergency Chief Warden. The Emergency Chief Warden is to abide by the National Weather Service definition of "as ended" storm.

Assembly Areas

In the event of an evacuation of an area due to lightning, persons should exit the affected area and assemble at a suitable place for lightning strike threats.

Your assembly area for lightning strike protection is:
CLOSEST SITE BUILDING

Emergency Control Point

In the event of an evacuation or other emergency, the Emergency Chief Warden will be located at the Emergency Control Point

The designated ECP is the Assembly Area (if safe to do so)

2.19 Tsunami

At this point in time the State Government is developing a tsunami warning system. It is not yet complete.

Until the State system is in place a local system will not be developed. Therefore, as a default, the existing flood warning system will be used.
However – Should there be a tsunami warning by:

- A direct telephone call from the SES, or a telephone call to the Waste Services Manager that is passed onto the Waste Depot
- A Public Radio broadcast
- Or by other methods

Then the course of action to follow is to stay at the highest point within the Waste Depot – Tsunamis can travel inland a long distance but do not go up very high.

2.20 Water Leakage

Emergency Chief Warden

- Evacuate the affected area.
- Shut off electricity to the affected area.
- If practicable, isolate source of flooding/water leakage.
- Prevent unauthorised access to the affected area.
- Notify the appropriate maintenance personnel.
- In the event that material and documents are water soaked, find a location to which they can be transferred. This location should:
  - be adequately ventilated, and
  - have easy access to exterior of building and be on the ground floor.
- Water soaked materials should not be placed in an area where they might cause collateral water damage to other materials eg. rugs, carpets etc.
- Follow up action may involve the pumping out of the affected area and the removal of undamaged materials.

Appendices

3.1 External Services

SERVICE	ORGANISATION	CONTACT	TEL. NO.
Air Conditioning	SCC	Brian Shearing	4429 3316
AGL			1300 732 245
Electrical Contractor	SCC	Brian Shearing	4429 3316
Electricity	Endeavour Energy	Office	131 003
Fire Extinguishers	CHUBB	Office	4271 2699
First Aid	Emergency		000
Gas	AGL		131 909
Hospital (Emergency)	Shoalhaven Memorial		4421 3111
Lifeline	Life Line South coast		4422 7678 admin 131 114 Counselling
Plumbing	Steve Watson Plumbing	Steve Watson	0408 490 224
Poisons Information Centre	Poisons Info. Centre		131 126
Rape Crisis Centre	Counselling Line		1800 424 017
RSPCA	Nowra Branch		0412 560 509
Security Alarms	South Coast Security		4423 3400
SES Message Service	Emergency Call Centre		132 500
Telephone Interpreting Service			131 450
Water	Shoalhaven Water		4429 3111
Wildlife Carers	WIRES	Mid South Coast Kangaroo Valley District	02 9577 7000 02 6239 2201
Waste Depots contractor	Subloo's Pty Ltd	Terry Bourke	0437 657 308

3.2 Internal Services

WHS Coordinator	Don Hahn	4429 3569
General Manager	Russ Pigg	4429 3260
Emergency Management Team	Peter Dun	4429 3333
Asset Management	Brad Davis	4429 3184

3.3 Neighbours

ORGANISATION	ADDRESS	TEL. NO.	CONTACT
Shoalhaven Animal Shelter	114 Flatrock Rd	4429 3410	Duty officer
National Parks & Wildlife Services	104 Flatrock Rd & Longreach Rd	4428 6300	
Crown Lands	Lot 7315 Flatrock Rd & Lot 7317 Bamarang Rd	4428 9100	
Grand Haulage & Hire P/L	3 Flatrock Rd	Not known	
SK Withers	43 Flatrock Rd	Not known	
RJ & JK Waller	41 Flatrock Rd	Not known	
Nowra Local Aboriginal Land Council	Lot 466 Flatrock Rd	4423 3163	

3.4 Evacuation Checklist

Checklists to be completed by persons who are issued them by Site Emergency Chief Warden
(eg. Emergency Area Warden(s), Responsible Operator(s))

Designated assembly areas are:

1. Grass verge next to main entrance gate (A).
2. Closest site building(s) in the event of lightning strike threats (B).

Emergency Chief Warden checklist

( ) Ensure appropriate announcements are made.
( ) Brief staff on emergency situation and hand out checklists.
( ) Contact emergency services (000).
( ) Take control of situation and direct patrons through exit gate.
( ) Ensure that all staff have cleared their areas & reported to you with completed checklists.
( ) If time permits carry out a further check of all areas.
( ) Ensure that you are the last person to leave the area of emergency.
( ) Assist emergency services.

