

Appendix 1

*Current Secretary's Environmental Assessment Requirements and
previous Director General's Requirements and Agency Comments*



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Our ref: SSD-6249

Mr Steve McCall
Environmental Property Services
PO Box 348
Nelson Bay NSW 2315

Dear Mr McCall

**Secretary's Environmental Assessment Requirements
Glenfield Waste Services Materials Recycling Facility, Glenfield (SSD-6249)**

As you are aware, on 11 September 2015 the Department of the Environment (DoE) determined that the proposed Glenfield Waste Facility would impact upon matters of national environmental significance protected under the *Environment Protection and Biodiversity Conservation Act 1999*.

Consequently, the Department has now amended the Secretary's environmental assessment requirements (SEARs), issued to L.A Kennett Enterprises Pty Ltd on 19 December 2013, to include the Commonwealth's requirements issued on 24 November 2015. I have attached a copy of the amended requirements for the development proposal along with the Commonwealth's guidelines, these amended requirements are based on the information you have provided to date.

I recommend that you undertake a gap analysis on any assessment work you have already carried out to ensure that it adequately addresses these amended requirements. You should also ensure that any consultation already carried out with government agencies and other stakeholders remains current.

Please note that the Department may alter these requirements at any time, and that you must consult further with the Department if you do not lodge a development application and EIS for the proposal within two years of the date of issue of these SEARs. The Department will review the EIS for the proposal carefully before putting it on public exhibition, and will require you to submit an amended EIS if it does not adequately address the SEARs.

I would appreciate it if you would contact the Department at least two weeks before you propose to submit the development application and EIS for your development. This will enable the Department to:

- confirm the applicable fee (see Division 1AA, Part 15 of the *Environmental Planning and Assessment Regulation 2000*); and
- determine the number of copies (hard-copy and CD-ROM) of the EIS required for review.

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

Yours sincerely


Chris Ritchie
Director
Industry Assessments
as delegate of the Secretary

Secretary's Environmental Assessment Requirements

Section 78A(8A) of the *Environmental Planning and Assessment Act*

State Significant Development

Application Number	SSD 6249
Development	Construction and operation of a materials recycling facility to process up to 450,000 tonnes of waste per annum comprising of commercial and industrial waste and construction and demolition waste, including the expansion and relocation of the existing recycling facility to the southern portion of the site.
Location	2 Cambridge Avenue, Glenfield (Lot 1 DP 113201, Lot 2 DP 333578, Lot 3 DP 736881 and Lot 91 DP 1155962) in the City of Campbelltown Local Government Area
Proponent	Glenfield Waste Services Pty Ltd
Date of Issue	November 2015
General Requirements	<p>The Environmental Impact Statement (EIS) for the development must meet the minimum form and content requirements in clauses 6 and 7 of Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i>.</p> <p>In addition, the EIS must include a:</p> <ul style="list-style-type: none">• detailed description of the development, including:<ul style="list-style-type: none">- need for the proposed development;- justification for the proposed development;- likely staging of the development - including construction, and operational stage/s;- likely interactions between the development and existing, approved and proposed operations in the vicinity of the site;- plans of any proposed building works;• consideration of all relevant environmental planning instruments, including identification and justification of any inconsistencies with these instruments;• risk assessment of the potential environmental impacts of the development, identifying the key issues for further assessment;• detailed assessment of the key issues specified below, and any other significant issues identified in this risk assessment, which includes:<ul style="list-style-type: none">- a description of the existing environment, using sufficient baseline data;- an assessment of the potential impacts of all stages of the development, including any cumulative impacts, taking into consideration relevant guidelines, policies, plans and statutes; and- a description of the measures that would be implemented to avoid, minimise and if necessary, offset the potential impacts of the development, including proposals for adaptive management and/or contingency plans to manage any significant risks to the environment; and

	<ul style="list-style-type: none"> • consolidated summary of all the proposed environmental management and monitoring measures, highlighting commitments included in the EIS. <p>The EIS must also be accompanied by a report from a qualified quantity surveyor providing:</p> <ul style="list-style-type: none"> • a detailed calculation of the capital investment value (as defined in clause 3 of the <i>Environmental Planning and Assessment Regulation 2000</i>) of the proposal, including details of all assumptions and components from which the CIV calculation is derived; • a close estimate of the jobs that will be created by the development during the construction and operational phases of the development; and • certification that the information provided is accurate at the date of preparation.
<p>Key Issues</p>	<p>The EIS must address the following specific matters:</p> <ul style="list-style-type: none"> • Waste Management – including: <ul style="list-style-type: none"> – a detailed description of the likely waste streams that would be handled at the facility; – details of how this waste would be handled on site, and transported to and from the site; – details of the location and size of stockpiles of unprocessed and processed waste on the site; – the measures that would be implemented to ensure that the development is consistent with the aims, objectives and guidance in the <i>NSW Waste Avoidance and Resource Recovery Strategy 2014 – 2021</i>; – a description of the technology and timeframes for processing waste and the quality control measures that would be implemented; and – details of the potential impacts associated with treating, storing, using and disposing of this waste and waste products. • Air Quality and Odour – including: <ul style="list-style-type: none"> – a quantitative assessment of the potential air quality and odour impacts of the development on surrounding landowners; – a description of how the handling, transporting, production and storage of waste materials would be managed to control all emissions; – a greenhouse gas assessment; and – details of all proposed mitigation, management and monitoring measures. • Noise – including: <ul style="list-style-type: none"> – a quantitative assessment of potential construction, operation and traffic noise; and – details of all proposed mitigation, management and monitoring measures. • Soil & Water – including: <ul style="list-style-type: none"> – a detailed water balance for the development, outlining the measures to minimise water use and any potential for a sustainable water supply; – wastewater predictions, and the measures that would be implemented to treat, reuse and/or dispose of this water;

	<ul style="list-style-type: none"> - the proposed erosion and sediment controls during construction; - the proposed stormwater management system; and - consideration of the potential salinity, contamination, flooding and acid sulfate soil impacts of the development. • Traffic and Transport – including: <ul style="list-style-type: none"> - details of all traffic types and volumes likely to be generated during construction and operation, including a description of haul routes; - an assessment of the predicted impacts of this traffic on road safety and the capacity of the road network, including consideration of cumulative traffic impacts at key intersections using SIDRA or similar traffic model; - detailed plans of the proposed layout of the internal road network and parking on site in accordance with the relevant Australian standards; and - detailed plans of any proposed road upgrades, infrastructure works or new roads required for the development. • Hazards – including: <ul style="list-style-type: none"> - a preliminary risk screening completed in accordance with <i>State Environmental Planning Policy No. 33 – Hazardous and Offensive Development and Applying SEPP 33</i> (DoP, 2011), with a clear indication of class, quantity and location of all dangerous goods and hazardous materials associated with the development. - a Preliminary Hazard Analysis (PHA), should preliminary screening indicate that the project is "potentially hazardous", prepared in accordance with Hazardous Industry Planning Advisory Paper No. 6 - Guidelines for Hazard Analysis (DoP, 2011) and Multi-Level Risk Assessment (DoP, 2011). • Biodiversity – including <ul style="list-style-type: none"> - an assessment of the proposal under the Framework for Biodiversity Assessment (Oct 2014) including an assessment of any potential impacts on riparian vegetation and groundwater dependant ecosystems; - a detailed description of any proposed offset; and - an assessment of the potential impacts on matters of national environmental significance protected under the <i>Environment Protection and Biodiversity Conservation Act 1999</i>, in accordance with the Guidelines prepared by the Commonwealth Department of Environment EPBC 2015/7529 (attached). • Heritage – including the potential Aboriginal and non-Aboriginal heritage impacts of the development. • Visual – including; <ul style="list-style-type: none"> - an assessment of the potential visual impacts of the development on the amenity of the surrounding area; and - a detailed description of the measures that would be implemented to minimise the visual impacts of the development, including the design features, landscaping and measures to minimise the lighting and signage impacts of the development.
<p>Plans and Documents</p>	<p>The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the <i>Environmental Planning and Assessment Regulation 2000</i>. These documents should be included as part of the EIS rather than as separate documents.</p>

<p>Consultation</p>	<p>During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners.</p> <p>In particular you must consult with:</p> <ul style="list-style-type: none"> • NSW Environment Protection Authority; • NSW Roads and Maritime Services; • Department of Primary Industries, including the NSW Office of Water; • Office of Environment and Heritage • City of Campbelltown Council; and • The local community and key stakeholders. <p>The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.</p>
<p>Further consultation after 2 years</p>	<p>If you do not lodge an EIS for the development within 2 years of the issue date of these DGRs, you must consult with the Director-General in relation to the requirements for lodgement.</p>
<p>References</p>	<p>The assessment of the key issues listed above must take into account relevant guidelines, policies, and plans as identified. While not exhaustive, Attachment 1 contains a list of some of the guidelines, policies, and plans that may be relevant to the environmental assessment of this development.</p>

ATTACHMENT 1 Technical and Policy Guidelines

The following guidelines may assist in the preparation of the Environmental Impact Statement. This list is not exhaustive and not all of these guidelines may be relevant to your proposal.

