



Mr Mario Alba
Pymore Recyclers International Pty Ltd
Level 40, 1 Farrer Place
Sydney NSW 2000

Our ref: SSD 7520
No: 16/03514

Dear Mr Alba

**Secretary's Environmental Assessment Requirements
Pymore Battery Recycling Facility, 129 Mitchell Avenue, Kurri Kurri (SSD 7520)**

I have attached the Secretary's Environmental Assessment Requirements (SEARs) for the preparation of an Environmental Impact Statement (EIS) for the above mentioned development.

The attached SEARs have been prepared in consultation with Cessnock City Council the relevant government authorities (see **Attachment 2**) and are based on the information you have provided to date. The Department will forward comments from Roads and Maritime Services and Rural Fire Service under separate cover when they become available. Please note that the Secretary may alter these SEARs at any time and that you must consult further with the Secretary if you do not lodge a development application and EIS for the development within two years of the date of issue of these SEARs.

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 it. 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.

If your development is likely to have a significant impact on matters of National Environmental Significance, it will require an approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This approval would be in addition to any approvals required under NSW legislation and it is your responsibility to contact the Department of Environment to determine if an approval under the EPBC Act is required (<http://www.environment.gov.au>).

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*);
- consultation and public exhibition arrangements; and
- determine the number of copies (hard-copy and CD-ROM) of the EIS that will be required for reviewing purposes.

If you have any enquiries about these requirements, please contact Kate Masters, Planning Services at the Department on (02) 9228 6321 or via email at kate.masters@planning.nsw.gov.au

Yours sincerely

Chris Ritchie
Director

Industry Assessments
as delegate of the Secretary

18/3/16.

Secretary's Environmental Assessment Requirements

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

State Significant Development

Application Number	SSD 7520
Development	Construction and operation of a resource recovery facility for used acid lead battery recycling with a throughput of 60,000 tonnes per annum.
Location	129 Mitchell Avenue, Kurri Kurri (Lots 796 and 797, DP 39877)
Applicant	Pymore Recyclers International Pty Ltd
Date of Issue	
General Requirements	<p>The Environmental Impact Statement (EIS) 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>. The EIS must include:</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 demolition, construction, and operational stage/s; – likely interactions between the development and existing, approved and proposed operations in the vicinity of the site; and – plans of any proposed building works. • demonstrate that the site is suitable for the proposed use in accordance with <i>State Environmental Planning Policy No 55 – Remediation of Land</i>; • consideration of all relevant environmental planning instruments, including identification and justification of any inconsistencies with these instruments; • consideration of issues discussed in Attachment 2 (public authority responses to key issues); • risk assessment of the potential environmental impacts of the development, identifying the key issues for further assessment; • a detailed description of the measures that would be implemented to minimise the adverse social and economic impacts of the project, including any infrastructure improvements or contributions and/or voluntary planning agreement or similar mechanisms; • 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, <u>using sufficient baseline data</u>; – an assessment of the potential impacts of all stages of the development, including any cumulative impacts resulting from the development and existing, approved and planned land uses in the vicinity, taking into consideration relevant guidelines, policies, plans and statutes; – 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 • a 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"> – identification of the quantity, type and classification of waste that would be handled, stored, processed or disposed of at the site; – a description of the waste processing and recycling measures, timeframes for processing and recycling and the quality control measures that would be implemented; – details of the potential impacts associated with treating, storing, using and disposing of any waste and waste products; and – an assessment of the development under the aims, objectives and guidance in the <i>NSW Waste Avoidance and Resource Recovery Strategy 2014-2021</i>. • Human Health – an assessment of the potential impacts to employees at the facility and any off-site impacts including: <ul style="list-style-type: none"> – details of measures to manage the exposure of employees to lead including the use of appropriate personal protective equipment and engineering controls at the facility to reduce exposure; – details of health monitoring of employees and awareness and education measures; – preventative measures for community exposure from the off-site transfer of contaminants; and – details of a work Health and Safety System consistent with the requirements of the <i>Work Health and Safety Regulation 2011</i>. • Hazards and Risks – including: <ul style="list-style-type: none"> – a preliminary risk screening in accordance with <i>State Environmental Planning Policy No. 33 – Hazardous and Offensive Development</i>, and <i>Applying SEPP 33 (DoP, 2011)</i>, with a clear indication of class, quantity, package size, and location of all dangerous goods and hazardous materials associated with the development; and – a Preliminary Hazard Analysis (PHA) should the preliminary risk screening indicate that the project is “potentially hazardous”. The PHA must be prepared in accordance with <i>Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis (DoP, 2011)</i>, and <i>Multi-Level Risk Assessment (DoP, 2011)</i>. • Traffic and Transport – including: <ul style="list-style-type: none"> – details of site access, internal road layout and vehicular parking required as a result of the development; – accurate predictions of the traffic generated by the development during construction and operation; – details of proposed haul routes, site access, internal roads and parking required for the development; – an assessment of the potential impacts of the development on the capacity, efficiency and safety of the road network during construction and operation; and – details of any required upgrades to road infrastructure. • Noise and Vibration – including: <ul style="list-style-type: none"> – a description of all potential noise and vibration sources during construction and operation, including road traffic noise; – a noise and vibration assessment in accordance with the relevant Environment Protection Authority Guidelines; and

- a description and appraisal of noise and vibration mitigation and monitoring measures.
- **Air and Odour** – including:
 - a quantitative air quality assessment of the potential air quality and odour impacts of the proposed development including impacts on any surrounding receivers. The assessment must consider impacts from construction and operation, and include:
 - details of the air emission inputs and outputs;
 - identification of all pollutants of concern;
 - a quantitative assessment of all potential impacts using dispersion modelling, including adequate justification and validation (where appropriate) of all model inputs and outputs;
 - a cumulative assessment of all existing and proposed emission sources; and
 - details of the proposed management and monitoring measures.
- **Soil and Water** – including:
 - a quantitative assessment of existing flooding on the site, potential impacts to and as a result of the development and proposed mitigation measures;
 - an assessment of impacts to surface and groundwater resources, soil and agricultural resources and impacts to groundwater dependent ecosystems;
 - a description of local soils, geology, topography, drainage (including flooding) and landscapes;
 - a site water balance including the details of any water supply and licencing requirements;
 - details of proposed stormwater, leachate, groundwater and waste water management, including erosion and sediment controls for the construction phase of the development;
 - wastewater predictions and the measures that would be implemented to treat, reuse and/or dispose of this water; and
 - a description and appraisal of impact mitigation and monitoring measures.
- **Contamination** – including:
 - a preliminary investigation of the land carried out in accordance with the contaminated land planning guidelines; and if necessary;
 - a detailed investigation of the land, carried out in accordance with the contaminated land planning guidelines; and
 - a risk assessment of the potential for the proposal to contaminate drink water, ground water, surface water and rain water tanks.
- **Heritage** – including:
 - an Aboriginal cultural heritage assessment (including cultural and archaeological significance), which must demonstrate effective consultation with relevant Aboriginal community groups; and
 - a non-Aboriginal cultural heritage assessment, (including both cultural and archaeological significance) which must outline any proposed management and mitigation measures.
- **Fire and Incident Management** – including information on the equipment to be installed on the premises such as spill clean-up equipment and bushfire/fire management (including asset protection zones) and containment measures.
- **Design, Visual Impacts, Landscaping** – including details of building design and potential visual impacts from the proposed building, lighting and signage and the proposed mitigation measures to minimise these impacts such as landscaping.
- **Biodiversity** – including and assessment of the proposal under the Framework for Biodiversity Assessment (October 2014) if necessary, and an assessment of any potential impacts on any riparian vegetation and any groundwater dependent ecosystems.
- **Cumulative Impacts** – cumulative environmental impacts resulting from

	the development and existing, approved and planned land uses in the vicinity, in particular, the Hunter Ecological Industrial Park (SSD 5448), taking into consideration relevant guidelines, policies, plans and statutes.
Plans and Documents	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> . Those documents should be included as part of the EIS rather than as separate documents.
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. In particular you must consult with:</p> <ul style="list-style-type: none"> • Cessnock City Council; • Environment Protection Authority; • WorkCover NSW; • Hunter New England Local Health District; • Department of Primary Industries, including NSW Office of Water; • Office of Environment and Heritage; • Roads and Maritime Services; and • surrounding landowners and occupiers that may be affected by the proposal. <p>The EIS must describe the consultation process and the issues raised, and identify where the development has been amended in response to those issues. Where amendments have not been made to address an issue, an 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 SEARs, you must consult with the Secretary in relation to any further 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.epa.nsw.gov.au/>

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

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

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:
 - significant local features such as heritage items;
 - the location and uses of existing buildings, shopping and employment areas; and
 - traffic and road patterns, pedestrian routes and public transport nodes.
3. 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
 - Additional copies as determined by the Department once the development application is lodged
-

Policies, Guidelines and Plans

Aspect	Policy /Methodology
--------	---------------------

Waste	
--------------	--

	Waste Avoidance and Resource Recovery Strategy 2014-2021 (EPA)
	Waste Classification Guidelines (DECC)
	Environmental Guidelines: Assessment Classification and Management of Non-Liquid and Liquid Waste (NSW EPA)
	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)
	EPA's Environmental Guidelines: Solid Waste Landfills
	State Environmental Planning Policy (Infrastructure) 2007

Human Health	
---------------------	--

	Work Health and Safety Regulation 2011 (WHS Regulation)
	Managing risks of hazardous chemicals in the workplace (Safe Work Australia, July 2014)
	Environmental Health Risk Assessment: Guidelines for assessing human health risk from environmental hazards (2012).

