

Your Reference : DA09/2077
Our reference : DOC10/23131

The General Manager
Shoalhaven City Council
PO Box 42
NOWRA NSW 2541

Attention: Mr Steve McDiarmid – Senior Development Planner

EMAIL & STANDARD POST

Dear Mr McDiarmid

**General Terms of Approval Issued – Development Application DA09/2077
Proposed Tomerong Landfill – 146 Parnell Road, Tomerong**

Reference is made to the Development Application and accompanying information provided for the proposed Tomerong Landfill, located at 146 Parnell Road, Tomerong, Lot 4 DP 775296 (the Premises), received by the Department of Environment, Climate Change and Water (DECCW) on 28 August 2009.

Please note that, although the Environment Protection Authority (EPA) is now part of the DECCW, certain statutory functions and powers continue to be exercised in the name of the EPA.

Background

Watkinson Apperley Pty Ltd and Quadro Australia Pty Ltd prepared an Environmental Impact Statement (EIS), on behalf of Tomerong Waste Pty Ltd (the Applicant), for the construction and operation of a non-putrescible General Solid Waste landfill facility located in an existing quarry at Lot 4 DP775296 Parnell Road Tomerong (the Proposal).

On 30 July 2007 the Department of Planning requested that the DECCW provide Director General Requirements (DGRs) for the Proposal.

On 20 August 2007 DECCW provided its DGRs for the Environmental Impact Statement (EIS) to Department of Planning.

On 26 August 2009 Shoalhaven City Council provided the EIS to DECCW requesting a review of the EIS and provision of General Terms of Approval (GTAs).

The EIS was exhibited by Shoalhaven City Council for 30 days between 26 August 2009 and 25 September 2009.

The Department of Environment and Climate Change NSW is now known as
the Department of Environment, Climate Change and Water NSW

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On 27 October 2009 DECCW received a letter from Shoalhaven City Council with public submissions to be considered for the Proposal.

On 19 February 2010 DECCW advised Shoalhaven City Council that DECCW had determined that it will be unable to issue an Environment Protection Licence (EPL) for the proposal as currently presented on the basis that the noise impacts will not meet the required criteria.

On 13 April 2010, Shoalhaven City Council provided DECCW with further information from the Applicant dated 9 April 2010 to support the EIS.

On 20 May 2010 Watkinson Apperley Pty Ltd provided the DECCW with a report titled '*Barrier Types for Noise Mitigation – Tomerong*' dated 17 May 2010, as prepared by Environmental Resource Management Australia Pty Ltd, to support the EIS.

The DECCW has now assessed the exhibited EIS and additional information and determined that, should consent be granted, an Environment Protection Licence could be issued. Enclosed are the DECCW's recommended general terms of approval should the Shoalhaven City Council approve the Proposal (Attachment A).

Should the Proposal be approved and an Environment Protection Licence subsequently be granted by the DECCW, the attached mandatory conditions for Environment Protection Licences (landfills) are also submitted for consideration (Attachment B).

DECCW notes that section 2.2.3 of the EIS indicates that the conceptual design for the leachate containment system will take account of the requirements set out in the DECCW's *Solid Waste Landfill Guidelines* (NSW EPA, 1996) and that leachate generated by the Proposal can be collected, stored and disposed of effectively while conforming to the requirements in those guidelines.

DECCW also notes that the EIS states in section 2.2.4;

"There will be no recovery or sales of material undertaken on site. The proposal intends to receive and landfill residual waste after the recovery and processing of 'recyclables' by specialist organisations."

The Applicant has included a commitment to construct a 5 metre high impervious noise barrier along Gumden Lane as detailed in the report titled '*Barrier Types for Noise Mitigation – Tomerong*' dated 17 May 2010 as prepared by Environmental Resource Management Australia Pty Ltd. DECCW understands that the proposed noise barrier will mitigate noise impacts from the Proposal, however, Council may need to assess proposed noise barrier in line with other planning considerations, such as the visual amenity.

If you have any further questions regarding this matter or wish to meet with the DECCW to discuss this matter please do not hesitate to contact Trevor Wilson on (02) 9995 5907.

Yours sincerely



7.6.10

ROB HOGAN
A/Manager Waste Operations
Department of Environment and Climate Change (NSW)

Attachment A: Recommended conditions of approval

Attachment B: Mandatory conditions for Environmental Protection Licences - Landfills

Attachment A

DECCW (NSW) – General Terms of Approval – Development Application DA09/2077 - Proposed Tomerong Landfill – 146 Parnell Road, Tomerong

THE PROPOSAL

Watkinson Apperley Pty Ltd and Quadro Australia Pty Ltd prepared an Environmental Impact Statement (EIS), on behalf of Tomerong Waste Pty Ltd (the Applicant) for the construction and operation of a non-putrescible General Solid Waste landfill facility located in an existing quarry at Lot 4 DP775296 Parnell Road Tomerong (the Premises).

