



## Planning

Contact: Emma Barnet  
Phone: 02 9228 6550  
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Craig Marler  
ADW Johnson Pty Ltd  
7/335 Hillsborough Road  
WARNERS BAY NSW 2282

Our ref: 1018197  
Your ref: CM:KP37672

20/10/10

Dear Mr Marler

**Subject: Director-General's Requirements for Northbank Enterprise Hub subdivision, Tomago (MP 10\_0185)**

The Department has received your application for the proposed Northbank Enterprise Hub subdivision in the Port Stephens local government area.

I have attached a copy of the Director-General's requirements for the project. These requirements have been prepared in consultation with the relevant government authorities, and are based on the information you have provided to date. I have also attached a copy of the government authorities' comments for your information.

Please note that under Section 75F(3) of the *Environmental Planning and Assessment Act 1979*, the Director-General may alter these requirements at any time.

If your proposal is likely to have a significant impact on matters of National Environmental Significance, it will require an approval under the Commonwealth *Environment Protection Biodiversity Conservation Act 1999* (EPBC Act). This approval is in addition to any approvals required under NSW legislation. It is your responsibility to contact the Department of Environment, Water, Heritage and the Arts in Canberra (6274 1111 or <http://www.environment.gov.au>) to determine if the proposal requires an approval under the EPBC Act. If it is determined that an approval is required under the EPBC Act, please contact the Department immediately as supplementary Director-General's requirements may need to be issued.

I would appreciate it if you would contact the Department at least two weeks before you propose to submit your Environmental Assessment for the project. This will enable the Department to determine the:

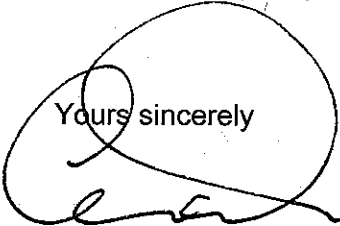
- applicable fee (see Division 1A, Part 15 of the Environmental Planning and Assessment Regulation 2000);
- consultation and public exhibition arrangements; and
- number of copies (hard-copy or CD-ROM) of the Environmental Assessment that will be required for exhibition purposes.

Once it receives the Environmental Assessment, the Department will review it in consultation with the relevant agencies to determine if it adequately addresses the Director-General's requirements, and may require you to revise it prior to public exhibition.

The Department is required to make all the relevant information associated with the project publicly available on its website. Consequently, I would appreciate it if you would ensure that all the documents you subsequently submit to the Department are in a suitable format for the web, and arrange for an electronic version of the Environmental Assessment to be hosted on a suitable website.

If you have any enquiries about these requirements, please contact Emma Barnet (9228 6550).

Yours sincerely

A handwritten signature in black ink, appearing to read 'Chris Wilson', written over the words 'Yours sincerely'.

20.10.10

Chris Wilson  
**Executive Director**  
*As delegate of the Director-General*

## Attachment 1

**Director-General's Requirements**Section 75F of the *Environmental Planning and Assessment Act 1979*

<b>Project</b>	Subdivision of approximately 241 hectares of land at Tomago for industrial purposes including filling, earthworks, internal roads and services.
<b>Site</b>	Lot 1001 DP 1127780, Tomago Road, Tomago
<b>Proponent</b>	WEPL Investments Pty Ltd
<b>Date of Issue</b>	October 2010
<b>General Requirements</b>	<p>The Environmental Assessment must include:</p> <ul style="list-style-type: none"> <li>• an executive summary</li> <li>• a detailed description of the project including the: <ul style="list-style-type: none"> <li>- need for the project</li> <li>- alternatives considered</li> <li>- various components and stages of the project.</li> </ul> </li> <li>• consideration of any relevant statutory provisions</li> <li>• a general overview of the environmental impacts of the project, identifying the key issues for further assessment, and taking into consideration any issues raised during consultation</li> <li>• a detailed assessment of the key issues specified below, and any other significant issues identified in the general overview of environmental impacts of the project (see above), which includes: <ul style="list-style-type: none"> <li>- a description of the existing environment, including constraints mapping</li> <li>- an assessment of the potential impacts of all components of the project, including any cumulative impacts from other industrial developments in the area.</li> </ul> </li> <li>• a description of the measures that would be implemented to avoid, minimise, mitigate, offset, manage and/or monitor the impacts of the project</li> <li>• a draft Statement of Commitments, outlining environmental management, mitigation and monitoring measures</li> <li>• a conclusion justifying the project, taking into consideration the environmental impacts of the proposal, the suitability of the site, and the benefits of the project</li> <li>• a signed statement from the author of the Environmental Assessment certifying that the information contained in the report is neither false nor misleading.</li> </ul>
<b>Key Issues</b>	<ul style="list-style-type: none"> <li>• <b>Strategic and Statutory context</b> - Consideration of any relevant statutory and non-statutory provisions including: <ul style="list-style-type: none"> <li>○ SEPPs</li> <li>○ NSW State Plan</li> <li>○ Lower Hunter Regional Strategy</li> <li>○ DCPs</li> </ul> <ul style="list-style-type: none"> <li>- Justify any inconsistencies and identify non-compliances</li> </ul> </li> <li>• <b>Flora and Fauna</b> – including: <ul style="list-style-type: none"> <li>- an assessment of impacts (direct or indirect) on threatened species, populations, ecological communities and their habitat, critical habitat (including riparian habitat) and native vegetation generally, including: <ul style="list-style-type: none"> <li>○ impacts on species listed under Section 18 and 18A of the <i>Environment Protection and Biodiversity Conservation Act 1999</i></li> <li>○ impacts on migratory species listed under the <i>Environment Protection and Biodiversity Conservation Act 1999</i></li> </ul> </li> </ul> </li> </ul>

- impacts on RAMSAR Wetlands, particularly the Hunter Estuary Wetlands
  - impacts on the Hunter Wetlands National Park.
- proposed measures to avoid, mitigate or offset any significant impacts.
- **Water and Soils** – including:
  - details of the quantity of fill required for the site and the proposed source(s) of the fill
  - a water balance for the site detailing water sources, water consumption, water recycling, the quantity and quality of water and the impact of any water release from the site on surface water and groundwater
  - an assessment of the potential impacts of sea level rise and an increase in rainfall intensity on the flood regime of the site and adjacent lands
  - an assessment of flooding impacts associated with the proposal including details of the flood liability of the site and changes to flooding behaviour
  - an assessment of the potential impacts, associated with sewage disposal, on surrounding environment
  - proposed erosion and sediment controls (during construction) and the proposed stormwater management system (during operations)
  - soil contamination and acid sulphate soils
  - water quality monitoring programs proposed during construction and operation to ensure the development achieves a satisfactory level of environmental performance.
- **Heritage** – (Aboriginal and European).
- **Traffic** – including access arrangements, details of the traffic volumes likely to be generated during construction, and an assessment of the predicted impacts of this traffic on the safety and capacity of the surrounding road network, identification of management measures and details of any road upgrades required, particularly on Tomago Road.
- **Site Layout and design**– including:
  - demonstration of how the project will fit into the broader urban design framework for the area and how it addresses wider urban design objectives in terms of connectivity of roads, infrastructure and reticulation synergies and relationships to adjoining areas
  - details of the subdivision of the site, including adequate setbacks, site coverage, lot sizes and positioning of lots
  - development controls and guidelines for the design and future development of the site covering, but not limited to, building heights and design, setbacks, floor space ratio, stormwater management and drainage, flooding, access and parking, landscaping, waste removal and storage, and energy and water efficiency/conservation requirements
- **Infrastructure** – including
  - details of the servicing capacity, destination/origination sources, site allocation and costs to adequately service the area to the capacity required
  - a detailed written and graphical description of the infrastructure to be made available; its location, capacity, staging/timing and maintenance requirements
  - identification of the infrastructure upgrades that are required off-site to facilitate the orderly and economic development of the project, and a description of the arrangements that would be put in place to ensure these upgrades are implemented in a timely manner and maintained
  - a description of how the provision of infrastructure both on and off-site would be co-ordinated and funded to ensure the necessary

	<p>infrastructure is in place prior to the detailed development of the site;</p> <ul style="list-style-type: none"> <li>- identify any technologies that may reduce the demand or need for servicing or provide for the supply of sustainable services.</li> </ul> <ul style="list-style-type: none"> <li>• <b>Noise</b> – including construction, operation and traffic.</li> <li>• <b>Air quality</b> – during construction, as well as greenhouse gas emissions.</li> <li>• <b>Waste Management</b> – including the quantity and type of all liquid and solid waste to be generated at the site and a description of how this waste would be handled, processed and, if necessary, disposed of.</li> <li>• <b>Hazards and Risk</b> – including an assessment of the potential hazards and risks associated with the proposed project. A preliminary risk screening must be completed in accordance with <i>State Environmental Planning Policy No. 33 – Hazardous and Offensive Development (SEPP 33)</i> and <i>Applying SEPP 33 (DUAP, 1994)</i>, and where necessary, a Preliminary Hazard Analysis (PHA) undertaken.</li> </ul>
<b>References</b>	<p>The Environmental Assessment must take into account relevant State and Commonwealth government technical and policy guidelines. While not exhaustive, guidelines which may be relevant to the project are included in the attached list.</p>
<b>Consultation</b>	<p>During the preparation of the Environmental Assessment, you should consult with the relevant local, State or Commonwealth government authorities, service providers, community groups or affected landowners. The consultation process and the issues raised must be described in the Environmental Assessment.</p> <p>In particular, you should consult with:</p> <ul style="list-style-type: none"> <li>• Commonwealth Department of Sustainability, Environment, Water, Population and Communities (former Department of Environment, Water, Heritage and the Arts)</li> <li>• Roads and Traffic Authority</li> <li>• Department of Environment and Climate Change and Water</li> <li>• NSW Office of Water</li> <li>• Energy Australia</li> <li>• Hunter Water Corporation</li> <li>• Port Stephens Council</li> </ul> <p>The consultation process and the issues raised must be described in the EA.</p>
<b>Deemed refusal period</b>	60 days