Hazard and Risk	
------------------------	--

	AS/NZS 4360:2004 Risk Management
	HB 203:2006 Environmental Risk Management – Principals and Process
	State Environmental Planning Policy No 33 – Hazardous and Offensive Development (SEPP 33)
	Planning Advisory Paper No. 6 – Guidelines for Hazardous Analysis (DUAP)
	Planning Advisory Paper No. 4 – Risk Criteria for Land Use Safety Planning (DUAP)

Traffic and Transport	
------------------------------	--

	Guide to Traffic Generating Development (RTA)
	Road Design Guide (RTA)

Noise and Vibration	
----------------------------	--

	Assessing Vibration: a technical guide (DEC)
	NSW Industrial Noise Policy (DECC)
	Environmental Criteria for Road Traffic Noise (NSW EPA)
	Rail Infrastructure Noise Guidelines (EPA)
	Environmental Noise Control Manual (DECC)
	Interim Construction Noise Guideline (DECC)
	Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZEC)

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)
	TRC (2011), Generic Guidance and Optimum Model Settings for the CALPUFF Modelling System for Inclusion into the 'Approved Methods for the Modelling and Assessment of Air Pollutants in NSW, Australia'

Odour	
--------------	--

	Technical Framework: Assessment and Management of Odour from Stationary
--	---

Policies, Guidelines and Plans

Aspect

Policy /Methodology

Sources in NSW (DEC)

Technical Notes: Assessment and Management of Odour from Stationary Sources in NSW (DEC)

Soil and Water

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

Surface Water

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)

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)

Groundwater

National Water Quality Management Strategy Guidelines for Groundwater Protection in Australia (ARMCANZ/ANZECC)

NSW State Groundwater Policy Framework Document (DLWC)

NSW State Groundwater Quality Protection Policy (DLWC)

NSW State Groundwater Quantity Management Policy (DLWC) Draft

The NSW State Groundwater Dependent Ecosystem Policy (DLWC)

Guidelines for the Assessment and Management of Groundwater Contamination (DECC) Draft

NSW Aquifer Interference Policy (NOW)

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)

Soil

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)

Rural Land Capability Map

Contamination

Policies, Guidelines and Plans

Aspect

Policy /Methodology

Contaminated Land Management Act 1997.
State Environmental Planning Policy 55 – Remediation of Land
Guidelines for Consultants Reporting on Contaminated Sites (EPA, 2000).
Guidelines for the NSW Site Auditor Scheme - 2nd edition (DEC, 2006).
Sampling Design Guidelines (EPA, 1995 and, National Environment Protection (Assessment of Site Contamination) Measure 1999 (April 2013).

Fire

Planning for Bush Fire Protection 2006

Heritage

Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH, 2011)
Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010)
Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW, 2010)

Design and Visual

Control of Obtrusive Effects of Outdoor Lighting (Standards Australia, AS 4282)
State Environmental Planning Policy No 64 - Advertising and Signage
AS/NZS 4360:2004 Risk Management
HB 203:2006 Environmental Risk Management – Principals and Process
State Environmental Planning Policy No 33 – Hazardous and Offensive Development (SEPP 33)
Planning Advisory Paper No. 6 – Guidelines for Hazardous Analysis (DUAP)
Planning Advisory Paper No. 4 – Risk Criteria for Land Use Safety Planning (DUAP)

Biodiversity

NSW Biodiversity Offsets Policy for Major Projects (2014) and the Framework for Biodiversity Assessment

Greenhouse Gas

AGO Factors and Methods Workbook (AGO)
Guidelines for Energy Savings Action Plans (DEUS, 2005)

ATTACHMENT 2
Public Authority Responses to Request for Key Issues

Kate Masters

From: Battye, Andrew <Andrew.Battye@safework.nsw.gov.au>
Sent: Monday, 14 March 2016 1:14 PM
To: Kate Masters
Subject: RE: Request for Secretary's Environmental Assessment Requirements (SEARs) Battery Recycling Facility Kurri Kurri SSD 7520 - Cessnock LGA

Security Classification:UNCLASSIFIED

Hi Kate,

The proposed battery recycling facility in Kurri Kurri will be using similar technology to that used at the RMT facility in Wagga Wagga. Therefore, the SEAR should contain WHS requirements that can adequately control high worker exposure to lead and prevent community health risks from potential off-site contamination with lead.

The preliminary EIA on the Kurri facility by EMM Consulting concludes that "impacts to employee health" is ranked as a "Moderate" priority and "off-site (human) health impacts" as a "Low" priority. With the challenges that were faced a few years ago in controlling employee exposure to lead at RMT Wagga, in considering the current SafeWork Australia proposals to revise national lead exposure limits and the generally strong public health concerns on off-site community exposures to lead, it is recommended that:

Work Health and Safety (WHS) must be considered as a "High" priority in the SEAR.

The WHS considerations in the SEAR should include, but not be limited to, (1) assessments of potential exposure to lead particularly during the crushing, screening and separating processes, (2) contamination of workplace amenities and (3) preventing community exposures from off-site transfer of contaminants. WHS regulatory requirements to comply with workplace exposure standards for lead and health monitoring for blood lead levels should be addressed in this context.

Trust this is helpful – if you have any further questions please let me know.

Thanks

Regards

Andrew Battye

A/Team Manager

Hazardous Chemical Services

SafeWork NSW

p 02 8867 2740 | m 0434 602 586

e Andrew.battye@safework.nsw.gov.au | www.safework.nsw.gov.au

Level 4 , 2 Burbank Place, Baulkham Hills NSW 2153



SafeWork NSW



**Department of
Primary Industries**

OUT16/11705

Ms Kate Masters
Industry Assessments
NSW Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Kate.Masters@planning.nsw.gov.au

Dear Ms Masters,

**Battery Recycling Facility, Kurri Kurri (SSD_7520)
Request for Secretary's Environmental Assessment Requirements**

I refer to your email dated 23 February 2016 to the Department of Primary Industries in respect to the above matter.

Comment by DPI Agriculture

DPI Agriculture notes that the proposed facility is adjacent to agricultural land (RU2). In an effort to not sterilize this land it is requested that full consideration of any impacts from the proposal on the land are captured within the EIS. Impacts may include water contamination, dust, soil erosion, sedimentation, weed and pest management, noise, traffic impacts, visual and lighting impacts and bushfire risks.

In particular, it is recommended that the EIS include:

- A water management plan including measures to prevent contamination,
- Mitigation measures to prevent excessive dust, soil erosion and sedimentation, including measures to strip and maintain the viability of the topsoil,
- Measures to manage weed and pest infestation including the management of vehicles that harbour weeds and pests,
- Proposed access routes and arrangements and associated noise and traffic impacts on farm residences and farming operations in the vicinity,
- Visual and lighting impacts on nearby farm residences and farming operations, and
- A plan to prevent, control and manage bushfire incidents.

Further detail on all issues outlined can be found in the document *Agricultural Issues for Landfill Developments at:*
http://www.dpi.nsw.gov.au/data/assets/pdf_file/0011/358985/Agricultural-issues-for-landfill-developments.pdf.

For further information please contact Helen Squires, Resource Management Officer – Hunter on 4939 8962 or at: helen.squires@dpi.nsw.gov.au.

Comments by DPI Water

DPI Water has reviewed the supporting documentation accompanying the request for Secretary's Environmental Assessment Requirements (SEARs) and provides the following comments, and further detail in **Attachment A**.

It is recommended that the EIS be required to include:

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

For further information please contact Alison Collaros, Senior Water Regulation Officer, [Newcastle Office], on 4904 2527 or at alison.collaros@dpi.nsw.gov.au.

Comment by DPI Lands

There is no Crown land or road incorporated in the proposed development on Lots 796 & 797 DP 39877.