Many of these documents can be found on the following websites:

<http://www.planning.nsw.gov.au>

<http://www.bookshop.nsw.gov.au>

<http://www.publications.gov.au>

Policies, Guidelines & Plans

Plans and Documents

The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Environmental Planning and Assessment Regulation 2000. Provide these as part of the EIS rather than as separate documents.

In addition, the EIS must include the following:

1. An existing site survey plan drawn at an appropriate scale illustrating:
 - the location of the land, boundary measurements, area (sq. m) and north point;
 - the existing levels of the land in relation to buildings and roads;
 - location and height of existing structures on the site;
 - location and height of adjacent buildings and private open space; and
 - all levels to be to Australian Height Datum (AHD).
2. A locality/context plan drawn at an appropriate scale should be submitted indicating:
 - watercourses including nearby rivers and creeks, and dams;
 - significant local features such as heritage items;
 - the location and uses of nearby buildings, shopping and employment areas, hospitals and schools; and
 - traffic and road patterns, pedestrian routes and public transport nodes.
3. An indication of the location of the site with respect to the relevant Land Zoning Map within the *Shoalhaven Local Environment Plan 2014*.
4. Drawings at an appropriate scale illustrating:
 - detailed plans, sections and elevations of the existing building, which clearly show all proposed internal and external alterations and additions.

Documents to be submitted

Documents to submit include:

- 1 hard copy and 1 electronic copy of all the documents and plans for review prior to exhibition; and
- other copies as determined by the Department once the development application is lodged.

Technical and Policy Guidelines

The following guidelines may assist in the preparation of the Environmental Impact Statement. This list is not exhaustive and not all of these guidelines may be relevant to your proposal.

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Policies, Guidelines & Plans

Aspect	Policy /Methodology
Waste	Waste Avoidance and Resource Recovery Strategy 2014-2021 (EPA) The National Waste Policy: Less Waste More Resources 2009 Waste Classification Guidelines (DECC) Environmental guidelines: Composting and Related Organics Processing Facilities (DEC) Environmental guidelines: Use and Disposal of Biosolid Products (NSW EPA) Composts, soil conditioners and mulches (Standards Australia, AS 4454)
Air Quality	Protection of the Environment Operations (Clean Air) Regulation 2010 Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (DEC) Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (DEC)
Odour	Technical Framework: Assessment and Management of Odour from Stationary Sources in NSW (DEC) Technical Notes: Assessment and Management of Odour from Stationary Sources in NSW (DEC)
Transport	Guide to Traffic Generating Development (RTA) Road Design Guide (RTA)
Noise	NSW Industrial Noise Policy (DECC) NSW Road Noise Policy (EPA, 2011) Environmental Criteria for Road Traffic Noise (NSW EPA) Interim Construction Noise Guideline (2009)
Soil and Water	Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites (ANZECC & NHMRC) National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPC) Draft Guidelines for the Assessment & Management of Groundwater Contamination (DECC) State Environmental Planning Policy No. 55 – Remediation of Land Managing Land Contamination – Planning Guidelines SEPP 55 – Remediation of Land (DOP) Acid Sulfate Soils Manual (Stone et al. 1998)
Soil	

<i>Surface Water</i>	National Water Quality Management Strategy: Water quality management - an outline of the policies (ANZECC/ARMCANZ)
	NSW Guidelines for Controlled Activities on Waterfront Land (NOW, 2012)
	National Water Quality Management Strategy: Policies and principles - a reference document (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Implementation guidelines (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Australian Guidelines for Fresh and Marine Water Quality (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Australian Guidelines for Water Quality Monitoring and Reporting (ANZECC/ARMCANZ)
	Using the ANZECC Guideline and Water Quality Objectives in NSW (DEC)
	NSW State Rivers and Estuaries Policy(1993)
	State Water Management Outcomes Plan
	NSW Government Water Quality and River Flow Environmental Objectives (DECC)
	Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (DEC)
	Managing Urban Stormwater: Soils & Construction (Landcom)
	Managing Urban Stormwater: Treatment Techniques (DECC)
	Managing Urban Stormwater: Source Control (DECC)
	Technical Guidelines: Bunding & Spill Management (DECC)
	NSW Floodplain Development Manual 2005
	<i>Groundwater</i>
Australian Groundwater Modelling Guidelines (NWC, 2012)	
NSW State Groundwater Policy Framework Document (DLWC)	
NSW State Groundwater Quality Protection Policy (DLWC)	
NSW State Groundwater Dependent Ecosystems Policy (2002)	
NSW State Groundwater Quantity Management Policy (DLWC) Draft Guidelines for the Assessment and Management of Groundwater Contamination (DEC, 2007)	
Hazards	
	State Environmental Planning Policy No. 33 – Hazardous and Offensive Development
	Applying SEPP 33 – Hazardous and Offensive Development Application Guidelines (DUAP)
	Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis
Greenhouse Gas	
	The National Greenhouse and Energy Reporting (Measurement) Technical Guidelines (NGER Technical Guidelines)
	Guidelines for Energy Savings Action Plans (DEUS, 2005)
Visual	
	Control of Obtrusive Effects of Outdoor Lighting (Standards Australia, AS 4282)
	State Environmental Planning Policy No 64 - Advertising and Signage

**Guidelines for preparing Assessment Documentation relevant to the
*Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)***

Glenfield Waste Facility (EPBC 2015/7529)

1. On 11 September 2015 it was determined that the Glenfield Waste Facility will impact upon the following matters of national environmental significance (MNES) protected under the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*:
 - **threatened species and communities.**
2. The project will be assessed in accordance with the NSW Assessment Bilateral Agreement (2015) and as such will be assessed in the manner specified in Schedule 1 to that Agreement including, addressing the matters outlined in Schedule 4 of the *Environment Protection and Biodiversity Conservation Regulations 2000 (Cth)*. These guidelines do not stand alone but are a supplement to the Secretary's Environmental Assessment Requirements issued on 10 June 2015 and must be addressed in conjunction with these requirements. The Guidelines are intended to ensure there is sufficient information in the assessment report relevant to MNES such that the Commonwealth decision-maker may make a determination on whether or not to approve the action.
3. The proponent must undertake an assessment of all the protected matters that may be impacted by the development under the controlling provision identified in Item 1. A list of protected matters that the Department of the Environment considered likely to be significantly impacted is provided at Attachment A to these Guidelines. Note that this may not be a complete list and it is the responsibility of the proponent to ensure any protected matters under this controlling provision, likely to be significantly impacted, are assessed for the Commonwealth decision-maker's consideration.

General Requirements

The EIS must address the following issues:

4. the precise location and description of all works to be undertaken (including associated offsite works and infrastructure), structures to be built or elements of the action that may have impacts on matters of national environmental significance (MNES).
5. an assessment of the likely impacts of the development on each EPBC Act-listed species and/or ecological community where there is likely to be a significant impact from the proposed development.