## Attachment 2

## State and Commonwealth Government Technical and Policy Guidelines - For Reference

Aspect	Policy /Methodology
<b>Flora and Fauna</b>	
	Draft Guidelines for Threatened Species Assessment (DEC & DPI, 2005)
	Draft Threatened Biodiversity Survey and Assessment Guidelines (DEC, 2004)
	Commonwealth Environmental Protection and Biodiversity Conservation Act 1999 - Guide to implementation in NSW (DoP)
	Environment Protection and Biodiversity Conservation Regulations 2000 (Schedule 4)
	State Environmental Planning Policy No 14 Coastal Wetlands
<b>Soil and Waters</b>	
<i>Erosion &amp; Sediment Control</i>	Managing Urban Stormwater: Soils & Construction (Landcom)
	Design Manual for Soil Conservation Works - Technical Handbook No. 5 (Soil Conservation Service of NSW)
	Soil and Landscape Issues in Environmental Impact Assessment (DLWC)
	Wind Erosion - 2nd Edition (DIPNR)
<i>Coastal Planning</i>	Coastline Management Manual (NSW Government 1990)
	NSW Coastal Planning Guideline - Adapting to Sea Level Rise (NSW Government 2010)
<i>Floodplain &amp; Wetlands</i>	The NSW Wetlands Management Policy (DLWC)
	Floodplain Management Manual (DNR)
	Recommended Methods for Monitoring Floodplains and Wetlands (Baldwin <i>et. al</i> )
<i>Groundwater</i>	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
<i>Stormwater</i>	Managing Urban Stormwater: Strategic Framework. Draft (EPA)
	Managing Urban Stormwater: Council Handbook. Draft (EPA)
	Managing Urban Stormwater: Treatment Techniques (EPA)
	Managing Urban Stormwater: Source Control. Draft (EPA)
<i>Water Quality</i>	National Water Quality Management Strategy: Water quality management - an outline of the policies (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Policies and principles - a reference document (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Implementation guidelines (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Australian Guidelines for Fresh and Marine Water Quality (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Australian Guidelines for Water Quality Monitoring and Reporting (ANZECC/ARMCANZ)
	Bunding and Spill Management (EPA)
	Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (DEC)
	Using the ANZECC Guideline and Water Quality Objectives in NSW (DEC)

Heritage	
<i>Aboriginal</i>	Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation (DEC, 2005)
	Interim Community Consultation Requirements for Applicants (DEC, 2004)
<i>Non-Indigenous</i>	NSW Heritage Manual (NSW Heritage Office & DUAP)
	The Burra Charter (The Australia ICOMOS charter for places of cultural significance)

## Attachment 3

**Guidelines on EPBC Act Matters – For Reference**

The Commonwealth Minister for the Environment has declared the project to be a controlled action under section 75 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Under the provisions of the Bilateral Agreement between New South Wales and Commonwealth Governments, the environmental assessment of the impacts of the controlled action must be assessed under Part 3A of the EP&A Act.

The Assessment should also include enough information about the controlled action and its relevant impacts to allow the Commonwealth Environment Minister to make an informed decision whether or not to approve the controlled action under the EPBC Act. This assessment is to be integrated into the assessment required for Part 3A of the EP&A Act. As a guide, the following matters in the EPBC Act and Schedule 4 of the EPBC Regulations 2000 should be considered.

**1. General information**

The background of the action including:

- (a) the title of the action;
- (b) the full name and postal address of the designated proponent;
- (c) a clear outline of the objective of the action;
- (d) the location of the action;
- (e) the background to the development of the action;
- (f) how the action relates to any other actions (of which the proponent should reasonably be aware) that have been, or are being, taken or that have been approved in the region affected by the action;
- (g) the current status of the action;
- (h) the consequences of not proceeding with the action.

**2. Description of the controlled action**

A description of the action, including:

- (a) all the components of the action;
- (b) the precise location of any works to be undertaken, structures to be built or elements of the action that may have relevant impacts;
- (c) how the works are to be undertaken and design parameters for those aspects of the structures or elements of the action that may have relevant impacts;
- (d) to the extent reasonably practicable, a description of any feasible alternatives to the controlled action that have been identified through the assessment, and their likely impact, including:
  - (i) if relevant, the alternative of taking no action;
  - (ii) a comparative description of the impacts of each alternative on the matters protected by the controlling provisions for the action;
  - (iii) sufficient detail to make clear why any alternative is preferred to another.

**3. A description of the relevant impacts of the controlled action;**

An assessment of all relevant impacts that the controlled action has, will have or is likely to have on:

- (a) threatened ecological communities and threatened species potentially present and listed under sections 18 and 18A of the EPBC Act;
- (b) migratory species listed under the EPBC Act;
- (c) RAMSAR Wetlands;
- (d) places listed on the National heritage list and protected under the EPBC Act;
- (e) World heritage areas.

Information must include:

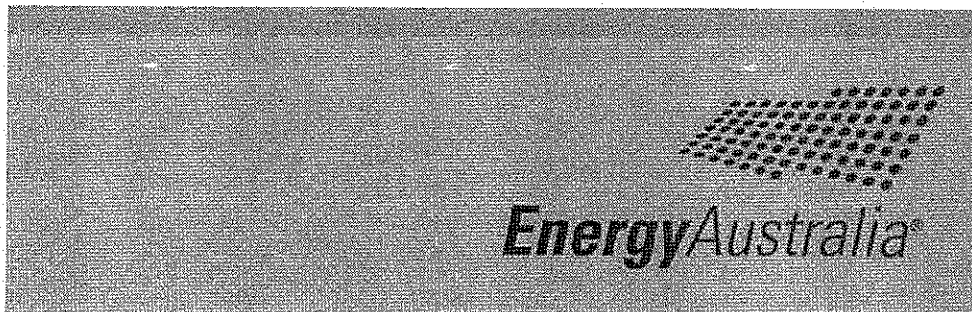
- (a) a description of the relevant impacts of the action on matters of national environmental significance;
- (b) a detailed assessment of the nature and extent of the likely short term and long term relevant impacts;
- (c) a statement whether any relevant impacts are likely to be unknown, unpredictable or irreversible;
- (d) analysis of the significance of the relevant impacts;
- (e) any technical data and other information used or needed to make a detailed assessment of

**ATTACHMENT 4**  
**Government Authority Responses to Request for Key Issues**  
**For Information Only**

145 Newcastle Road  
Wallsend NSW 2287

Address all mail to  
PO Box 487 Newcastle  
NSW 2300 Australia

Telephone +61 2 13 15 25



**30 September 2010**

**Emma Barnet**  
**Contact Officer**  
**Northbank Enterprise Hub**  
GPO Box 39  
SYDNEY NSW 2001  
Phone: 02 9228 6550  
Fax: 02 9228 6466  
emma.barnet@planning.nsw.gov.au

**Re: Northbank Enterprise Hub, subdivision for industrial purposes (MP 10\_0153)**

Dear Emma,

Thank you for the advice regarding WEPL Investments Pty Ltd application for the Northbank Enterprise Hub.

WEPL & ADW Johnson Pty Ltd have taken the initiative to brief EnergyAustralia on the project. We have had ongoing discussions with them regarding the adjoining development and powerline relocations have been completed to allow site works on that site. WEPL & ADW Johnson are well aware of our requirements for early advice regarding electricity connection for the development and any relocation works required for existing powerlines.

As such, EnergyAustralia's only request would be to formalise those requirements for completeness.

