

Ms Rachael Snape
Urbis Pty Ltd
Tower 2, Level 23
Darling Park, 201 Sussex Street
SYDNEY NSW 2000

17/03271
MP 06_0139 MOD 7

rsnape@urbis.com.au

Dear Ms Snape

**Genesis Waste Management Facility, Erskine Park (MP 06_0139 MOD 7)
Environmental Assessment Requirements**

I refer to your request seeking environmental assessment requirements (EARs) to modify the Minister's approval for the Genesis Waste Management Facility on Honeycomb Drive, Eastern Creek in the Blacktown local government area (LGA). This request is under section 75W of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

In accordance with section 75W(3) of the *Environmental Planning and Assessment Act 1979*, the Secretary may notify the Proponent of environmental assessment requirements (EARs) with respect to the proposed modification. The Proponent must comply with these requirements before the matter is considered by the Minister.

The EARs have been prepared in consultation with relevant government agencies, and are based on the information you have provided to date. Your modification request should be accompanied by an Environmental Assessment (EA) which addresses the requirements of the agencies (**Attachment 1**) and the following:

- **strategic context**, including:
 - demonstration that the proposal is consistent with all relevant legislation, strategies, environmental planning instruments and development control plans (DCPs); and
 - demonstration that the proposal is subject to section 75W EP&A Act.
- **other approvals**, including the identification of any proposed variations to other licences and approvals.
- **details of the existing operations on the site**, including:
 - existing and approved operations/facilities, including any statutory approvals that apply to these;
 - a summary of the existing conditions of consent that would be relevant to the proposal;
 - a summary of the existing environmental management and monitoring regime;
 - detailed plans of the existing and proposed site layout, including design of the proposed access route; and
 - detailed plans of all structures proposed to be constructed and modified.
- **description of the modification**, including:
 - a detailed description of the proposed modification, including changes to the operation of the site and likely staging;
 - the justification and need for the modification;
 - details of any requested changes to the approved conditions of consent; and
 - an assessment of all potential impacts of the proposal on the existing environment and measures to avoid, minimise, mitigate and/or manage these potential impacts.
- **waste management** – including:
 - details of how waste will be managed during the demolition of structures and relocation of waste material on-site;

- details of the types and amounts of materials to be stored in the Post Production Dispatch Area and justification for its need;
- a description of waste processing operations, including a description of the technology to be installed, resource outputs and the quality of control measures that would be implemented;
- details of how waste would be stored and handled on-site, transported to and from the site and details of how the receipt of non-conforming waste would be dealt with; and
- the measures that would be implemented to ensure the development is consistent with the aims, objectives and guidance in the NSW Waste Avoidance and Resource Recovery Strategy 2014-2021.
- **traffic and access**, including:
 - a traffic impact assessment for all phases of the modification which considers traffic types and volumes likely to be generated, impacts on road safety and impacts on the capacity of the road network; and
 - justification for the selected site access arrangements, internal road network and parking arrangements.
- **soil and water**, including:
 - an assessment of potential impacts to soil and water resources, topography, hydrology, drainage lines, watercourses and riparian lands on or nearby to the site;
 - details of stormwater/wastewater/leachate management systems including the capacity and integrity of on-site detention systems and measures to treat, reuse or dispose of water;
 - characterisation of the surface water quality at the discharge point and/or groundwater infiltration point against the relevant water quality criteria (including details of the contaminants of concern that may leach from the waste into the waters that may be discharged) and proposed mitigation measures to manage any impacts to surface water or groundwaters;
 - a revised site water balance, including identification of water requirements for the life of the project, measures that would be implemented to ensure an adequate and secure water supply is available for the proposal and a detailed description of the measures to minimise water use at the site; and
 - details of proposed mitigation, management and monitoring measures.
- **noise and vibration**, including a quantitative assessment of the construction, operation and transportation noise and vibration impacts on all affected receivers (including the residents of Minchinbury and Erskine Park), prepared in accordance with relevant Environment Protection Authority guidelines.
- **air quality and odour**, including a quantitative assessment of the potential air quality, dust and odour impacts for all phases of the proposal in accordance with relevant Environment Protection Authority guidelines.
- **visual**, including:
 - a description of the potential visual impacts from proposed buildings and associated structures; and
 - details of the measures proposed to minimise visual impacts, such as landscaping.
- **details of the proposed boundary adjustment**, including consideration of any changes to existing obligations under Blacktown City Council's S94 Contributions Plan No. 18, the Precinct Plan or any regional contributions under the existing approval from the Minister for Planning.
- **fire and incident management**, including technical information on the environmental protection equipment to be installed on the premises such as air, water and noise controls, spill cleanup equipment and fire management (including location of fire hydrants and water flow rates at the hydrants) and containment measures.
- **hazards**, including a preliminary risk screening completed in accordance with *State Environmental Planning Policy No. 33 – Hazardous and Offensive Development* and Applying SEPP 33 (DoP, 2011), with a clear indication of class, quantity and location of all dangerous goods and hazardous materials associated with the development. Should preliminary screening indicate that the project is "potentially hazardous" a Preliminary Hazard Analysis (PHA) must be prepared in accordance with Hazardous Industry Planning Advisory Paper No. 6 - Guidelines for Hazard Analysis (DoP, 2011) and Multi-Level Risk Assessment (DoP, 2011).
- **a table indicating where each element of the EARs is addressed in the EA.**

In preparing the EA, the Department strongly recommends that you directly consult with relevant government agencies.

Following the provision of the EA, the Department will advise you of the applicable fee (under Division 1A, Part 15 of the *Environmental Planning and Assessment Regulation 2000*) and consultation requirements.

If you have any enquiries about these requirements, please contact Bianca Thornton on the above details.

Yours sincerely



Chris Ritchie
Director
Industry Assessments

24/4/17

ATTACHMENT 1
Public Authority Responses to Request for Key Issues

Your ref: MP 06_0139 Mod 7
File no: MC-06-1449/8

12 April 2017

Industry Assessments
Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001

Attention: Bianca Thornton

Dear Ms Thornton,

Re: MP 06_0139 Mod 7 Input into Secretary's Environmental Assessment Requirements for modifications to Project Approval MP 06_0139 for the Genesis Xero Waste Facility, Eastern Creek

I refer to your correspondence dated 27 March 2017, requesting that Council provide input with regard to the Secretary's Environmental Assessment Requirements (SEARs) for the above proposal, which seeks construct a new access road, two additional weighbridges and a new internal road network, modify the site layout and undertake environmental management works. Blacktown City Council appreciates the opportunity to provide comments on the key issues and assessment requirements for the proposed modifications.

We have undertaken a preliminary review of the proposal, and we request that the comments identified in **Attachment A** to this letter be included in the SEARs.

We also trust that all owners and occupiers within a suitable catchment from the proposed development will be informed of this proposal. We consider it appropriate that the properties in Minchinbury, Eastern Creek and Erskine Park (within the Penrith City Council area) are notified, in particular if they are residential properties.

If you would like to discuss this matter further, please contact me on 9839 6000.

Yours faithfully,



Judith Portelli

Manager Development Assessment

ATTACHMENT A

The following items are requested to be included in the SEARS:

Planning Matters

The proposal is to undertake a full and detailed assessment of potential impacts of the proposal on residential areas, in particular the Minchinbury area. Any measures to mitigate these potential impacts in the design of the proposal and management of operational matters are to be detailed.