The development site is adjoined to the east by Lot 87 DP 755231 forming part Reserve 63332 for night soil depot notified 6 May 1932 and part Reserve 89278 for

public pound purposes notified 6 September 1974. Management of Reserve 63332 is by the Kurri Kurri Night Soil Depot Reserve Trust, which is administered by Cessnock City Council. Management of Reserve 89278 defaults to DPI Lands.

Lot 87 is subject to Aboriginal Land Claim 18713 lodged 3 August 2009 by the Mindaribba Local Aboriginal Land Council.

Lot 87 is adjoined to the east by Lot 262 DP 755231 forming part Reserve 39718 for night soil depot notified 30 September 1905. Management of Reserve 39718 devolves to Cessnock City Council. Based on air photos it is assumed that the dog kennels referred to in the report are located on Lot 262 and are approximately 120m from the proposed development site. An unformed Crown public road adjoins the eastern boundary of the development site and the northern boundary of Lot 87.

Due to potential contamination risks associated with the development (i.e. lead) DPI Lands requests the following points be discussed in the Environmental Impact Statement:

- Access routes
- Drainage
- Buffer zones
- Asset protection zones
- Environmental monitoring regime, including air and water quality

Given their interests in the above Crown land, both Cessnock City Council (in their capacity as Managers of Reserve 39718 and the Kurri Kurri Night Soil Depot Reserve Trust) and the Mindaribba Local Aboriginal Land Council should be consulted during the preparation of the EIS.

For further information please contact Andrew Petroeschovsky, Senior Natural Resource Management Officer, (Grafton Office) on 6642 9214 or at andrew.petroeschovsky@crowland.nsw.gov.au.

Yours sincerely



Mitchell Isaacs
Director, Planning Policy & Assessment Advice
07/03/2016

Attachment A

Battery Recycling Facility, Kurri Kurri (SSD_7520) Request for Secretary's Environment Assessment Requirements DPI Water - General Assessment Requirements for general projects

The following detailed assessment requirements are provided to assist in adequately addressing the assessment requirements for this proposal.

For further information visit the DPI Water website, www.water.nsw.gov.au

Key Relevant Legislative Instruments

This section provides a basic summary to aid proponents in the development of an Environmental Impact Statement (EIS), and should not be considered a complete list or comprehensive summary of relevant legislative instruments that may apply to the regulation of water resources for a project.

The EIS should take into account the objects and regulatory requirements of the *Water Act 1912* (WA 1912) and *Water Management Act 2000* (WMA 2000), and associated regulations and instruments, as applicable.

Water Management Act 2000 (WMA 2000)

Key points:

- Volumetric licensing in areas covered by water sharing plans,
- Works within 40m of waterfront land,
- SSD & SSI projects are exempt from requiring water supply work approvals and controlled activity approvals as a result of the *Environmental Planning & Assessment Act 1979 (EP&A Act)*,
- No exemptions for volumetric licensing apply as a result of the *EP&A Act*,
- Basic landholder rights, including harvestable rights dams,
- Aquifer interference activity approval and flood management work approval provisions have not yet commenced and are regulated by the *Water Act 1912*,
- Maximum penalties of \$2.2 million plus \$264,000 for each day an offence continues apply under the *WMA 2000*.

Water Act 1912 (WA 1912)

Key points:

- Volumetric licensing in areas where no water sharing plan applies,
- Monitoring bores,
- Aquifer interference activities that are not regulated as a water supply work under the *WMA 2000*,
- Flood management works,
- No exemptions apply to licences or permits under the *WA 1912* as a result of the *EP&A Act*,
- Regulation of water bore driller licensing.

Water Management (General) Regulation 2011

Key points:

- Provides various exemptions for volumetric licensing and activity approvals,
- Provides further detail on requirements for dealings and applications.

Water Sharing Plans – these are considered regulations under the *WMA 2000*

Access Licence Dealing Principles Order 2004

Harvestable Rights Orders

Embargo Orders

Water Sharing Plans

It is important that the proponent understands and describes the ground and surface water sharing plans, water sources, and management zones that apply to the project. The relevant water sharing plans can be determined spatially at www.ourwater.nsw.gov.au. Multiple water sharing plans may apply and these must all be described.

The *Water Act 1912* applies to all water sources not yet covered by a commenced water sharing plan. It is noted that non-alluvial groundwater at the site is within the area covered by the Draft Water Sharing Plan for the North Coast Fractured and Porous Rock Water Sources. The Draft plan is currently on exhibition and is due for implementation in 2016. Until the Plan is implemented, groundwater will continue to be managed under the *Water Act 1912*.

The EIS is required to:

- Demonstrate how the proposal is consistent with the relevant rules of the Water Sharing Plan 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 (including groundwater dependent ecosystems), water quality and surface-groundwater connectivity.
- Provide a description of any site water use (amount of water to be taken 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, including:
 - Sufficient market depth to acquire the necessary entitlements for each water source.
 - Ability to carry out a “dealing” to transfer the water to relevant location under the rules of the WSP.
 - Daily and long-term access rules.
 - Account management and carryover provisions.
- Provide a detailed and consolidated site water balance.
- Further detail on licensing requirements is provided below.

Relevant Policies and Guidelines

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

- NSW Guidelines for Controlled Activities on Waterfront Land (NOW, 2012)
- NSW Aquifer Interference Policy (NOW, 2012)
- Risk Assessment Guidelines for Groundwater Dependent Ecosystems (NOW, 2012)
- Australian Groundwater Modelling Guidelines (NWC, 2012)
- NSW State Rivers and Estuary Policy (1993)
- NSW Wetlands Policy (2010)
- NSW State Groundwater Policy Framework Document (1997)
- NSW State Groundwater Quality Protection Policy (1998)

- NSW State Groundwater Dependent Ecosystems Policy (2002)
- NSW Water Extraction Monitoring Policy (2007)

DPI Water policies can be accessed at the following links:

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

An assessment framework for the NSW Aquifer Interference Policy can be found online at: <http://www.water.nsw.gov.au/Water-management/Law-and-policy/Key-policies/Aquifer-interference>.

Licensing Considerations

The EIS is required to provide:

- Identification of water requirements for the life of the project in terms of both volume and timing (including predictions of potential ongoing groundwater take following the cessation of operations at the site – such as evaporative loss from open voids or inflows).
- Details of the water supply source(s) for the proposal including any proposed surface water and groundwater extraction from each water source as defined in the relevant Water Sharing Plan/s and all water supply works to take water.
- Explanation of how the required water entitlements will be obtained (i.e. through a new or existing licence/s, trading on the water market, controlled allocations etc.).
- 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. 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.
- Applicability of any exemptions under the *Water Management (General) Regulation 2011* to the project.

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.

For more information on Harvestable Right dams, including a calculator, visit:

<http://www.water.nsw.gov.au/Water-licensing/Basic-water-rights/Harvesting-runoff/Harvesting-runoff>

Dam Safety

Where new or modified dams are proposed, or where new development will occur below an existing dam, the NSW Dams Safety Committee should be consulted in relation to any safety issues that may arise. Conditions of approval may be recommended to ensure safety in relation to any new or existing dams.

See www.damsafety.nsw.gov.au for further information.

Surface Water Assessment

The predictive assessment of the impact of the proposed project on surface water sources should include the following:

- Identification of all surface water features including watercourses, wetlands and floodplains transected by or adjacent to the proposed project.
- Identification of all surface water sources as described by the relevant water sharing plan.
- Detailed description of dependent ecosystems and existing surface water users within the area, including basic landholder rights to water and adjacent/downstream licensed water users.
- Description of all works and surface infrastructure that will intercept, store, convey, or otherwise interact with surface water resources.
- Assessment of predicted impacts on the following:
 - flow of surface water, sediment movement, channel stability, and hydraulic regime,
 - water quality,
 - flood regime,
 - dependent ecosystems,
 - existing surface water users, and
 - planned environmental water and water sharing arrangements prescribed in the relevant water sharing plans.

Groundwater Assessment

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.

Where it is considered unlikely that groundwater will be intercepted or impacted (for example by infiltration), a brief site assessment and justification for the minimal impacts may be sufficient, accompanied by suitable contingency measures in place in the event that groundwater is intercepted, and appropriate measures to ensure that groundwater is not contaminated.

Where groundwater is expected to be intercepted or impacted, the following requirements should be used to assist the groundwater assessment for the proposal.

- The known or predicted highest groundwater table at the site.
- 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.
- Bore construction information is to be supplied to DPI Water by submitting a "Form A" template. DPI Water will supply "GW" registration numbers (and licence/approval numbers if required) which must be used as consistent and unique bore identifiers for all future reporting.