Yours Sincerely

**Greg Skinner**  
**EnergyAustralia**  
**Area Manager Lower Hunter**  
(Maitland, Cessnock and Port Stephens)  
Distributions, Operations and Reliability



**Environment,  
Climate Change  
& Water**

Your reference: 10/18197  
Our reference: DOC10/44256;  
FI10/12424; Part 3A  
Contact: Steve Lewer (02) 4908  
6814

Ms Felicity Greenway  
Team Leader - Industry  
Industry and Mining, Major Projects Assessments  
Department of Planning  
GPO Box 39  
SYDNEY NSW 2001

Attention: Ms Emma Barnet

Dear Ms Greenway

**DEVELOPMENT APPLICATION MP10\_0153 FOR NORTHBANK ENTERPRISE HUB PROJECT  
LOT 1001 DP 1127780, TOMAGO ROAD, TOMAGO  
DIRECTOR GENERALS REQUIREMENTS**

Reference is made to your letter dated 24 September 2010 (received on 29 September 2010), seeking assessment requirements and any key issues for the proposed industrial subdivision known as Northbank Enterprise Hub (MP 10-0153), on Lot 1001 in Deposited Plan (DP) 1127780, located at Tomago Road, Tomago, NSW; in the Port Stephens local government area.

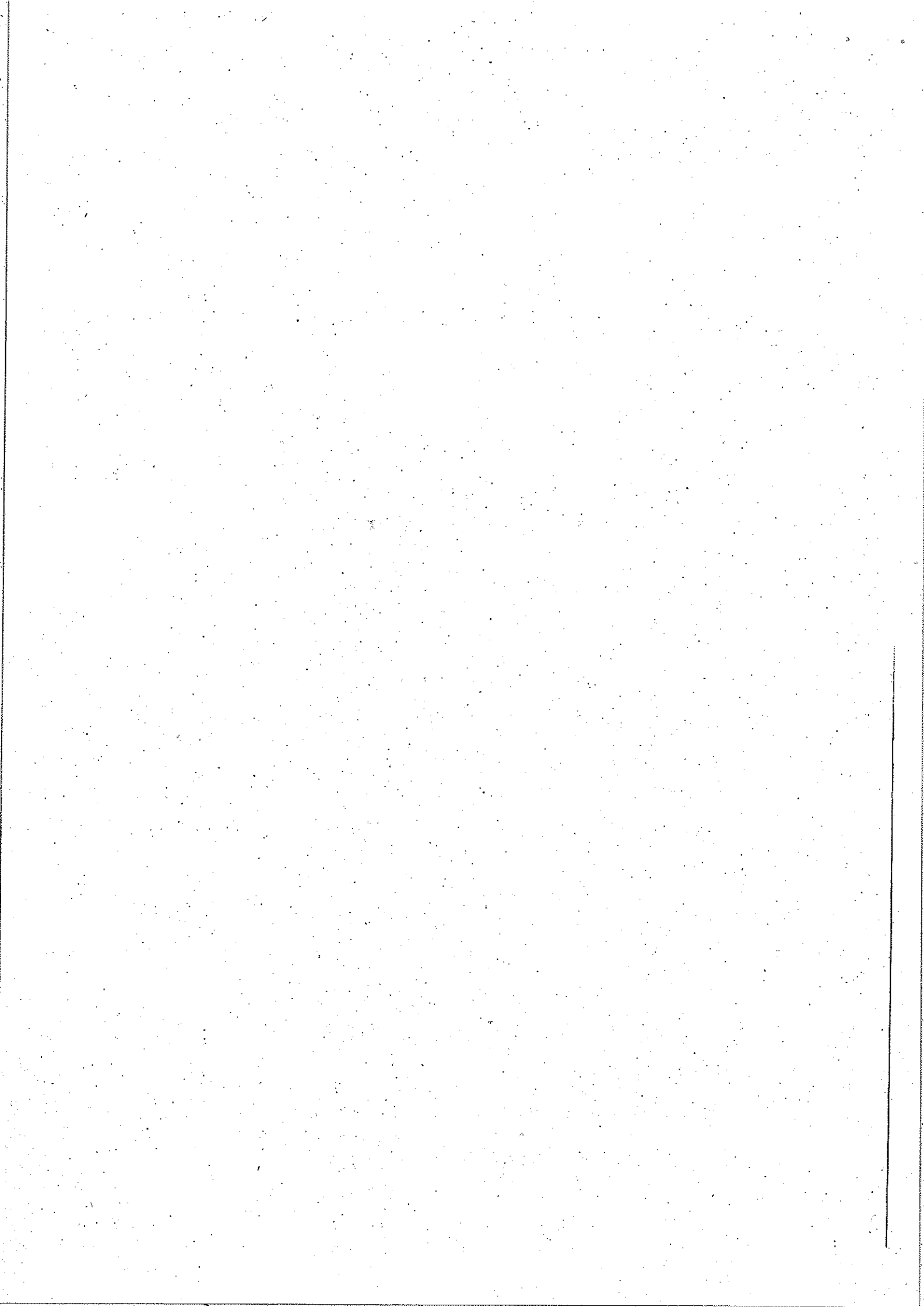
DECCW understands that the development proposal is for a new industrial and business park, and includes:

- Development of an industrial and business park, to be known as Northbank Enterprise Hub, which will be designed to integrate with the adjoining WEPL Investments Pty. Ltd approved Part 3A industrial subdivision to the north-east;
- Associated fill and earthworks; and
- Roads, utilities / services and infrastructure support.

DECCW has considered the details of the proposal as provided in the Preliminary Environmental Assessment and has identified the information it requires to be addressed in the Environmental Assessment (EA) to make a reliable appraisal of the proposals impacts. The main issues of interest to DECCW are:

- impacts on threatened species, populations, ecological communities and their habitat;
- impacts on any local corridor links and wildlife movement;
- any potential direct or indirect impacts on nearby government conservation estate, namely Hunter Wetlands National Park;
- impacts on nearby RAMSAR listed wetlands (Hunter Estuary Wetlands RAMSAR Site [RAMSAR ID - 24]), including impacts on threatened wader and estuarine birds and migratory species;
- any impacts on Aboriginal cultural heritage values;
- flooding and floodplain related impacts;
- water quality and quantity impacts;

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117 Bull Street, Newcastle West NSW 2302  
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- wastewater management;
- impacts on air quality, and
- impacts on noise amenity.


**Attachment A** presents a more detailed explanation of DECCW's main issues regarding the proposed development. Please note that the issuing of DGRs is a statutory requirement for DECCW and should not be construed as support or endorsement of the proposed development.

In carrying out the assessment the applicant should refer to the relevant guidelines in **Attachment B** and also any industry codes of practice and best environmental management practice guidelines. The proponent should be aware that any commitments made in the EA may be formalised as licence or approval conditions. Consequently, pollution control or conservation measures should not be proposed if they are impractical, unrealistic or beyond the financial viability of the development. It is important that all conclusions are supported by adequate data.

DECCW requests that the applicant provide **three (3) printed copies and one electronic copy (i.e. \*.pdf format)** of the EA and any supporting or background reports when lodging application with DECCW. These documents should be lodged with the Department of Environment, Climate Change and Water, PO Box 488G, Newcastle NSW 2300.

If you require any further information regarding this matter please contact Steve Lewer on (02) 4908 6814.

Yours sincerely

 15-10-10

**PETER JAMIESON**  
Head Regional Operations Unit  
North East Branch  
Environment Protection and Regulation

Enclosed: Attachment 'A' – Director General's Requirements  
Attachment 'B' – Guidance Material

## ATTACHMENT A

### DEPARTMENT OF ENVIRONMENT, CLIMATE CHANGE AND WATER DIRECTOR-GENERAL'S REQUIREMENTS FOR THE PROPOSED NORTHBANK ENTERPRISE HUB, TOMAGO

#### GENERAL INFORMATION

The following information must be provided in the Environmental Assessment (EA) to enable DECCW to accurately assess the environmental implications of the proposed activity. The EA must adequately describe the development proposal and the existing environment including air, noise, waters, soils, flora and fauna characteristics and Aboriginal cultural heritage.

#### THE PROPOSAL

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

- The size and type of the operation,
- The nature of the processes and the products, by-products and wastes produced;
- The use or disposal of products;
- The anticipated level of performance in meeting required environmental standards and cleaner production principles;
- The staging and timing of the proposal; and
- The proposal's relationship to any other industry or facility.

#### THE PREMISES

The EA will need to fully identify all of the processes and activities intended for the site and during the life of the project. This will include details of:

- A site and locality plan that includes the lot and DP number of the site;
- The location of the proposed facility and details of the surrounding environment;
- The proposed layout of the site;
- All equipment proposed for use at the site;
- Appropriate landuse zoning;
- Ownership and/or land use details of any premises and land likely to be affected by the proposed development;
- Maps/diagrams showing the location of residences and properties likely to be affected and other industrial developments, conservation areas, wetlands, etc in the locality that may be affected by the facility;
- Topography, vegetation, location of utilities and services;
- The location of residences and properties that may be impacted by the operation;
- The location of any environmentally sensitive areas such as conservation areas, wetlands, creeks or streams, watercourses and stormwater systems;
- Surface water management systems;
- Chemicals, including fuel, used on the site and proposed methods for their transportation, storage, use and emergency management;
- Waste generation and disposal;
- Methods to mitigate any expected environmental impacts of the development;
- Site rehabilitation following termination of the development.

#### WATER MANAGEMENT

The general area is very sensitive to adverse impacts to surface and groundwater and stringent controls will be necessary for the site. A detailed stormwater management plan will be necessary.