Key Issues – Biodiversity

6. The EIS must address the following issues in relation to Biodiversity including:
 - identification of all EPBC Act listed threatened species and community likely to be located in the project area or in the vicinity; and
 - identification of all EPBC Act listed threatened species and community likely to be significantly impacted by the development in accordance with the Matters of National Environmental Significance - Significant Impact Guidelines 1.1 Environment Protection and Biodiversity Conservation Act 1999 (Significant Impact Guidelines).
7. For each of the relevant EPBC Act listed threatened species and community likely to be significantly impacted by the development the EIS must provide:

- a description of the environment (including identification and mapping of suitable breeding habitat, suitable foraging habitat, important populations and habitat critical for survival), with consideration of, and reference to, any relevant Commonwealth guidelines and policy statements including listing advice, conservation advice and recovery plans;
- details of the scope, timing and methodology for studies or surveys used and how they are consistent with (or justification for divergence from) published Australian Government guidelines and policy statements; and
- specifically detailed mapping identifying the extent and quality of the EPBC Act listed critically endangered Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest in accordance with the EPBC Act listing criteria and any policy statements for that community for both the impact site and proposed offset site.

Impacts

8. For each of the relevant EPBC Act listed threatened species and community likely to be significantly impacted by the development the EIS must provide a description of the impacts of the action having regard to the full national extent of the species or community's range including:
 - a detailed assessment of the extent, nature and consequence of the likely direct, indirect and consequential impacts – refer to the Significant Impact Guidelines for guidance on the various types of impact that need to be considered;
 - a statement whether any relevant impacts are likely to be unknown, unpredictable or irreversible; and
 - a description of any likely cumulative impacts, where potential project impacts are in addition to existing impacts of other activities (including known potential future expansions or developments by the proponent and other proponents in the region and vicinity).

Avoidance and mitigation

9. For each of the relevant EPBC Act listed threatened species and community likely to be significantly impacted by the development the EIS must provide information on proposed avoidance and mitigation measures to manage the relevant impacts of the action including:
 - a description of proposed avoidance and mitigation measures to deal with relevant impacts of the action;
 - assessment of the expected or predicted effectiveness of the mitigation measures, and
 - a description of the outcomes that the avoidance and mitigation measures will achieve.
10. For each of the relevant EPBC Act listed threatened species and community likely to be significantly impacted by the development the EIS must provide reference to, and consideration of relevant Commonwealth guidelines and policy statements including conservation advice, recovery plans, threat abatement plans and wildlife conservation plans.

[Note: the relevant guidelines and policy statements for each species and community are available from the Department of the Environment Species Profiles and Threats Database.

<http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl>]

Residual impacts and offsets

11. For each of the relevant EPBC Act listed threatened species and community likely to be significantly impacted by the development the EIS must provide:
 - Identification of significant residual adverse impacts likely to occur after the proposed activities to avoid and mitigate all impacts are taken into account.
 - details of how the current published NSW Framework for Biodiversity Assessment (FBA) has been applied in accordance with the objects of the EPBC Act to offset significant residual adverse impacts;
 - details of the offset package to compensate for significant residual impacts including details of the credit profiles required to offset the development in accordance with the FBA and/or mapping and descriptions of the extent and condition of the relevant habitat and/or threatened communities occurring on proposed offset;

[Note: For the purposes of approval under the EPBC Act, it is a requirement that offsets directly contribute to the ongoing viability of the specific protected matter impacted by a proposed action i.e. 'like for like'. In applying the FBA, residual impacts on EPBC Act listed threatened ecological communities must be offset with Plant Community Type(s) (PCT) that are ascribed to the specific EPBC listed ecological community. PCTs from a different vegetation class will not generally be acceptable as offsets for EPBC listed communities.]

12. Any significant residual impacts not addressed by the FBA may need to be addressed in accordance with the Environment Protection and Biodiversity Conservation Act 1999 Environmental Offset Policy. <http://www.environment.gov.au/epbc/publications/epbc-act-environmental-offsets-policy>. [Note if the EPBC Act Environmental Offset Policy is used to calculate proposed offsets for a threatened species or community you may wish to seek further advice from the Department of Planning and Environment.]

Environmental Record of person proposing to take the action

13. The information provided must include details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against the person proposing to take the action; and for an action for which a person has applied for a permit, the person making the application.
14. If the person proposing to take the action is a corporation, details of the corporation's environmental policy and planning framework must also be included.

REFERENCES

1. *Environment Protect and Biodiversity Conservation Act 1999* - section 51-55, section 96A(3)(a)(b), 101A(3)(a)(b), section 136, section 527E
2. NSW Assessment Bilateral Agreement (2015) - Item 18.1, Item 18.5, Schedule 1
3. *Matters of National Environmental Significance - Significant impact guidelines 1.1* (2013) EPBC Act
4. *Environment Protect and Biodiversity Conservation Act 1999 Environmental Offsets Policy* October 2012

The Department of the Environment's Environment Reporting Tool (ERT) identifies seven listed threatened communities and 33 listed threatened species that are known or considered likely to occur within 2 km of the site of the proposed action.

The Department of the Environment considers that the proposed action is likely to have a significant impact on:

- Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest (critically endangered)

The Department of the Environment considers that the following species are possibly at risk of a significant impact, requiring further assessment at this stage.

- Yellow Gnat-orchid (*Genoplesium bauera*) (endangered)
- Illawarra Greenhood (*Pterostylis gibbosa*) (endangered)
- Leafless Tongue-orchid (*Cryptostylis hunteriana*) (vulnerable)
- Austral Toadflax (*Thesium australe*) (vulnerable)



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Our ref: SSD-6249

Mr Steve McCall
L.A Kennett Enterprises Pty Ltd
PO Box 348
NELSON BAY NSW 2315

Dear Mr McCall

**State Significant Development – Director-General's Requirements
Glenfield Waste Services Materials Recycling Facility, Glenfield (SSD-6249)**

I have attached a copy of the Director-General's environmental assessment requirements (DGRs) for the preparation of an Environmental Impact Statement (EIS) for the proposed Materials Recycling Facility at Glenfield in the City of Campbelltown Local Government Area.

These requirements are based on the information you have provided to date and have been prepared in consultation with the relevant government agencies. Their comments, which you should address appropriately when preparing the EIS, are also attached (see Attachment 2).

Please note that comments provided by the Department of Primary Industries (DPI) are currently in draft format with final comments expected shortly, while the Department has also not yet received comments from Campbelltown City Council (Council). The final comments from DPI and comments from Council will both be provided to you once they have been received for your consideration as part of preparing your EIS.

Please note that the Department may alter these requirements at any time, and that you must consult further with the Department if you do not lodge a development application and EIS for the proposal within two years of the date of issue of these DGRs. The Department will review the EIS for the proposal carefully before putting it on public exhibition, and will require you to submit an amended EIS if it does not adequately address the DGRs.

I wish to emphasise the importance of effective and genuine community consultation and the need for proposals to proactively respond to the community's concerns. Accordingly a comprehensive, detailed and genuine community consultation and engagement process must be undertaken during preparation of the EIS. This process must ensure that the community is both informed of the proposal and is actively engaged in issues of concern to them. Sufficient information must be provided to the community so that it has a good understanding of what is being proposed and of the potential impacts.

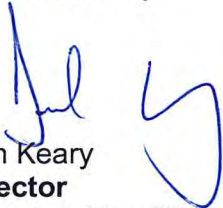
Your proposal may require a separate approval under Commonwealth *Environment Protection Biodiversity Conservation Act 1999* (EPBC Act). If an EPBC Act approval is required, I would appreciate it if you would advise the Department accordingly, as the Commonwealth approval process may be integrated into the NSW approval process, and supplementary DGR's may need to be issued.

I would appreciate it if you would contact the Department at least two weeks before you propose to submit the development application and EIS for your development. This will enable the Department to:

- confirm the applicable fee (see Division 1AA, Part 15 of the *Environmental Planning and Assessment Regulation 2000*); and
- determine the number of copies (hard-copy and CD-ROM) of the EIS required for review.