- A description of the watertable and groundwater pressure configuration, flow directions and rates and physical and chemical characteristics of the groundwater source (including connectivity with other groundwater and surface water sources).
- Sufficient baseline monitoring for groundwater quantity and quality for all aquifers and GDEs to establish a baseline incorporating typical temporal and spatial variations.
- 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 groundwater quality, its beneficial use classification and prediction of any impacts on groundwater quality.
- An assessment of the potential for 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

The EIS must consider the potential impacts on any 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.

Watercourses, Wetlands and Riparian Land

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:
 - wetlands/swamps, watercourses and top of bank;
 - riparian corridor widths to be established along the creeks;
 - existing riparian vegetation surrounding the watercourses (identify any areas to be protected and any riparian vegetation proposed to be removed);
 - the site boundary, the footprint of the proposal in relation to the watercourses and riparian areas; and
 - proposed location of any asset protection zones.
- Photographs of the watercourses/wetlands and a map showing the point from which the photos were taken.
- A detailed description of all potential impacts on the watercourses/riparian land.
- A detailed description of all potential impacts on the wetlands, including potential impacts to the wetlands hydrologic regime; groundwater recharge; habitat and any species that depend on the wetlands.
- A description of the design features and measures to be incorporated to mitigate potential impacts.
- Geomorphic and hydrological assessment of water courses including details of stream order (Strahler System), river style and energy regimes both in channel and on adjacent floodplains.

Landform rehabilitation

Where significant modification to landform is proposed, the EIS must include:

- Justification of the proposed final landform with regard to its impact on local and regional surface and groundwater systems;
- A detailed description of how the site would be progressively rehabilitated and integrated into the surrounding landscape;
- Outline of proposed construction and restoration of topography and surface drainage features if affected by the project; and
- An outline of the measures to be put in place to ensure that sufficient resources are available to implement the proposed rehabilitation.

Consultation and general enquiries

General licensing enquiries can be made to Advisory Services: water.enquiries@dpi.nsw.gov.au, 1800 353 104.

Assessment or state significant development enquiries, or requests for review or consultation should be directed to the Strategic Stakeholder Liaison Unit, water.referrals@dpi.nsw.gov.au.

A consultation guideline and further information is available online at: www.water.nsw.gov.au/water-management/law-and-policy/planning-and-assessment

End Attachment A



8 March 2016

Kate Masters, Senior Planner
Industry Assessments
Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Contact: Mr Peter Giannopoulos
Our Ref: AD2016/005970
Your Ref: SSD 7520 Battery Recycling Facility
Kurri Kurri

Dear Ms Masters

Request for Secretary's Environmental Assessment Requirements (SEARs) in Relation to Proposed to a Proposed Battery Recycling Facility

State Significant Development SSD 7520 – 129 Mitchell Avenue, Kurri Kurri

I refer to your e-mail of 23 February 2016 whereby you advised that EMM Consulting on behalf of Pymore Recyclers International Pty Ltd, have lodged a request for Secretary's Environmental Assessment Requirements (SEARs) in relation to a proposal to construct a facility to recycle batteries at the abovementioned site.

Council appreciates your invitation to comment on the proposed development. In this regard, the following information is intended to assist with the preparation of your assessment requirements:

Pollution and Health

Based on Basel recommendations 33(c), batteries should be drained and prepared for recycling; batteries should be identified and segregated; batteries must be stored in a proper building or covered place which must have a minimum set of characteristics, as follows:

- i) it must have an impermeable and acid-resistant floor;
- ii) it must have an efficient water collection system which directs spilled solutions toward the effluent or acid electrolyte treatment plant;
- iii) it should have only one entrance in and one exit, which should stay closed unless otherwise necessary, in order to avoid dust release;
- iv) it should have a special gas collection system, which filters the air to remove lead dusts and at the same time renews the air inside the hangar in order to avoid the concentration of toxic gases;

- v) It must be provided with appropriate fire fighting equipment; and
- vi) only authorised personnel should be allowed to enter the storage area.

Type of Processing on Site

The actual type of processing needs to be stipulated. As outlined below, there are increased environmental risks depending on the type of processing.

Classic methodologies of lead recycling processes, including water-jacket blast furnaces, reverberatory furnaces, electric arc furnaces, and short and long rotary furnaces, do not require battery breakage before the smelting process. The drained batteries are entered directly into the recycling process since pyrometallurgical techniques accept organic materials and other substances, which are burned or incorporated into the slag.

Noise

Hours of operation will be a critical issue as there are sensitive receptors along Mitchell Avenue, Kurri Kurri. For example, Council recently granted consent to a 24 hour gym, and has since received complaints in relation to the noise generated from the facility. It is acknowledged that the proposed facility will operate differently to a gym and will generate a different type of noise/s, however, it is important that any Acoustic Report prepared gives consideration to the sensitive receptors within the locality.

Air Emissions

Air quality monitoring stations are recommended on site to ascertain the level of particulates. Local exhaust ventilation sites should also be monitored.

Fire Risk

It should be noted that fire is an environmental hazard in battery recycling. Most consumer batteries have the potential to short-circuit if the terminals come in contact with one another, for example, li-ion batteries being mixed with lead acid can cause fires, leading to explosion and personal injury.

Bunding

Standard car batteries are composed primarily of lead plates and sulfuric acid, both of which are harmful to the environment.

Appropriate bunding should be installed in the following areas:

- Battery delivery dock
- Chemical storage
- Battery stockpile area
- Truck wash down bay
- Recycling centre

Soil / Water contamination

Figure 1.2 shows Swamp Creek running along the boundary of the proposed facility.

It is recommend that leachate monitoring be installed around the perimeter of the processing buildings, as well as at various locations over the property and creek.

Effluent Treatment Plant: BASEL Recommendations

The proposed facility should install an effluent treatment station in order to treat the water that leaves the recycling facility, including waste coming from the electrolyte neutralisation, rain water, spilled water from battery storage, etc. The purpose of this is to control, protect and improve the water quality.

Trade Waste

It will be important to ascertain the type of waste to be generated on site. Usually wastes have lead contents as high as 2-5% and must be treated as hazardous wastes, even if the lead is not leachable, and thus requires a destination in a regulated hazardous waste landfill site.

Cooling tower

Confirmation will be required as to whether there is a requirement for cooling towers to be utilised at the premises (note: these are monitored by Council).

Dust control and road maintenance

If the current access road is to be utilised by trucks etc., there is a significant dust issue to be addressed. Furthermore, the current state of the road, and the proposed facility's impact on the local road network, will need to be considered.

Social impact

The social impacts of the proposal should be fully considered. Accordingly, a Social Impact Assessment should be prepared.

Traffic, Access and Parking

Consideration is required of the adequacy of the road system to accept the anticipated traffic loads as a result of operation of the proposed facility. Furthermore, local roads may require upgrading. Other considerations include the provision of on site car parking, which should be addressed via submission of a comprehensive Traffic Impact Assessment.

Flooding

As the northern portion of the site is affected by flooding, the proposed development should consider this affectation and avoid development in this vicinity. The development should also make provision for the storage of hazardous materials above the 1% AEP flood level, or provide bunding to exclude flood waters from these areas.

Drainage

The provision of On-Site Detention (OSD) and site drainage concepts will be required. OSD concepts should include calculations justifying the sizing of any OSD system.

Community consultation

Council recommends that the applicant undertakes a robust programme of public consultation to ensure all relevant stakeholders are fully aware of the proposed development and have the opportunity to put forward their views.

Thank you for the opportunity to be involved in the preparation of your requirements for SEARs.

If you require any further information please do not hesitate to contact Council's Team Leader Development Services, Mr Peter Giannopoulos on telephone 02 4993 4112.

Yours faithfully


Janine McCarthy
Development Services Manager



Office of
Environment
& Heritage

DOC16/100366-1
SSD-7520

Ms Kate Masters
Senior Planner, Industry Assessments
Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001

Dear Ms Masters

RE: INPUT INTO SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS FOR AN ENVIRONMENTAL IMPACT STATEMENT FOR PROPOSED BATTERY RECYCLING FACILITY, KURRI KURRI (SSD-7520)

I refer to your email dated 23 February 2016 inviting the Office of Environment and Heritage (OEH) to provide input into the Secretary's Environmental Assessment Requirements (SEARs) for a proposed battery recycling facility at Kurri Kurri. This project is located within the Cessnock local government area.

OEH understands that Pymore Recycles International Pty Ltd to construct a facility to recycle batteries at Kurri Kurri. The facility would have the capacity to recycle about 60,000 tonnes of used lead-acid batteries per year to recover and reuse their components. OEH acknowledges that the proposal is a State Significant Development under the *Environmental Planning and Assessment Act 1979*. The development is classified as hazardous waste facilities that transfer, store or dispose of solid or liquid waste classified in the Australian Dangerous Goods Code or medical, cytotoxic or quarantine waste that handles more than 1,000 tonnes per year of waste.