The EA must provide sufficient information to demonstrate that the proposed development can be operated whilst complying with the *Protection of the Environment Operations Act 1997*, in particular, the protection of water quality during construction and operation of the proposed facility.

The methodology, data and assumptions used to design any pollution control works and assess the potential impact of the proposal on water quality (ground and surface waters), must be fully documented and justified.

The EA must identify any fuel or chemical storage areas to be established on the site and describe the measures proposed to minimise the potential for leakage or the migration of pollutants into the soil/waters or from the site.

## **WASTEWATER MANAGEMENT**

The EA should describe the sewage treatment and effluent management processes proposed to be used on site. Given the scale of the proposal and the environmental sensitivity of the site and surrounds DECCW would expect reticulated sewerage and appropriate wastewater management will be necessary for this proposal.

## **NOISE AND VIBRATION IMPACTS**

The EA must include a noise assessment of the existing environment, potential impacts and proposed noise amelioration measures. DECCW's *"New South Wales Industrial Noise Policy"* (EPA, 2000) provides a guide to the methodology and assessment criteria used by DECCW to determine noise planning levels. Given the existing noise environment in the area specific commitments / controls may be needed so as to achieve acceptable noise amenity criteria.

The evaluation should take into account the construction and ground-based operational phases of the development over the "operating" hours proposed and take into account adverse weather conditions including temperature inversions. Sound power levels measured or estimated for all plant and equipment should be clearly stated and justified.

Construction noise should be assessed using the Department's *"Interim Construction Noise Guideline"* (DECC 2009)

The EA should include an assessment of cumulative noise impacts, having regard to existing developments and developments which have received development consent in the area but which have not commenced.

The EA must identify the transport route(s) to be used, the hours of operation and quantify the noise impacts. The DECCW publication *"Environmental Criteria for Road Traffic Noise"* (EPA, 1999) describes the methods generally used by DECCW to determine noise planning levels for road traffic noise in locations of varying sensitivity.

## **AIR QUALITY**

The EA must include an Air Quality Impact Assessment (AQIA). The AQIA must identify and describe in detail all possible sources of air pollution and activities/processes with the potential to cause air pollutants including odours and fugitive dust emissions beyond the boundary of the development site. This should cover both the construction and operational phases of the development. The AQIA should include cumulative impacts associated with existing developments and any developments that have been granted development consent but which have not commenced. For this site and this area sulphur dioxide (SO<sub>2</sub>) impacts will be particularly important.

In regard to SO<sub>2</sub> impacts the EA should also document and explain the implications of any agreement, covenant or similar instrument which relates to SO<sub>2</sub> emissions and future uses of the site.

The EA should demonstrate that the proposal will operate within DECCW's objectives which are to minimise adverse effects on the amenity of local residents and sensitive land uses and to limit the effects of emissions on local, regional and inter-regional air quality.

The EA must describe in detail the measures proposed to mitigate the impacts and quantify the extent to which the mitigation measures are likely to be effective in achieving the relevant environmental outcomes.

The AQIA must be prepared in accordance with the DECCW's "*Approved Methods and Guidance for the Modelling & Assessment of Air Pollutants in NSW*". This publication is available from the DECCW's website at <http://www.environment.nsw.gov.au/air/>. The AQIA must describe the methodology used and any assumptions made to predict the impacts. Air pollutant emission rates, ambient air quality data and meteorological data used in the assessment must be clearly stated and justified.

### **MONITORING PROGRAMS**

The EA should include a detailed assessment of any noise, air quality, water quality or waste monitoring required during the construction phase and on-going operation of the facility to ensure that the development achieves a satisfactory level of environmental performance. The evaluation should include a detailed description of the monitoring locations, sample analysis methods and the level of reporting proposed.

### **EPA STATUTORY REQUIREMENTS**

The EA should identify whether the proposed activity is listed in Schedule 1 of the *Protection of the Environment Operations Act 1997* (POEO Act) and will therefore require an Environment Protection Licence (EPL) from DECCW.

General information on licence requirements can also be obtained from DECCW's Environment Line on 131 555 during office hours, or can be found at the DECCW web site at:

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

### **CONTAMINATED LAND**

The EA must determine whether contaminated soils are likely to be disturbed during the proposed works. If contaminated soils are likely to be disturbed, the EA should detail the measures to be adopted to protect human health and the environment, and if necessary remediate or dispose of the contaminated material. The following guidelines may be helpful in assessing any actions required in respect of the proposed works:

- Contaminated Sites - Guidelines for Consultants Reporting on Contaminated Sites (EPA 1997);
- Contaminated Sites - Guidelines for the NSW Site Auditor Scheme (EPA 1998); and
- Contaminated Sites - Sampling Design Guidelines (EPA 1995).

### **FLOODING AND FLOODPLAIN MANAGEMENT**

The subject land is situated almost entirely on a declared floodplain and contains a number of DECCW assets including levees, floodgates and drains that form part of the Hunter Valley Flood Mitigation Scheme ("HVFMS") under Chapter 5, Part 2 of the *Water Management Act 2000*. DECCW administers Chapter 5, Part 2 of the *Water Management Act 2000* on behalf of the Minister for Water.

The filling of the floodplain is considered to constitute a "flood work" as defined by the *Water Management Act 2000* and very detailed documentation will be necessary in the EA to demonstrate the impact of the works on flood behaviour and possible adverse effects on upstream and adjacent lands. The EA should also detail whether the Minister for Water's consent will be necessary under section 256 of the *Water Management Act 2000*.

At a minimum DECCW requires the proponent undertaken comparative modelling that identifies the impact of the development for all flood events affecting the site, not just the 1% AEP event. The flood analysis should extend to 2100 conditions. That is, with a tailwater condition reflecting a 0.9m sea level rise.

The analysis should also address possible impacts on other HVFMS assets including the Fullerton Cove ring levee and drain.

Presently DECCW requires access across the site for maintenance activities associated with the ring levee and other HVFMS assets. This requirement will be ongoing.

The proponent must prepare a detailed stormwater management plan. The plan should detail controls such that there is no adverse impact on the functioning of adjacent HVFMS assets.

As the HVFMS assets on Lot 1001 only serve that lot, there should be no objection to their removal. However, the proponent must seek the Minister's consent to do so.

#### **ABORIGINAL CULTURAL HERITAGE**

DECCW recommends that the following key issues with regard to Aboriginal cultural heritage (ACH) be addressed by the proponent in preparing the EA.

##### **Existing ACH values:**

DECCW notes the existence of numerous registered Aboriginal sites in the immediate locality. These include open camp sites, isolated objects, scarred trees, artefact sites, middens, and burials. We recommend the proponent consider any potential impacts of the proposal on these known sites, the sensitivity and significance of these sites to the traditional Aboriginal custodians and any relationship that may exist between these sites and any ACH values of the project area.

##### **Impacts of the project on ACH values:**

1. The Environmental Assessment (EA) should address and document the information requirements set out in the draft *"Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation"* (Department of Environment and Conservation 2005). This document is available from DECCW and DoP upon request.
2. The EA should include surveys by suitably qualified archaeological consultants in consultation with traditional Aboriginal custodians.
3. The EA should identify the nature and extent of impacts on ACH values across the project area and the strategies proposed to avoid / minimise these impacts. If impacts are proposed as part of the final development, clear justification for such impacts should be provided.
4. The EA should assess the archaeological and Aboriginal significance of the site's ACH values.
5. Describe the actions that will be taken to avoid or mitigate impacts of the project on ACH values. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.
6. The EA needs to clearly demonstrate that effective community consultation with Aboriginal communities has been undertaken in assessing impacts, developing options and making final

recommendations. DECCW supports broad-based Aboriginal community consultation and as a guide DECCW's *'Aboriginal cultural heritage consultation requirements for proponents 2010'* provides a useful model to follow.

7. If impacts on ACH values are proposed as part of the final development, an assessment of the regional significance of the values to be impacted, the extent to which these values are protected elsewhere in the landscape and consideration of the proposed impacts in the context of 'inter generational equity' should be undertaken.

Note: If the EA is relying on past surveys it is critical to confirm that the surveys are consistent with the requirements of the above Part 3A guidelines. Furthermore, if any new sites or objects are located, they should be recorded on NPWS site cards and registered on DECCW's Aboriginal Heritage Information Management System (AHIMS). AHIMS contact details: Phone: (02) 9585 6470, address: Lvl 6, 43 Bridge Street, Hurstville, NSW, 2220, e-mail: [ahims@environment.nsw.gov.au](mailto:ahims@environment.nsw.gov.au).

### THREATENED SPECIES AND BIODIVERSITY ISSUES

DECCW notes that the proposed development site is located next to Hunter Estuary Wetland RAMSAR Site (and the Hunter Wetlands National Park), which is an internationally known area significant to wetland birds and migratory species. Furthermore, based on the Preliminary EA, the site is known to be regionally important to a number of threatened species, such as the Grass Owl and the Australasian Bittern, as well as likely important to a number of threatened water / wader birds given the likely habitats present. As such very stringent controls will be necessary to protect sensitive attributes due to the close proximity of the site to these attributes, the type of development and scale of the proposal.