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

Yours sincerely

 19/12/13
Dan Keary
Director
Industry, Key Sites and Social Projects
as the Director-General's nominee

Director General's Environmental Assessment Requirements

Section 78A(8A) of the *Environmental Planning and Assessment Act*

State Significant Development

Application Number	SSD 6249
Development	<p>Construction and operation of a materials recycling facility in Glenfield which includes:</p> <ul style="list-style-type: none"> • Processing of up to 450,000 tonnes of waste per annum comprising of commercial and industrial waste and construction and demolition waste; • Expand and relocate the existing recycling facility to the southern portion of the site; • Construction of an internal road and parking area; and • Ancillary infrastructure.
Location	2 Cambridge Avenue, Glenfield (Lot 1 DP 113201, Lot 2 DP 333578, Lot 3 DP 736881 and Lot 91 DP 1155962) in the City of Campbelltown Local Government Area
Proponent	Glenfield Waste Services Pty Ltd
Date of Issue	December 2013
General Requirements	<p>The Environmental Impact Statement (EIS) must include:</p> <ul style="list-style-type: none"> • the minimum form and content requirements in clauses 6 and 7 of Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i>; and <p>In addition, the EIS must include a:</p> <ul style="list-style-type: none"> • detailed description of the development, including: <ul style="list-style-type: none"> - need for the proposed development; - justification for the proposed development; - likely staging of the development - including construction, and operational stage/s; - likely interactions between the development and existing, approved and proposed operations in the vicinity of the site; - plans of any proposed building works; • consideration of all relevant environmental planning instruments, including identification and justification of any inconsistencies with these instruments; • risk assessment of the potential environmental impacts of the development, identifying the key issues for further assessment; • detailed assessment of the key issues specified below, and any other significant issues identified in this risk assessment, which includes: <ul style="list-style-type: none"> - a description of the existing environment, using sufficient baseline data; - an assessment of the potential impacts of all stages of the development, including any cumulative impacts, taking into consideration relevant guidelines, policies, plans and statutes; and

	<ul style="list-style-type: none"> - a description of the measures that would be implemented to avoid, minimise and if necessary, offset the potential impacts of the development, including proposals for adaptive management and/or contingency plans to manage any significant risks to the environment; and • consolidated summary of all the proposed environmental management and monitoring measures, highlighting commitments included in the EIS. <p>The EIS must also be accompanied by a report from a qualified quantity surveyor providing:</p> <ul style="list-style-type: none"> • a detailed calculation of the capital investment value (as defined in clause 3 of the <i>Environmental Planning and Assessment Regulation 2000</i>) of the proposal, including details of all assumptions and components from which the CIV calculation is derived; • a close estimate of the jobs that will be created by the development during the construction and operational phases of the development; and • certification that the information provided is accurate at the date of preparation.
<p>Key Issues</p>	<p>The EIS must address the following specific matters:</p> <ul style="list-style-type: none"> • Waste Management – including: <ul style="list-style-type: none"> - a detailed description of the likely waste streams that would be handled/stored/disposed of at the facility; - details of how this waste would be stored and handled on site, and transported to and from the site; - details of the location and size of stockpiles of unprocessed and processed recycled waste on the site; - the measures that would be implemented to ensure that the development is consistent with the aims, objectives and guidance in the <i>NSW Waste Avoidance and Resource Recovery Strategy 2007</i>; - a description of the technology and timeframes for processing waste and the quality control measures that would be implemented; and - details of the potential impacts associated with treating, storing, using and disposing of this waste and waste products. • Air Quality and Odour – including: <ul style="list-style-type: none"> - a quantitative assessment of the potential air quality and odour impacts of the development on surrounding landowners; - a description of how the handling, transporting, production and storage of waste materials would be managed to control dust generation; and - details of all proposed mitigation, management and monitoring measures. • Noise – including: <ul style="list-style-type: none"> - construction, operation and traffic noise; and - details of all proposed mitigation, management and monitoring measures. • Soil & Water – including: <ul style="list-style-type: none"> - a detailed water balance for the development, outlining the measures to minimise water use and any potential for a

	<p>sustainable water supply;</p> <ul style="list-style-type: none"> - wastewater predictions, and the measures that would be implemented to treat, reuse and/or dispose of this water; - the proposed erosion and sediment controls during construction; - the proposed stormwater management system; and - consideration of the potential salinity, contamination, flooding and acid sulfate soil impacts of the development. <ul style="list-style-type: none"> • Traffic and Transport – including: <ul style="list-style-type: none"> - predictions of the traffic volumes likely to be generated during construction and operation; - an assessment of the impacts of this traffic on the safety, capacity and efficiency of the surrounding road network; - modelling of key intersections (including any nearby existing or proposed developments) and details of truck routes; - an assessment of the need for upgrading or road improvement works; - details of the availability of non-car travel modes and measures to encourage greater use of these travel modes; and - access and parking. • Hazards – including: <ul style="list-style-type: none"> - a Preliminary Hazard Analysis (PHA) of the development; and - an assessment of the potential fire risks of the development • Biodiversity – including an assessment of any potential impacts on any threatened species, populations, endangered ecological communities, groundwater dependent ecosystems or their habitats in the region. • Heritage – including the potential Aboriginal and non-Aboriginal heritage impacts of the development. • Greenhouse Gas – including: <ul style="list-style-type: none"> - a quantitative assessment of the potential scope 1 and 2 greenhouse gas emissions of the development, and a qualitative assessment of the potential impacts of these emissions on the environment; and - a detailed description of the measure that would be implemented on site to ensure that the development is energy efficient. • Visual – including: <ul style="list-style-type: none"> - an assessment of the potential visual impacts of the development on the amenity of the surrounding area; and - a detailed description of the measures that would be implemented to minimise the visual impacts of the development, including the design features, landscaping and measures to minimise the lighting and signage impacts of the development.
Plans and Documents	<p>The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the <i>Environmental Planning and Assessment Regulation 2000</i>. These documents should be included as part of the EIS rather than as separate documents.</p>
Consultation	<p>During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners.</p> <p>In particular you must consult with:</p> <ul style="list-style-type: none"> • NSW Environment Protection Authority;

	<ul style="list-style-type: none"> • NSW Roads and Maritime Services; • Department of Primary Industries, including the NSW Office of Water; • Office of Environment and Heritage • City of Campbelltown Council; and • The local community and key stakeholders. <p>The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.</p>
Further consultation after 2 years	If you do not lodge an EIS for the development within 2 years of the issue date of these DGRs, you must consult with the Director-General in relation to the requirements for lodgement.
References	The assessment of the key issues listed above must take into account relevant guidelines, policies, and plans as identified. While not exhaustive, Attachment 1 contains a list of some of the guidelines, policies, and plans that may be relevant to the environmental assessment of this development.

ATTACHMENT 1

Technical and Policy Guidelines

The following guidelines may assist in the preparation of the Environmental Impact Statement. This list is not exhaustive and not all of these guidelines may be relevant to your proposal.

Many of these documents can be found on the following websites:

<http://www.planning.nsw.gov.au>

<http://www.bookshop.nsw.gov.au>

<http://www.publications.gov.au>

Policies, Guidelines & Plans

Aspect	Policy /Methodology
Waste	<p>Waste Avoidance and Resource Recovery Strategy 2007 (DECC)</p> <p>Waste Classification Guidelines (DECC)</p> <p>Environmental Guidelines: Assessment Classification and Management of Non-Liquid and Liquid Waste (NSW EPA)</p> <p>Environmental guidelines: Composting and Related Organics Processing Facilities (DEC)</p> <p>Environmental guidelines: Use and Disposal of Biosolid Products (NSW EPA)</p> <p>Composts, soil conditioners and mulches (Standards Australia, AS 4454)</p>
Air Quality	<p>Protection of the Environment Operations (Clean Air) Regulation 2010</p> <p>Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (DEC)</p> <p>Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (DEC)</p>
Odour	<p>Technical Framework: Assessment and Management of Odour from Stationary Sources in NSW (DEC)</p> <p>Technical Notes: Assessment and Management of Odour from Stationary Sources in NSW (DEC)</p>
Noise	<p>NSW Industrial Noise Policy (DECC)</p> <p>Environmental Noise Management – Assessing Vibration: a technical guide (DEC)</p> <p>Interim Construction Noise Guideline (DECC)</p> <p>Environmental Criteria for Road Traffic Noise (NSW EPA)</p> <p>Environmental Noise Control Manual (DECC)</p>
Soil and Water	<p>Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites (ANZECC & NHMRC)</p>
Soil	<p>National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPC)</p> <p>Draft Guidelines for the Assessment & Management if Groundwater Contamination (DECC)</p>

