



Your reference: SEAR ID No. 6967
Our reference: EF13/5558; DOC15/91887-02

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

Dear Mr Mooney

Re Proposed Ardlethan solid waste landfill project – SEAR ID No. 6967

Thank you for your electronic mail dated 18 March 2015 to the Environment Protection Authority (EPA) requesting our information requirements for the Secretary's Environmental Assessment Requirements to be prepared for the proposed solid waste landfill at Ardlethan.

We note the proposal includes modifying an historic open cut tin mine into a solid waste landfill with putrescible waste sourced by road locally and by rail from Sydney. There is a nominated potential disposal capacity of 23 million cubic metres with resource recovery proposed to occur at transfer stations prior to transport of the waste to Ardlethan.

We have considered the details of the proposal as described in the documentation provided with your electronic mail and information gathered at the planning focus meeting on 30 March 2015. We have identified the information required for the Environmental Assessment (EA) which is outlined in Attachment 'A'. The EPA's key information requirements for the project are as follows.

1. A complete description of the overall project that includes where the waste will be sourced from, details about all transfer stations, the proposed transport, handling, storage and disposal of waste, maps of the site configuration, details about cell construction, filling plans and site rehabilitation and the proposed staging of the landfill.
2. A detailed and contemporary hydrogeological impact assessment that documents local and regional groundwater features and includes a comprehensive description of the measures that will be implemented in the waste cells to protect groundwaters.
3. An appropriate air quality impact assessment that models the potential odour and dust impacts from the project on sensitive receptors.
4. A comprehensive assessment of the leachate and contaminated storm water collection systems including demonstration that surface and groundwaters will be protected through adequate design, construction and management.

5. An assessment of the potential noise impacts on sensitive receptors from all activities conducted on site, including road and rail movements associated with the project.
6. A detailed assessment of the proposed gas capture systems and any proposed disposal or use of the gas.

In carrying out the assessment the proponent should refer to the relevant guidelines identified at Attachment 'B'.

The Proponent should be made aware that any commitments made in the EA may be formalised as approval conditions and may also be included as formal EPA licence conditions.

The Proponent should also be aware that, consistent with provisions under Part 9.4 of the *Protection of the Environment Operations Act 1997* (the Act) the EPA may require the provision of a financial assurance and/or assurances. The amount and form of the assurance(s) would be determined by the EPA and required as a condition of an Environment Protection Licence (EPL).

In addition, as a requirement of an EPL, the EPA will require the Proponent to prepare, test and implement a Pollution Incident Response Management Plan and/or Plans in accordance with Section 153A of the Act.

If you have any further enquiries about this matter please contact me by telephoning 02 6969 0700.

Yours sincerely

 16.4.2015

CRAIG BRETHERTON
Acting Director South and Forestry
Environment Protection Authority

ATTACHMENT 'A'

Description of the proposal

The description of the proposal should be clearly stated and refer to:

- a) The size and type of the landfill and operations to be undertaken, types of wastes to be disposed and their pathways, resource recovery activities, the nature of any processes and the products, by-products and wastes produced.
- b) The proposed disposal methods for solid and liquid wastes.
- c) Proposals for the use or recycling of by-products.
- d) The staging and timing of the proposal and any plans for future expansion.
- e) The proposal's relationship to any other industry or facility.

Potential environmental impacts of the project

The following potential environmental impacts and their existing baseline conditions need to be assessed, quantified and reported on.

- (a) Air;
- (b) Noise;
- (c) Water;
- (d) Land; and
- (e) Waste and chemicals.

The Environmental Assessment (EA) should address how the required environmental goals outlined below will be met for each potential impact.

The EA should describe mitigation and management options that will be used to prevent, control, abate or mitigate identified potential environmental impacts associated with the project and to reduce risks to human health and prevent the degradation of the environment.

This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.

Potential impacts on air quality

The goal of the project in relation to air quality should be to ensure sensitive receptors are protected from any adverse impacts from odour and dust.