The EA must:

- document all the known and likely threatened species, populations and ecological communities on the study area, including their habitats. This should not be restricted to those on the subject site but include such species / populations / communities that may be indirectly impacted upon, particularly on the adjacent Hunter Wetlands National Park and Hunter Estuary Wetland RAMSAR Site;
- provide a detailed assessment of the direct and indirect impacts of the proposal. Indirect impacts should include (but are not limited to): - adverse hydrological impacts, both surface and groundwater (e.g. adverse hydrological impacts to RAMSAR listed and SEPP14 wetlands, endangered ecological communities, Hunter River estuary habitats and associated drainage network), downstream impacts, changes to the saline / freshwater balance associated with fill and proposed earthworks, increased nutrient / pollution loads, fragmentation, loss of connective links and impacts on wildlife corridors, impacts of bushfire asset protection zones, noise and dust impacts, light pollution (i.e. increasing skyglow from uncontrolled uplight from the subdivision), weed infestation and feral animal implications, and increased human visitation (including litter);
- as the proposal involves the clearing of vegetation and/or removal / damage to habitat the EA must clearly articulate the size of this impact, and where applicable delineate this on the basis of vegetation / habitat type;
- provide a general baseline flora and fauna survey (including appropriate targeted surveys for threatened species) for the subject site, describing the vegetation communities, habitat types and species assemblages present;
- detail the actions that will be taken to avoid or mitigate impacts on threatened species, their habitats, populations and ecological communities; and in instances where impacts can not be avoided provide appropriate details on offset / compensatory habitat packages or strategies, habitat enhancement features and proposed management plans;
- address measures to protect and manage riparian corridors, adjacent aquatic habitats and coastal floodplain and estuarine environments; and
- detail any impacts on adjacent or nearby government conservation estate and provide mitigation or avoidance measures for any adverse impacts.

To address likely impacts (both direct and indirect) on threatened species, populations and ecological communities (including their habitat), the proponent will need to engage a suitably qualified and experienced environmental consultant(s) to conduct an appropriate flora and fauna survey of the subject site / study area, and provide an assessment report.

### Surveys

Survey procedures and assessment of results should be consistent with those procedures and assessment approaches contained within the DECCW publications:

- the *Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna -Amphibians* (DECCW, 2009a)
- *Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities - Working Draft* (DEC, 2004), and
- Threatened species survey and assessment guideline information on: [www.environment.nsw.gov.au/threatenedspecies/surveyassessmentgdlns.htm](http://www.environment.nsw.gov.au/threatenedspecies/surveyassessmentgdlns.htm).

A general baseline fauna and flora survey must be conducted on the subject site and/or study area to provide details of the vegetation communities, habitat types and species assemblages present. Details of prevailing weather conditions, any analyses used and copies of all field data sheets must be provided. Additional targeted surveys will be required for all likely threatened species, populations and/or ecological communities that are not easily detected using general survey methodologies.

Surveys must be undertaken at the time of year when the subject species are most likely to be detected (e.g. targeted threatened flora should be carried out when a species is flowering and/or fruiting, as these features are typically required to positively identify species, and fauna surveys should be undertaken when animals are active and/or breeding).

If a proposed survey methodology is likely to vary significantly from widely accepted methods, the proponent should discuss the proposed methodology with DECCW prior to undertaking the EA, to determine whether DECCW considers that it is appropriate.

### Previous Surveys

Recent (less than 5 years old) surveys and assessments may be used, but surveys greater than five years will not be accepted. However, previous surveys (less than 5 years old) should not be used if they have:

- been undertaken in seasons, weather conditions or following extensive disturbance events when the target subject species are unlikely to be detected or present (e.g. outside known flowering / fruiting periods, adverse drought conditions, flooding, bushfire, slashing and overgrazing etc.); or
- utilised methodologies, survey sampling intensities, timeframes or baits that are not the most appropriate ones for detecting the target subject species;

unless these differences can be clearly demonstrated to have had an insignificant impact upon the outcomes of the surveys.

### Documenting survey effort

The time invested in each survey technique applied must be summarised (preferably in tabular format) in the EA (e.g. - number of person hours per transect / quadrat, duration of call playback, number of nights traps set etc...). It is not sufficient to aggregate all time spent on all survey techniques. Effort must be expressed for each separate survey technique and each separate vegetation community. Survey, quadrat and transect sites must be schematically shown on a geo-referenced map and/or photograph. Targeted surveys also need to specify method adopted (e.g. random meander [Cropper 1993]), habitats searched (e.g. type / features), duration, effort, prevailing

weather conditions and location. Environmental conditions during the survey should be noted at the commencement of each survey technique.

Personnel details including name of all surveyor(s), contact phone number and relevant experience should be provided. The person who identified records (e.g. Anabat, hair tubes, and scat analysis) must be identified.

#### BioBanking Assessment Methodology

If the proponent is proposing to conduct a biodiversity assessment using BioBanking Assessment Methodology, as outlined in the *BioBanking Assessment Methodology and Credit Calculator Operational Manual* (DECC 2009b), then it is advantageous that during the survey component of the EA that the relevant data is collected in the appropriate format for the Biometric tool (i.e. BioBanking Credit Calculator) (\*Note: this may reduce duplication or further surveying at a later date). Under this scenario all vegetation types in the study area should be identified and matched to a DECCW BioMetric vegetation type. Please note there is no formal requirement to use BioBanking under Part 3A of the *Environmental Planning and Assessment (EP&A) Act 1979*, but the process can, if the proponent wishes, provide guidance in determining the level and adequacy of an offset required to compensate the loss of vegetation / habitat (if applicable). Furthermore, conducting a biodiversity assessment does not negate the need to comply with the full survey requirements.

For details on the use of Biometric, see <http://www.environment.nsw.gov.au/biobanking/>

#### Subject Species

In determining potential threatened species (the subject species), populations and/or ecological communities for the site, consideration must be given to the vegetation / habitat types present within the study area, recent and historic records of threatened species or populations in the locality and the known distribution of threatened species, populations and/or ecological communities.

Databases such as DECCW *Atlas of NSW Wildlife*, *BioBanking Credit Calculator*, *Australian Museum and Royal Botanic Gardens* should be consulted to assist in compiling the list. Other databases must also be consulted to create a comprehensive list of subject species. Vegetation mapping for the region may assist in identifying potential ecological communities.

DECCW notes the following known threatened species, populations and ecological communities (based on DECCW *Atlas of NSW Wildlife* database, vegetation mapping and potential habitat) which have broad habitat matches to that of the site occur on or nearby (approx. 10 km radius) to the proposal and these should be targeted during surveying (but not be limited to just these):

#### (ii) FLORA

For targeted surveys of relevant flora which have suitable habitat available on site please note the following known flowering / fruiting times for each species. These should be used as a guide to time surveys appropriately. Surveying at these times is recommended for species with suitable habitat available that are not readily detectable all year round (e.g. annual species, species cryptic in nature etc) and for species where flowers and/or fruits are necessary for their positive identification. If targeted flora surveys for these species are conducted outside its known phenology then justification must be provided as to why; if this is not provided or considered inappropriate, then all such species will be considered to be present on all available habitat and in viable numbers. For species which do not require flowers / fruits for positive identification (e.g. large trees / shrubs, species readily identifiable from vegetative features etc), then survey as appropriate (\*though please provide justification).

**Trailing Woodruff (*Asperula asthenes*)\*** – flowers and fruits in spring (Thompson 2009); fruits are required to separate genera *Asperula* and *Galium* (Harden 1992).

**Netted Bottle Brush (*Callistemon linearifolius*)** – flowers spring to summer (Harden 2002), though Benson & McDougall (1998) note predominantly October to November.

- Leafless Tongue Orchid (*Cryptostylis hunteriana*)\*** – in NSW flowering occurs from December to February (Nicholls 1938, Jones 1993, Harden 1993) though Bell (2001) states that the Central Coast populations (i.e. Freeman's Waterhole, Vales Point and Wyee) flower in November.
- Camfield's Stringybark (*Eucalyptus camfieldii*)** – flowering period November to December (Brooker & Kleinig 1999).
- Parramatta Red Gum (*Eucalyptus parramattensis* subsp. *decadens*)\*** – flowering typically occurs between November to January (Bell 2006).
- Tangled Bedstraw (*Galium australe*)** – poorly recorded in NSW; most flowering collections have been made in late spring to early autumn, potentially overlooked due to its small size and cryptic nature, fruits required to separate genera *Asperula* and *Galium* (Harden 1992); flowers spring – summer (Thompson 2009).
- Small-flower Grevillea (*Grevillea parviflora* subsp. *parviflora*)\*** – flowers from July to December (Benson & McDougall 2000, Makinson 2000, Harden 2002, Fairley 2004)
- Noah's False Chickweed (*Lindernia alsinoides*)** – flowers during summer, mainly November (Harden 1992).
- Small Water-ribbons (*Maundia triglochoides*)** – flowers November to January, in the warmer months (Harden 1993, Benson & McDougall 2002); without flowering material may be confused with the more common genus *Triglochin* (i.e. 'individual fruit dehiscent but carpels remaining fused along their central axis for most of their length, ovule pendulous, attached at the apex of ovary in *Maundia*' cf. 'individual fruit separating into carpels, ovule erect, attached at the base of the ovary in *Triglochin*' [Aston 1971, Harden 1993], though *Maundia* tends to have spongy inflated leaves compared to linear, flattened or terete and strap-like in *Triglochin* (Aston 1971 Harden 1993).
- Tall Knot-weed (*Persicaria elatior*)\*** – flowers January to February (February - April for fruiting) (Benson & McDougall 1999); inflorescence required to separate species in genus (i.e. small clusters / individual flowers cf. dense spikes, elongated [as in *P. elatior*] or sub-globose spike-like racemes [Harden 2001]); DECCW notes that a 'water plant' possibly a *Persicaria* was recorded at site FL20, but sample was inadequate for identification.
- Dwarf Kerrawang (*Rulingia prostrata*)\*** - flowers between October and December (Benson & McDougall 2001).
- Black-eyed Susan (*Tetradlea juncea*)\*** – flowers predominantly November to February, though known to flower early from June onwards (Harden 1992, Driscoll 2003).
- Horned Pondweed (*Zannichellia palustris*)** – flowers during the warmer months (Harden 1993).