The EIS details an operation to convert the void created by current and future quarrying operations at the Premises into a landfill facility, as the quarrying operation achieves its intended benching level. The proposed landfill has a current void capacity of approximately 900,000m³ with lateral extensions available in the future within the existing approved quarry excavation boundaries. The estimated volume yet to be quarried approximates to an area of 2.41ha.

The proposed landfill would initially receive approximately 50,000 tonnes of waste per year and will increase to 100,000 tonnes per year over an eight (8) year period. The proposal intends to receive and dispose of residual waste after the recovery and processing of 'recyclables' by specialist organisations. The landfill facility will receive waste classified as a general solid waste (non-putrescible), in accordance with the DECCW's NSW Waste Classification Guidelines 2009, and being limited to *"residual waste after the recovery and processing of 'recyclables' by specialist organisations"* as identified in the EIS (p13).

Impact to Endangered Ecological Community (EEC)

The EIS had conflicting information in relation to predicted impacts on River Flat Eucalypts Forest which is identified as an EEC. Additional information provided by the Applicant has identified a typographical error in the EIS.

DECCW now understands that a maximum of 2 metres of this EEC either side of the proposed bridge works will potentially be impacted by the proposal (rather than 21 metres). DECCW also understands from the correspondence, this area is already highly disturbed by weeds as a result of edge effects. It is considered that the impact on approximately 0.2ha of EEC can be managed by future rehabilitation works.

DECCW RECOMMENDATIONS FOR GENERAL TERMS OF APPROVAL

Environment Protection Licence

1. Prior to commencing any activity associated with the proposal, including construction activities, the applicant must apply for and be issued with an Environment Protection Licence from the Environment Protection Authority (EPA).
2. Waste must not be received and/or disposed of at the premises until the Environment Protection Authority has granted the Applicant with an Environment Protection Licence which approves the receipt and disposal of waste at the premises.

Waste

3. The only wastes that may be received at the Premises for disposal are *"residual waste after the recovery and processing of 'recyclables' by specialist organisations"* which have been classified as general solid wastes (non-putrescible) under DECCW's NSW Waste Classification Guidelines as in force from time to time, as identified in the EIS (p13).

Storage & Handling – Waste and Products

4. The Applicant shall store all chemicals, fuels and oils used on site in an appropriately designed impervious bunded area that contains 110 percent of the largest container contained within the bund. These bunds shall be designed and installed in accordance with the requirements of all relevant Australian standards, and/or DECCW's Environment Protection Manual Technical Bulletin Bunding and Spill Management.

Financial assurance

5. In accordance with part 9.4 *Protection of the Environment Operations Act 1997*, the Applicant will be required to provide a financial assurance in the form of an unconditional and irrevocable bank guarantee to ensure the carrying out of all works and programs required by the environment protection licence, should it be issued.

Noise

6. The Applicant must undertake the noise mitigation measures as detailed in the EIS and the report titled 'Barrier Types for Noise Mitigation – Tomerong' dated 17 May 2010 as prepared by Environmental Resource Management Australia Pty Ltd. These measures must be completed before any waste is received on site.

Note: The Applicant has included a commitment to construct a 5 metre high impervious noise barrier along Gumden Lane as detailed in the report titled 'Barrier Types for Noise Mitigation – Tomerong' dated 17 May 2010 as prepared by Environmental Resource Management Australia Pty Ltd. DECCW understands that the proposed noise barrier will mitigate noise impacts from the Proposal, however, Council may need to assess proposed noise barrier in line with other planning considerations, such as the visual amenity.

Construction and Environment Management Plan

7. Prior to construction commencing, the Applicant must prepare a construction and environment management plan (CEMP) in consultation with a suitably qualified person and be approved by the consent authority. The must be approved by the consent authority. This construction and environment management CEMP plan should include the following, but not be limited to:
 - Soil erosion and sedimentation control plan;
 - The process for stormwater treatment and treatment device(s);
 - Drainage and stormwater design;
 - Construction methods and sequence;
 - Noise control measures (during construction and operation); and
 - Vegetation management plan
 - Green and Golden Bell Frog habitat management plan
8. The CEMP plan must include a procedure for limiting the impact to arboreal species during any required clearing of hollow bearing trees. Hollow bearing trees are to be removed under the supervision of suitability qualified ecologist.