	State Environmental Planning Policy No. 55 – Remediation of Land Managing Land Contamination – Planning Guidelines SEPP 55 – Remediation of Land (DOP)
<i>Surface Water</i>	National Water Quality Management Strategy: Water quality management - an outline of the policies (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Policies and principles - a reference document (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Implementation guidelines (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Australian Guidelines for Fresh and Marine Water Quality (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Australian Guidelines for Water Quality Monitoring and Reporting (ANZECC/ARMCANZ)
	Using the ANZECC Guideline and Water Quality Objectives in NSW (DEC)
	State Water Management Outcomes Plan
	NSW Government Water Quality and River Flow Environmental Objectives (DECC)
	Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (DEC)
	Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment
	Managing Urban Stormwater: Soils & Construction (Landcom)
	Managing Urban Stormwater: Treatment Techniques (DECC)
	Managing Urban Stormwater: Source Control (DECC)
	Technical Guidelines: Bunding & Spill Management (DECC)
	Floodplain Development Manual (DIPNR)
	Floodplain Risk Management Guideline (DECC)
	A Rehabilitation Manual for Australian Streams (LWRRDC and CRCCH)
	Technical Guidelines: Bunding & Spill Management (DECC)
	Environmental Guidelines: Use of Effluent by Irrigation (DECC)
	<i>Groundwater</i>
NSW State Groundwater Policy Framework Document (DLWC)	
NSW State Groundwater Quality Protection Policy (DLWC)	
NSW State Groundwater Quantity Management Policy (DLWC) Draft	
NSW State Groundwater Dependent Ecosystems Policy (2002)	
Guidelines for the Assessment and Management of Groundwater Contamination (DECC)	
Transport	
	Guide to Traffic Generating Development (RTA)
	Road Design Guide (RTA)
Hazards	
	State Environmental Planning Policy No. 33 – Hazardous and Offensive Development
	Applying SEPP 33 – Hazardous and Offensive Development Application Guidelines (DUAP)
	Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis
Biodiversity	
	Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna – Amphibians (DECCW 2009)
	Threatened Biodiversity Survey and Assessment: Guidelines for Developments

	and Activities – Working Draft (DECC 2004)
	Guidelines for Threatened Species Assessment (DoP 2005)
	The Threatened Species Assessment Guideline – The Assessment of Significance (DECC 2007)
	NSW State Groundwater Dependent Ecosystem Policy (DLWC)
	Policy & Guidelines - Aquatic Habitat Management and Fish Conservation (NSW Fisheries)
	Policy and Guidelines for Fish Habitat Conservation and Management (NSW Fisheries 2013)
	Cumberland Plain Recovery Plan (DECCW 2010)
	Recovering Bushland on the Cumberland Plain: Best Practice Guidelines for the Management and Restoration of Bushland (DEC 2005)
	State Environmental Planning Policy No. 44 – Koala Habitat Protection
Greenhouse Gas	
	AGO Factors and Methods Workbook (AGO)
	Guidelines for Energy Savings Action Plans (DEUS, 2005)
Visual	
	Control of Obtrusive Effects of Outdoor Lighting (Standards Australia, AS 4282)
	State Environmental Planning Policy No 64 - Advertising and Signage
Social & Economic	
	Draft Economic Evaluation in Environmental Impact Assessment (DOP)
	Techniques for Effective Social Impact Assessment: A Practical Guide (Office of Social Policy, NSW Government Social Policy Directorate)

ATTACHMENT 2
Agency Input into Key Assessment Issues



NSW Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Attention: Mr Ashley Cheong

Notice Number 1518797
File Number EF13/4723
Date 13-Dec-2013

**RE: Request for key issues and assessment requirement - State Significant Development Proposal
- GWS Materials Recycling Facility, Glenfield (SSD-6249)**

Reference is made to correspondence from the Department of Planning and Infrastructure ("DP&I") dated 22 November 2013 and received by the Environment Protection Authority ("the EPA") on 25 November 2013 requesting requirements for the preparation of an environmental impact statement ("EIS") in relation to the above proposal. The proposal was submitted by L.A. Kennett Enterprises Pty Ltd ("the Proponent").

The EPA has considered the details of the Proponent's proposal as provided by the DP&I and has identified the information it requires to assess the project (see **Attachment A**). The Proponent should ensure that the EIS is sufficiently comprehensive to enable the EPA to determine the extent of the impact(s) of the proposal.

The key issues requiring assessment for this project are summarised below:

1. Air quality (including dust, odour, other air emissions assessment modelling and management);
2. Noise impact (including noise assessment modelling and mitigation);
3. Waste acceptance, storage, processing, reuse, management and disposal;
4. Soils and contamination; and
5. Surface water and waste water management, (including surface water controls and impacts on waterways and water supply).

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 EIS 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.

The EPA requests that an electronic copy of the EIS be submitted for assessment. This document should be sent to waste.operations@epa.nsw.gov.au

If you have any queries regarding this matter please contact Mr Josh Madden on (02) 9995 5077.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Belinda Lake', written over a dotted line.

Belinda Lake
Acting Unit Head
Waste & Resources - Waste Management
(by Delegation)

ATTACHMENT A: EIS REQUIREMENTS FOR

State Significant Development Proposal - GWS Materials Recycling Facility, Glenfield (SSD-6249)

How to use these requirements

The EPA requirements have been structured in accordance with the former Department of Infrastructure Planning and Natural Resources 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
 - 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.

Air

- Identify all sources of air emissions from the development.

Note: emissions can be classed as either:

- *point (eg 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 (eg 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 from the development (including both 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.
- For projects with a significant potential traffic noise impact 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:
 - a) including 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 www.environment.nsw.gov.au/ieo, 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 eg 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

- Details of the layout of the waste facility, the treatment process and the environmental controls at the facility.
- 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 *DECCW Waste Classification Guidelines 2008* (<http://www.epa.nsw.gov.au/waste/envguidlms/>).
- 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.
- Details of the quantity, type and specifications for all **output products** proposed to be produced from the facility. The description should include the physical, chemical and biological characteristics (including contaminant concentrations) of those output products as well as relevant accredited standards against which the products would comply. In documenting or describing the composition of output products and/or wastes generated from the proposed facility reference should be made to the relevant EPA resource recovery exemption (<http://www.epa.nsw.gov.au/waste/RRecoveryExemptions.htm>) or the *DECCW Waste Classification Guidelines 2009* (<http://www.epa.nsw.gov.au/waste/classification.htm>).

Details of intended (or potential) end uses for output products from the facility and the relevant product standards which would be used to assess those products against.

- 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.
- Details of the type and quantity of any chemical substances (including hydrocarbon (oils and fuels), explosives etc.) to be used or stored and describe arrangements for their safe use and storage.
- Include a detailed plan for in-situ classification of waste material, including the sampling locations and sampling regime that will be employed to classify the waste, particularly with regards to the identification of contamination hotspots.