OEH has reviewed the 'Kurri Kurri Battery Recycling Facility: Request for Secretary's Environmental Assessment Requirements' report (dated 19 February 2016) and has prepared Standard SEARs which are presented in **Attachment A**. Project Specific SEARs for flooding have been provided in **Attachment B**.

Flooding Risk and Floodplain Management

The proposed development facility is located on a currently undeveloped portion of 129 Mitchell Street, Kurri Kurri. This portion of the site is partially affected by floods as small as the 50% annual exceedance probability (AEP) (an approximately two year recurrence interval flood event), approximately one third of the site is below the 1% AEP flood level and approximately two thirds of the site is below the probable maximum flood (PMF) level (Swamp Creek Floodplain Risk management Study and Plan, Worley Parsons 2013). No details are given in the preliminary documents of the proposed location of the facility within the site, however, it is likely that the whole of the operational area of the site will be below the PMF level. There is approximately five metres difference in level between a 1% AEP flood and a PMF

flood in this location (approximately 0.8 metre difference in level between a 1% AEP and 0.5% AEP). Floods in excess of the 1% AEP flood have occurred in this local government area in the recent past (2007 and 2015). There is no specific flood warning system for Swamp Creek and the peak flood is noted to occur in Abermain as little as 6 to 9 hours after water starts to rise. This gives very limited time for emergency response procedures to be implemented on site.

The site of the proposed development is very constrained with respect to floodplain management. Swamp Creek passes through the north western corner of the site and the majority of the site is below the probable maximum flood extent for this creek. OEH considers that it will be very difficult to manage risks to the environment for a development of this nature on a site with these constraints and does not support locating hazardous and offensive industries within the floodplain. The environmental assessment process will be required to address a large number of items from the various agencies and is likely to incur considerable cost. The proponent is advised to give due consideration to the flooding constraints on this site and the ability to manage the risk imposed by these constraints prior to proceeding with full environmental assessment. More suitable locations without the inherent flood risks may be available within the area.

OEH considers that it will not be feasible to mitigate the risk to the community posed by mobilisation of stored dangerous goods during a flood event. The large differential between the 1% level and the PMF level means that it is unlikely that adequate storage outside of/above the flood extent can be accommodated on site. Waste products produced by the recycling process may also be mobilised by flood events. Storage or processing of dangerous and hazardous waste is not considered to be a compatible land use for land located within the floodplain.

Swamp Creek passes through the north western corner of the site. There is the potential for contamination of the waterway from site runoff in non-flood events and stormwater management requirements would need to consider the full range of rainfall conditions to ensure that contaminated flows do not enter the waterway.

In order to provide a usable industrial facility it is also considered likely that changes to the existing site topography, using fill, will be required to produce a satisfactory building platform for construction of the required roads and processing plant. The impact of fill on flood storage and flood behaviour outside of the development will need to be adequately modelled to ensure that minimal off site impacts occur.

Aboriginal Cultural Heritage

OEH notes the existence of registered Aboriginal sites in the region containing the project area. These registered Aboriginal sites include isolated finds, artefact scatters and potential archaeological deposits (PADs). In addition to the known areas of PAD, it is acknowledged that the region containing the project area may contain landforms which might yield further evidence of Aboriginal occupation. The proponent should therefore consider any potential impacts of the proposal on regional Aboriginal cultural heritage values. The EIS should include an assessment of Aboriginal cultural values associated with the area and the cultural significance of any Aboriginal objects identified within the project area. Additionally, the EIS should consider any relationships that may exist between any sites contained within the project area and any regional Aboriginal cultural heritage values

Threatened Biodiversity

The Framework for Biodiversity Assessment was released on 1 October 2014. This project is to be assessed under this policy and must be conducted by a person accredited in accordance with section 142B(1)(c) of the *Threatened Species Conservation Act 1995* (TSC Act). Given that the Framework for Biodiversity Assessment is a relatively new state wide policy, the consultant is welcome to contact OEH with any questions they may have regarding the methodology.

The proponent will need to ensure that the biodiversity assessment is fully consistent with requirements of the Framework for Biodiversity Assessment. Guidance documents to assist with this process are provided in **Attachment C**. OEH notes that the application report, the OEH's 'Atlas of NSW Wildlife' database and/or recent records indicates that the following threatened species or endangered

populations (as per Schedules under the TSC Act) have been recorded within the development footprint or near the study area (approx. two kilometre radius): *Acacia bynoeana*, *Callistemon linearifolius*, *Eucalyptus glaucina*, *Eucalyptus parramattensis* subsp. *decadens*, *Grevillea parviflora* subsp. *parviflora*, *Rutidosia heterogama* Black Bittern, Black-necked Stork, Eastern Bent-wing Bat, Eastern Cave Bat, Eastern Freetail-bat, Flame Robin, Greater Broad-nosed Bat, Grey-crowned Babbler (eastern subspecies), Grey-headed Flying-fox, Large-eared Pied Bat, Little Bent-wing Bat, Little Lorikeet, Powerful Owl, Sooty Owl, Regent Honeyeater, Southern Myotis, Speckled Warbler, Squirrel Glider and Varied Sittella. These species should be considered in your assessment (though they should not just be restricted to these taxa as OEH notes a number of threatened species within the general locale to which the site may offer potential habitat).

OEH also notes the following endangered ecological communities may occur within the general locality: Hunter Lowland Redgum Forest in the Sydney Basin and New South Wales North Coast Bioregions, and Lower Hunter Spotted Gum-Ironbark Forest in the Sydney Basin Bioregion, and Kurri Sand Swamp Woodland in the Sydney Basin Bioregion.

If you have any further questions in relation to this matter, please contact Robert Gibson, Regional Biodiversity Conservation Officer, on 4927 3154.

Yours sincerely



7 MAR 2016

RICHARD BATH
Senior Team Leader Planning, Hunter Central Coast Region
Regional Operations

Enclosure

Attachment A – Standard Environmental Assessment Requirements

<p>Biodiversity</p> <p>1. Biodiversity impacts related to the proposed development are to be assessed and documented in accordance with the <u>Framework for Biodiversity Assessment</u>, unless otherwise agreed by OEH, by a person accredited in accordance with s142B(1)(c) of the <i>Threatened Species Conservation Act 1995</i>.</p>
<p>Aboriginal cultural heritage</p> <p>2. The EIS must identify and describe Aboriginal cultural heritage values that exist across the whole area that will be affected by the development and document these in the EIS. This may include the need for surface survey and test excavation. The identification of cultural heritage values should be guided by the <i>Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW</i> (DECCW, 2011) and consultation with OEH regional officers.</p> <p>3. Where Aboriginal cultural heritage values are identified, consultation with Aboriginal people must be undertaken and documented in accordance with the <i>Aboriginal cultural heritage consultation requirements for proponents 2010</i> (DECCW). The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the EIS.</p> <p>4. Impacts on Aboriginal cultural heritage values are to be assessed and documented in the EIS. The EIS must demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the EIS must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to OEH.</p>
<p>Historic heritage</p> <p>5. The EIS must provide a heritage assessment including but not limited to an assessment of impacts to <i>State and local heritage</i> including conservation areas, natural heritage areas, places of Aboriginal heritage value, buildings, works, relics, gardens, landscapes, views, trees should be assessed. Where impacts to State or locally significant heritage items are identified, the assessment shall:</p> <ol style="list-style-type: none"> outline the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the mitigation measures) generally consistent with the NSW Heritage Manual (1996), be undertaken by a suitably qualified heritage consultant(s) (note: where archaeological excavations are proposed the relevant consultant must meet the NSW Heritage Council's Excavation Director criteria), include a statement of heritage impact for all heritage items (including significance assessment), consider impacts including, but not limited to, vibration, demolition, archaeological disturbance, altered historical arrangements and access, landscape and vistas, and architectural noise treatment (as relevant), and where potential archaeological impacts have been identified develop an appropriate archaeological assessment methodology, including research design, to guide physical archaeological test excavations (terrestrial and maritime as relevant) and include the results of these test excavations.