Vegetation Management

9. The Applicant must engage a suitably qualified ecologist to prepare a vegetation management plan to manage potential impacts on the River Flat Eucalypts Forest (EEC) at the Premises. This vegetation management plan must be approved by the consent

authority prior to construction or operation of the site commencing. The vegetation management plan must include (but is not limited to):

- a) Details on how River Flat Eucalypts Forest (EEC) and *Melaleuca biconvexa* species will be managed and rehabilitated during construction and ongoing operations on the Premises. The vegetation management plan should also aim to improve off site connectivity and to prevent weed invasion within the EEC; and
 - b) Details of how points 10 to 15 below will be implemented at the Premises.
- 10. Prior to any construction activities at the Premises, the River Flat Eucalypts Forest (EEC) vegetation adjacent to the construction areas must be fenced to clearly mark its extent and to prevent access by construction equipment.
 - 11. The Applicant must monitor the health of *Melaleuca biconvexa* within Tomerong Creek for loss of individual trees within proximity of the proposed bridge construction.
 - 12. The Applicant must counteract the loss of any *Melaleuca biconvexa* by planting *Melaleuca biconvexa* during rehabilitation works. Plants used during rehabilitation should be propagated from local seed (off the site).
 - 13. During the site induction, staff involved in construction activities should be advised to ensure all construction activities are excluded from fenced areas containing the EEC.
 - 14. Should any EEC or Threatened Species be harmed or removed at the Premises not in accordance with the Figure 1 in the report titled "Tomerong Quarry Bridge Upgrade – Flora and Fauna Assessment" (No. 09SGBECO-0004) dated 5 August 2009, the DECCW may require:
 - a) further studies be conducted in accordance with relevant guidelines such as the DECCW's Draft South Coast Regional Conservation Plan (2007); and
 - b) Offsetting and/or conservation for that EEC or Threatened Species in accordance with relevant guidelines for the protection of biodiversity such as the DECCW's Biodiversity Offsetting Principals.
 - 15. Any future site clearing under this Proposal must be undertaken to ensure that hollow bearing trees are retained where possible.

Green and Golden Bell Frog habitat management plan

- 16. The Applicant must prepare a Green and Golden Bell Frog habitat management plan (GGBFHMP) to protect and rehabilitate the areas on the Premises that could provide habitat for Green and Golden Bell Frog populations. The GGBFHMP must include the following elements:
 - a) Be developed in consultation with a suitably qualified ecologist and be submitted to the DECCW with the opportunity for the DECCW to make comments and recommendations prior to construction commencing and the plan being implemented.

Note: The plan should be prepared in accordance with the *Best Practice Guidelines: Green and Golden Bell Frog Habitat* (DECCW, 2008), and the associated actions in the *NSW Priorities Action Statement*.

- b) Identify and undertake a conservation assessment ranking for any known or likely habitats of the Green and Golden Bell Frog on the Premises, including but not necessarily limited

to, identification and assessment of breeding habitat, shelter habitat, foraging habitat and movement habitat components.

- c) Identify any actual or potential threats from construction and operations, including but not necessarily limited to, habitat loss, habitat modification and disturbance, fragmentation and isolation of habitat, water quality and pollutant issues, road mortality, exotic weed control and application of herbicides containing glyphosate, slashing and mowing, invasion by *Chrysanthemoides monilifera*, predation and disease.
- d) Identify appropriate actions to prevent or minimise these actual or potential threats, including but not necessarily limited to the development of response protocols in the event that frogs are found on the Premises.
- e) A feasibility assessment of retaining and refurbishing existing or potential breeding habitats, including but not necessarily limited to the provision for compensatory habitat where appropriate.
- f) A program of works and timeline for planting and landscaping with vegetation suitable for Green and Golden Bell Frog foraging and shelter as well as installing structures (such as logs and concrete pieces) to facilitate movement and over wintering habitat.

Rehabilitation and Closure

- 17. Upon cessation of waste operations, the Applicant shall decommission the project and rehabilitate the site to the satisfaction of the DECCW and the consent authority.
- 18. The Applicant shall prepare and implement a Rehabilitation and Closure Plan to the satisfaction of the DECCW and the Shoalhaven City Council. This plan must:
 - a) Be prepared in consultation with DECCW, the consent authority and by a suitably qualified and experienced expert;
 - b) Define the objectives and criteria for rehabilitation and closure;
 - c) Investigate options for the future use of the site;
 - d) Describe the measures that would be implemented to achieve the specified objectives and criteria for the rehabilitation and closure; and
 - e) Calculate the cost of implementing these measures; and describe how the performance of these measures would be monitored over time.

Attachment B

Administrative conditions

A1. Information Supplied to the EPA

A1.1 Except as expressly provided by these general terms of approval, works and activities must be carried out in accordance with the proposal contained in:

- a) the "Environmental Impact Statement – Inert Waste Landfill Facility Parnell Road Tomerong, Volume 1, Watkinson Apperley Pty Limited Quadro Australia Pty Limited August 2009" (the EIS) relating to the development;
- b) the attachments and appendences provided with the EIS;
- c) further supporting information provided in correspondence dated 9 April 2010; and
- d) the report titled '*Barrier Types for Noise Mitigation – Tomerong*' dated 17 May 2010 as prepared by Environmental Resource Management Australia Pty Ltd.