Emergency Area Warden / Operational Staff

( ) Report to Emergency Chief Warden for instructions.
( ) Evacuate Council staff work and other areas (weighbridge, tip face, irrigation area, leachate / stormwater runoff dams, plant sheds, staff amenities buildings, ActewAGL landfill gas electricity generation lot, service contractor work areas).
( ) Evacuate depot operations contractor staff work areas (transfer bins, buyback & recycling sheds/areas, recycling storage areas/stockpiles, contractor lunch room).
( ) Advise patrons to leave through the nearest safe exit & assemble at designated assembly areas.
( ) Report to Emergency Chief Warden.
( ) Assist Emergency Services.

REMEMBER DO NOT PANIC - STAY CALM

3.5 Personal Emergency Evacuation Plan (PEEP)

As a requirement of AS 3745-2010 Planning for Emergencies in Facilities, an individualised emergency plan designed for each occupant with a disability who may need assistance during an emergency shall be completed. The Emergency Chief Warden shall discuss and complete a PEEP with each occupant with a disability as part of the site induction process and reviewed annually in accordance with AS1851-2005 Maintenance of Fire Protection Systems. Information on this PEEP shall be disseminated to all people responsible for its implementation.

Occupant's Name:

……

Location:

Building / Facility

……

Floor

……

Room Number

……

Is an Assistance Animal involved? Yes ☐ No ☐

Are you trained in the Emergency Response Procedures (including the Evacuation Procedures?) Yes ☐ No ☐

Preferred method of receiving updates to the Emergency Response Procedures:
(Please state, e.g. text, email, Braille etc.)

……

……

Preferred method for Notification of Emergency:
(Please state, e.g. visual alarm, personal vibrating device, SMS, etc. Add line as necessary)

……

Type of assistance required:
(Please list procedures necessary for assistance. Add lines as necessary)

……

……

……

Equipment required for evacuation:
(Please list. Add lines as necessary)

……

……

Egress Procedure: (Give step by step details. Add lines as necessary)

1. ……
2. ……
3. ……
4. ……

Designated assistants within the work environment and contact details:
(Please list name, phone, mobile, email. Add lines as necessary)

……

……

……

Are your designated assistants trained in the Emergency Response procedures
(including the Evacuation Procedures)?

Yes ☐ No ☐

Are your designated assistants trained in the Evacuation Equipment?

Yes ☐ No ☐

Diagram of preferred route for assisted evacuation (please provide diagram):

Issue Date: …. / …. / …. Review Date: …. / …. / ….

Occupant approved: …….. Date: …. / …. / ….
(Signature)

Chief Warden: …… Date: …. / …. / ….
(Signature)

