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Director Industry Assessments
Department of Planning, Industry and Environment
320 Pitt Street
Sydney NSW 2000

Attention: Sally Munk

Notice Number 1588799
Date 29-Nov-2019

Western Sydney Energy and Resource Recovery Centre - Request for SEARs (SSD 10395)

I refer to the Department of Planning, Industry and Environment's request for the NSW Environment Protection Authority's (**EPA**) input on the Secretary's Environmental Assessment Requirements (**SEARs**) for the Western Sydney Energy and Resource Recovery Centre in Eastern Creek - SSD 10395 (**the Proposal**).

The Proposal is for the construction and operation of an Energy from Waste Facility at 339 Wallgrove Rd Eastern Creek.

The EPA has provided recommendations for SEARs that should be considered in relation to the proposal. Please see **Attachment A** for details.

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.

Based on the information provided, the proposal will require an Environment Protection Licence (**Licence**) under the *Protection of the Environment Operations Act 1997* (**the Act**). The Licence will condition both the construction and operation of the Proposal.

The Proponent should be made aware that any commitments made in the Environmental Impact Statement (**EIS**) may be formalised as approval conditions and may also be placed as conditions on the Licence.

The Proponent should be made aware that, consistent with provisions under Part 9.4 of 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 the Licence.

In addition, as a requirement of the Licence, 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 dark ink, appearing to be 'Trevor Wilson', written over a dotted line.

Trevor Wilson
Unit Head
Sydney Waste Compliance
(by Delegation)

ATTACHMENT A: EPA recommendations for SEARs for the Western Sydney Energy and Resource Recovery Centre (SSD 10395)

The Environmental Impact Statement (EIS) must include an assessment of the potential impacts of the proposal including cumulative impacts and develop appropriate measures to avoid, mitigate, manage and/or offset these impacts. The EIS must address the following specific matters:

Environment Protection Licence

Based on the information provided, the proposal will require an Environment Protection Licence under the the Act.

Soils, Contamination and Construction

1. Provide any details including site history that are needed to describe the existing situation in terms of soil types and properties and the potential for soil contamination. Include appropriate investigation in accordance with the *Managing Land Contamination, Planning Guidelines SEPP 55 – Remediation of Land*.
2. Identify any likely impacts resulting from the construction or operation of the proposal, including the likelihood of:
 - disturbing any existing contaminated soil;
 - contamination of soil by operation of the activity;
 - subsidence or instability;
 - soil erosion;
 - ground water interaction; and
 - disturbing acid sulfate or potential acid sulfate soils.
3. Outline construction works including:
 - actions to address any existing soil contamination;
 - any earthworks or site clearing;
 - re-use and disposal of cleared material (including use of spoil on-site);
 - construction timetable and staging; hours of construction; proposed construction methods;
 - environment protection measures, including noise mitigation measures, dust control measures and erosion and sediment control measures; and
 - Include a site diagram showing the site layout and location of environmental controls.
4. Provide details of spoil disposal with particular attention to:
 - the quantity of spoil material likely to be generated;
 - proposed strategies for the handling, stockpiling, reuse/recycling and disposal of spoil; and
 - 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.

5. Describe and assess the effectiveness or adequacy of any soil management and mitigation measures during construction and operation of the proposal including:
 - erosion and sediment control measures directed at minimising disturbance of land, minimising water flow through the site and filtering, trapping or detaining sediment with reference to *Managing Urban Stormwater: Soils and Construction* (Landcom 2004). Also include measures to maintain and monitor controls as well as rehabilitation strategies;
 - 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); and
 - proposals for the management of potential acid sulfate soils – see *Acid Sulfate Soil Manual* (Acid Sulfate Soil Advisory Committee 1998) and *Acid Sulfate Soils Assessment Guidelines* (Acid Sulfate Soil Advisory Committee 1998).
7. Detail contingency plans for any potential incidents during the construction of the facility that may result in environmental harm.