A2. Administrative Licensing Conditions

A2.1 The applicant must apply for and receive an environment protection licence from the EPA prior to commencing any activity associated with the proposal, including construction activities.

A2.2 Waste must not be received and/or disposed of at the premises until the EPA has provided the applicant with an environment protection licence which explicitly approves the receipt and disposal of waste at the premises.

A2.3 The licence application referred to in condition A2.1 must also be accompanied by a report which provides:

- a) drawings "for construction," specifications, design details and installation and commissioning schedule for the proposed :
 - i) liner system for the landfill cells; and
 - ii) leachate collection, conveyance, storage and disposal system; and
 - iii) progressive capping and rehabilitation of the premises; and
- b) a proposed Construction Quality Assurance Plan (CQAP) which ensures that the measures referred to in a) of this condition will be installed in a manner to achieve their design specifications, including an undertaking to provide:
 - i) as constructed" drawings prepared from field surveys of the installed liner system and the leachate collection, conveyance and storage system; and
 - ii) a report prepared by a suitably qualified person that validates that the measures referred to in a) i) and ii) of this condition were installed generally in accordance with their design specifications; and
- c) a groundwater monitoring program report which:
 - i) details a proposed groundwater monitoring network and a proposed groundwater monitoring program for the facility;
 - ii) demonstrates that the proposed measures referred to in i) would be suitable to enable detection of leachate pollution of groundwater, if any; and
 - iii) provides a proposed installation and implementation schedule for the measures referred to in i); and

- d) a report by a suitably qualified and experienced person which demonstrates that blasting at the quarry will not damage the landfill or leachate storage dam liners; and
- e) a soil and water management plan in accordance with Managing Urban Stormwater: Soils and Construction (Landcom, 2004) with all sediment control dams sized to contain up the 90th percentile 5 day duration rainfall event with all pumped discharges containing less than 50 mg/L of TSS and all discharges containing less than 0.9 mg/L of total ammonia.

A2.4 The landfill cell liner system referred to in a) i) of condition A2.3 must comprise either:

- a) re-compacted clay or similar material at least 90 centimetres thick with an in-situ co-efficient of permeability less than 10^{-9} metres per second covering the entire floor and walls of each waste disposal cell; and
- b) a flexible membrane liner (FML) with a minimum co-efficient of permeability of less than 10^{-14} metres per second covering the entire floor and walls of each waste disposal cell; or
- c) an alternative liner system approved in writing by the EPA.

A2.5 The design of the leachate collection, conveyance, storage and disposal system referred to a) ii) of condition A2.3 must:

- a) be on the basis that disposal options for leachate are limited to irrigation over the active landfill cell/s or disposal at a facility licensed to accept such waste;
- b) include a leachate drainage layer comprising either:
 - i) a minimum 300 mm thick layer of 20mm minimum sized rounded gravel:
 - with a permeability of not less than 1×10^{-3} metres per second; and
 - which is chemically resistant to the leachate; and
 - is capable of withstanding the weight of the overlying waste; or
 - ii) an alternative system approved in writing by the EPA; and
- c) incorporate leachate dam/s that:
 - i) have a minimum capacity of six thousand (6,000) cubic metres; and
 - ii) are lined with either :
 - a composite liner system comprising either re compacted clay or similar material at least 90 centimetres thick with an in situ co-efficient of permeability of less than 10^{-9} metres per second overlaid by a flexible FML at least 1.5mm thick and of minimum co-efficient of permeability of 10^{-14} metres per second; and
 - a flexible membrane liner (FML) with a minimum co-efficient of permeability of less than 10^{-14} metres per second; or
 - an alternative system approved in writing by the EPA; and
 - iii) allow for the level of leachate in the storage dam/s to be maintained such that there is no overflow ie the design should include high level alarm/s and/or interlock system/s configured such that the alarm/s are activated

and any pump or gravity flow of leachate to any dam/s is automatically shut down prior to dam overflow.

Note a: The EPA will review the reports required by condition A2.3 with a view to attaching conditions to the applicant's environment protection licence requiring installation of the respective measures and implementation of the respective programs.

Note b: For validation of thickness of the compacted component of any liner and the leachate drainage layer the EPA will accept the as constructed surveys referred to in b) i) of condition A3.4

Note c: For validation of the permeability:

- of the compacted component of any liner the EPA will accept compaction and moisture content testing every 1000 m2 in accordance with AS 1289.5.7.1 and permeability testing every 5000 m2 in accordance with AS1289.6.7.3 (for undisturbed samples); and*
- of the leachate drainage media the EPA will accept particle size distribution testing in accordance with AS 1289.6.7.1 and permeability testing in accordance with AS1289.6.7.1 at least one per source and every 2500 tonnes of material used.*

Note d: The EPA will also review the information required by b) ii) of condition A2.3 with a view to attaching conditions to the environment protection licence to enable the licensee to commence landfill disposal of wastes at the facility.