APPENDIX 3

Pollution Incident Notification Procedure

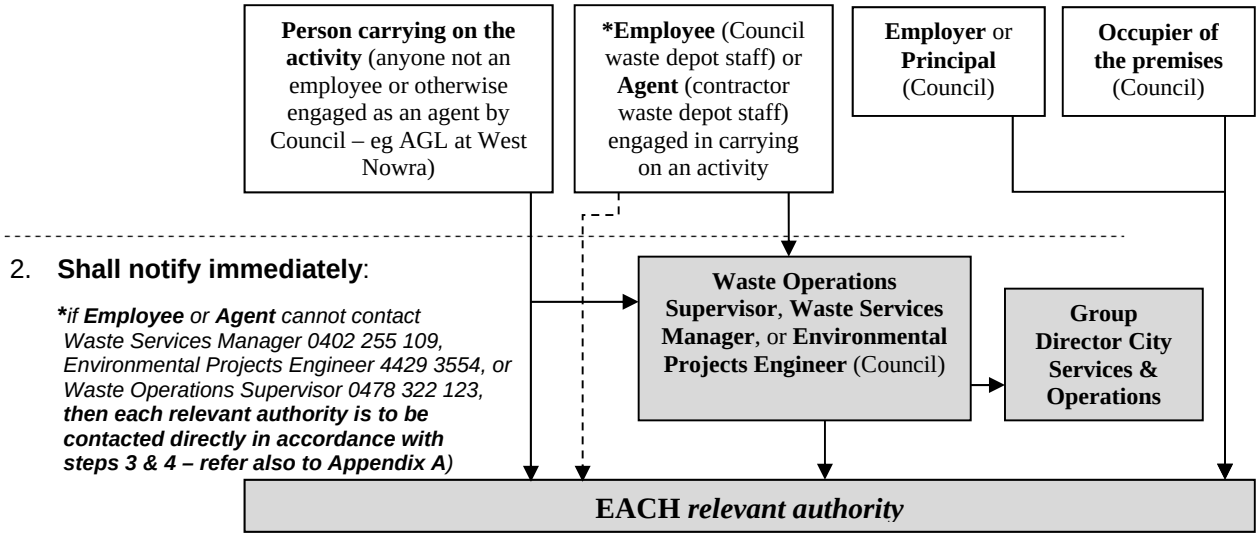
Purpose & Scope

A pollution incident occurring in the course of an activity causing or threatening *material harm to the environment*, and all *relevant information* about it, **must be notified immediately** to each *relevant authority*. This procedure outlines the notification duties of a person, an employee, an employer, the occupier, agents and principals, as per the legislated requirements applicable to Council's operations at its waste depots. This procedure does not extend to a pollution incident involving only the emission of an odour[1].

A person who contravenes legislated duty to notify pollution incident requirements is guilty of an offence carrying maximum penalties of $2,000,000 (a corporation) or $500,000 (an individual)[1].

Notification Steps Required

1. **Whoever becomes aware** of the pollution incident:



3. **<u>If the incident presents an immediate threat to health or property</u>**, first call '000' for Fire and Rescue NSW and/or NSW Police and/or NSW Ambulance Service as applicable;

4. **<u>After the '000' call has been made, or if the incident does not require an initial combat agency</u>**, immediately call each *relevant authority* in the following order, notifying the *relevant information* (refer to Definitions)

Depots WITH environmental protection licence: ***Huskisson, North Nowra (closed), Sussex Inlet, Ulladulla & West Nowra***
a. **EPA** – Environment Line on 131 555 b. **Ministry of Health** on (02) 4221 6700 or A/H (02) 4222 5000 (ask for Public Health Officer) c. **WorkCover** on 13 10 50 d. **Shoalhaven City Council** on (02) 4429 3111 (ask for Environmental Health Officer) or A/H emergencies (02) 4421 3100 e. **Fire and Rescue NSW** on 4421 4754 or 000 – unless already contacted as in step 3 above

Depots WITHOUT environmental protection licence: ***Bendalong, Berry, Callala, Kangaroo Valley, Kioloa & Lake Conjola transfer***

stations
a. **Shoalhaven City Council** on (02) 4429 3111 (ask for Environmental Health Officer) or A/H emergencies (02) 4421 3100 b. **EPA** – Environment Line on 131 555 c. **Ministry of Health** on (02) 4221 6700 or A/H (02) 4222 5000 (ask for Public Health Officer) d. **WorkCover Authority** on 13 10 50 e. **Fire and Rescue NSW** on 4421 4754 or 000 – unless already contacted as in step 3 above

Definitions

material harm to the environment	means harm to the environment (i) involving actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or (ii) results in actual or potential loss (including 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) or property damage of an amount, or amounts in aggregate, exceeding $10,000.
relevant information	consists of the following as known to the person notifying the pollution incident when the notification is required to be given: (a) the time, date, nature, duration and location of the incident, (b) the location of the place where pollution is occurring or is likely to occur, (c) the nature, the estimated quantity or volume and the concentration of any pollutants involved, if known, (d) the circumstances in which the incident occurred (including the cause of the incident, if known), (e) the action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution, if known, (f) other information prescribed by the regulations. If (c), (d) or (e) is not known to the person notifying when the initial notification is made but becomes known afterwards, that information must additionally be notified immediately after it becomes known.
relevant authority	means any of the authorities relevant to the pollution incident notification requirements as outlined in section 148(8) of the POEO Act 1997.