The Applicant's Request for Environmental Assessment Requirements makes several references to proposed options with the final proposal being the subject of the s75W application. Please ensure the final proposal addresses the following:

- The potential impact of traffic movements and noise on site and off site.
- Clarification of any changes to the processes to be undertaken on the site.
- Details of how / if this proposal relates to the proposed incinerator of the Energy from Waste Facility at Eastern Creek (SSD 13_6236).
- The approved location of the amenity berms provide an 'enclosure' to mitigate potential impacts of the Facility. Should the western berm be relocated, confirm if the other berms are required to be extended / modified to maintain an appropriate level of amenity. Also indicate the extent and presentation of any proposed buildings and structures which will be visible from the public domain.
- Clarify if the proposed Option A and B Masterplans submitted with the Applicant's request are a temporary access arrangement during the construction of the new Precinct Road which is expected to take 6 months, or if this is proposed to be a permanent arrangement. A temporary access road via Kangaroo Avenue may be considered given the existing access road may obstruct the construction of the new estate road, however permanent access via Kangaroo Avenue is not demonstrated to be suitable.
- Provide clarification of the location and anticipated extent of use of the internal private roads, as the Option A and B plans indicate a new road network with incomplete roads/connections.
- Provide details of the use / treatment to the western portion of the site between the existing and proposed buildings and the western amenity berm which is proposed to be relocated to be in the vicinity of Archbold Road.
- Architectural plans are to be provided for all buildings, including floor plans, elevations, sections and external materials and schedules. The proposed building heights are to be identified.

Environmental Health

The following requirements are provided by Council's Environmental Health section:

SEPP 33

Ensure the application addresses State Environmental Planning Policy No. 33 – Hazardous and Offensive Development, with particular regard to aboveground fuel tanks.

Acoustic Assessment

An acoustic assessment must be conducted that explicitly outlines the expected noise levels at all affected receivers, and satisfies the noise criteria outlined in the EPA Licence 20121.

The following is to be considered:

- There are residential receivers at both Minchinbury and Erskine Park, but all affected receivers must be accounted for.
- 24 hour maintenance work in the landfill may create problems as the repair and maintenance of machines could be used to conceal landfilling operations, which would certainly have an impact on the ability to meet noise criteria.
- The acoustic assessment is to consider the impact of the proposal on residential receivers during the evening and night period and the sleep disturbance criteria between 10pm and 7am.
- The acoustic assessment is to consider potential impacts in light of the proposed relocation of the buildings and structures, internal roads and amenity berms.

Traffic Management

The following requirement is provided by Council's Access and Transport Management section:

A Traffic Impact Assessment is to be prepared which considers any modifications and its impact on traffic, parking and access to the site. This is to include any proposed temporary or permanent access arrangements and an assessment of vehicle and truck movements and safety at the entry driveway.

Engineering

The following requirement is provided by Council's Engineering section:

Realignment of the boundary

The proposed realignment of the western boundary to Archbold Road will effectively increase the "operational area" of the project and could have a significant impact on Council's adopted Contributions Plan for the Quarry Catchment.

The Applicant's request for SEARs refers to our previous comments that the stormwater basins should be on the same title as the operational area. The intent of our comments was to have the basins within the existing operation area being Lots 1 and 8. The previous approval requires them to manage the stormwater from Lots 1 and 8 in perpetuity and this part of the site is excluded from S94 stormwater contributions.

If the Applicant were to expand this approach for the additional area between the existing operational area and Archbold Road, this would affect the size of the stormwater infrastructure and contributions in the Quarry Catchment of Council's adopted S94 Contributions Plan 18. The land area and size of trunk drainage is currently being assessed as part of the Development Applications for Sargents, so timing is also an issue.

Therefore, the following requirements are provided:

- The Applicant's Stormwater Management Strategy is required to be consistent with Council's adopted S94 Contributions Plan No 18, Precinct Plan and previous project approval, to the satisfaction of Council.
- If the Applicant is seeking to "expand" the operational area then the payment of the

applicable section 94 contributions is required to be paid by the Applicant.

Relocation and modification of the western amenity berm

The visual impact of the proposed relocation and modification of the western amenity berm to the Archbold Road frontage is required to be considered in detail by the Applicant. The provision of a berm and potential drainage basin in this area is a poor development outcome. It is preferred that this area is utilised for industrial purposes given its high level of exposure.

Access Options

Any access to the Facility should utilise the new Estate Road, as opposed to utilising access via Kangaroo Drive.

Should Option B off Kangaroo Drive be proposed by the Applicant, this will require the reconstruction of that section of pavement as the traffic load will be significantly increased.



21 April 2017

RMS Reference: SYD10/00814/04 (A17173106)
DP&E Ref: Major Project Approval No. 06_139

Director
Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001

Attention: Bianca Thornton

Dear Sir/Madam

**GENESIS WASTE MANAGEMENT FACILITY - LOTS 1 AND 2 IN DP1145808 AND PART LOT 8
IN DP 1200048 HONEYCOMB DRIVE, EASTERN CREEK**

Reference is made to your letter dated 27 March 2017 requesting Roads and Maritime Services (Roads and Maritime) to provide details of key issues and assessment requirements regarding the abovementioned development for inclusion in the Secretary's Environmental Assessment Requirements (SEARs).

Roads and Maritime require the following issues to be included in the transport and traffic impact assessment of the proposed development:

1. Daily and peak traffic movements likely to be generated by the proposed development including the impact on nearby intersections and the need/associated funding for upgrading or road improvement works (if required). The key intersections to be examined / modelled include:
 - Wallgrove Road and Wonderland Drive
2. Further clarification is requested from the applicant regarding the proposed future access to Archbold Road. The applicant is requested to align the proposal with the revised RMS intersection location so that the development is consistent with the RMS concept design for Archbold Road (see attached plans for further information).
3. Details of the proposed access and the parking provisions associated with the proposed development including compliance with the requirements of the relevant Australian Standards (ie: turn paths, sight distance requirements, aisle widths, etc).
4. Proposed number of car parking spaces and compliance with the appropriate parking codes.

Roads and Maritime Services

5. Details of service vehicle movements (including vehicle type and likely arrival and departure times).
6. Roads and Maritime requires the EA report to assess the implications of the proposed development for non-car travel modes (including public transport use, walking and cycling); the potential for implementing a location-specific sustainable travel plan (eg 'Travelsmart' or other travel behaviour change initiative); and the provision of facilities to increase the non-car mode share for travel to and from the site. This will entail an assessment of the accessibility of the development site by public transport.
7. To ensure that the above requirements are fully addressed, Roads and Maritime requests that a Traffic Management and Accessibility Plan (TMAP) be undertaken for the Genesis Waste Management Facility site to properly ascertain the cumulative regional traffic impacts associated with development. The TMAP process provides an opportunity to identify a package of traffic and transport infrastructure measures required to support future development. Regional and local intersection and road improvements, vehicular access options for adjoining sites, public transport needs, the timing and cost of infrastructure works and the identification of funding responsibilities associated with the development should be identified.
8. Roads and Maritime requires an assessment of the likely toxicity levels of loads transported on arterial and local roads to / from the site and, consequently, the preparation of an incident management strategy for crashes involving such loads, if relevant.
9. Roads and Maritime will require in due course the provision of a traffic management plan for all demolition/construction activities, detailing vehicle routes, number of trucks, hours of operation, access arrangements and traffic control measures.

If you have any further inquiries in relation to this development application please contact Amanda Broderick on 8849 2391 or email: development.sydney@rms.nsw.gov.au.

Yours sincerely



Rachel Cumming
Senior Land Use Coordinator
Network Sydney West Precinct



RMS concept design for Archbold Road

Department of Planning
Sydney, NSW 2001

Attention: Ms Bianca Thornton

Notice Number 1550967
File Number DOC17/217511
Date 10 April 2017

RE: Proposed modification to Genesis Waste Management Facility MP 06_0139 MOD 7

I refer to your request for the Environment Protection Authority's (EPA) requirements for the environmental assessment (EA) in regard to the above proposal received by EPA on 27 March 2017.