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 these general terms of approval for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.

Air

EPA identi- fication no.	Type of monitoring point	Type of discharge point	Description of location
1	Air emissions monitoring		Surface gas monitoring in progressively capped areas of landfill
2	Air emissions monitoring		Building gas accumulation monitoring in buildings on landfill premises

P1.2 The following points referred to in the table below are identified in these general terms of approval for the purposes of monitoring and/or the setting of limits for the emission of pollutants to water from the point.

Water and land

EPA identification no.	Type of monitoring point	Type of discharge point	Description of location
3	Leachate quality monitoring		To be determined.
Numbers to be determined	Surface water discharge quality monitoring	Surface water discharge quality	To be determined following submission of information in licence application
Numbers to be determined	Groundwater quality monitoring		To be determined following submission of information in licence application

Limit conditions

L1. Pollution of waters

L1.1 Except as may be expressly provided by a licence under the Protection of the Environment Operations Act 1997 in relation of the development, section 120 of the Protection of the Environment Operations Act 1997 must be complied with in connection with the carrying out of the development.

L1.2 The applicant must ensure that that the level of leachate above the basal liner is maintained less than 300mm, or another depth approved by the EPA unless the leachate dam has adequate freeboard capacity.

L2 Load Limits

L2.1 Not applicable

L3 Concentration limits

L3.1 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.

L3.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.

L3.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table/s.

Water and Land

POINTS (to be determined)

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Total suspended solids	mg/L				50
Nitrogen ammonia	mg/L				1

L3.4 The licensee is not taken to have exceeded a concentration limit specified in this licence for the discharge of Total Suspended Solids from points (to be determined) if:

- a) the dam/s overflow is caused by a rainfall event exceeding the 5 day 90%ile rainfall; and
- b) the licensee has taken all practical measures to avoid or minimise water pollution.

L4 Volume and mass limits

L4.1 Not applicable

L5 Waste

L5.1 The applicant must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by a licence under the Protection of the Environment Operations Act 1997.

L5.2 The applicant must ensure that only the following types of waste are disposed of at the premises:

Code	Waste	Description	Activity	Other Limits
	General Solid Waste (non-putrescible) excluding biosolids	As defined in Schedule 1 of the POEO Act, as in force from time to time	Waste Disposal (application to land)	NA

L6 Noise limits

L6.1 Noise from the premises must not exceed an LAeq (15 minute) noise emission criterion of 40dB(A) when measured or computed at any point on the boundary of residence identified as the "holiday lodge" as identified in Report titled 'Barrier Types for Noise Mitigation – Tomerong' and dated 17 May 2010 as prepared by Environmental Resource Management Australia Pty Ltd.

5dB(A) must be added to the measured level if the noise is substantially tonal or impulsive in character.

L7 Hours of operation

Activities covered by this licence must be carried out between the following hours:

- a) 0700 hrs to 1500 hrs Monday to Friday;
- b) 0800 hrs to 1600 hrs on Saturday; and
- c) Closed Sunday.

Note: The EPA may also limit the hours of operation for any 'noisy' equipment on the premises, such as crushing and grinding equipment, to less than the hours of operation outlined in condition L7 above.

L8 Potentially offensive odour

L8.1 No condition in this licence identifies a potentially offensive odour for the purposes of section 129 of the Protection of the Environment Operations Act 1997.

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

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 emissions of dust from the premises.

O3.2 Trucks entering and leaving the premises that are carrying loads must be covered at all times, except during loading and unloading.

O4 *Leachate management*

O4.1 Water which contacts waste, other than virgin excavated natural material, must be managed as leachate.

O4.2 Leachate must only be disposed of by:

- a) evaporation,
- b) irrigation within the leachate dam or within the active cell of the landfill, or
- c) disposal at a facility licensed to accept such waste.

O4.3 Irrigation of leachate must only be undertaken:

- a) during dry weather;
- b) such that ponding or run off within the active cell does not occur and if the active tipping face is enclosed by a 300mm high earthen bund; and
- c) Have a 0.5 meter freeboard at all times.

O5 *Management of surface waters*

O5.1 Surface drainage must be diverted away from any area where waste is being or has been landfilled.

O5.2 The drainage from all areas at the premises which will liberate suspended solids when stormwater runs over these areas must be diverted into sedimentation basins.

O5.3 All practicable measures must be undertaken to manage all sediment dams such they have sufficient capacity to store run-off from the 90th percentile 5 day rainfall event.