- Identify, characterise and classify all waste that will be generated onsite through excavation, demolition or construction activities, including proposed quantities of the waste. **Note:** All waste must be classified in accordance with the *DECCW Waste Classification Guidelines (2009)*.
- Identify, characterise and classify all waste that is proposed to be disposed of to an offsite location, including proposed quantities of the waste and the disposal locations for the waste. This includes waste that is intended for re-use or recycling. **Note:** All waste must be classified in accordance with the *DECCW Waste Classification Guidelines (2009)*.
- Include a commitment to retaining all sampling and classification results for the life of the project to demonstrate compliance with the *DECCW Waste Classification Guidelines (2009)*.
- Provide details of how waste will be handled and managed onsite to minimise pollution, including:
 - Stockpile location and management
 - a) Labelling of stockpiles for identification, ensuring that all waste is clearly identified and stockpiled separately from other types of material (especially the separation of any contaminated and non-contaminated waste).
 - b) Proposed height limits for all waste to reduce the potential for dust and odour.
 - c) Procedures for minimising the movement of waste around the site and double handling.
 - d) Measures to minimise leaching from stockpiles into the surrounding environment, such as sediment fencing, geofabric liners etc.
 - Erosion, sediment and leachate control including measures to be implemented to minimise erosion, leachate and sediment mobilisation at the site during works. The EA should show the location of each measure to be implemented. The Proponent should consider measures such as:
 - a) Sediment traps
 - b) Diversion banks
 - c) Sediment fences
 - d) Bunds (earth, hay, mulch)
 - e) Geofabric liners
 - f) Other control measures as appropriate

The Proponent should also provide details of:

 - g) how leachate from stockpiled waste material will be kept separate from stormwater runoff;
 - h) treatment of leachate through a wastewater treatment plant (if applicable); and
 - i) any proposed transport and disposal of leachate off-site.
- Provide details of how the waste will be handled and managed during transport to a lawful facility. If the waste possesses hazardous characteristics, the Proponent must provide details of how the waste will be treated or immobilised to render it suitable for transport and disposal.
- Include details of all procedures and protocols to be implemented to ensure that any waste leaving the site is transported and disposed of lawfully and does not pose a risk to human health or the environment.
- Include a statement demonstrating that the Proponent is aware of EPA's requirements with respect to notification and tracking of waste.

- Include a statement demonstrating that the Proponent is aware of the relevant legislative requirements for disposal of the waste, including any relevant Resource Recovery Exemptions, as gazetted by EPA from time to time.
- Outline contingency plans for any event that affects operations at the site that may result in environmental harm, including: excessive stockpiling of waste, volume of leachate generated exceeds the storage capacity available on-site etc.

ESD

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

An assessment of a range of options available for use of the resource, including the benefits of each option to future generations.

- a) proper valuation and pricing of environmental resources
- b) 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
acceptability of any environmental risks or uncertainties
 - d) reliability of proposed environmental impact mitigation measures
 - e) 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 (eg 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: www.environment.nsw.gov.au/ieo 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 (eg 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 eg 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: exploration (if relevant or significant), construction, routine operation, start-up 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.

8. Air

Describe baseline conditions

- Provide a description of existing air quality and meteorology, using existing information and site representative ambient monitoring data.

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 (eg 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 *Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW* (EPA, 2001); *Approved Methods for the Sampling and Analysis of Air Pollutants in NSW* (EPA, 2001); *Assessment and Management of Odour from Stationary Sources in NSW* (EPA, 2001); *Technical Notes: Draft Policy: Assessment and Management of Odour from Stationary Sources*

in NSW (EPA, 2001); *Load Calculation Protocol for use by holders of NSW Environment Protection Licences when calculating Assessable Pollutant Loads* (EPA, 1999).

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.

9. 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 (eg 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 muffles 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 (DECCW 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: www.environment.nsw.gov.au/ieo. 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.deh.gov.au/water/quality/nwqms/volume1.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 (www.hrc.nsw.gov.au) 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 OEH 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 the technical guidelines section 'Bunding and Spill Management' of the *Authorised Officers Manual* (EPA, 1995) (<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 list relevant guidelines e.g. *Managing Urban Stormwater: Soils and Construction* (Landcom, 2004), *Guidelines for Fresh and Marine Water Quality* ANZECC 2000), *Environmental Guidelines: Use of effluent by Irrigation* (DECCW, 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 (eg 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* (DECCW 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); *Contaminated Sites – Guidelines on Significant Risk of Harm and Duty to Report* (EPA, 2003).

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

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 <http://www.epa.nsw.gov.au/waste/envguidlns/>

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 (eg 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 (eg 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 (eg 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
<u>Relevant Legislation</u>	
<i>Contaminated Land Management Act 1997</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+140+1997+cd+0+N
<i>Environmentally Hazardous Chemicals Act 1985</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+14+1985+cd+0+N
<i>Environmental Planning and Assessment Act 1979</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N
<i>Protection of the Environment Operations Act 1997</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N
<i>Water Management Act 2000</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+92+2000+cd+0+N
<u>Licensing</u>	
Guide to Licensing	www.epa.nsw.gov.au/licensing/licenceguide.htm
<u>Air Issues</u>	
Air Quality	
Approved methods for modelling and assessment of air pollutants in NSW (2005)	http://www.epa.nsw.gov.au/resources/air/ammodelling05361.pdf
POEO (Clean Air) Regulation 2010	http://www.legislation.nsw.gov.au/maintop/view/inforce/subordleg+428+2010+cd+0+N
<u>Noise and Vibration</u>	
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/traffic.htm
Environmental Criteria for Road Traffic Noise (EPA, 1999)	http://www.epa.nsw.gov.au/noise/traffic.htm
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

<u>Waste, Chemicals and Hazardous Materials and Radiation</u>	
Waste	
Environmental Guidelines: Solid Waste Landfills (EPA, 1996)	http://www.epa.nsw.gov.au/resources/waste/envguidlns/solidlandfill.pdf
Draft Environmental Guidelines - Industrial Waste Landfilling (April 1998)	http://www.epa.nsw.gov.au/resources/waste/envguidlns/industrialfill.pdf
Waste Classification Guidelines (DECC, 2009)	http://www.epa.nsw.gov.au/waste/envguidlns/index.htm
Resource recovery exemption	http://www.epa.nsw.gov.au/waste/RRecoveryExemptions.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
<u>Water and Soils</u>	
Acid sulphate soils	
Acid Sulfate Soils Planning Maps	http://canri.nsw.gov.au/download/
Acid Sulfate Soils Manual (Stone et al. 1998)	Manual available for purchase from: http://www.landcom.com.au/whats-new/the-blue-book.aspx Chapters 1 and 2 are on DP&I's Guidelines Register at: Chapter 1 Acid Sulfate Soils Planning Guidelines: http://www.planning.nsw.gov.au/rdaguidelines/documents/NSW%20Acid%20Sulfate%20Soils%20Planning%20Guidelines.pdf Chapter 2 Acid Sulfate Soils Assessment Guidelines: http://www.planning.nsw.gov.au/rdaguidelines/documents/NSW%20Acid%20Sulfate%20Soils%20Assessment%20Guidelines.pdf
Acid Sulfate Soils Laboratory Methods Guidelines (Ahern et al. 2004)	http://www.derm.qld.gov.au/land/ass/pdfs/lmg.pdf This replaces Chapter 4 of the Acid Sulfate Soils Manual above.
Contaminated Sites Assessment and Remediation	
Managing land contamination: Planning Guidelines – SEPP 55 Remediation of Land	http://www.planning.nsw.gov.au/DevelopmentAssessments/Regist/erofDevelopmentAssessmentGuidelines/tabid/207/language/en-US/Default.aspx
Guidelines for Consultants Reporting on	http://www.epa.nsw.gov.au/resources/clm/20110650consultantsqli

Contaminated Sites (EPA, 2000)	nes.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)	Available by request from EPA's Environment Line
National Environment Protection (Assessment of Site Contamination) Measure 1999 (or update)	http://www.ephc.gov.au/taxonomy/term/44
Soils – general	
Soil and Landscape Issues in Environmental Impact Assessment (DLWC 2000)	http://www.dnr.nsw.gov.au/care/soil/soil_pubs/pdfs/tech_rep_34_nsw.pdf
Managing urban stormwater: soils and construction, vol. 1 (Landcom 2004) and vol. 2 (A. Installation of services; B Waste landfills; C. Unsealed roads; D. Main Roads; E. Mines and quarries) (DECC 2008)	Vol 1 - Available for purchase at http://www.landcom.com.au/whats-new/publications-reports/the-blue-book.aspx Vol 2 - http://www.environment.nsw.gov.au/stormwater/publications.htm
Landslide risk management guidelines	http://www.australiangeomechanics.org/resources/downloads/
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.mincos.gov.au/publications/australian_and_new_zealand_guidelines_for_fresh_and_marine_water_quality
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/approved_methods-water.pdf



Office of
Environment
& Heritage

Your reference: SSD-6249
Our reference: DOC13/85694
Contact: Rachel Lonie, 99956837

Mr Nicholas Hall
A/Manager Industry
Development Assessment Systems and Approvals
Department of Planning and Infrastructure
GPO Box 39
Sydney NSW 2001

Attention: Ashley Cheong

Dear Mr Hall

I refer to your letter received 22 November 2013 by the Office of Environment and Heritage (OEH) requesting input on Environmental Assessment Requirements for an Environmental Impact Statement to be prepared for the Glenfield Waste Site, Glenfield (SSD 6249).