The EPA has considered the details of the proposal as provided by Urbis Pty Ltd on behalf of ThaQuarry Pty Ltd and has identified the information it requires to issue its general terms of approval in Attachment A. In summary, the EPA's key information requirements for the proposal include an adequate assessment of:

1. Air Quality and Odour

Detailed assessment of potential airborne emissions generated in all phases of the proposed modification works including demolition, transport and relocation of all buildings, plant, waste, construction and operations. The assessment should cover the following:

- Source points for all potential airborne emissions should be identified and details of the environmental controls to mitigate impacts.
- Detail the process for relocating the western amenity berm and procedures to mitigate onsite and offsite impacts of wind blown particulates.
- The EIS should cover all potential emissions, and include but is not limit to, coarse particulates, PM10, PM2.5 and odour.
- Details of plant or processes that have the potential to produce airborne emissions during any stage of the proposed modification works including onsite traffic dust and increased vehicle movements during demolition and construction.
- Details of dust suppression procedures during all stages of the modification works at the premises.
- An odour assessment considering potential odours from all areas of the premises.

2. Noise and vibration

The EIS should contain a detailed assessment of noise and vibration impacts on all receivers during all phases of the proposed modification works.

- The proponent must demonstrate that noise and vibration levels from demolition, transport, relocation, construction and future operations meet the requirements of the relevant EPA guidelines.

- Identify all noise sources from activities with potential for high noise and vibration levels in particular demolition, construction and operational phases.
- Detailed noise assessment where increased plant and equipment will be utilised such as the additional automated mechanical sorter in the MPC and increased vehicle movements associated with demolition and construction works.

3. Water Management

Details of stormwater management during all phases of the modification including demolition, construction and future operation must be included in the EIS. The EPA would expect that the new buildings be constructed to exclude all stormwater and that internal surfaces be graded inwards to contain all waste water and any leachate runoff. Consideration must be provided for the following:

- Details of all stormwater management devices including capacity and expected throughput.
- Details of the flow of clean and contaminated groundwater and how it will be diverted around the premises.
- What measures would the proponent employ to mitigate any impacts of contaminated and/or sediment laden water reaching stormwater and offsite receptors.
- Controls in place for increased sediment and mud tracking from vehicles leaving the premises during demolition and construction works during wet weather.
- A sediment and erosion plan detailing controls during all phases of the modification works.
- Details of the "pits" at the entrances to collect runoff from waste vehicles during wet weather.

4. Waste Management

Details of how waste will be managed during the demolition of structures and relocation of waste material around the premises. The EPA requires further information about the following:

- The types and amount of waste material that will be relocated.
- How waste material will be transported around the premises and processes to manage environmental impacts during transport.
- Detailed controls and processes to consider with an additional automated mechanical sorting plant within the MPC building.
- Provide further detail of the type and amounts of recovered materials to be stored in the Post Production Dispatch Area (PPDA) for further processing by others prior to being transported offsite (section 2.3.2.3 in Amended PEA). Explain what is meant by recycling and processing by others including what plant and processes will be used in the PPDA.
- Provide details of where the material proposed to be stored in the PPDA is being taken offsite and what further processing will be conducted?
- Detail the reasons for the significant change in use of the already approved Pre Sort Enclosure (PSE) to a PPDA.

5. Fuel Storage

Provide details of the fuel storage including refueling and tank access, tank capacities, bunded area and depth with included detailed specifications and drawings. Please provide details of the following:

- Provide a detailed assessment of all potential ignition sources in the vicinity of the fuel storage location.
- Details of the refueling zone including materials used in the storage location and specifications of

materials to be utilised in the construction.

- Provide details of controls to mitigate spills to the environment and including processed for disposing of contaminated bund water.
- Provide a schedule of testing and monitoring the refueling equipment including fuel dispensers, pumps, valves and associated infrastructure.

In carrying out the assessment, the proponent should refer to the relevant guidelines as listed in Attachment B and any relevant industry codes of practice and best practice management guidelines.

Please note that this response does not cover biodiversity or Aboriginal cultural heritage issues, which are the responsibility of the Office of Environment and Heritage.

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

The Proponent should be made 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.

Yours sincerely

A handwritten signature in black ink, appearing to read "Ruth Owler".

Ruth Owler

Unit Head

Waste & Resource Recovery

(by Delegation)

ATTACHMENT A: EIS REQUIREMENTS FOR

Proposed modification to Genesis Waste Management Facility MP 06_0139 MOD 7

How to use these requirements

The EPA requirements have been structured in accordance with the DIPNR EIS Guidelines, as follows. It is suggested that the EIS follow the same structure:

- A. Executive summary
- B. The proposal
- C. The location
- D. Identification and prioritisation of issues
- E. The environmental issues
- F. List of approvals and licences
- G. Compilation of mitigation measures
- H. Justification for the proposal

A Executive summary

The executive summary should include a brief discussion of the extent to which the proposal achieves identified environmental outcomes.

B The proposal

1. Objectives of the proposal

- The objectives of the proposal should be clearly stated and refer to:
 - a) the size and type of the operation, the nature of the processes and the products, by-products and wastes produced
 - b) a life cycle approach to the production, use or disposal of products related to the demolition and construction of new and existing structures
 - c) the anticipated level of performance in meeting required environmental standards and cleaner production principles
 - 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.

2. Description of the proposal

General

- Outline the production process including:
 - a) the environmental "mass balance" for the process – quantify in-flow and out-flow of materials, any points of discharge to the environment and their respective destinations (sewer, stormwater, atmosphere, recycling, landfill etc)
 - b) any life-cycle strategies for the products.
- Outline cleaner production actions, including:
 - a) measures to minimise waste (typically through addressing source reduction)
 - b) proposals for use or recycling of by-products
 - c) proposed disposal methods for solid and liquid waste
 - d) air management systems including all potential sources of air emissions, proposals to re-use or treat emissions, emission levels relative to relevant standards in regulations, discharge points
 - e) water management system including all potential sources of water pollution, proposals for re-use, treatment etc, emission levels of any wastewater discharged, discharge points, summary of options explored to avoid a discharge, reduce its frequency or reduce its impacts, and rationale for selection of option to discharge.
 - f) soil contamination treatment and prevention systems.
- Outline construction works including:
 - a) actions to address any existing soil contamination

- b) any earthworks or site clearing; re-use and disposal of cleared material (including use of spoil on-site)
- c) construction timetable and staging; hours of construction; proposed construction methods
- d) environment protection measures, including noise mitigation measures, dust control measures and erosion and sediment control measures.
- Include a site diagram showing the site layout and location of environmental controls.

Air

- Identify all sources or potential sources of air emissions from the development.
Note: emissions can be classed as either:
 - *point (e.g. emissions from stack or vent) or*
 - *fugitive (from wind erosion, leakages or spillages, associated with loading or unloading, conveyors, storage facilities, plant and yard operation, vehicle movements (dust from road, exhausts, loss from load), land clearing and construction works).*
- Provide details of the project that are essential for predicting and assessing air impacts including:
 - a) the quantities and physio-chemical parameters (e.g. concentration, moisture content, bulk density, particle sizes etc) of materials to be used, transported, produced or stored
 - b) an outline of procedures for handling, transport, production and storage
 - c) the management of solid, liquid and gaseous waste streams with potential for significant air impacts.