O6 *Fire risk reduction works*

O6.1 The applicant must have in place and implement procedures to minimise the risk of fire at the premises.

O7 *Burning of green waste*

O7.1 There must be no incineration or burning of any waste at the premises

O8 *Screening of waste*

O8.1 The applicant must have in place and implement procedures to identify and prevent the disposal of any waste not permitted by this general terms of approval to be disposed of at the premises.

O9 *Completion of landfill cells*

O9.1 The applicant must ensure that the landfill cells are capped progressively.

O10 *Unauthorised entry*

O10.1 The applicant must take all practicable steps to control entry to the premises.

O10.2 The applicant must install and maintain a stockproof perimeter fence around the premises.

O10.3 The applicant must install and maintain lockable security gates at all access and departure locations.

O10.4 The applicant must ensure that all gates are locked whenever the landfill is unattended.

O11 *Degradation of local amenity*

O11.1 The applicant must have in place and implement a litter management program.

O12 *Tracking of mud and waste*

O12.1 The applicant must minimise the tracking of waste and mud by vehicles.

O13 *Covering of waste*

O13.1 Cover material must be "virgin excavated natural material" as defined in Schedule 1 of the Protection of the Environment Operations Act 1997 and must be applied in accordance with the following requirements:

Daily cover

(a) 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.

Intermediate cover

(b) 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.

Cover material stockpile

(c) 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.

O14 *Control of pests and vermin*

O14.1 The applicant must control pests and at the premises.

O15 Fire extinguishment

O15.1 The applicant must extinguish any fires at the premises as soon as possible.

O16 Fire fighting capability

O16.1 The applicant must have in place and implement fire prevention measures at the premises.

O17 Staff training

O17.1 The applicant must ensure that adequately trained staff are available at the premises in order to administer the requirements of these general terms of approval.

O18 Closure Plan

O18.1 The licensee must submit to the EPA within twelve 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.

Monitoring and recording conditions

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by the EPA's general terms of approval, or a licence under the Protection of the Environment Operations Act 1997, in relation to the development or in order to comply with the load calculation protocol must be recorded and retained as set out in conditions M1.2 and M1.3.

M1.2 All records required to be kept by the general terms of approval must be:

- in a legible form, or in a form that can readily be reduced to a legible form;
- kept for at least 4 years after the monitoring or event to which they relate took place; and
- 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: the date(s) on which the sample was taken;

- the time(s) at which the sample was collected;
- the point at which the sample was taken; and
- 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 applicant must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The applicant must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

Air

Methane gas monitoring - POINTS to be determined

Pollutant	Units of measure	Frequency	Sampling Method
Methane	%by volume	Quarterly	Special Method 1

For the purposes of the table above Special Method 1 means sampling is to be undertaken in accordance with Benchmark technique No. 17 (Surface Gas Emission Monitoring) and Benchmark technique No. 18 (Gas Accumulation monitoring) defined in the document "Environmental Guidelines: Solid Waste Landfills, NSW EPA 1996."

Water and Land

Leachate at leachate collection dam (location to be determined) - POINTS to be determined

Pollutant	Units of measure	Frequency	Sampling Method
Alkalinity (as HCO ₃ ⁻ and CO ₃ ²⁻)	mg/L	Every six months	Grab sample
Aluminium	mg/L	Annually	Grab sample
Arsenic	mg/L	Annually	Grab sample
Barium	mg/L	Annually	Grab sample
Benzene	mg/L	Annually	Grab sample
Cadmium	mg/L	Annually	Grab sample
Calcium	mg/L	Every six months	Grab sample
Chloride	mg/L	Every six months	Grab sample
Chromium (total)	mg/L	Annually	Grab sample
Cobalt	mg/L	Annually	Grab sample
Conductivity	uS/cm	Every six months	Grab sample
Copper	mg/L	Annually	Grab sample
Ethylbenzene	mg/L	Annually	Grab sample
Fluoride	mg/L	Annually	Grab sample
Lead	mg/L	Annually	Grab sample
Magnesium	mg/L	Every six months	Grab sample
Manganese	mg/L	Annually	Grab sample
Mercury	mg/L	Annually	Grab sample
Nitrate + Nitrite (oxidised nitrogen)	mg/L	Every six months	Grab sample
Nitrogen - ammonia	mg/L	Every six months	Grab sample
Organochlorine pesticides	mg/L	Annually	Grab sample
Organophosphate pesticides	mg/L	Annually	Grab sample
pH	pH	Every six months	Grab sample
Polycyclic aromatic hydrocarbons	mg/L	Annually	Grab sample
Potassium	mg/L	Every six months	Grab sample
Sodium	mg/L	Every six months	Grab sample
Sulfate	mg/L	Every six months	Grab sample
Toluene	mg/L	Annually	Grab sample
Total dissolved solids	mg/L	Every six months	Grab sample
	mg/L	Every six months	Grab sample
Total organic carbon			
Total Petroleum Hydrocarbons	mg/L	Annually	Grab sample
Total phenolics	mg/L	Annually	Grab sample
Xylene	mg/L	Annually	Grab sample
Zinc	mg/L	Annually	Grab sample