Water and soils

6. The EIS must map the following features relevant to water and soils including:
- Acid sulfate soils (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Planning Map).
 - Rivers, streams, wetlands, estuaries (as described in Appendix 2 of the Framework for Biodiversity Assessment).
 - Groundwater.
 - Groundwater dependent ecosystems.
 - Proposed intake and discharge locations.
7. The EIS must describe background conditions for any water resource likely to be affected by the development, including:
- Existing surface and groundwater.
 - Hydrology, including volume, frequency and quality of discharges at proposed intake and discharge locations.
 - Water Quality Objectives (as endorsed by the NSW Government www.environment.nsw.gov.au/ieo/index.htm) including groundwater as appropriate that represent the community's uses and values for the receiving waters.
 - Indicators and trigger values/criteria for the environmental values identified at (c) in accordance with the ANZECC (2000) Guidelines for Fresh and Marine Water Quality and/or local objectives, criteria or targets endorsed by the NSW Government.
8. The EIS must assess the impacts of the development on water quality, including:
- The nature and degree of impact on receiving waters for both surface and groundwater, demonstrating how the development protects the Water Quality Objectives where they are currently being achieved, and contributes towards achievement of the Water Quality Objectives over time where they are currently not being achieved. This should include an assessment of the mitigating effects of proposed stormwater and wastewater management during and after construction.
 - Identification of proposed monitoring of water quality.
9. The EIS must assess the impact of the development on hydrology, including:
- Water balance including quantity, quality and source.
 - Effects to downstream rivers, wetlands, estuaries, marine waters and floodplain areas.
 - Effects to downstream water-dependent fauna and flora including groundwater dependent ecosystems.
 - Impacts to natural processes and functions within rivers, wetlands, estuaries and floodplains that affect river system and landscape health such as nutrient flow, aquatic connectivity and access to habitat for spawning and refuge (e.g. river benches).
 - Changes to environmental water availability, both regulated/licensed and unregulated/rules-based sources of such water.
 - Mitigating effects of proposed stormwater and wastewater management during and after construction on hydrological attributes such as volumes, flow rates, management methods and re-use options.
 - Identification of proposed monitoring of hydrological attributes.

Flooding and coastal erosion

10. The EIS must map the following features relevant to flooding as described in the Floodplain Development Manual 2005 (NSW Government 2005) including:
 - a. Flood prone land
 - b. Flood planning area, the area below the flood planning level.
 - c. Hydraulic categorisation (floodways and flood storage areas).
11. The EIS must describe flood assessment and modelling undertaken in determining the design flood levels for events, including a minimum of the 1 in 10 year, 1 in 100 year flood levels and the probable maximum flood, or an equivalent extreme event.
12. The EIS must model the effect of the proposed development (including fill) on the flood behaviour under the following scenarios:
 - a. Current flood behaviour for a range of design events as identified in 8) above. The 1 in 200 and 1 in 500 year flood events as proxies for assessing sensitivity to an increase in rainfall intensity of flood producing rainfall events due to climate change.
13. Modelling in the EIS must consider and document:
 - a. The impact on existing flood behaviour for a full range of flood events including up to the probable maximum flood.
 - b. Impacts of the development on flood behaviour resulting in detrimental changes in potential flood affection of other developments or land. This may include redirection of flow, flow velocities, flood levels, hazards and hydraulic categories.
 - c. Relevant provisions of the NSW Floodplain Development Manual 2005.
14. The EIS must assess the impacts on the proposed development on flood behaviour, including:
 - a. Whether there will be detrimental increases in the potential flood affectation of other properties, assets and infrastructure.
 - b. Consistency with Council floodplain risk management plans.
 - c. Compatibility with the flood hazard of the land.
 - d. Compatibility with the hydraulic functions of flow conveyance in floodways and storage in flood storage areas of the land.
 - e. Whether there will be adverse effect to beneficial inundation of the floodplain environment, on, adjacent to or downstream of the site.
 - f. Whether there will be direct or indirect increase in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.
 - g. Any impacts the development may have upon existing community emergency management arrangements for flooding. These matters are to be discussed with the NSW State Emergency Service (SES) and Council.
 - h. Whether the proposal incorporates specific measures to manage risk to life from flood. These matters are to be discussed with the SES and Council.
 - i. Emergency management, evacuation and access, and contingency measures for the development considering the full range of flood risk (based upon the probable maximum flood or an equivalent extreme flood event). These matters are to be discussed with and have the support of Council and the SES.
 - j. Any impacts the development may have on the social and economic costs to the community as consequence of flooding.

Attachment B – Project Specific Requirements

1. Flooding and Floodplain Management

- A. The impact of any changes to the existing site topography including cut, fill and building construction is to be assessed by flood modelling for events up to and including the probable maximum flood (PMF). The site currently contains areas of flood storage which if filled may have off site impacts. The development is to demonstrate that it will have no impact on flood levels outside of the site boundary.
- B. The Environmental Impact Assessment is to demonstrate how the risk of mobilisation of stored dangerous/hazardous goods will be managed in a flood event, up to and including the PMF event.
- C. The Environmental Impact Assessment is to demonstrate how the risk of contamination of waterways will be managed in the event of inundation of the site during flood events up to and including the PMF. This assessment is to include both the dangerous/hazardous goods and waste products.
- D. Under SEPP 33 requirements hazard assessments are required. Hazard assessment should be undertaken in accordance with the Hazardous Industry Planning Advisory Papers (HIPAPs) and other guidelines provided by the NSW Department of Planning and Environment for Multi Level Risk Assessment. Likelihood and consequences of exposure of the facility to flood events including the 1% annual exceedance probability (AEP), 0.5% AEP, and PMF events are to be considered. Risks to the facility (economic damages), risks to human health, the bio-physical environment and the downstream waterway are to be considered.

Attachment C – Guidance material

Title	Web address
Relevant Legislation	
<i>Coastal Protection Act 1979</i>	www.legislation.nsw.gov.au/maintop/view/inforce/act+13+1979+cd+0+N
<i>Commonwealth Environment Protection and Biodiversity Conservation Act 1999</i>	www.austlii.edu.au/au/legis/cth/consol_act/epabca1999588/
<i>Environmental Planning and Assessment Act 1979</i>	www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N
<i>Fisheries Management Act 1994</i>	www.legislation.nsw.gov.au/maintop/view/inforce/act+38+1994+cd+0+N
<i>Marine Parks Act 1997</i>	www.legislation.nsw.gov.au/maintop/view/inforce/act+64+1997+cd+0+N
<i>National Parks and Wildlife Act 1974</i>	www.legislation.nsw.gov.au/maintop/view/inforce/act+80+1974+cd+0+N
<i>Protection of the Environment Operations Act 1997</i>	www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N
<i>Threatened Species Conservation Act 1995</i>	www.legislation.nsw.gov.au/maintop/view/inforce/act+101+1995+cd+0+N
<i>Water Management Act 2000</i>	www.legislation.nsw.gov.au/maintop/view/inforce/act+92+2000+cd+0+N
<i>Wilderness Act 1987</i>	www.legislation.nsw.gov.au/viewtop/inforce/act+196+1987+FIRST+0+N
Biodiversity	
NSW Biodiversity Offsets Policy for Major Projects (OEH, 2013)	www.environment.nsw.gov.au/resources/biodiversity/140672biopoly.pdf
Framework for Biodiversity Assessment (OEH, 2013)	www.environment.nsw.gov.au/resources/biodiversity/140675fbapdf
Fisheries NSW policies and guidelines	www.dpi.nsw.gov.au/fisheries/habitat/publications/policies_-guidelines-and-manuals/fish-habitat-conservation
List of national parks	www.environment.nsw.gov.au/NationalParks/parksearchatoz.aspx
Revocation, re-categorisation and road adjustment policy (OEH, 2012)	www.environment.nsw.gov.au/policies/RevocationOfLandPolicy.htm
Guidelines for developments adjoining land and water managed by OEH (DECCW, 2010)	www.environment.nsw.gov.au/resources/protectedareas/10509devadideccw.pdf
Heritage	
The Burra Charter (The Australia ICOMOS charter for places of cultural significance)	http://australia.icomos.org/wp-content/uploads/The-Burra-Charter-2013-Adopted-31.10.2013.pdf
Statements of Heritage Impact 2002 (HO & DUAP)	www.environment.nsw.gov.au/resources/heritagebranch/heritage/hmstatementsofhi.pdf
NSW Heritage Manual (DUAP) 1996	www.environment.nsw.gov.au/Heritage/publications/index.htm#G-I