Noise and vibration

- Identify all noise sources or potential sources from the development (including demolition, construction and operation phases). Detail all potentially noisy activities including ancillary activities such as transport of goods and raw materials.
- Specify the times of operation for all phases of the development and for all noise producing activities.
- Provide details of road alignment (include gradients, road surface, topography, bridges, culverts etc), and land use along the proposed road and measurement locations – diagrams should be to a scale sufficient to delineate individual residential blocks.

Water

- Provide details of the project that are essential for predicting and assessing impacts to waters including:
 - a) the quantity and physio-chemical properties of all potential water pollutants and the risks they pose to the environment and human health, including the risks they pose to Water Quality Objectives in the ambient waters (as defined on <http://www.environment.nsw.gov.au/ieo/index.htm>, using technical criteria derived from *the Australian and New Zealand Guidelines for Fresh and Marine Water Quality*, ANZECC 2000)
 - b) the management of discharges with potential for water impacts
 - c) drainage works and associated infrastructure; land-forming and excavations; working capacity of structures; and water resource requirements of the proposal.

- Outline site layout, demonstrating efforts to avoid proximity to water resources (especially for activities with significant potential impacts e.g. effluent ponds) and showing potential areas of modification of contours, drainage etc.
- Outline how total water cycle considerations are to be addressed showing total water balances for the development (with the objective of minimising demands and impacts on water resources). Include water requirements (quantity, quality and source(s)) and proposed storm and wastewater disposal, including type, volumes, proposed treatment and management methods and re-use options.

Waste and chemicals

Provide details of the quantity and type of both liquid waste and non-liquid waste generated, handled, processed or disposed of at the premises. Waste must be classified according to the EPA's *Waste Classification Guidelines 2014 (as amended from time to time)*

- Provide details of liquid waste and non-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 emissions arising from the handling, storage, processing and reprocessing of waste at the facility
 - f) the proposed controls for managing the environmental impacts of these activities.
- Provide details of spoil disposal with particular attention to:
 - a) the quantity of spoil material likely to be generated
 - b) proposed strategies for the handling, stockpiling, reuse/recycling and disposal of spoil
 - c) the need to maximise reuse of spoil material in the construction industry
 - d) identification of the history of spoil material and whether there is any likelihood of contaminated material, and if so, measures for the management of any contaminated material
 - e) designation of transportation routes for transport of spoil.
- Provide details of procedures for the assessment, handling, storage, transport and disposal of all hazardous and dangerous materials used, stored, processed or disposed of at the site, in addition to the requirements for liquid and non-liquid wastes.
- Provide details of the type and quantity of any chemical substances to be used or stored and describe arrangements for their safe use and storage.
- Reference should be made to the guidelines: EPA's *Waste Classification Guidelines 2014 (as amended from time to time)*

ESD

- Demonstrate that the planning process and any subsequent development incorporates objectives and mechanisms for achieving ESD, including:

- a) an assessment of a range of options available for use of the resource, including the benefits of each option to future generations
- b) proper valuation and pricing of environmental resources
- c) identification of who will bear the environmental costs of the proposal.

3. Rehabilitation

- Outline considerations of site maintenance, and proposed plans for the final condition of the site (ensuring its suitability for future uses).

4. Consideration of alternatives and justification for the proposal

- Consider the environmental consequences of adopting alternatives, including alternative:
 - a) sites and site layouts
 - b) access modes and routes
 - c) materials handling and production processes
 - d) waste and water management
 - e) impact mitigation measures
 - f) energy sources
- Selection of the preferred option should be justified in terms of:
 - a) ability to satisfy the objectives of the proposal
 - b) relative environmental and other costs of each alternative
 - c) acceptability of environmental impacts and contribution to identified environmental objectives
 - d) acceptability of any environmental risks or uncertainties
 - e) reliability of proposed environmental impact mitigation measures
 - f) efficient use (including maximising re-use) of land, raw materials, energy and other resources.

C The location

1. General

- Provide an overview of the affected environment to place the proposal in its local and regional environmental context including:
 - a) meteorological data (e.g. rainfall, temperature and evaporation, wind speed and direction)
 - b) topography (landform element, slope type, gradient and length)
 - c) surrounding land uses (potential synergies and conflicts)
 - d) geomorphology (rates of landform change and current erosion and deposition processes)
 - e) soil types and properties (including erodibility; engineering and structural properties; dispersibility; permeability; presence of acid sulfate soils and potential acid sulfate soils)
 - f) ecological information (water system habitat, vegetation, fauna)
 - g) availability of services and the accessibility of the site for passenger and freight transport.

2. Air

- Describe the topography and surrounding land uses. Provide details of the exact locations of dwellings, schools and hospitals. Where appropriate provide a perspective view of the study area such as the terrain file used in dispersion models.
- Describe surrounding buildings that may effect plume dispersion.
- Provide and analyse site representative data on following meteorological parameters:
 - a) temperature and humidity
 - b) rainfall, evaporation and cloud cover
 - c) wind speed and direction
 - d) atmospheric stability class
 - e) mixing height (the height that emissions will be ultimately mixed in the atmosphere)
 - f) katabatic air drainage
 - g) air re-circulation.

3. Noise and vibration

- Identify any noise sensitive locations likely to be affected by activities at the site, such as residential properties, schools, churches, and hospitals. Typically the location of any noise sensitive locations in relation to the site should be included on a map of the locality.
- Identify the land use zoning of the site and the immediate vicinity and the potentially affected areas.

4. Water

- Describe the catchment including proximity of the development to any waterways and provide an assessment of their sensitivity/significance from a public health, ecological and/or economic perspective. The Water Quality and River Flow Objectives on the website: <http://www.environment.nsw.gov.au/ieo/index.htm> should be used to identify the agreed environmental values and human uses for any affected waterways. This will help with the description of the local and regional area.

5. Soil Contamination Issues

- Provide details of site history – if earthworks are proposed, this needs to be considered with regard to possible soil contamination, for example if the site was previously a landfill site or if irrigation of effluent has occurred.

D Identification and prioritisation of issues / scoping of impact assessment

- Provide an overview of the methodology used to identify and prioritise issues. The methodology should take into account:
 - a) relevant NSW government guidelines
 - b) industry guidelines
 - c) EISs for similar projects
 - d) relevant research and reference material
 - e) relevant preliminary studies or reports for the proposal
 - f) consultation with stakeholders.
- Provide a summary of the outcomes of the process including:
 - a) all issues identified including local, regional and global impacts (e.g. increased/ decreased greenhouse emissions)
 - b) key issues which will require a full analysis (including comprehensive baseline assessment)
 - c) issues not needing full analysis though they may be addressed in the mitigation strategy
 - d) justification for the level of analysis proposed (the capacity of the proposal to give rise to high concentrations of pollution compared with the ambient environment or environmental outcomes is an important factor in setting the level of assessment).

E The environmental issues

1. General

- The potential impacts identified in the scoping study need to be assessed to determine their significance, particularly in terms of achieving environmental outcomes, and minimising environmental pollution.
- Identify gaps in information and data relevant to significant impacts of the proposal and any actions proposed to fill those information gaps so as to enable development of appropriate management and mitigation measures. This is in accordance with ESD requirements.

Note: The level of detail should match the level of importance of the issue in decision making which is dependent on the environmental risk.

Describe baseline conditions

- Provide a description of existing environmental conditions for any potential impacts.