Sediment Basin/s - POINTS to be determined

Pollutant	Units of measure	Frequency	Sampling Method
Conductivity	uS/cm	Special Frequency 2	Grab sample
Nitrogen – ammonia	mg/L	Special Frequency 2	Grab sample
pH	pH	Special Frequency 2	Grab sample
Total Suspended Solids	mg/L	Special Frequency 2	Grab sample

For the purposes of the table above Special Frequency 2 means the collection of samples on the first day of discharge and daily during continual discharge.

Groundwater monitoring - POINTS to be determined

Pollutant	Units of measure	Frequency	Sampling Method
Alkalinity (as HCO ₃ ⁻ and CO ₃ ²⁻)	mg/L	Quarterly	Groundwater sample – grab
Aluminium	mg/L	Annually	Groundwater sample – grab
Arsenic	mg/L	Annually	Groundwater sample – grab
Barium	mg/L	Annually	Groundwater sample – grab
Benzene	mg/L	Annually	Groundwater sample – grab
Cadmium	mg/L	Annually	Groundwater sample – grab
Calcium	mg/L	Quarterly	Groundwater sample – grab
Chloride	mg/L	Quarterly	Groundwater sample – grab
Chromium (total)	mg/L	Annually	Groundwater sample – grab
Cobalt	mg/L	Annually	Groundwater sample – grab
Conductivity	uS/cm	Quarterly	In situ
Copper	mg/L	Annually	Groundwater sample – grab
Ethylbenzene	mg/L	Annually	Groundwater sample – grab
Fluoride	mg/L	Annually	Groundwater sample – grab
Lead	mg/L	Annually	Groundwater sample – grab
Magnesium	mg/L	Quarterly	Groundwater sample – grab
Manganese	mg/L	Annually	Groundwater sample – grab
Mercury	mg/L	Annually	Groundwater sample – grab
Nitrate + Nitrite (oxidised nitrogen)	mg/L	Quarterly	Groundwater sample – grab
Nitrogen - ammonia	mg/L	Quarterly	Groundwater sample – grab
Organochlorine pesticides	mg/L	Annually	Groundwater sample – grab
Organophosphate pesticides	mg/L	Annually	Groundwater sample – grab
pH	pH	Quarterly	In situ
Polycyclic aromatic hydrocarbons	mg/L	Annually	Groundwater sample – grab
Potassium	mg/L	Quarterly	Groundwater sample – grab
Sodium	mg/L	Quarterly	Groundwater sample – grab
Standing water level	m AHD	Quarterly	In situ
Sulfate	mg/L	Quarterly	Groundwater sample – grab
Toluene	mg/L	Annually	Groundwater sample – grab
Total dissolved solids	mg/L	Quarterly	Groundwater sample – grab
	mg/L	Quarterly	Groundwater sample – grab
Total organic carbon			
Total Petroleum Hydrocarbons	mg/L	Annually	Groundwater sample – grab
Total phenolics	mg/L	Annually	Groundwater sample – grab
Xylene	mg/L	Annually	Groundwater sample – grab
Zinc	mg/L	Annually	Groundwater sample – grab

Note: The monitoring requirements may be varied by the EPA subject to ongoing review and assessment of monitoring results.

M3 Testing methods - concentration limits

M3.1 Monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area required to be conducted by the EPA's general terms of approval, or a licence under the Protection of the Environment Operations Act 1997 must be done in

accordance with the Approved Methods Publication unless another method has been approved in writing by the EPA for the purposes of that testing prior to the testing taking place.

M4 *Recording of pollution complaints*

M4.1 The applicant must keep a legible record of all complaints made to the applicant or any employee or agent of the applicant in relation to pollution arising from any activity to which this general terms of approval 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 applicant in relation to the complaint, including any follow-up contact with the complainant; and
- f) if no action was taken by the applicant, 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 applicant 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 applicant 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.

M6 *Requirement to monitor rainfall*

M6.1 Rainfall at the premises must be measured at Point W1 and recorded in millimetres per 24 hour period, at the same time each day.

Reporting conditions

R1 *Annual Return documents*

What documents must an Annual Return contain?

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

- a) Statement of Compliance; and
- b) A Monitoring and Complaints Summary.

A copy of the form in which the Annual Return must be supplied to the EPA accompanies the licence. Before the end of each reporting period, the EPA will provide to the applicant a copy of the form that must be completed and returned to the EPA.