Aboriginal Cultural Heritage	
Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010)	www.environment.nsw.gov.au/resources/cultureheritage/commconsultation/09781ACHconsultreq.pdf
Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010)	www.environment.nsw.gov.au/resources/cultureheritage/10783FinalArchCoP.pdf
Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2011)	www.environment.nsw.gov.au/resources/cultureheritage/20110263ACHguide.pdf
Aboriginal Site Recording Form	www.environment.nsw.gov.au/resources/parks/SiteCardMainV1_1.pdf
Aboriginal Site Impact Recording Form	www.environment.nsw.gov.au/resources/cultureheritage/120558asirf.pdf
Aboriginal Heritage Information Management System (AHIMS) Registrar	www.environment.nsw.gov.au/contact/AHIMSRegistrar.htm
Care Agreement Application form	www.environment.nsw.gov.au/resources/cultureheritage/20110914TransferObject.pdf
Water and Soils	
Acid sulphate soils	
Acid Sulfate Soils Planning Maps via 'The NSW Natural Resource Atlas'	www.nratlas.nsw.gov.au/
Acid Sulfate Soils Manual (Stone et al. 1998)	www.planning.nsw.gov.au/rda/guidelines/documents/NSW%20Acid%20Sulfate%20Soils%20Planning%20Guidelines.pdf
Acid Sulfate Soils Laboratory Methods Guidelines (Ahern et al. 2004)	www.advancedenvironmentalmanagement.com/Reports/Savannah/Appendix%2015.pdf This replaces Chapter 4 of the Acid Sulfate Soils Manual above.
Flooding and Coastal Erosion	
Reforms to coastal erosion management	www.environment.nsw.gov.au/coasts/coastalerosionmgmt.htm
Floodplain development manual	www.environment.nsw.gov.au/floodplains/manual.htm
Guidelines for Preparing Coastal Zone Management Plans	Guidelines for Preparing Coastal Zone Management Plans www.environment.nsw.gov.au/resources/coasts/130224CZMPGuide.pdf
NSW Climate Impact Profile	NSW Climate Impact Profile
Climate Change Impacts and Risk Management	Climate Change Impacts and Risk Management: A Guide for Business and Government, AGIC Guidelines for Climate Change Adaptation
Water	
Water Quality Objectives	www.environment.nsw.gov.au/ieo/index.htm
ANZECC (2000) Guidelines for Fresh and Marine Water Quality	www.environment.gov.au/water/publications/quality/australian-and-new-zealand-guidelines-fresh-marine-water-quality-volume-1
Applying Goals for Ambient Water Quality Guidance for Operations Officers – Mixing Zones	http://deccnet/water/resources/AWQGuidance7.pdf
Approved Methods for the Sampling and Analysis of Water Pollutant in NSW (2004)	www.environment.nsw.gov.au/resources/legislation/approvedmethods-water.pdf

09 March 2016

Kate Masters
Senior Planner
Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001

Dear Ms Masters

BATTERY RECYCLING FACILITY KURRI KURRI – SECRETARY’S ENVIRONMENTAL ASSESSMENT REQUIREMENTS (SEARs)

I refer to the Secretary’s Environmental Assessment Requirements (SEARs) in relation to the Battery Recycling Facility – Kurri Kurri SSD7520.

It is recommended that the Secretary’s Environmental Assessment Requirements include the requirement of a human health risk assessment that considers the potential adverse effects from human exposure to project related environmental hazards. The assessment should be conducted in accordance with the enHealth document Environmental Health Risk Assessment: Guidelines for assessing human health risk from environmental hazards (2012) and be submitted as part of the Environmental Impact Statement.

The assessment should include, but not be limited to:

- Assessment of the risks with human exposure to acute and cumulative impact of noise,
- Air quality (particulates and cumulative impact of particulates) and
- The risk of contamination of drinking water including ground water, surface water and rain water tanks.

When assessing health risks, both incremental changes in exposure from existing background pollutant levels and the cumulative impacts of specific and existing pollutant levels should be addressed at the location of receptors. Exposure should be assessed at the location of the most affected receptors and also for the other sensitive receptors such as childcare centres, hospitals and aged care facilities. Consideration should also be given to the size of the population exposed to environmental hazards.

Hunter New England Local Health District
ABN 63 598 010 203

Hunter New England Population Health
Locked Bag 10
Wallsend NSW 2287
Phone (02) 4924 6477 Fax (02) 4924 6490
Email PHEnquiries@hnehealth.nsw.gov.au
www.hnehealth.nsw.gov.au/hneph

09 March 2016

It is recommended that the proponent seeks additional specialist advice in relation to ensuring robust community engagement and consultation processes.

Should you require any additional information in relation to the above, please telephone Ms Carolyn Herlihy, Environmental Health Officer on 4924 6477.

Yours sincerely



Dr David Durrheim
Service Director - Health Protection
Hunter New England Population Health



Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Attention: Kate Masters

Notice Number 1538547
File Number SF16/9485
Date 01-Mar-2016

RE: Battery Recycling Facility - Kurri Kurri

I refer to your request for the Environment Protection Authority's (EPA) requirements for the environmental assessment (EA) in regard to the above proposal received by EPA on 23 February 2016.

The EPA has considered the details of the proposal as provided by Department of Planning and Environment and has identified the information it requires to issue its general terms of approval in Attachment A.

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

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

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

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

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

Yours sincerely



Pat Fabiano

.....
Patricia Fabiano
Acting Unit Head
Hazardous Materials, Chemicals & Radiation
(by Delegation)



ATTACHMENT A: EIS REQUIREMENTS FOR Pymore Recyclers International Pty Ltd

How to use these requirements

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

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

A Executive summary

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

B The proposal

1. Objectives of the proposal

- The objectives of the proposal should be clearly stated and refer to:
 - a) the size and type of the operation, the nature of the processes and the products, by-products and wastes produced
 - b) a life cycle approach to the production, use or disposal of products
 - 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 <http://www.environment.nsw.gov.au/ieo/index.htm>, using technical criteria derived from the Australian and New Zealand Guidelines for Fresh and Marine Water Quality, ANZECC 2000)
 - b) the management of discharges with potential for water impacts
 - c) drainage works and associated infrastructure; land-forming and excavations; working capacity of structures; and water resource requirements of the proposal.
- Outline site layout, demonstrating efforts to avoid proximity to water resources (especially for activities with significant potential impacts 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

- 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 *Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-liquid Wastes* (NSW EPA, 1999).
- Provide details of liquid waste and non-liquid waste management at the facility, including:
 - a) the transportation, assessment and handling of waste arriving at or generated at the site
 - b) any stockpiling of wastes or recovered materials at the site
 - c) any waste processing related to the facility, including reuse, recycling, reprocessing (including composting) or treatment both on- and off-site
 - d) the method for disposing of all wastes or recovered materials at the facility
 - e) the emissions arising from the handling, storage, processing and reprocessing of waste at the facility
 - f) the proposed controls for managing the environmental impacts of these activities.
- Provide details of spoil disposal with particular attention to:
 - a) the quantity of spoil material likely to be generated
 - b) proposed strategies for the handling, stockpiling, reuse/recycling and disposal of spoil
 - c) the need to maximise reuse of spoil material in the construction industry
 - d) identification of the history of spoil material and whether there is any likelihood of contaminated material, and if so, measures for the management of any contaminated material
 - e) designation of transportation routes for transport of spoil.
- Provide details of procedures for the assessment, handling, storage, transport and disposal of all hazardous and dangerous materials used, stored, processed or disposed of at the site, in addition to the requirements for liquid and non-liquid wastes.
- Provide details of the type and quantity of any chemical substances to be used or stored and describe arrangements for their safe use and storage.
- Reference should be made to the guidelines: *Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes* (NSW EPA, 1999).

ESD

- Demonstrate that the planning process and any subsequent development incorporates objectives and mechanisms for achieving ESD, including:
 - a) an assessment of a range of options available for use of the resource, including the benefits of each option to future generations
 - b) proper valuation and pricing of environmental resources
 - c) identification of who will bear the environmental costs of the proposal.

3. Rehabilitation

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

4. Consideration of alternatives and justification for the proposal

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

C The location

1. General

- Provide an overview of the affected environment to place the proposal in its local and regional environmental context including:
 - a) meteorological data (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.

3. Noise and vibration

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

4. Water

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



5. Soil Contamination Issues

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

D Identification and prioritisation of issues / scoping of impact assessment

- Provide an overview of the methodology used to identify and prioritise issues. The methodology should take into account:
 - a) relevant NSW government guidelines
 - b) industry guidelines
 - c) EISs for similar projects
 - d) relevant research and reference material
 - e) relevant preliminary studies or reports for the proposal
 - f) consultation with stakeholders.
- Provide a summary of the outcomes of the process including:
 - a) all issues identified including local, regional and global impacts (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.

2. 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 DECCW.
- 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 / DECCW 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 relevant guidelines e.g. *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (DEC, 2001); *Approved Methods for the Sampling and Analysis of Air Pollutants in NSW* (DEC, 2007); *Assessment and Management of Odour from Stationary Sources in NSW* (DEC, 2006); *Technical Notes: Assessment and Management of Odour from Stationary Sources in NSW* (DEC, 2006); *Load Calculation Protocol for use by holders of NSW Environment Protection Licences when calculating Assessable Pollutant Loads* (DECC, 2009).