Assess impacts

- For any potential impacts relevant for the assessment of the proposal provide a detailed analysis of the impacts of the proposal on the environment including the cumulative impact of the proposal on the receiving environment especially where there are sensitive receivers.
- Describe the methodology used and assumptions made in undertaking this analysis (including any modelling or monitoring undertaken) and indicate the level of confidence in the predicted outcomes and the resilience of the environment to cope with the predicted impacts.
- The analysis should also make linkages between different areas of assessment where necessary to enable a full assessment of environmental impacts e.g. assessment of impacts on air quality will often need to draw on the analysis of traffic, health, social, soil and/or ecological systems impacts; etc.
- The assessment needs to consider impacts at all phases of the project cycle including: demolition, construction, routine operation, operations, upset operations and decommissioning if relevant.
- The level of assessment should be commensurate with the risk to the environment.

Describe management and mitigation measures

- Describe any mitigation measures and management options proposed to prevent, control, abate or mitigate identified environmental impacts associated with the proposal 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.
- Proponents are expected to implement a 'reasonable level of performance' to minimise environmental impacts. The proponent must indicate how the proposal meets reasonable levels of performance. For example, reference technology based criteria if available, or identify good practice for this type of activity or development. A 'reasonable level of performance' involves adopting and implementing technology and management practices to achieve certain pollutant emissions levels in economically

viable operations. Technology-based criteria evolve gradually over time as technologies and practices change.

- Use environmental impacts as key criteria in selecting between alternative sites, designs and technologies, and to avoid options having the highest environmental impacts.
- Outline any proposed approach (such as an Environmental Management Plan) that will demonstrate how commitments made in the EIS will be implemented. Areas that should be described include:
 - a) operational procedures to manage environmental impacts
 - b) monitoring procedures
 - c) training programs
 - d) community consultation
 - e) complaint mechanisms including site contacts
 - f) strategies to use monitoring information to improve performance
 - g) strategies to achieve acceptable environmental impacts and to respond in event of exceedences.

4. Air

Describe baseline conditions

- Provide a description of existing air quality and meteorology, using existing information and site representative ambient monitoring data. This description should include the following parameters:
 - Coarse particulates;
 - PM10;
 - PM2.5; and
 - odour.

Assess impacts

- Identify all pollutants of concern and estimate emissions by quantity (and size for particles), source and discharge point.
- Estimate the resulting ground level concentrations of all pollutants. Where necessary (e.g. potentially significant impacts and complex terrain effects), use an appropriate dispersion model to estimate ambient pollutant concentrations. Discuss choice of model and parameters with the EPA.
- Describe the effects and significance of pollutant concentration on the environment, human health, amenity and regional ambient air quality standards or goals.
- Describe the contribution that the development will make to regional and global pollution, particularly in sensitive locations.
- For potentially odorous emissions provide the emission rates in terms of odour units (determined by techniques compatible with EPA procedures). Use sampling and analysis techniques for individual or complex odours and for point or diffuse sources, as appropriate.

Note: With dust and odour, it may be possible to use data from existing similar activities to generate emission rates.

- Reference should be made to list relevant guidelines e.g. *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (DEC, 2016); *Approved Methods for the Sampling and Analysis of Air Pollutants in NSW* (DEC, 2007); *Assessment and Management of Odour from Stationary Sources in NSW* (DEC, 2006); *Technical Notes: Assessment and Management of Odour from Stationary Sources in NSW* (DEC, 2006); *Load Calculation Protocol for use by holders of NSW Environment Protection Licences when calculating Assessable Pollutant Loads* (DECC, 2009).

Describe management and mitigation measures

- Outline specifications of pollution control equipment (including manufacturer's performance guarantees where available) and management protocols for both point and fugitive emissions. Where possible, this should include cleaner production processes.

5. Noise and vibration

Describe baseline conditions

- Determine the existing background (LA90) and ambient (LAeq) noise levels in accordance with the *NSW Industrial Noise Policy*.
- Determine the existing road traffic noise levels in accordance with the *NSW Environmental Criteria for Road Traffic Noise*, where road traffic noise impacts may occur.
- The noise impact assessment report should provide details of all monitoring of existing ambient noise levels including:
 - a) details of equipment used for the measurements
 - b) a brief description of where the equipment was positioned
 - c) a statement justifying the choice of monitoring site, including the procedure used to choose the site, having regards to the definition of 'noise sensitive locations(s)' and 'most affected locations(s)' described in Section 3.1.2 of the *NSW Industrial Noise Policy*
 - d) details of the exact location of the monitoring site and a description of land uses in surrounding areas
 - e) a description of the dominant and background noise sources at the site
 - f) day, evening and night assessment background levels for each day of the monitoring period
 - g) the final Rating Background Level (RBL) value
 - h) graphs of the measured noise levels for each day should be provided
 - i) a record of periods of affected data (due to adverse weather and extraneous noise), methods used to exclude invalid data and a statement indicating the need for any re-monitoring under Step 1 in Section B1.3 of the *NSW Industrial Noise Policy*
 - j) determination of LAeq noise levels from existing industry.

Assess impacts

- Determine the project specific noise levels for the site. For each identified potentially affected receiver, this should include:
 - a) determination of the intrusive criterion for each identified potentially affected receiver
 - b) selection and justification of the appropriate amenity category for each identified potentially affected receiver
 - c) determination of the amenity criterion for each receiver
 - d) determination of the appropriate sleep disturbance limit.
- Maximum noise levels during night-time period (10pm-7am) should be assessed to analyse possible affects on sleep. Where LA1(1min) noise levels from the site are less than 15 dB above the background LA90 noise level, sleep disturbance impacts are unlikely. Where this is not the case, further analysis is required. Additional guidance is provided in Appendix B of the *NSW Environmental Criteria for Road Traffic Noise*.
- Determine expected noise level and noise character (e.g. tonality, impulsiveness, vibration, etc) likely to be generated from noise sources during:
 - a) site establishment
 - b) construction
 - c) operational phases
 - d) transport including traffic noise generated by the proposal
 - e) other services.

Note: The noise impact assessment report should include noise source data for each source in 1/1 or 1/3 octave band frequencies including methods for references used to determine noise source levels. Noise source levels and characteristics can be sourced from direct measurement of similar activities or from literature (if full references are provided).

- Determine the noise levels likely to be received at the most sensitive locations (these may vary for different activities at each phase of the development). Potential impacts should be determined for any identified significant adverse meteorological conditions. Predicted noise levels under calm conditions may also aid in quantifying the extent of impact where this is not the most adverse condition.
- The noise impact assessment report should include:
 - a) a plan showing the assumed location of each noise source for each prediction scenario
 - b) a list of the number and type of noise sources used in each prediction scenario to simulate all potential significant operating conditions on the site
 - c) any assumptions made in the predictions in terms of source heights, directivity effects, shielding from topography, buildings or barriers, etc
 - d) methods used to predict noise impacts including identification of any noise models used. Where modelling approaches other than the use of the ENM or SoundPlan computer models are adopted, the approach should be appropriately justified and validated
 - e) an assessment of appropriate weather conditions for the noise predictions including reference to any weather data used to justify the assumed conditions

- f) the predicted noise impacts from each noise source as well as the combined noise level for each prediction scenario under any identified significant adverse weather conditions as well as calm conditions where appropriate
- g) for developments where a significant level of noise impact is likely to occur, noise contours for the key prediction scenarios should be derived
- h) an assessment of the need to include modification factors as detailed in Section 4 of the *NSW Industrial Noise Policy*.
- Discuss the findings from the predictive modelling and, where relevant noise criteria have not been met, recommend additional mitigation measures.
- The noise impact assessment report should include details of any mitigation proposed including the attenuation that will be achieved and the revised noise impact predictions following mitigation.
- Where relevant noise/vibration criteria cannot be met after application of all feasible and cost effective mitigation measures the residual level of noise impact needs to be quantified by identifying:
 - a) locations where the noise level exceeds the criteria and extent of exceedence
 - b) numbers of people (or areas) affected
 - c) times when criteria will be exceeded
 - d) likely impact on activities (speech, sleep, relaxation, listening, etc)
 - e) change on ambient conditions
 - f) the result of any community consultation or negotiated agreement.
- For the assessment of existing and future traffic noise, details of data for the road should be included such as assumed traffic volume; percentage heavy vehicles by time of day; and details of the calculation process. These details should be consistent with any traffic study carried out in the EIS.
- Where blasting is intended an assessment in accordance with the *Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration* (ANZECC, 1990) should be undertaken. The following details of the blast design should be included in the noise assessment:
 - a) bench height, burden spacing, spacing burden ratio
 - b) blast hole diameter, inclination and spacing
 - c) type of explosive, maximum instantaneous charge, initiation, blast block size, blast frequency.