### (iii) FAUNA

#### Amphibians:

- Wallum Froglet (*Crinia tinnula*)  
Green And Golden Bell Frog (*Litoria aurea*)\*

#### Birds:

- Maggie Goose (*Anseranas semipalmata*)  
Australasian Bittern (*Botaurus poiciloptilus*)  
Bush Stone-curlew (*Burhinus grallarius*)  
Sanderling (*Calidris alba*)  
Great Knot (*Calidris tenuirostris*)  
Glossy Black Cockatoo (*Calyptorhynchus lathamii*)  
Greater Sand-plover (*Charadrius leschenaulti*)  
Lesser Sand Plover (*Charadrius mongolus*)  
Spotted Harrier (*Circus assimilis*)  
Varied Sittella (*Daphoenositta chrysoptera*)  
White-fronted Chat (*Epthianura albifrons*)  
Black-necked Stork (*Ephipporhynchus asiaticus*)  
Beach Stone-curlew (*Esacus neglectus*)\*  
Little Lorikeet (*Glossopsitta pusilla*)  
Sooty Oystercatcher (*Haematopus fuliginosus*)  
Pied Oystercatcher (*Haematopus longirostris*)  
Little Eagle (*Hieraetus morphoides*)  
Black Bittern (*Ixobrychus flavicollis*)  
Swift Parrot (*Lathamus discolor*)\*  
Broad-billed Sandpiper (*Limicola falcinellus*)  
Black-tailed Godwit (*Limosa limosa*)  
Square-tailed Kite (*Lopholictinia isura*)  
Turquoise Parrot (*Neophema pulchella*)  
Barking Owl (*Ninox connivens*)  
Powerful Owl (*Ninox strenua*)  
Blue-billed Duck (*Oxyura australis*)  
Osprey (Previously *Pandion haliaetus* now *Pandion cristatus*)  
Rose-crowned Fruit-dove (*Ptilinopus regina*)  
Painted Snipe (*Rostratula benghalensis*)\* referred to the Australian Snipe (*Rostratula australis* - which is considered polytypic)  
Little Tern (*Sterna albifrons*)  
Freckled Duck (*Stictonetta naevosa*)  
Red-backed Button-quail (*Tumix maculosa*)  
Grass Owl (Previously *Tyto capensis* now *Tyto longimembris*)  
Masked Owl (*Tyto novaehollandiae*)  
Regent Honeyeater (Previously *Xanthomyza phrygia* now *Anthochaera phrygia*)\*  
Terek Sandpiper (*Xenus cinereus*)

**Mammals:**

Large-eared Pied Bat (*Chalinolobus dwyeri*)\*  
 Spotted-tailed Quoll (*Dasyurus maculatus*)\*  
 Eastern False Pipistrelle (*Falsistrellus tasmaniensis*)  
 Little Bentwing-bat (*Miniopterus australis*)  
 Eastern Bent-wing Bat (*Miniopterus schreibersii* subsp. *oceanensis*)  
 Eastern Freetail bat (*Mormopterus norfolkensis*)  
 Large-footed Myotis (*Myotis adversus*)  
 Squirrel Glider (*Petaurus norfolcensis*)  
 Brush-tailed Phascogale (*Phascogale tapoatafa*)  
 Koala (*Phascolarctos cinereus*)  
 Eastern Chestnut Mouse (*Pseudomys gracilicaudatus*)  
 Grey-headed Flying-fox (*Pteropus poliocephalus*)\*  
 Yellow-bellied Sheath-tail-bat (*Saccolaimus flaviventris*)  
 Greater Broad-nosed Bat (*Scoteanax rueppellii*)

**(iv) ENDANGERED ECOLOGICAL COMMUNITIES**

The following endangered ecological communities are known to occur on the subject land or within the nearby vicinity, and as such have potential to occur given similarities in habitat requirements:

- Coastal Saltmarsh in the NSW North Coast, Sydney Basin and South East Corner Bioregions.
- Freshwater wetlands on coastal floodplains of the NSW North Coast, Sydney Basin and South East Corner Bioregions.
- Littoral Rainforest in the NSW North Coast, Sydney Basin and South East Corner Bioregions.
- Lowland Rainforest in the NSW North Coast and Sydney Basin Bioregions.
- Lowland Rainforest on Floodplain in the New South Wales North Coast Bioregion.
- River-flat Eucalypt Forest on Coastal Floodplains of the North Coast, Sydney Basin and South East Corner Bioregions.
- Swamp Sclerophyll Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner Bioregions.
- Swamp Oak Floodplain Forest of the NSW North Coast, Sydney Basin and South East Corner Bioregions.

\* indicates species that are listed on the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The above lists of species, populations and ecological communities are not necessarily exhaustive. The applicant must carry out their own process of determining the subject species. This process should incorporate consideration of:

- the vegetation communities present within the study area;
- the presence, quantity, quality and degree of fragmentation of likely habitat for individual threatened species;
- recent (within the last ten years) records of threatened species, populations and ecological communities in the locality; and
- the known distribution of threatened species, populations and ecological communities.

DECCW *Atlas of NSW Wildlife*, Threatened species website, *Australian Museum and Royal Botanic Gardens* databases, the *Birds Australia and NSW Bird Atlas* databases (for birds) and other relevant databases, vegetation mapping and literature should be used to assist in compiling or assessing the list. The Data Licensing Officer at DECCW Head Office should be contacted on (02) 9585 6684 to obtain information on the Atlas database.

The Preliminary EA does not include any site specific details regarding threatened species, populations, ecological communities and their habitat. DECCW notes a number of threatened fauna species have been recorded for the subject site and immediate surrounds (based on DECCW *Atlas of NSW Wildlife* database and other recent studies), namely Australasian Bittern, Grass Owl, Greater Broad-nosed Bat, Grey-headed Flying-fox, Large-footed Myotis, Little Bent-wing Bat, Koala and Turquoise Parrot. DECCW is of the opinion all these species will need to be targeted in any survey (including other likely species filtered from the subject species list), and included in the assessment of threatened species for the proposal.

## Habitat Corridors

The potential fragmentation of and/or indirect impacts on the various corridor links in which the proposal lies or is within close proximity to, needs to be assessed. DECCW notes that the proposal lies near a north-south corridor – Richardson Road, which also runs in an east-west direction to the north of the proposal. This corridor links the Tomago sand beds / Tilligery area with the Hunter wetlands (e.g. Hunter Wetland National Park) as identified in Scotts (2003).

Regional Corridors are landscape corridors designed to provide potential residential and dispersal habitat for threatened faunal assemblages (as described in Scotts 2003), and supplementary habitat for other taxa. Typically corridors are schematic representations and are in the order of kilometres wide to maintain habitat and to facilitate movement between areas of significant intact habitat. Although they may be discontinuous, due to fragmentation by clearing or degraded through logging and/or agricultural activities, they must still maintain their overall landscape connectivity. DECCW is of the opinion regardless of the patchiness and discontinuous nature associated with parts of these corridors, they still represent an important habitat, nodes and movement linkage for locally occurring threatened species, of which some are highly mobile and can move across gaps in habitat. Fragmentation may impede the movement opportunities for some of the known threatened species of the subject site, and hence impacts on such corridors need to be carefully assessed and documented in the EA.

## Compensatory strategies

DECCW's 'offset provision' principles state that impacts must be avoided first by using prevention and mitigation measures (DECC 2007a). Where significant modification of the proposal to minimise impacts is not possible then compensatory strategies should be considered. These should include on or offsite proposals that contribute to long term conservation of affected threatened species, populations or ecological communities. If compensatory habitat is not considered appropriate, justification must be provided. Where a proposal involves the clearing of threatened species habitat then appropriate offsets which compensate for the clearing of the habitat should be provided. In this instance the proposal should clearly indicate the scale / size of the impact so that appropriate comparisons can be made to any offset packages.