References & Associated Documents

1. *Protection of the Environment Operations Act 1997 (specifically Part 5.7 – Duty to Notify Pollution Incidents), as amended by Protection of the Environment Legislation Amendment Act 2011*
2. *Waste Depots' Emergency Procedure Manuals*
3. *Waste Depot Guidelines – WMS/SWP058*

APPENDIX A

Details to be displayed in depot gatehouses:

POLLUTION INCIDENT

If causing or threatening material harm to the environment:

1. **Call immediately:**

   *[insert **name** & **contact number** of Waste Operations Supervisor]*

   OR *[insert **name** & **contact number** of Waste Services Manager]*

   OR *[insert **name** & **contact number** of Environmental Projects Engineer]*

2. **If none of the above are contactable then call *in sequence*:**

   000... if incident represents an immediate threat to health or property,

131 555	EPA Environment Line,
4421 6700 or A/H 4222 5000	Ministry of Health (ask for Public Health Officer),
13 10 50	WorkCover,
***[4429 3111 or A/H 4421 3100**	Shoalhaven City Council (ask for Environmental Health Officer),]
4421 4754 or 000	Fire and Rescue NSW unless already contacted as above

***insert this number above EPA Environment Line number for depots without an environmental protection licence*

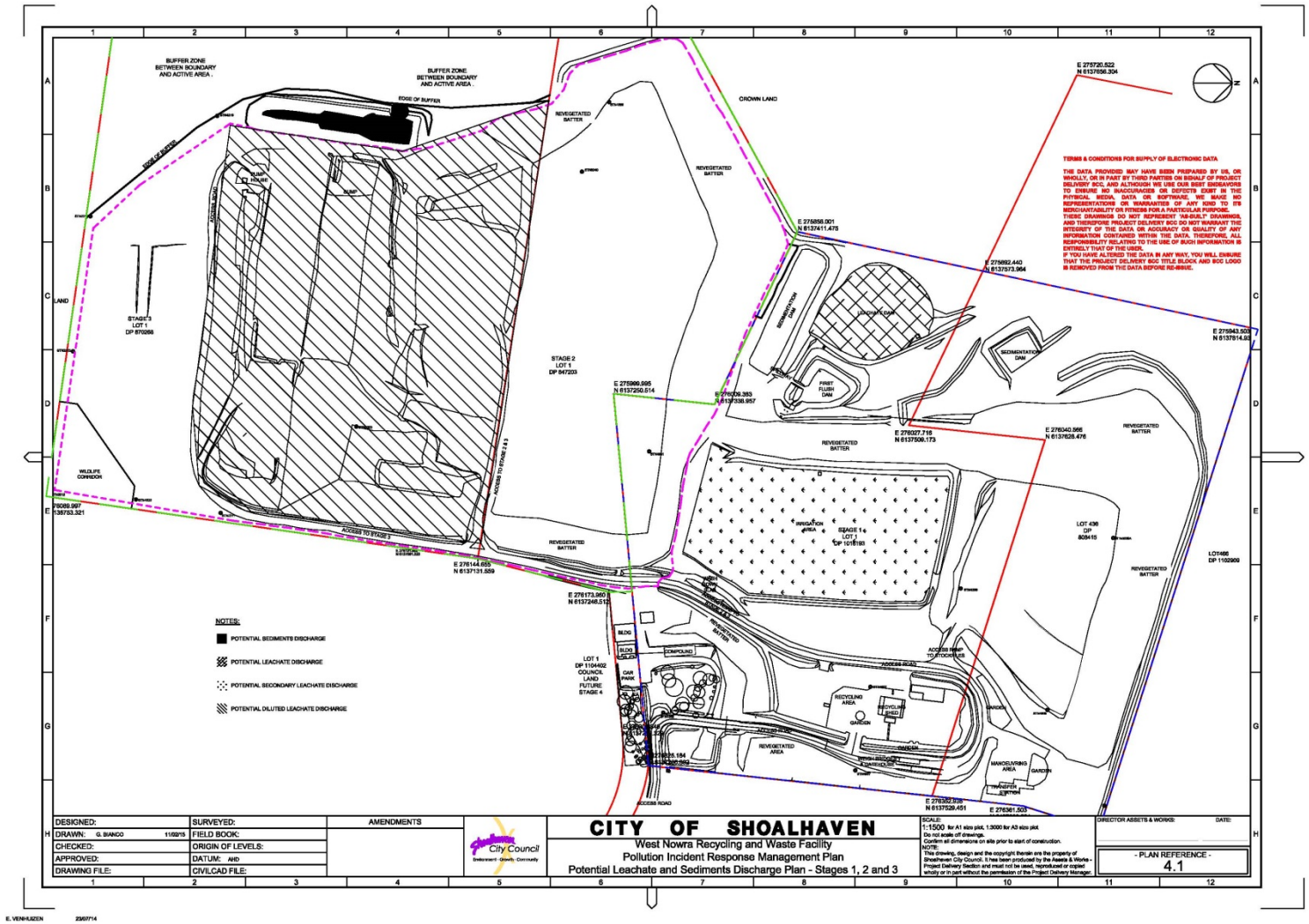
For further details refer CS/187 Pollution Incident Notification Procedure