Describe management and mitigation measures

- Determine the most appropriate noise mitigation measures and expected noise reduction including both noise controls and management of impacts for both construction and operational noise. This will include selecting quiet equipment and construction methods, noise barriers or acoustic screens, location of stockpiles, temporary offices, compounds and vehicle routes, scheduling of activities, etc.
- For traffic noise impacts, provide a description of the ameliorative measures considered (if required), reasons for inclusion or exclusion, and procedures for calculation of noise levels including ameliorative measures. Also include, where necessary, a discussion of any potential problems associated with the proposed ameliorative measures, such as overshadowing effects from barriers. Appropriate ameliorative measures may include:

- a) use of alternative transportation modes, alternative routes, or other methods of avoiding the new road usage
- b) control of traffic (eg: limiting times of access or speed limitations)
- c) resurfacing of the road using a quiet surface
- d) use of (additional) noise barriers or bunds
- e) treatment of the façade to reduce internal noise levels buildings where the night-time criteria is a major concern
- f) more stringent limits for noise emission from vehicles (i.e. using specially designed 'quite' trucks and/or trucks to use air bag suspension)
- g) driver education
- h) appropriate truck routes
- i) limit usage of exhaust breaks
- j) use of premium mufflers on trucks
- k) reducing speed limits for trucks
- l) ongoing community liaison and monitoring of complaints
- m) phasing in the increased road use.

4. Water

Describe baseline conditions

- Describe existing surface and groundwater quality – an assessment needs to be undertaken for any water resource likely to be affected by the proposal and for all conditions (e.g. a wet weather sampling program is needed if runoff events may cause impacts).
Note: Methods of sampling and analysis need to conform with an accepted standard (e.g. Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (DEC 2004) or be approved and analyses undertaken by accredited laboratories).
- Provide site drainage details and surface runoff yield.
- State the ambient Water Quality and River Flow Objectives for the receiving waters. These refer to the community's agreed environmental values and human uses endorsed by the Government as goals for the ambient waters. These environmental values are published on the website: <http://www.environment.nsw.gov.au/ieo/index.htm>. The EIS should state the environmental values listed for the catchment and waterway type relevant to your proposal. NB: A consolidated and approved list of environmental values are not available for groundwater resources. Where groundwater may be affected the EIS should identify appropriate groundwater environmental values and justify the choice.
- State the indicators and associated trigger values or criteria for the identified environmental values. This information should be sourced from the ANZECC 2000 *Guidelines for Fresh and Marine Water Quality* (<http://www.environment.gov.au/water/publications/quality/nwqms-guidelines-4-vol1.html>) (Note that, as at 2004, the NSW Water Quality Objectives booklets and website contain technical criteria derived from the 1992 version of the ANZECC Guidelines. The Water Quality Objectives remain as Government Policy, reflecting the community's environmental values and long-term goals, but the

technical criteria are replaced by the more recent ANZECC 2000 Guidelines). NB: While specific guidelines for groundwater are not available, the ANZECC 2000 Guidelines endorse the application of the trigger values and decision trees as a tool to assess risk to environmental values in groundwater.

- State any locally specific objectives, criteria or targets, which have been endorsed by the government e.g. the Healthy Rivers Commission Inquiries or the NSW Salinity Strategy (DLWC, 2000) (<http://www.environment.nsw.gov.au/salinity/government/nswstrategy.htm>).
- Where site specific studies are proposed to revise the trigger values supporting the ambient Water Quality and River Flow Objectives, and the results are to be used for regulatory purposes (e.g. to assess whether a licensed discharge impacts on water quality objectives), then prior agreement from the EPA on the approach and study design must be obtained.
- Describe the state of the receiving waters and relate this to the relevant Water Quality and River Flow Objectives (i.e. are Water Quality and River Flow Objectives being achieved?). Proponents are generally only expected to source available data and information. However, proponents of large or high risk developments may be required to collect some ambient water quality / river flow / groundwater data to enable a suitable level of impact assessment. Issues to include in the description of the receiving waters could include:
 - a) lake or estuary flushing characteristics
 - b) specific human uses (e.g. exact location of drinking water offtake)
 - c) sensitive ecosystems or species conservation values
 - d) a description of the condition of the local catchment e.g. erosion levels, soils, vegetation cover, etc
 - e) an outline of baseline groundwater information, including, but not restricted to, depth to watertable, flow direction and gradient, groundwater quality, reliance on groundwater by surrounding users and by the environment
 - f) historic river flow data where available for the catchment.

Assess impacts

- No proposal should breach clause 120 of the *Protection of the Environment Operations Act 1997* (i.e. pollution of waters is prohibited unless undertaken in accordance with relevant regulations).
- Identify and estimate the quantity of all pollutants that may be introduced into the water cycle by source and discharge point including residual discharges after mitigation measures are implemented.
- Include a rationale, along with relevant calculations, supporting the prediction of the discharges.
- Describe the effects and significance of any pollutant loads on the receiving environment. This should include impacts of residual discharges through modelling, monitoring or both, depending on the scale of the proposal. Determine changes to hydrology (including drainage patterns, surface runoff yield, flow regimes, wetland hydrologic regimes and groundwater).
- Describe water quality impacts resulting from changes to hydrologic flow regimes (such as nutrient enrichment or turbidity resulting from changes in frequency and magnitude of stream flow).
- Identify any potential impacts on quality or quantity of groundwater describing their source.
- Identify potential impacts associated with geomorphological activities with potential to increase surface water and sediment runoff or to reduce surface runoff and sediment transport. Also consider possible impacts such as bed lowering, bank lowering, instream siltation, floodplain erosion and floodplain siltation.
- Identify impacts associated with the disturbance of acid sulfate soils and potential acid sulfate soils.

- Containment of spills and leaks shall be in accordance with EPA's guidelines section 'Bunding and Spill Management' at <http://www.epa.nsw.gov.au/mao/bundingspill.htm> and the most recent versions of the Australian Standards referred to in the Guidelines. Containment should be designed for no-discharge.
- The significance of the impacts listed above should be predicted. When doing this it is important to predict the ambient water quality and river flow outcomes associated with the proposal and to demonstrate whether these are acceptable in terms of achieving protection of the Water Quality and River Flow Objectives. In particular the following questions should be answered:
 - a) will the proposal protect Water Quality and River Flow Objectives where they are currently achieved in the ambient waters; and
 - b) will the proposal contribute towards the achievement of Water Quality and River Flow Objectives over time, where they are not currently achieved in the ambient waters.
- Consult with the EPA as soon as possible if a mixing zone is proposed (a mixing zone could exist where effluent is discharged into a receiving water body, where the quality of the water being discharged does not immediately meet water quality objectives. The mixing zone could result in dilution, assimilation and decay of the effluent to allow water quality objectives to be met further downstream, at the edge of the mixing zone). The EPA will advise the proponent under what conditions a mixing zone will and will not be acceptable, as well as the information and modelling requirements for assessment.