Period covered by Annual Return

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

R1.3 Where the licence is transferred from the applicant 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 the licence is surrendered by the applicant or revoked by the EPA or Minister, the applicant 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.

Deadline for Annual Return

R1.5 The Annual Return for the reporting period must be supplied to the EPA 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').

Licensee must retain copy of Annual Return

R1.6 The applicant 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.

Certifying of Statement of Compliance and Signing of Monitoring and Complaints Summary

R1.7 Within the Annual Return, the Statement 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 A person who has been given written approval to certify a Statement of Compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review this licence.

R2. Notification of environmental harm

Note: The applicant or its employees must notify the EPA of incidents causing or threatening material harm to the environment as soon as practicable 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 EPA's Pollution Line service on 131 555.

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

R3 *Written report*

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:

- a) where the licence applies to premises, an event has occurred at the premises; or
- b) where the licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this general terms of approval, 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 applicant 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) cause, time and duration of the event;
- b) 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 applicant, 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 applicant is aware) who witnessed the event, unless the applicant has been unable to obtain that information after making reasonable effort;
- e) action taken by the applicant 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 applicant. The applicant must provide such further details to the EPA within the time specified in the request.

R4 *Reporting of Fires*

R4.1 In the event of a fire at the facility the applicant must record:

- a) the time and date when the fire was deliberately started or reported;
- b) whether the fire was authorised by the applicant, and, if not, the circumstances which ignited the fire;
- c) the time and date that the fire ceased and whether it burnt out or was extinguished;
- d) the location of fire (eg. clean timber stockpile, putrescible garbage cell, etc);
- e) the prevailing weather conditions;
- f) any observations made in regard to smoke direction and dispersion;
- g) the amount of waste that was combusted by the fire; and
- h) the action taken to extinguish the fire.

R4.2 The applicant or its employees or agents must notify the EPA in accordance with conditions R2.1 and R2.2 of all fires at the premises as soon as practical after becoming aware of the incident.

R5 *Quarterly reporting*

R5.1 The applicant must provide the EPA with information on the quantity of waste received at the facility and the quantity of waste transported from the facility each quarter. The information in respect of a particular quarter is to be provided on the approved Form WISQTR.1 and must be received by the EPA within 60 days of the end of that quarter.

For the purposes of this condition each of the following periods is a quarter:

(Quarter 1) 1 January - 31 March

(Quarter 2) 1 April - 30 June

(Quarter 3) 1 July - 30 September

(Quarter 4) 1 October - 31 December

R5.2 Whenever leachate is discharged to surface waters from the premises the licensee must notify the event to the EPA in accordance with condition R2.1.

R5.3 The licensee must provide written details of any leachate discharge(s) which exit the premises to the EPA within 7 days of the date on which the incident occurred.

R5.4 The written details referred to in the above condition must be provided as a report. The report must include the following information:

- a) the volume of the leachate discharged and over what time period the discharge occurred;
- b) the date and time of the commencement of the overflow;
- c) the weather conditions at the time of the discharge, specifying the amount of rainfall on a daily basis that had fallen:
 - on the day(s) of the discharge; and
 - for the one week period prior to the discharge;
- d) the most recent monitoring results of the chemical composition of the leachate;
- e) an explanation as to why the discharge occurred;
- f) the location(s) of the discharge; and
- g) a plan of action to prevent a similar discharge in the future.

General Conditions

G1 *Copy of licence kept at the premises*

G1.1 A copy of the 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.

G2 *Contact number of incidents and responsible employees*

G2.1 A 24-hour telephone contact line(s) for the purpose of enabling the EPA to directly contact one or more representatives of the applicant who can:

- a) Respond at all times to incidents relating to the premises, and;
- b) Contact the applicant's senior employees or agents authorised at all times to:

- i) speak on behalf of the applicant, and
- ii) provide any information or document required under the licence.

Special Conditions

E1.1 If the results of the groundwater or sediment basin monitoring required by condition M2.1 indicate ammonia concentrations greater than 1 mg/L the licensee must contact the EPA within 24 hours and advise it of the results of that monitoring.

Note: If ammonia concentrations are above 1mg/L the EPA will liaise with the licensee to determine an appropriate response.

Pollution Studies and Reduction Programs

U1. Leachate Report

U1.1 The applicant must undertake monitoring of leachate generation and disposal rates over a period of not less than 12 months and based on that information provide a report which either:

- demonstrates that the leachate disposal system is adequate to ensure containment of all leachate generated in a 10% AEP wet year; or
- if the information demonstrate that the containment system is not adequate, proposes an upgrade to the system and a provide a program for implementing and commission that upgrade to ensure adequate containment (during the 10% AEP wet year).