Waste Management

8. Demonstrate how the proposal would operate as an energy from waste facility in accordance with the *NSW Energy from Waste Policy Statement*.
9. Demonstrate that the waste used as feedstock in the waste to energy plant would be the residual from a resource recovery process that maximises the recovery of material in accordance with the EPA's *NSW Energy from Waste Policy Statement*.
10. Describe the classes and quantities of waste that would be thermally treated at the facility, including proposed sources, quantities, composition and classes of waste with reference to the data sets relied upon in making these determinations. Note, all waste must be classified in accordance with the EPA's *Waste Classification Guidelines*.
11. Describe the procedures that would be implemented to control the residual waste inputs to the plant, including contingency measures that would be implemented if inappropriate materials are identified.
12. Include a detailed site plan(s) identifying all operational areas and a detailed description of the waste processing procedures at the facility, including the types of pollution which may result from the storage and processing of that waste, and mitigation measures for managing any such impacts.
13. Demonstrate that all waste handling activities, including receiving, sorting, processing, sampling, quarantine, storage, and loading will be conducted in an enclosed building. No waste, including finished products, may be stored outside.
14. Provide details of the processing capacity of the plant including typical, maximal and minimal rates of processing.
15. Provide the maximum annual throughput of waste and the maximum volume of waste to be stored at the premises at any one time.
16. Detail how the proponent will meet the EPA's record keeping and reporting requirements, including weighing material in and out of the premises (refer to the EPA's *Waste Levy Guidelines* for more information – available at <http://www.epa.nsw.gov.au/your-environment/waste/waste-levy>).
17. Include a list and description, including quantities, of the types of materials (solid liquid and gaseous) or finished products (if any) to be produced and their intended fate.
18. Describe the procedures to be implemented for the management of all waste materials produced from

the waste to energy facility (solid liquid and gaseous).

19. Include details of all procedures and protocols to be implemented to ensure that any waste accepted to and leaving from the site is transported and disposed of lawfully and does not pose a risk to human health or the environment.
20. Demonstrate that any waste material produced from the energy from waste facility for land application is fit-for-purpose and poses minimal risk of harm to the environment in order to meet the requirements for consideration of a resource recovery order and/or exemption by the EPA under Clause 91 of the *Protection of the Environment Operations (Waste) Regulation 2014*. The EIS should list each intended order and exemption by name, and set out details as to how the proponent will meet each of these.
21. Identify the measures that would be implemented to ensure that the development is consistent with the aims, objectives and guidance in the *NSW Waste Avoidance and Resource Recovery Strategy 2014-2021*.

Air Quality

The EIS for the proposal should include an Air Quality Impact Assessment (AQIA), prepared in accordance with the *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales 2016*. The AQIA should:

1. Identify all potential discharges of fugitive and point source emissions of pollutants and odour for all stages of the proposal. All processes that could result in air emissions must be identified and described. Sufficient detail to accurately communicate the characteristics and quantity of all emissions must be provided.
2. Describe the receiving environment in detail. The proposal must be contextualised within the receiving environment (local, regional and inter-regional as appropriate). The description must include but need not be limited to:
 - meteorology and climate;
 - topography;
 - surrounding land-use
 - identified sensitive receptors; and
 - ambient air quality.
3. Identify comparable facilities within the airshed and consider the cumulative impact of air emissions from these facilities.
4. Assess all risks to the environment, human health and amenity associated with emissions of air pollutants, including odour, from all stages of the proposal.
5. Justify the level of assessment undertaken on the basis of risk factors, including but not limited to:
 - proposal location;
 - characteristics of the receiving environment; and
 - type and quantity of pollutants emitted.
6. Include a consideration of 'worst case' emission scenarios and impacts at proposed emission limits including consideration of what emissions may be released during a trip or emergency shut down.
7. Account for cumulative impacts associated with existing emission sources as well as any currently approved developments linked to the receiving environment.