Describe management and mitigation measures

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

3. 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 (DEC 2004) or be approved and analyses undertaken by accredited laboratories).
- Provide site drainage details and surface runoff yield.
- State the ambient Water Quality and River Flow Objectives for the receiving waters. These refer to the community's agreed environmental values and human uses endorsed by the Government as goals for the ambient waters. These environmental values are published on the website: <http://www.environment.nsw.gov.au/ieo/index.htm>. The EIS should state the environmental values listed for the catchment and waterway type relevant to your proposal. NB: A consolidated and approved list of environmental values are not available for groundwater resources. Where groundwater may be affected the EIS should identify appropriate groundwater environmental values and justify the choice.
- State the indicators and associated trigger values or criteria for the identified environmental values. This information should be sourced from the ANZECC 2000 *Guidelines for Fresh and Marine Water Quality* (<http://www.environment.gov.au/water/publications/quality/nwgms-guidelines-4-vol1.html>) (Note that, as at 2004, the NSW Water Quality Objectives booklets and website contain technical criteria derived from the 1992 version of the ANZECC Guidelines. The Water Quality Objectives remain as Government Policy, reflecting the community's environmental values and long-term goals, but the technical criteria are replaced by the more recent ANZECC 2000 Guidelines). NB: While specific guidelines for groundwater are not available, the ANZECC 2000 Guidelines endorse the application of the trigger values and decision trees as a tool to assess risk to environmental values in groundwater.
- State any locally specific objectives, criteria or targets, which have been endorsed by the government e.g. the Healthy Rivers Commission Inquiries or the NSW Salinity Strategy (DLWC, 2000) (<http://www.environment.nsw.gov.au/salinity/government/nswstrategy.htm>).
- Where site specific studies are proposed to revise the trigger values supporting the ambient Water Quality and River Flow Objectives, and the results are to be used for regulatory purposes (e.g. to assess whether a licensed discharge impacts on water quality objectives), then prior agreement from the EPA on the approach and study design must be obtained.
- Describe the state of the receiving waters and relate this to the relevant Water Quality and River Flow Objectives (i.e. are Water Quality and River Flow Objectives being achieved?). Proponents are generally only expected to source available data and information. However, proponents of large or high risk developments may be required to collect some ambient water quality / river flow / groundwater data to enable a suitable level of impact assessment. Issues to include in the description of the receiving waters could include:
 - a) lake or estuary flushing characteristics



- b) specific human uses (e.g. exact location of drinking water offtake)
- c) sensitive ecosystems or species conservation values
- d) a description of the condition of the local catchment e.g. erosion levels, soils, vegetation cover, etc
- e) an outline of baseline groundwater information, including, but not restricted to, depth to watertable, flow direction and gradient, groundwater quality, reliance on groundwater by surrounding users and by the environment
- f) historic river flow data where available for the catchment.

Assess impacts

- No proposal should breach clause 120 of the *Protection of the Environment Operations Act 1997* (i.e. pollution of waters is prohibited unless undertaken in accordance with relevant regulations).
- Identify and estimate the quantity of all pollutants that may be introduced into the water cycle by source and discharge point including residual discharges after mitigation measures are implemented.
- Include a rationale, along with relevant calculations, supporting the prediction of the discharges.
- Describe the effects and significance of any pollutant loads on the receiving environment. This should include impacts of residual discharges through modelling, monitoring or both, depending on the scale of the proposal. Determine changes to hydrology (including drainage patterns, surface runoff yield, flow regimes, wetland hydrologic regimes and groundwater).
- Describe water quality impacts resulting from changes to hydrologic flow regimes (such as nutrient enrichment or turbidity resulting from changes in frequency and magnitude of stream flow).
- Identify any potential impacts on quality or quantity of groundwater describing their source.
- Identify potential impacts associated with geomorphological activities with potential to increase surface water and sediment runoff or to reduce surface runoff and sediment transport. Also consider possible impacts such as bed lowering, bank lowering, instream siltation, floodplain erosion and floodplain siltation.
- Identify impacts associated with the disturbance of acid sulfate soils and potential acid sulfate soils.
- Containment of spills and leaks shall be in accordance with 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 relevant guidelines e.g. *Managing Urban Stormwater: Soils and Construction* (DECC, 2008), *Guidelines for Fresh and Marine Water Quality* ANZECC 2000), *Environmental Guidelines: Use of effluent by Irrigation* (DEC, 2004).

Describe management and mitigation measures

- Outline stormwater management to control pollutants at the source and contain them within the site. Also describe measures for maintaining and monitoring any stormwater controls.
- Outline erosion and sediment control measures directed at minimising disturbance of land, minimising water flow through the site and filtering, trapping or detaining sediment. Also include measures to maintain and monitor controls as well as rehabilitation strategies.
- Describe waste water treatment measures that are appropriate to the type and volume of waste water and are based on a hierarchy of avoiding generation of waste water; capturing all contaminated water (including stormwater) on the site; reusing/recycling waste water; and treating any unavoidable discharge from the site to meet specified water quality requirements.
- Outline pollution control measures relating to storage of materials, possibility of accidental spills (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* (DEC 2004).

5. Soils and contamination

Describe baseline conditions

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

Assess impacts

- Identify any likely impacts resulting from the construction or operation of the proposal, including the likelihood of:
 - a) disturbing any existing contaminated soil
 - b) contamination of soil by operation of the activity
 - c) subsidence or instability
 - d) soil erosion
 - e) disturbing acid sulfate or potential acid sulfate soils.
- Reference should be made to relevant guidelines e.g. *Contaminated Sites – Guidelines for Consultants Reporting on Contaminated Sites* (OEH, 2011); *Contaminated Sites – Guidelines on Significant Risk of Harm from Contaminated Land and the 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 – see *Assessing and Managing Acid Sulfate Soils*, Environment Protection Authority, 1995 (note that this is the only methodology accepted by the EPA).

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 relevant guidelines e.g. *Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes* (EPA, 1999).

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
Relevant Legislation	
<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
Licensing	
Guide to Licensing	www.epa.nsw.gov.au/licensing/licenceguide.htm
Air Issues	
Air Quality	
Approved methods for modelling and assessment of air pollutants in NSW (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
Noise and Vibration	
Interim Construction Noise Guideline (DECC, 2009)	http://www.epa.nsw.gov.au/noise/constructnoise.htm
Assessing Vibration: a technical guideline (DEC, 2006)	http://www.epa.nsw.gov.au/noise/vibrationguide.htm
Industrial Noise Policy Application Notes	http://www.epa.nsw.gov.au/noise/applicnotesindustnoise.htm
Environmental Criteria for Road Traffic Noise (EPA, 1999)	http://www.epa.nsw.gov.au/resources/noise/roadnoise.pdf
Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects (DECC, 2007)	http://www.epa.nsw.gov.au/noise/railinfranoise.htm
Environmental assessment requirements for rail traffic-generating developments	http://www.epa.nsw.gov.au/noise/railnoise.htm

Waste, Chemicals and Hazardous Materials and Radiation	
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
Water and Soils	
Acid sulphate soils	
Coastal acid sulfate soils guidance material	http://www.environment.nsw.gov.au/acidsulfatesoil/
Acid Sulfate Soils Planning Maps	http://www.environment.nsw.gov.au/acidsulfatesoil/riskmaps.htm
Contaminated Sites Assessment and Remediation	
Managing land contamination: Planning Guidelines – SEPP 55 Remediation of Land	http://www.planning.nsw.gov.au/assessingdev/pdf/qu_contam.pdf
Guidelines for Consultants Reporting on Contaminated Sites (EPA, 2000)	http://www.epa.nsw.gov.au/resources/clm/20110650consultantsglin es.pdf
Guidelines for the NSW Site Auditor Scheme - 2nd edition (DEC, 2006)	http://www.epa.nsw.gov.au/resources/clm/auditorglines06121.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.scew.gov.au/nepms/assessment-site-contamination
Soils – general	
Managing land and soil	http://www.environment.nsw.gov.au/soils/landandsoil.htm
Managing urban stormwater for the protection of soils	http://www.environment.nsw.gov.au/stormwater/publications.htm
Landslide risk management guidelines	http://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.environment.gov.au/water/publications/quality/nwqms-guidelines-4-vol1.html
Applying Goals for Ambient Water Quality Guidance for Operations Officers – Mixing Zones	Contact the EPA on 131555
Approved Methods for the Sampling and Analysis of Water Pollutant in NSW (2004)	http://www.environment.nsw.gov.au/resources/legislation/approved-methods-water.pdf