Note: The assessment of water quality impacts needs to be undertaken in a total catchment management context to provide a wide perspective on development impacts, in particular cumulative impacts.

- Where a licensed discharge is proposed, provide the rationale as to why it cannot be avoided through application of a reasonable level of performance, using available technology, management practice and industry guidelines.
- Where a licensed discharge is proposed, provide the rationale as to why it represents the best environmental outcome and what measures can be taken to reduce its environmental impact.
- Reference should be made to *Managing Urban Stormwater: Soils and Construction* (Landcom, 2004), *Guidelines for Fresh and Marine Water Quality* ANZECC 2000), *Environmental Guidelines: Use of effluent by Irrigation* (DEC, 2004).

Describe management and mitigation measures

- Outline stormwater management to control pollutants at the source and contain them within the site. Also describe measures for maintaining and monitoring any stormwater controls.
- Outline erosion and sediment control measures directed at minimising disturbance of land, minimising water flow through the site and filtering, trapping or detaining sediment. Also include measures to maintain and monitor controls as well as rehabilitation strategies.
- Describe waste water treatment measures that are appropriate to the type and volume of waste water and are based on a hierarchy of avoiding generation of waste water; capturing all contaminated water (including stormwater) on the site; reusing/recycling waste water; and treating any unavoidable discharge from the site to meet specified water quality requirements.
- Outline pollution control measures relating to storage of materials, possibility of accidental spills (e.g. preparation of contingency plans), appropriate disposal methods, and generation of leachate.

- Describe hydrological impact mitigation measures including:
 - a) site selection (avoiding sites prone to flooding and waterlogging, actively eroding or affected by deposition)
 - b) minimising runoff
 - c) minimising reductions or modifications to flow regimes
 - d) avoiding modifications to groundwater.
- Describe groundwater impact mitigation measures including:
 - a) site selection
 - b) retention of native vegetation and revegetation
 - c) artificial recharge
 - d) providing surface storages with impervious linings
 - e) monitoring program.
- Describe geomorphological impact mitigation measures including:
 - a) site selection
 - b) erosion and sediment controls
 - c) minimising instream works
 - d) treating existing accelerated erosion and deposition
 - e) monitoring program.
- Any proposed monitoring should be undertaken in accordance with the *Approved Methods for the Sampling and Analysis of Water Pollutants in NSW* (DEC 2004).

5. Soils and contamination

Describe baseline conditions

- Provide any details (in addition to those provided in the location description - Section C) that are needed to describe the existing situation in terms of soil types and properties and soil contamination.

Assess impacts

- Identify any likely impacts resulting from the construction or operation of the proposal, 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 or potential acid sulfate soils.

- Reference should be made to *Contaminated Sites – Guidelines for Consultants Reporting on Contaminated Sites* (OEH, 2011); *Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997* (EPA, 2015).

Describe management and mitigation measures

- Describe and assess the effectiveness or adequacy of any soil management and mitigation measures during construction and operation of the proposal including:
 - a) erosion and sediment control measures
 - b) proposals for site remediation – see *Managing Land Contamination, Planning Guidelines SEPP 55 – Remediation of Land* (Department of Urban Affairs and Planning and Environment Protection Authority, 1998)
 - c) proposals for the management of these soils – see *Acid Sulfate Soil Manual* (Acid Sulfate Soil Advisory Committee 1998) and *Acid Sulfate Soils Assessment Guidelines* (Acid Sulfate Soil Advisory Committee 1998).

6. Waste and chemicals

Describe baseline conditions

- Describe any existing waste or chemicals operations related to the proposal.

Assess impacts

- Assess the adequacy of proposed measures to minimise natural resource consumption and minimise impacts from the handling, transporting, storage, processing and reprocessing of waste and/or chemicals.
- Reference should be made to: the EPA's *Waste Classification Guidelines 2014 (as in force from time to time)*

Describe management and mitigation measures

- Outline measures to minimise the consumption of natural resources.
- Outline measures to avoid the generation of waste and promote the re-use and recycling and reprocessing of any waste.
- Outline measures to support any approved regional or industry waste plans.

7. Cumulative impacts

- Identify the extent that the receiving environment is already stressed by existing development and background levels of emissions to which this proposal will contribute.
- Assess the impact of the proposal against the long term air, noise and water quality objectives for the area or region.

- Identify infrastructure requirements flowing from the proposal (e.g. water and sewerage services, transport infrastructure upgrades).
- Assess likely impacts from such additional infrastructure and measures reasonably available to the proponent to contain such requirements or mitigate their impacts (e.g. travel demand management strategies).

F. List of approvals and licences

- Identify all approvals and licences required under environment protection legislation including details of all scheduled activities, types of ancillary activities and types of discharges (to air, land, water).

G. Compilation of mitigation measures

- Outline how the proposal and its environmental protection measures would be implemented and managed in an integrated manner so as to demonstrate that the proposal is capable of complying with statutory obligations under EPA licences or approvals (e.g. outline of an environmental management plan).
- The mitigation strategy should include the environmental management and cleaner production principles which would be followed when planning, designing, establishing and operating the proposal. It should include two sections, one setting out the program for managing the proposal and the other outlining the monitoring program with a feedback loop to the management program.

H. Justification for the Proposal

- Reasons should be included which justify undertaking the proposal in the manner proposed, having regard to the potential environmental impacts.

ATTACHMENT B: GUIDANCE MATERIAL

Title	Web address
Relevant Legislation	
<i>Contaminated Land Management Act 1997</i>	http://www.legislation.nsw.gov.au/#/view/act/1997/140
<i>Environmentally Hazardous Chemicals Act 1985</i>	http://www.legislation.nsw.gov.au/#/view/act/1985/14
<i>Environmental Planning and Assessment Act 1979</i>	http://www.legislation.nsw.gov.au/#/view/act/1979/203
<i>Protection of the Environment Operations Act 1997</i>	http://www.legislation.nsw.gov.au/#/view/act/1997/156
<i>Water Management Act 2000</i>	http://www.legislation.nsw.gov.au/#/view/act/2000/92
Licensing	
Guide to Licensing	www.epa.nsw.gov.au/licensing/licenceguide.htm
Air Issues	
Air Quality	
Approved methods for modelling and assessment of air pollutants in NSW (2016)	http://www.epa.nsw.gov.au/air/appmethods.htm
POEO (Clean Air) Regulation 2010	http://www.legislation.nsw.gov.au/#/view/regulation/2010/428
Noise and Vibration	
Interim Construction Noise Guideline (DECC, 2009)	http://www.epa.nsw.gov.au/noise/constructnoise.htm
Assessing Vibration: a technical guideline (DEC, 2006)	http://www.epa.nsw.gov.au/noise/vibrationguide.htm
Industrial Noise Policy Application Notes	http://www.epa.nsw.gov.au/noise/applicnotesindustnoise.htm
Environmental Criteria for Road Traffic Noise (EPA, 1999)	http://www.epa.nsw.gov.au/resources/noise/roadnoise.pdf
Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects (DECC, 2007)	http://www.epa.nsw.gov.au/noise/railinfranoise.htm
Environmental assessment requirements for rail traffic-generating developments	http://www.epa.nsw.gov.au/noise/railnoise.htm