Justification for any area(s) proposed as compensatory habitat / offsets must include an assessment of the threatened species / biodiversity values impacted on by the proposed works (i.e. those of the subject site) and a comparison of whether the proposed offset area(s) provides equivalent or greater values – "improve or maintain important biodiversity values".

To determine the adequate biodiversity offset either one of the following methodologies are to be used as a guide:

- DECCW 'offsetting principles', as outlined on the Departments website: *Principles for the use of biodiversity offsets in NSW* (DECCW 2008 website - <http://www.environment.nsw.gov.au/biocertification/offsets.htm>) can be used as general guide for offsetting and compensatory habitat requirements,
- a biodiversity assessment using BioBanking Assessment Methodology under Biodiversity Banking and Offsets Scheme, as outlined in the *BioBanking Assessment Methodology and Credit Calculator Operational Manual* (DECC 2009b). This would provide a quantitative assessment of the required ecosystem and species (threatened) credits that need to be retired to offset the impacts of the development.

DECCW is of the opinion that a biodiversity assessment using BioBanking Assessment Methodology under Biodiversity Banking and Offsets Scheme, would provide a transparent framework and a quantitative alternative to the principles-based approach (i.e. 'offset provision' principles as outlined in the biodiversity certification guideline - DECC 2007a). DECCW acknowledges that this is a voluntary process and not a requirement under Part 3A, but believes it provides a valuable insight and quantitative appraisal into what would be an acceptable offset package to compensate the likely impacts of the development.

Offsets will require the proponent to consider adequate conservation in perpetuity, appropriate management regimes, and financial security with respect to ongoing management.

The following principles are relevant to areas without an existing biodiversity offsets program. Offsets will require the proponent to consider adequate conservation in perpetuity, appropriate management regimes (including other habitat enhancement or mitigation measures) and financial security with respect to ongoing management. DECCW would typically consider suitable measures to ensure conservation in perpetuity, such as (but not limited to):

- The establishment of biobanking sites with biobanking agreements under the *Threatened Species Conservation Act 1995* (TSC Act)
- The dedication of land under the *National Parks and Wildlife Act 1974* (NPW Act).
- A Conservation Agreement under the NPW Act;
- A Trust Agreement under the *Nature Conservation Trust Act 2001*;
- A Planning Agreement under s 93F (soon to be s116T) of the EP&A Act.
- A public positive covenant under s88E of the *Conveyancing Act 1919*

To appropriately manage any proposed compensatory offsets, DECCW will require that an appropriate Management Plan (such as vegetation or habitat) be developed. These plans should be prepared prior to any potential approval of the development. The management plan should clearly document how the offset area, any retained vegetated areas or habitat features and proposed habitat management within the development footprint (e.g. buffer zones, habitat trees and nest boxes) will be managed and implemented with respect to long-term conservation and viability, including clear details on how they will be funded. The plan should cover, but not be limited to, the following issues:

- weed management (both control and suppression) and monitoring,
- management of retained native vegetation and habitat (including buffer zones),
- feral animal control,
- fire management (including asset protection zones [APZs]),
- public access (including restriction of, increased traffic, and associated impacts, such as increased refuse and pets),
- size and management of buffer zones,
- minimisation of edge effects and fragmentation,
- stormwater control and changes to hydrology (including stormwater / runoff control and sediment / erosion control measures),
- management of specific habitat enhancement measures (e.g. hollow / habitat trees, animal fencing to facilitate movement [e.g. Koala 'floppy-top fencing'], artificial hollows and nest boxes etc.),
- fauna displacement and if appropriate translocation (including any licence requirements),
- proposed surveys, such as pre-extraction baseline, pre-clearance and rehabilitation surveys,
- details of long-term monitoring (including proposed timing),
- details of any rehabilitation program, including details of timing (including proposed staging details), rehabilitation measures (including details of proposed revegetation and species mix), and post-rehabilitation monitoring,
- measures to ensure conservation in perpetuity (e.g. transfer to DECCW estate, conservation agreements or covenants), and
- funding details of long-term financial commitment to any proposed conservation measures, including any mechanisms to be implemented to achieve this.

#### **DECCW Conservation Estate and RAMSAR / Nationally Important Wetlands**

Likely impacts on any adjoining and/or nearby government conservation estate under the *National Parks and Wildlife Act 1974*, RAMSAR listed wetlands and Nationally Important Wetlands ("these latter two will also be an EPBC Act issue as well) must be assessed, evaluated and reported on. DECCW notes that the site is surrounded to the east and south by Hunter Wetland National Park (NP) and the Hunter Estuary Wetlands RAMSAR Site (RAMSAR ID – 24). The EA must consider

information presented on the federal Department of Sustainability, Environment, Water, Population and Communities 'Australian RAMSAR Wetlands' website: <http://www.environment.gov.au/cgi-bin/wetlands/alphalist.pl>, specifically referring to the Hunter Estuary Wetlands. Furthermore, DECCW notes that the proposal adjoins Nationally important wetlands (i.e. as per the *Directory of Important Wetlands*) and SEPP14 mapped wetlands, and as such any impacts on these need to be addressed.

The assessment should focus on impacts on threatened species (including populations and ecological communities), their habitat, biodiversity in general and landscape / amenity values, but include indirect impacts such as increased surface runoff, changes to hydrology, downstream impacts, changes to the saline / freshwater balance associated with fill and proposed earthworks, potential mangrove encroachment and implications to coastal saltmarsh, fragmentation of wetland habitats, loss of connective links and impacts on wildlife corridors, noise and dust impacts, light pollution (i.e. increasing skyglow from uncontrolled upright from the subdivision), pollution, increased nutrient loads, weed infestation, feral animals and increased physical human impacts, but not be limited to these.

The EA should describe mitigation and management options that will be used to prevent the identified impacts associated with the project. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.

Specifically, the DECCW Parks and Wildlife Group are undertaking a major wetlands rehabilitation project (known as the 'Tomago Wetlands Rehabilitation Project') which is located directly to the east of the proposed subdivision. This is within the Hunter Estuary Wetlands RAMSAR Site and the Hunter Wetlands NP. As such, the proposal must limit impacts (both direct and indirect) to this internationally significant area. Water management impacts must be appropriately addressed and ensure that no run off from the proposed subdivision is re-directed into the north/south drain, which is located to the east of the subdivision. This drain feeds directly into the Tomago Wetland Rehabilitation Project. As such any run-off impact may adversely affect the rehabilitation program.

## Report

The general report structure should be consistent with the information presented in Table 3.4 of DEC (2004). In addition the following is required:

- a geo-referenced map / aerial photograph (or equivalent) of the subject site and study area indicating their location and regional context;
- details of the survey design and methodologies / techniques used for both flora and fauna (including details of prevailing weather conditions, any analyses used and copies of all field data sheets);
- a detailed description of all vegetation communities / types (both undisturbed and disturbed) on the site and study area (and if applicable DECCW BioMetric vegetation types), including a geo-referenced map / aerial photograph (or equivalent) showing their location. The descriptions should include: a general description, characteristic features (e.g. lacks a mid-storey, restricted to a particular geomorphic / edaphic feature etc.), their distribution and size, their vegetation structure (including cover), their condition, key diagnostic species, relationship to other communities, species richness and any significant species present (e.g. threatened species, ROTAP [Briggs & Leigh 1996], regionally significant taxa);
- identification of the classification system used in the vegetation descriptions (e.g. Specht *et al.* 1974, Hnatiuk *et al.* 2009 [Note: the classification must have regard to both structural and floristic elements]),
- details of how the vegetation classification for the site was developed, including details and associated products (e.g. dendrograms / two-way tables) of any analyses used;
- a full floristic list in tabular format of all taxa (both native and exotic) recorded on the subject site, indicating which vegetation communities they occur in, their cover / abundance, and conservation (including taxa of conservation significance);
- a full list of fauna (both native and exotic) in tabular format recorded on the subject site, indicating which vegetation communities / habitat types they occurred in;

- a geo-referenced map / aerial photograph (or equivalent) showing all threatened species, populations and ecological communities recorded on the site during surveying (\*Note: records obtained from the "Atlas of NSW Wildlife" database can be used in determining likely habitat, but they are not to be schematically mapped in the EA, as this is considered a breach of licence conditions for such records);
- all habitat features / types should be detailed and mapped (where appropriate), such as frequency and location of stags, hollow bearing trees (including size), mature / old growth trees, culverts, rock shelters, rock outcrops, presence of feed tree / shrub / groundcover species (e.g. winter-flowering eucalypts, *Acacia* and *Banksia* trees, *Casuarina* / *Allocasuarina* and areas of native grasses), crevices, caves, drainage lines, soaks etc; and
- details of how the proposal will impact (both directly and indirectly) and affect known and potential threatened species, populations and ecological communities (including their habitat), including any assessment of significance.
- details of how the proposal may impact on corridors, connective links and fragmentation.
- details of how the proposal will impact (both directly and indirectly) on adjacent government conservation estate (e.g. Hunter Wetland National Park) and internationally / nationally important wetlands (e.g. Hunter Estuary Wetlands RAMSAR Site, wetlands listed in the *Directory of Important Wetlands* and SEPP14 mapped wetlands).
- details of mitigation and offset / compensatory habitat measures.