Do not speak to the media

Refer any media enquiries to Council's Media Manager on 4429 3595

APPENDIX 4

Potential Leachate and Sediments Discharge Plan


BUFFER ZONE BETWEEN BOUNDARY AND ACTIVE AREA .
EDGE OF BUFFER
CROWN LAND
REVEGETATED BATTER
STAGE 3 LOT 1 DP 870268
STAGE 2 LOT 1 DP 947203
STAGE 1 LOT 1 DP 1018193
LOT 1 DP 1104402 COUNCIL LAND FUTURE STAGE 4
LOT 436 DP 808415
LOT 466 DP 1102909
WILDLIFE CORRIDOR
ACCESS TO STAGE 1
ACCESS TO STAGE 2 & 3
ACCESS ROAD
IRRIGATION AREA
SEDIMENTATION DAM
LEACHATE DAM
FIRST FLUSH DAM
RECYCLING AREA
RECYCLE SHED
GARDEN
MANOEUVRING AREA
TRANSFER STATION
BLDG
COMPOUND
CAR PARK
E 275720.522 N 6137856.304
E 275858.001 N 6137411.475
E 275892.440 N 6137573.964
E 275943.505 N 6137814.55
E 275999.595 N 6137250.514
E 276009.383 N 6137336.957
E 276027.716 N 6137509.173
E 276040.566 N 6137626.476
E 276144.655 N 6137131.559
E 276173.060 N 6137248.512
E 276332.926 N 6137539.451
E 276361.503
NOTES:
POTENTIAL SEDIMENTS DISCHARGE
POTENTIAL LEACHATE DISCHARGE
POTENTIAL SECONDARY LEACHATE DISCHARGE
POTENTIAL DILUTED LEACHATE DISCHARGE
TERMS & CONDITIONS FOR SUPPLY OF ELECTRONIC DATA
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ORIGIN OF LEVELS:
DATUM: AHD
CIVILCAD FILE:
AMENDMENTS
CITY OF SHOALHAVEN
West Nowra Recycling and Waste Facility
Pollution Incident Response Management Plan
Potential Leachate and Sediments Discharge Plan - Stages 1, 2 and 3
SCALE: 1:1500 for A1 size plot, 1:3000 for A3 size plot.
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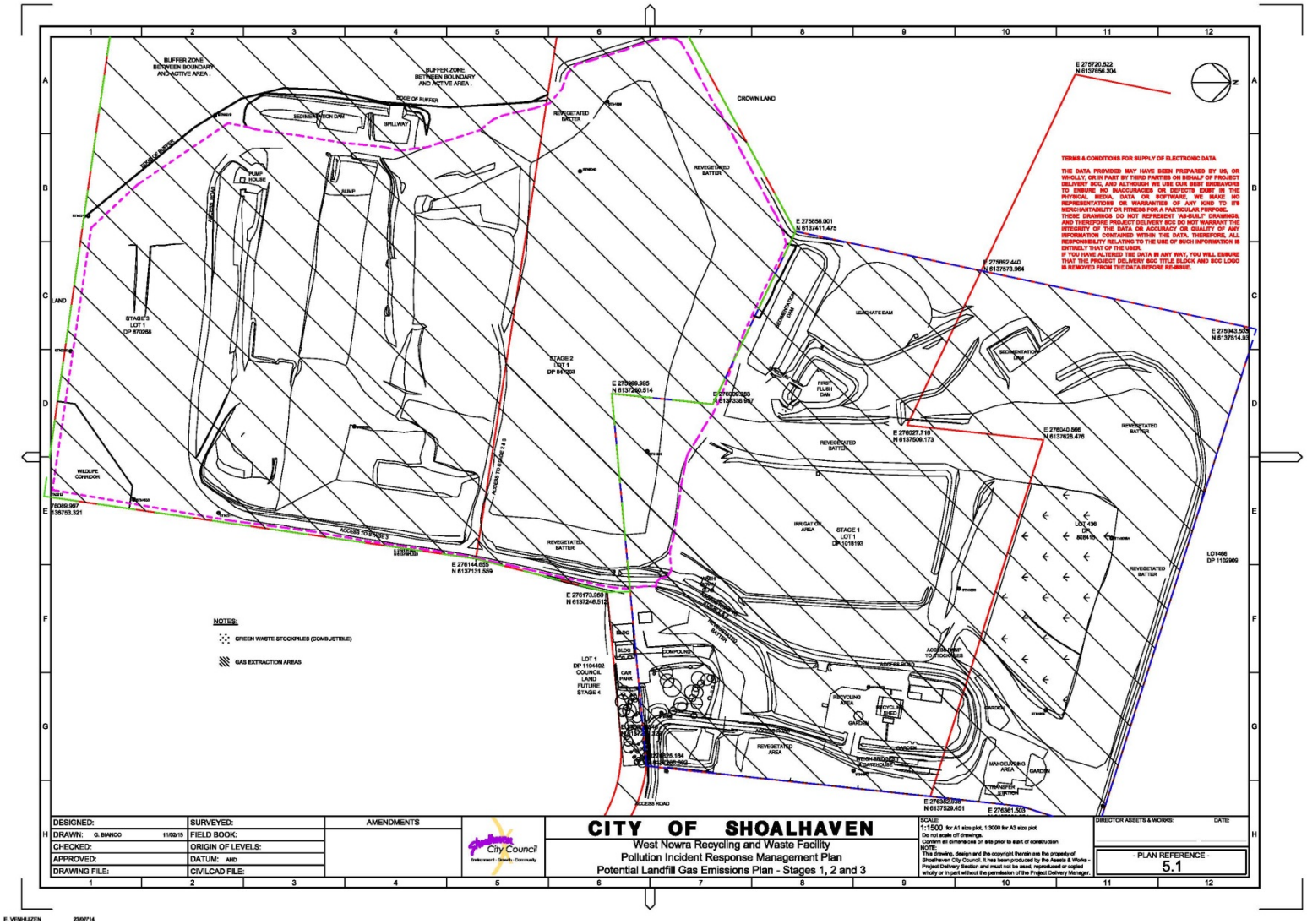
E. VENHUIZEN 23/07/14