8. Include air dispersion modelling conducted in accordance with the *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales 2016*.
9. Demonstrate the proposal's ability to comply with the relevant regulatory framework, specifically the *Protection of the Environment Operations (POEO) Act (1997)* and the *POEO (Clean Air) Regulation (2010)*.
10. Detail emission control techniques/ practices, including emission sampling and monitoring, that will be employed by the proposal, and benchmark these techniques/ practices against best practice emission control and management.

Human Health Risk Assessment

A Human Health Risk Assessment (HHRA) undertaken in conjunction with the AQIA and in accordance with *Environmental Health Risk Assessment: Guidelines for assessing human health risks from environmental hazards* (enHealth) that includes:

1. An examination of best practice management measures for the mitigation of toxic air emissions.
1. Details of the proposed technology and a demonstration that it is technically fit for purpose.
1. The inhalation of criteria pollutants and exposure from all pathways i.e., inhalation, ingestion and dermal to specific air toxics.
2. Details of any pollution control equipment and other impact mitigation measures for fugitive and point source emissions.
3. A demonstration of how the waste to energy facility would be operated in accordance with best practice measures to manage toxic air emissions with consideration of the *European Union's Waste Incineration Directive 2000* and the *NSW Energy from Waste Policy Statement*.
4. Details of the proposed management and monitoring measures.

Water

1. 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.
2. Identify all surface water features including water courses, wetlands and floodplains transacted by or adjacent to the proposed development.
3. Provide details of the project that are necessary for predicting and assessing impacts to waters including:
 - 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 works and associated infrastructure; land-forming and excavations; working capacity of structures; and water resource requirements of the proposal;
 - Assessment of the potential impact of the development on all identified water features, tributaries and riparian areas;
 - 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);

- 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;
 - site diagram of the finished facility identifying surface water flows and discharge pathways including the location of discharge monitoring points;
 - 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; and
 - 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.
9. 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.

Noise and Vibration

1. 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.
2. Construction noise associated with the proposed development should be assessed using the *Interim Construction Noise Guideline* (DECC, 2009).
3. Operational noise from all industrial activities to be undertaken on the premises should be assessed using the guidelines contained in the *Noise Policy for Industry* (EPA, 2017). This assessment should be undertaken for all proposed operational times (i.e. day, evening and night). The assessment must include detail of all noise management, mitigation and monitoring measures.
4. Noise on public roads from increased road traffic generated by land use developments should be assessed using the guidelines contained in the *NSW Road Noise Policy* (DECCW, 2011). <http://www.epa.nsw.gov.au/resources/noise/2011236nswroadnoisepolicy.pdf>
5. Vibration from all activities (including construction and operation) to be undertaken on the premises should be assessed using the guidelines contained in the *Assessing Vibration: a technical guideline* (DEC, 2006).

Hazards and Risk

1. Where preliminary screening indicate that the project is potentially hazardous provide a Preliminary Hazard Analysis (PHA) in accordance with *Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis and Multi-Level Risk Assessment* and or *No 33 Hazardous and Offensive Development and Applying SEPP 33 (DoP, 2011)* with a clear indication of class, quality and location of all dangerous goods and hazardous material associated with the development.

2. 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.
3. The containment of liquids 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.
4. Detail fire/emergency measures and procedures.
5. Detail contingency plans for any potential incidents or equipment failure during the operation of the facility that may result in environmental harm.

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	
NSW Noise Policy for Industry	http://www.epa.nsw.gov.au/your-environment/noise/industrial-noise/noise-policy-for-industry-(2017)

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
NSW Road Noise Policy (DECCW, 2011)	http://www.epa.nsw.gov.au/your-environment/noise/transport-noise
NSW Rail Infrastructure Noise Guideline (EPA, 2013)	http://www.epa.nsw.gov.au/your-environment/noise/transport-noise
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 Unions 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/20110650consultantsglines.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/95059sampingdline.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