Human Health Risk Assessment	
Environmental Health Risk Assessment: Guidelines for assessing human health risks from environmental hazards (enHealth, 2012)	http://www.eh.org.au/documents/item/916
Waste, Chemicals and Hazardous Materials and Radiation	
Waste	
Environmental Guidelines: Solid Waste Landfills (EPA, 2016)	http://www.epa.nsw.gov.au/waste/landfill-sites.htm
Draft Environmental Guidelines - Industrial Waste Landfilling (April 1998)	http://www.epa.nsw.gov.au/resources/waste/envguidlms/industrialfill.pdf
EPA's Waste Classification Guidelines 2014	http://www.epa.nsw.gov.au/wasteregulation/classify-guidelines.htm
Resource recovery orders and exemptions	http://www.epa.nsw.gov.au/wasteregulation/orders-exemptions.htm
European Union's Waste Incineration Directive 2000	http://ec.europa.eu/environment/archives/air/stationary/wid/legislation.htm
EPA's Energy from Waste Policy Statement	http://www.epa.nsw.gov.au/wastestrategy/energy-from-waste.htm
NSW Waste Avoidance and Resource Recovery Strategy 2014-2021	http://www.epa.nsw.gov.au/wastestrategy/warr.htm
Chemicals subject to Chemical Control Orders	
Chemical Control Orders (regulated through the EHC Act)	http://www.epa.nsw.gov.au/pesticides/CCOs.htm
National Protocol - Approval/Licensing of Trials of Technologies for the Treatment/Disposal of Schedule X Wastes - July 1994	Available in libraries
National Protocol for Approval/Licensing of Commercial Scale Facilities for the Treatment/Disposal of Schedule X Wastes - July 1994	Available in libraries
Water and Soils	
Acid sulphate soils	
Coastal acid sulfate soils guidance material	http://www.environment.nsw.gov.au/acidsulfatesoil/ and http://www.epa.nsw.gov.au/mao/acidsulfatesoils.htm
Acid Sulfate Soils Planning Maps	http://www.environment.nsw.gov.au/acidsulfatesoil/riskmaps.htm
Contaminated Sites Assessment and Remediation	

Managing land contamination: Planning Guidelines – SEPP 55 Remediation of Land	http://www.epa.nsw.gov.au/clm/planning.htm
Guidelines for Consultants Reporting on Contaminated Sites (EPA, 2000)	http://www.epa.nsw.gov.au/resources/clm/20110650consultantsguidelines.pdf
Guidelines for the NSW Site Auditor Scheme - 2nd edition (DEC, 2006)	http://www.epa.nsw.gov.au/resources/clm/auditorguidelines06121.pdf
Sampling Design Guidelines (EPA, 1995)	http://www.epa.nsw.gov.au/resources/clm/95059samplingdesign.pdf
National Environment Protection (Assessment of Site Contamination) Measure 1999 (or update)	http://www.scew.gov.au/nepms/assessment-site-contamination
Soils – general	
Managing land and soil	http://www.environment.nsw.gov.au/soils/landandsoil.htm
Managing urban stormwater for the protection of soils	http://www.environment.nsw.gov.au/stormwater/publications.htm
Landslide risk management guidelines	http://australiangeomechanics.org/admin/wp-content/uploads/2010/11/LRM2000-Concepts.pdf
Site Investigations for Urban Salinity (DLWC, 2002)	http://www.environment.nsw.gov.au/resources/salinity/booklet3siteinvestigationsforurbansalinity.pdf
Local Government Salinity Initiative Booklets	http://www.environment.nsw.gov.au/salinity/solutions/urban.htm
Water	
Water Quality Objectives	http://www.environment.nsw.gov.au/ieo/index.htm
ANZECC (2000) Guidelines for Fresh and Marine Water Quality	http://www.environment.gov.au/water/publications/quality/nwqms-guidelines-4-vol1.html
Applying Goals for Ambient Water Quality Guidance for Operations Officers – Mixing Zones	Contact the EPA on 131555
Approved Methods for the Sampling and Analysis of Water Pollutant in NSW (2004)	http://www.environment.nsw.gov.au/resources/legislation/approvedmethods-water.pdf



Department of Primary Industries

OUT17/14750

Ms Bianca Thornton
Industry Assessments
NSW Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Bianca.thornton@planning.nsw.gov.au

Dear Ms Thornton

**Genesis Waste Management Facility (MP06_0139 MOD 7)
Request for Secretary's Environmental Assessment Requirements**

I refer to your email of 30 March 2017 to the Department of Primary Industries (DPI) in respect to the above matter. Comment has been sought from relevant divisions of DPI. Views were also sought from NSW Department of Industry - Lands that are now a division of the broader Department and no longer within NSW DPI. Any further referrals to DPI can be sent by email to landuse.enquiries@dpi.nsw.gov.au.

DPI has reviewed the application recommends the following considerations be included in the SEARs, with further detail in **Attachment A**:

- The EIS should include an assessment of impacts to surface and groundwater sources including water use, water licensing arrangements, impacts on water users, waterfront land, aquifers including compliance with relevant policies.

Yours sincerely

Mitchell Isaacs
Director, Planning Policy & Assessment Advice
10 April 2017

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

<https://goo.gl/o8TXWz>

Attachment A

Genesis Waste Management Facility (MP06_0139 MOD 7) Request for Secretary's Environment Assessment Requirements Detailed comments – DPI Water

- Annual volumes of surface water and groundwater proposed to be taken by the activity (including through inflow and seepage) from each surface and groundwater source as defined by the relevant water sharing plan.
- Assessment of any volumetric water licensing requirements (including those for ongoing water take following completion of the project).
- The identification of an adequate and secure water supply for the life of the project. Confirmation that water can be sourced from an appropriately authorised and reliable supply. This is to include an assessment of the current market depth where water entitlement is required to be purchased.
- A detailed and consolidated site water balance.
- Assessment of impacts on surface and groundwater sources (both quality and quantity), related infrastructure, adjacent licensed water users, basic landholder rights, watercourses, riparian land, and groundwater dependent ecosystems, and measures proposed to reduce and mitigate these impacts.
- Full technical details and data of all surface and groundwater modelling.
- Proposed surface and groundwater monitoring activities and methodologies.
- Assessment of any potential cumulative impacts on water resources, and any proposed options to manage the cumulative impacts.
- Consideration of relevant policies and guidelines.
- A statement of where each element of the SEARs is addressed in the EIS in the form of a table.

End Attachment A

D2017/40417

Ms Bianca Thornton
Planning Officer
Industry Assessments
Department of Planning and Environment
GPO Box 39
Sydney NSW 2001

Dear Ms Thornton,

MP 06_0139 MOD 6 – Genesis Waste Management Facility – Honeycomb Drive Eastern Creek

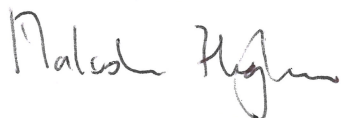
Thank you for your email of 27 March 2017 requesting WaterNSW's input for the Secretary's Environmental Assessment Requirements (SEARs) for the above proposal.

The nearest WaterNSW asset to the waste management facility is the Warragamba Pipelines corridor. As the Pipelines corridor is located more than two kilometres from the southern boundary of the waste management facility, the development is unlikely to have an impact on WaterNSW's infrastructure or operations. WaterNSW therefore has no requirements for the development and has no objection to it.

WaterNSW requests the Department continues to consult with us regarding any future developments and SEARs requests for development proposals adjacent to its land and assets.

If you have any queries regarding the above please contact Alison Kniha on 4724 2451 or alison.kniha@watarnsw.com.au.

Yours sincerely,



MALCOLM HUGHES
Manager Catchment Protection

28/3/17

Bianca Thornton

From: Dana Alderson
Sent: Monday, 10 April 2017 10:54 AM
To: Bianca Thornton
Subject: RE: Request for Input to SEARs - Genesis Waste Management Facility MP 06_0139 MOD 6

Hi Bianca,

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

Kind regards,
Dana

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