OEH has reviewed the Supporting Documentation report dated November 2013 and provides advice in relation to biodiversity and Aboriginal cultural heritage matters in Attachment 1. It is noted that OEH has provided comment (dated 06/11/13) to Campbelltown Council on a draft Planning Proposal for the Glenfield Waste Site. These comments are relevant to this state significant development (SSD) proposal and include recommendations for further biodiversity and Aboriginal heritage survey and assessment.

Although development as proposed may be permitted with consent under the existing zone it is recommended that the planning proposal be progressed prior to, or concurrent with, this SSD proposal. This is because OEH considers biodiversity and Aboriginal heritage issues are relevant to both proposals and resolution of the future zoning of the land should include resolving the extent of the area to be zoned RE1 as proposed in the draft Campbelltown LEP 2013 as the current SSD proposal appears to extending into the RE1 area.

If you have any queries regarding this advice please contact Rachel Lonie, Conservation Planning Officer on 9995 6837 or by email at rachel.lonie@environment.nsw.gov.au (note work days are Monday and Wednesday only).

Yours sincerely

S. Harrison 04/12/13

SUSAN HARRISON
Senior Team Leader Planning
Greater Sydney Region
Regional Operations

The flora and fauna assessment should be used as the basis for determining the biodiversity values by assessing the:

- conservation significance of the remnant vegetation communities on site. The criteria for establishing significance should be documented;
- recovery potential and ecological role of cleared land and areas supporting modified vegetation. This should enable further consideration of linkages that could be made as part of the development and assessments of priorities for improving the condition of remnant vegetation on site. In undertaking this assessment it is recommended that relevant areas be compartmentalised into land units classified into categories of high, moderate and low recovery potential; and
- significance of habitat for threatened species and regionally and locally significant fauna and flora species.

These assessments should be compiled into a single map indicating areas of high, moderate or low biodiversity value.

The flora and fauna assessment should assist to inform which parts of the site have more capability for development and which require protection to avoid an adverse impact on threatened species and communities. OEH recommends that areas of high and moderate conservation value be managed to ensure that no development or activity results in adverse impacts or loss of value. For these areas, OEH recommends the application of environmental protection zones with appropriate minimum lot sizes. It should be noted that OEH does not consider the use of development controls at the development stage alone is sufficient to protect the biodiversity values present on the site.

Council's attention is drawn to OEH's *Principles for the use of biodiversity offsets in NSW* (available at www.environment.nsw.gov.au/biocertification/offsets.htm) which identifies that impacts must be avoided first by using prevention and mitigation measures. OEH recommends that any offsetting for unavoidable direct and indirect impacts be assessed in accordance with these principles. OEH also recommends that the Biodiversity Certification Assessment Methodology (BCAM) or Biobanking Assessment Methodology (BBAM) be used to develop any proposed offsetting measures as they are considered best practice.

OEH further recommends that any management and restoration of CPW adopt the best practice standards contained in the *Cumberland Plain Recovery Plan* (DECCW, 2010) and *Recovering Bushland on the Cumberland Plain: Best Practice Guidelines for the Management and Restoration of Bushland* (DEC 2005).

On a specific matter, it was noted in the advice on the draft Planning Proposal that the Ecological Assessment referred to the "recent offset approvals in the area include the OEH and DP&I in 2011 agreeing to ARTC's offset restoration proposal for enhancement planting at Leacock Regional Park as compensation for the removal of EEC's outside the park's boundary". Council was advised that this was not an inappropriate example of an offset as it was likely linked to the revocation of land in Leacock Regional Park and was therefore a one off measure to offset land from the Regional Park.

2.0 Aboriginal Cultural Heritage

As advised on the draft Planning Proposal, OEH considers that the Aboriginal Heritage Assessment report is a thorough preliminary assessment but does not provide enough information about potential archaeological or cultural values within the proposed re-zoning area for OEH to support the statement that there are no Aboriginal cultural heritage constraints.

4 December 2013

Department's Ref: SSD-6249 Our Ref:SYD13/01369
File Number: A5637969 Contact: Xi Lin

A/Manager - Industry
Development Assessment System and Approvals
NSW Department of Planning & Infrastructure
GPO Box 39
Sydney NSW 2001

Attention: Ashley Cheong

**GWS MATERIALS RECYCLING FACILITY, GLENFIELD
(SSD 13_6249)- REQUEST FOR KEY ISSUES AN ASSESSMENT REQUIREMENTS**

Dear Mr Hall,

I refer to the Department's letter of 21 November r 2013 (Ref:SSD13_6249) requesting the Roads and Maritime Services (RMS) to provide details of key issues and assessment requirements regarding the abovementioned development for inclusion in the Director General's Environmental Assessment (EA) requirements.

The RMS has reviewed the above request and would like 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, including peak traffic movements and the need / associated funding for upgrading or road improvement works (if required).
2. Trip assignments on the regional road network in the AM and PM peak periods.
3. Details of the proposed accesses 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. In due course the provision of a Construction Traffic Management Plan (CTMP) will be required for all demolition / construction activities, detailing vehicle routes, number of trucks, hours of operation, access arrangements and traffic control measures.

Further enquiries on this matter can be directed to the nominated Development Assessment Officer Xi Lin on phone 8849 2906 or via email at xi.lin@rms.nsw.gov.au.

Yours sincerely,



James Hall
**Senior Land Use Planner
Transport Planning, Sydney Region**

Roads & Maritime Services

Comment by Crown Lands

It is noted the site borders the Georges River which is Crown waterway. Crown Lands advise no particular requirements for the Study, but will be interested in any potential impacts on the waterway when considering the final exhibited environmental assessment.

For further information please contact Rebecca Johnson Coordinator Client Services (Newcastle office) on 4920 5040, or: rebecca.johnson@lands.nsw.gov.au.

Comment by Fisheries NSW

Fisheries NSW is responsible for ensuring that fish stocks are conserved and that there is no net loss of key fish habitats upon which they depend. To achieve this, Fisheries NSW ensures that developments comply with the requirements of the *Fisheries Management Act 1994* (namely the aquatic habitat protection and threatened species provisions in Parts 7 and 7A of the Act, respectively), and the associated *Policy and Guidelines for Aquatic Habitat Management and Fish Conservation (1999)*. In addition, Fisheries NSW is responsible for ensuring the sustainable management of commercial and recreational fishing in NSW.

The Georges River is important key fish habitat within south-west Sydney and Fisheries NSW recommends the project is designed to:

- (i) minimise potential erosion and sedimentation and water quality impacts to the river during construction and in the operation of the facility, and
- (ii) maintain a minimum 50 metre wide vegetated buffer zone to the river.

Fisheries NSW recommends that development proposals comply with the *Policy and Guidelines for Fish Habitat Conservation and Management (2013)*. A list of general information requirements for developments and standard precautions and mitigation measures are outlined in Section 3.1 of this document. Refer: <http://www.dpi.nsw.gov.au/fisheries/habitat/publications/policies,-guidelines-and-manuals/fish-habitat-conservation>

For further information please contact Carla Ganassin, Conservation Manager (Wollongong office) on 4254 5527, or at: carla.ganassin@industry.nsw.gov.au.

Comment by NSW Office of Water

The NSW Office of Water provides the following comments, and the detailed requirements in Attachment A.

It is recommended that the environmental assessment include:

- (i) Assessment of impacts on surface and ground water sources (both quality and quantity), watercourses and riparian land, and measures proposed to reduce and mitigate these impacts.
- (ii) Proposed surface and groundwater monitoring.
- (iii) Details of water proposed to be taken (including through inflow and seepage) from each water source as defined by the relevant water sharing plan.
- (iv) Assessment of any water licensing requirements.