The project must create an emissions inventory that identifies all potential air pollutants at their source and discharge point. Details need to be provided on the proposed measures to manage odour from all sources and in particular from the waste cells and any contaminated waste water collection or storage ponds. Measures to prevent or control the emission of odour from these facilities must be detailed. The EA must also include an assessment of all sources of dust emissions and its potential cumulative impact on sensitive receptors.

For a proposal of this scope and in the existing location we would expect an assessment of odour and dust to be undertaken in accordance with our guideline the 'Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales' (EPA, 2005). The assessment must identify all sensitive receptors in proximity to the proposed development and include odour and particulate modelling, in

conjunction with analyses of local meteorologic and terrain data in order to make informed decisions about design and management options for the proposed development.

Emissions from any plant must meet the design criteria detailed in the *Protection of the Environment Operations (Clean Air) Regulation 2010*. Details need to be provided on the proposed air pollution control techniques from any air emission points, including proposed measures to manage and monitor efficiency and performance.

Potential impacts of noise

The goals of the project should include design, construction, operation and maintenance of the facility in accordance with relevant EPA policy, guidelines and criteria, and in order to minimise potential impacts from noise.

We expect that potential noise sources are assessed in accordance with the *"NSW Industrial Noise Policy"* (EPA, 2000), and where required mitigation measures are proposed (e.g. appropriate equipment chosen to minimise noise levels). The times of operation for all phases of the development and for all ongoing noise generating activities must be specified and included in the assessment and all residential or noise sensitive premises likely to be impacted by the development must be identified and included in the assessment.

The proposed development will result in increased traffic movements. The potential noise impacts associated with any traffic increases need to be assessed in accordance with the *"NSW Road Noise Policy"* (EPA, 2011).

Potential impacts on water quantity and quality

A hydrogeological assessment must be undertaken to assess potential groundwater impacts. In particular, the proponent must.

- a) Comprehensively determine whether the water contained within the Ardwest/Wild Cherry Open Cut includes any intercepted groundwater.
- b) Identify surrounding groundwater users that may be affected by any adverse impact on groundwater quantity or quality.
- c) Quantify the impacts that any proposed water extraction may have on the groundwater source.
- d) Detail any potential groundwater quality impacts from this proposal and identify appropriate measures that will be undertaken to mitigate any potential adverse impact.

The goals of the project should include:

- No pollution of waters (including surface and groundwater), except to the extent authorised by the EPA (i.e. in accordance with an Environment Protection Licence);
- Contaminated water (including process waters, wash down waters, polluted stormwater or sewage) captured on the site and collected, treated and beneficially reused, where this is safe and practicable to do so;
- Anticipate wet weather impacts and develop contingencies into the design of all contaminated water infrastructure and clean water diversions; and
- Insure any proposed discharges are acceptable to the NSW Water Quality and River Flow Objectives and where appropriate propose monitoring and management measures.

The EA should document the measures that will achieve the above goals.

Details of the site drainage and any natural or artificial waters within or adjacent to the development must be identified and where applicable measures proposed to mitigate potential impacts of the development on

these waters. The EA should provide details of the proposed design and construction of water management systems for the site to ensure surface and ground waters are protected from contaminants.

Potential impacts on land

The EA must describe the proposed location in terms of soil types and properties and soil contamination. Any likely impacts resulting from the construction or operation of the proposal must be identified, including the likelihood of.

- a) Disturbing any existing contaminated soil.
- b) Contamination of soil by operation of the activity.
- c) Subsidence or instability.
- d) Soil erosion.
- e) Disturbing acid sulfate soils or potential generation of acid sulfate.

The goals of the project should include:

- No pollution of land, except to the extent authorised by the EPA (i.e. in accordance with an Environment Protection Licence);
- Any potentially contaminated sites that are encountered or disturbed are appropriately managed and rehabilitated.
- The potential impact of land erosion from the development is mitigated; and
- The land impacted by waste disposal is appropriately monitored and managed in accordance with relevant EPA guidelines.

The EA should document the measures that will achieve the above goals.