APPENDIX 5

Potential Landfill Gas Emissions Plan


BUFFER ZONE BETWEEN BOUNDARY AND ACTIVE AREA
EDGE OF BUFFER
SEDIMENTATION DAM
SPILLWAY
REVEGETATED BATTER
CROWN LAND
PUMP HOUSE
SUMP
ACCESS ROAD
STAGE 3 LOT 1 DP 870258
STAGE 2 LOT 1 DP 847023
LEACHATE DAM
FINAL FLUSH DAM
REVEGETATED BATTER
WILDLIFE CORRIDOR
ACCESS TO STAGE 3
IRRIGATION AREA
STAGE 1 LOT 1 DP 1018193
LOT 436 DP 808415
LOT 466 DP 1102909
NOTES:
GREEN WASTE STOCKPILES (COMBUSTIBLE)
GAS EXTRACTION AREAS
LOT 1 DP 1104402 COUNCIL LAND FUTURE STAGE 4
BLDG
COMPOUND
CAR PARK
ACCESS ROAD
RECYCLING AREA
GARDEN
REVEGETATED AREA
MANOEUVRING AREA
ACCESS TO STOCKPILES
E 275720.522 N 6137656.304
E 275856.001 N 6137411.475
E 275892.440 N 6137573.964
E 275043.526 N 6137814.32
E 276040.566 N 6137628.476
E 276027.716 N 6137506.173
E 276000.995 N 6137260.514
E 276037.383 N 6137338.957
E 276144.655 N 6137131.559
E 276173.960 N 6137246.512
E 276352.826 N 6137529.491
E 276361.503
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DESIGNED:
DRAWN: Q. BIANCO 11/02/15
CHECKED:
APPROVED:
DRAWING FILE:
SURVEYED:
FIELD BOOK:
ORIGIN OF LEVELS:
DATUM: AHD
CIVILCAD FILE:
AMENDMENTS
CITY OF SHOALHAVEN
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