- (v) A detailed and consolidated site water balance.
- (vi) Consideration of relevant policies and guidelines.

For further information please contact Janne Grose, Planning and Assessment Coordinator (Penrith office) on 4729 8262, or at: Janne.Grose@water.nsw.gov.au.

Attachment A
Glenfield Recycling Facility (SSD-6249)
Request for Input into Director General Requirements
Detailed comment by the NSW Office of Water

Relevant Legislation

The Environmental Impact Statement (EIS) should take into account the objects and regulatory requirements of the *Water Act 1912* and *Water Management Act 2000* (WMA 2000), as applicable. Proposals and management plans should be consistent with the Objects (s.3) and Water Management Principles (s.5) of the WMA.

Water Sharing Plans (WSPs)

The proposal is located within the area covered by the *Water Sharing Plan for the Greater Metropolitan Region Unregulated River Water Sources* and the *Water Sharing Plan for the Greater Metropolitan Region Groundwater sources*. The EIS is required to:

- Demonstrate how the proposal is consistent with the relevant rules of the WSP including rules for access licences, distance restrictions for water supply works and rules for the management of local impacts in respect of surface water and groundwater sources, ecosystem protection, water quality and surface-groundwater connectivity.
- Provide a description of any site water use (amount of water from each water source) and management including all sediment dams, clear water diversion structures with detail on the location, design specifications and storage capacities for all the existing and proposed water management structures.
- Provide an analysis of the proposed water supply arrangements against the rules for access licences and other applicable requirements of any relevant WSP
- Provide a detailed and consolidated site water balance.

Relevant Policies and Guidelines

The EIS should take into account the following policies (as applicable):

- Guidelines for Controlled Activities on Waterfront Land (2012)
- Aquifer Interference Policy (2012)
- NSW State Rivers and Estuary Policy (1993)
- NSW State Groundwater Policy Framework Document (1997)
- NSW State Groundwater Quality Protection Policy (1998)
- NSW State Groundwater Dependent Ecosystems Policy (2002)
- Department of Primary Industries Risk Assessment Guidelines for Groundwater Dependent Ecosystems (2012).

Refer:

<http://www.water.nsw.gov.au/Water-management/Law-and-policy/Key-policies/default.aspx>

The EIS needs to demonstrate the proposal is consistent with the spirit and principles of these policy documents.

Licensing Considerations

Section 6.4 of the Supporting Documentation report notes stormwater runoff from the site will pass through sedimentation and water quality controls and then will be piped into a retention

pond. The report indicates the retention pond will provide adequate available water for operational requirements across the site. The EIS is required to provide:

- Details of the water supply source(s) for the proposal including any proposed surface water and groundwater extraction and all water supply works to take water.
- Information on the purpose, location, construction and expected annual extraction volumes including details on all existing and proposed water supply works which take surface water, (pumps, dams, diversions, etc).
- Details on all bores and excavations for the purpose of investigation, extraction, dewatering, testing and monitoring and an approval obtained from the Office of Water prior to their installation. All predicted groundwater take must be accounted for through adequate licensing.
- Details on existing dams/storages (including the date of construction, location, purpose, size and capacity) and any proposal to change the purpose of existing dams/storages.
- Details on the location, purpose, size and capacity of any new proposed dams/storages.

Water allocation account management rules, total daily extraction limits and rules governing environmental protection and access licence dealings also need to be considered.

The Harvestable Right gives landholders the right to capture and use for any purpose 10% of the average annual runoff from their property. The Harvestable Right has been defined in terms of an equivalent dam capacity called the Maximum Harvestable Right Dam Capacity (MHRDC). The MHRDC is determined by the area of the property (in hectares) and a site-specific run-off factor. The MHRDC includes the capacity of all existing dams on the property that do not have a current water licence. Storages capturing up to the harvestable right capacity are not required to be licensed but any capacity of the total of all storages/dams on the property greater than the MHRDC may require a licence.

It is suggested any stormwater runoff from off site is diverted around the site.

Groundwater Assessment

Section 6.4 of the Supporting Documentation report notes a Flood and Stormwater Management Assessment will assess groundwater (page 24). To ensure the sustainable and integrated management of groundwater sources, the EIS needs to include adequate details to assess the impact of the project on all groundwater sources including:

- the predicted highest groundwater table at the site.
- any works likely to intercept, connect with or infiltrate the groundwater sources.
- any proposed groundwater extraction, including purpose, location and construction details of all proposed bores and expected annual extraction volumes.
- a description of the flow directions and rates and physical and chemical characteristics of the groundwater source.
- the predicted impacts of any final landform on the groundwater regime.
- the existing groundwater users within the area (including the environment), any potential impacts on these users and safeguard measures to mitigate impacts.
- an assessment of the quality of the groundwater for the local groundwater catchment
- an assessment of groundwater contamination (considering both the impacts of the proposal on groundwater contamination and the impacts of contamination on the proposal).
- measures proposed to protect groundwater quality, both in the short and long term.
- measures for preventing groundwater pollution so that remediation is not required.
- protective measures for any groundwater dependent ecosystems (GDEs).
- proposed methods of the disposal of waste water and approval from the relevant authority.
- the results of any models or predictive tools used.

Where potential impact/s are identified the assessment will need to identify limits to the level of impact and contingency measures that would remediate, reduce or manage potential impacts to the existing groundwater resource and any dependent groundwater environment or water users, including information on:

- any proposed monitoring programs, including water levels and quality data.
- reporting procedures for any monitoring program including mechanism for transfer of information.
- an assessment of any groundwater source/aquifer that may be sterilised from future use as a water supply as a consequence of the proposal.
- identification of any nominal thresholds as to the level of impact beyond which remedial measures or contingency plans would be initiated (this may entail water level triggers or a beneficial use category).
- description of the remedial measures or contingency plans proposed.
- any funding assurances covering the anticipated post development maintenance cost, for example on-going groundwater monitoring for the nominated period.

Groundwater Dependent Ecosystems

It is suggested the EIS considers the potential impacts on any Groundwater Dependent Ecosystems (GDEs) at the site and in the vicinity of the site. The Supporting Documentation indicates the vegetation on the site is potentially Shale Plain Woodland, a sub unit of the Cumberland Plain Woodland (page 26).

The Department of Primary Industries *Risk Assessment Guidelines for Groundwater Dependent Ecosystems* (2012) (Volume 3, Appendix 9) indicates that Cumberland Shale Plains Woodland has high probability of being a GDE. The EIS should provide details on the presence and distribution of Groundwater Dependent Ecosystems (GDEs) at the site and in the vicinity of the site and:

- identify any potential impacts on GDEs as a result of the proposal including:
 - the effect of the proposal on the recharge to groundwater systems,
 - the potential to adversely affect the water quality of the underlying groundwater system and adjoining groundwater systems in hydraulic connections, and
 - the effect on the function of GDEs (habitat, groundwater levels, connectivity).
- provide safeguard measures for any GDEs.

Watercourse and Riparian Land

The EIS should consider the *Guidelines for Controlled Activities on Waterfront Land* (2012). Figure 4.1 in the Supporting Documentation shows the Georges River and riparian vegetation occur along the eastern boundary of the recycling facility allotments boundary. The 1:25 000 Liverpool topographic map shows a first order watercourse occurs in the south eastern corner of the site which flows into the Georges River.

The EIS should address the potential impacts of the project on all watercourses likely to be affected by the project, existing riparian vegetation and the rehabilitation of riparian land. It is recommended the EIS provides details on all watercourses potentially affected by the proposal, including:

- scaled plans showing the location of:
 - top of bank;
 - riparian setbacks (measured from top of bank) to be protected and enhanced;
 - remnant riparian vegetation surrounding the watercourses (identify any areas to be protected and any native riparian vegetation proposed to be removed);
 - the site boundary, the footprint of the proposal in relation to the watercourses and riparian areas;

- proposed location of any asset protection zones
- photographs of the watercourses
- a description of potential environmental impacts on the watercourses and riparian corridors
- a description of the design features and measures to be incorporated to mitigate potential impacts.