Waste and chemicals

The EA must provide details of solid and liquid waste management at the facility, including.

- a) The transportation, assessment and handling of waste arriving at or generated at the site.
- b) Any stockpiling of wastes or recovered materials at the site.
- c) Any waste processing related to the facility, including reuse, recycling, reprocessing (including composting) or treatment both on and off-site.
- d) The method for disposing of all wastes or recovered materials at the facility.
- e) The air or water emissions arising from the handling, storage, processing and reprocessing of waste at the facility.
- f) Waste cover composition, suitability, where it will be sourced and the timing of covering.
- g) The proposed controls for managing the environmental impacts of these activities.

For any wastes classified as industrial or hazardous under the EPA's Waste Classification Guidelines the EA must.

- Describe the nature of the waste; and
- Describe the proposed management techniques to be taken to minimise potential impacts associated with transporting, storing, handling or disposing of the waste whilst having regard to the *Protection of the Environment Operations Act 1997*, *Radiation Control Act 1990* and the Code of Practice and Safety Guide for Radiation Protection and Radioactive Waste Management in Mining and Mineral Processing 2005.

The goals of the project should include:

- It is in accordance with the principles of the waste hierarchy and cleaner production;
- Where potential impacts associated with the handling, processing and storage of waste at the premises are identified, these be mitigated by the development;
- The beneficial reuse of all wastes generated at the premises are maximised where it is safe and practical to do so; and
- No waste disposal occurs on site except in accordance with an Environment Protection Licence.

The goal of the project should ensure that environmental risks from hazardous chemicals and chemical waste are minimised. The EA needs to identify the proposed type, quantity and location of chemicals to be stored on site. Spill management measures, including items such as bunding, and emergency procedures should be clearly outlined.

ATTACHMENT 'B'

Guidance Material

Air quality

- Protection of the Environment Operations (Clean Air) Regulation 2010
- Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales (EPA, 2005)
- Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (EPA, 2005)
- Assessment and Management of Odour from Stationery Sources in NSW (EPA, 2006)

Noise and vibration

- NSW Industrial Noise Policy (EPA, 2000)
- NSW Road Noise Policy (EPA, 2011)
- Assessing Vibration: a technical guideline (EPA, 2006)
- Technical Basis for Guidelines to Minimise Annoyance Due to Blasting Overpressure and Ground Vibration (ANZECC, 1990)
- Interim Construction Noise Guidelines (EPA, 2009)
- Rail Infrastructure Noise Guidelines (EPA, 2013)

Water quality

- National Water Quality Management Strategy: Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC/ARMCANZ, 2000)
- National Water Quality Management Strategy: Australian Guidelines for Water Quality Monitoring and Reporting (ANZECC/ARMCANZ, 2000)
- Using the ANZECC Guidelines and Water Quality Objectives in NSW (EPA, 2006)

Groundwater

- The NSW State Groundwater Policy Framework Document (DLWC, 1997)
- The NSW State Groundwater Quality Protection Policy (DLWC, 1998)
- The NSW State Groundwater Dependent Ecosystems Policy (DLWC, 2002)
- National Water Quality Management Strategy Guidelines for Groundwater Protection in Australia (ARMCANZ/ANZECC, 1995)

Stormwater

- Managing Urban Stormwater: Soils and Construction (Landcom, 2004)
- Managing Urban Stormwater: Treatment Techniques (Draft) (EPA, 1997)

Wastewater

- Environmental Guidelines: Use of Effluent by Irrigation (EPA, 2004)
- Environmental Guidelines: Storage and Handling of liquids (EPA, 2007)

Waste

- Waste Classification Guidelines (EPA, 2008)
- Environmental Guidelines: Use and Disposal of Biosolids Products (EPA, 1997)
- Environmental Guidelines: Composting and Related Organics Processing Facilities (EPA, 2004)
- Environmental Guidelines: Solid Waste Landfills (EPA, 1996)
- Storing and Handling Liquids: Environmental Protection (EPA, 2007)