## References

- Aston, H.I. (1971) *Aquatic Plants of Australia*. Melbourne University Press.
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**Department of Environment, Climate Change and Water**  
**October 2010**

## ATTACHMENT B

### DECCW GENERAL GUIDANCE MATERIAL

#### Assessing Environmental Impacts

Information requirements described in **Attachment A** should be assessed in accordance with the following legislative requirements and guidelines. In particular the requirements of Section 45 of the *Protection of the Environment Operations Act 1997* should be addressed.

#### Air Quality

- Protection of the Environment Operations (Clean Air) Regulation 2002.
- Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (2006).
- Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (2005).
- Assessment and Management of Odour from Stationery Sources in NSW (November, 2006).

#### Impacts on Greenhouse Gas Emissions

- The Greenhouse Gas Protocol: Corporate Standard, World Council for Sustainable Business Development & World Resources Institute  
<http://www.ghgprotocol.org/standards/corporate-standard>
- National Greenhouse Accounts (NGA) Factors, Australian Department of Climate Change (Latest release), <http://www.climatechange.gov.au/publications/greenhouse-acctg/national-greenhouse-factors.aspx>
- National Greenhouse and Energy Reporting System, Technical Guidelines (latest release)  
<http://www.climatechange.gov.au/en/government/initiatives/national-greenhouse-energy-reporting/tools-resources.aspx>
- National Carbon Accounting Toolbox  
<http://www.climatechange.gov.au/government/initiatives/ncat.aspx>
- Australian Greenhouse Emissions Information System (AGEIS)  
<http://ageis.climatechange.gov.au/>

#### Noise and Vibration

- Construction noise should be assessed using DECC's "Interim Construction Noise Guideline" (DECC 2009) available electronically at  
<http://www.environment.nsw.gov.au/noise/constructnoise.htm>
- Operational noise should be assessed in accordance with the *NSW Industrial Noise Policy (EPA, 2000)* and *Industrial Noise Policy Application Notes*.  
<http://www.environment.nsw.gov.au/noise/industrial.htm>
- Operational vibration should be assessed in accordance with *DECCW's Environmental Noise Management – Assessing Vibration: a technical guideline (DEC, 2006)*.  
<http://www.environment.nsw.gov.au/noise/vibrationguide.htm>
- Traffic noise should be assessed using the *Environmental Criteria for Road Traffic Noise (EPA, 1999)* <http://www.environment.nsw.gov.au/noise/traffic.htm>
- If blasting is required for any reasons, blast impacts should be demonstrated to be capable of complying with the guidelines contained in "*Australian and New Zealand Environment Council – Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration*" (ANZEC 1990). (<http://www.environment.nsw.gov.au/noise/blasting.htm>)

#### Water

##### Water Quality

- National Water Quality Management Strategy: Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC 2000).

- NWQMS Australian Guidelines for Water Quality Monitoring and Reporting (ANZECC 2000).

#### Stormwater

- Managing Urban Stormwater: Soils and Construction (Landcom, 2004).
- Managing Urban Stormwater: Source Control (EPA 1998).
- Managing Urban Stormwater: Treatment Techniques (EPA 1998).

#### Groundwater

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

#### **Waste Water**

- National Water Quality Management Strategy: Guidelines for Sewerage Systems - Effluent Management (ARMCANZ/ANZECC 1997).
- National Water Quality Management Strategy: Guidelines for Sewerage Systems – Use of Reclaimed Water (ARMCANZ/ANZECC 2000).
- Environmental Guidelines for the Utilisation of Treated Effluent by Irrigation (NSW DEC 2004).

#### **Waste and Chemicals**

- *Protection of the Environment Operations Act 1997* – Schedule 1
- Waste Classification Guidelines, Part 1: Classification of Waste (DECC, 2008)
- Environmental Compliance Report: Liquid Chemical Storage, Handling and Spill Management Part B Review of Best Practice and Regulation (DEC, 2005)  
<http://www.environment.nsw.gov.au/resources/licensing/ecrchemicalsb05590.pdf>
- Storing and Handling Liquids: Environmental Protection Participants Manual (DECC, 2007)  
<http://www.environment.nsw.gov.au/resources/sustainbus/2007210liquidsManual.pdf>
- Waste Exemption Guidelines <http://www.environment.nsw.gov.au/waste/RegulateWaste.htm>

#### **Contaminated Land**

- Contaminated Sites - Guidelines for Consultants Reporting on Contaminated Sites (EPA 1997);
- Contaminated Sites - Guidelines for the NSW Site Auditor Scheme (EPA 1998); and
- Contaminated Sites - Sampling Design Guidelines (EPA 1995).

#### **Aboriginal Cultural Heritage Impacts**

- Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation – (DEC, 2005) Available from the Department of Planning website.
- Part 3A EP&A Act Guidelines for Aboriginal Cultural Heritage Assessment and Community Consultation' (Department of Planning and DEC 2007). Available from DECC and Department of Planning on request.
- 'Aboriginal cultural heritage consultation requirements for proponents (DECCW 2010)

#### **Threatened Species Impacts**

- Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities (DEC November 2004)  
<http://www.environment.nsw.gov.au/resources/nature/TBSAGuidelinesDraft.pdf>.

(\*Note: Section 6.1 *Assessment of Significance* has now been amended by DECC [2007b]).

- Threatened species survey and assessment guidelines: field survey methods for fauna – Amphibians (DECC April 2009)  
<http://www.environment.nsw.gov.au/resources/threatenedspecies/09213amphibians.pdf>

(Note: DECC has recently produced new survey guidelines to cover Amphibians (frogs), which replaces the amphibian section in the DEC (2004) guidelines. However, the survey requirements for all other species (flora and fauna) are still found in the DEC (2004) guidelines).

- Threatened Species Assessment Guidelines – The Assessment of Significance (DECC 2007b).
- Principles for the use of Biodiversity Offsets in NSW (DECC October 2008).  
<http://www.environment.nsw.gov.au/biocertification/offsets.htm>
- The BioBanking Assessment Methodology. Further information can be found on the DECC website at: <http://www.environment.nsw.gov.au/biobanking/assessmethodology.htm>.
- Consideration for assessment of the proposal through the NSW Government's Biodiversity Banking and Offset Scheme (BioBanking). BioBanking is a voluntary process which provides a systematic and consistent framework for counterbalancing (offsetting) the impacts of development to achieve and improve or maintain outcome for biodiversity values. Further information is available at: <http://www.environment.nsw.gov.au/biobanking/index.htm>

**Department of Environment, Climate Change and Water  
October 2010**

116 Adelaide Street, Raymond Terrace NSW 2324  
PO Box 42, Raymond Terrace NSW 2324  
DX21406 ABN 16 744 377 876

Telephone Inquiries:  
MS A J GALE  
File No: 25-2010-8-1  
Parcel No: 43644  
Your Ref: MP 10\_0153

13 October 2010

Department of Planning  
GPO Box 39  
SYDNEY NSW 2001

Attention: Ms Emma Barnet – Industry and Mining, Major Project Assessment

Dear Ms Barnet,

Re: **Proposed: Northbank Enterprise Hub - Subdivision for Industrial Purposes – Major Project (MP 10\_0153)**  
**Property: LOT: 1001 DP: 1127780**  
**365 Tomago Road TOMAGO**

Reference is made to the Department's correspondence dated 24 September 2010 (received 29 September 2010) advising of the abovementioned Major Project and undertaking consultation with relevant public authorities seeking any key issues and assessment requirements by 11 October 2010 (extension granted until 13/10/10 thank you).

Council notes the information provided by way of a preliminary assessment and overall it would appear the key constraints and issues are being considered in the preliminary assessment to inform the Director-General's Requirements (DGRs). Council will be in a position to provide more detailed comment through the process and upon receipt of the final environmental assessment. That said, the following preliminary comments are provided to both reaffirm site constraints and key areas to be addressed within the final environmental assessment report.

Council notes the key constraints over the land consist of:-

- Bushfire prone land – portions of lot;
- Flood Prone land – across the lot;
- Acid Sulphate Soils ( Class 2, 3 and 4) – across the lot;
- Supplementary koala habitat – Port Stephens Comprehensive Koala Plan of Management (noting portions of the lot is cleared lands);
- Endangered Ecological Communities - Coastal Salt Marsh, Flat Eucalypt Forest on Coastal floodplains, Swamp Schlerophyl Forest (noting portions of lot is cleared lands)
- NSW Wildlife Atlas- fauna (vulnerable) – across the lot;
- SEPP 14 – Wetlands - rear of lot and on adjoining land;
- SEPP 55 – Remediation of land
- Prime Agricultural land;
- Within Buffer Area – Tomago Aluminium Smelter;
- Within Coastal Protection Area – SEPP 71 Coastal Protection



Council notes the key issues for consideration and assessment of potential risk as outlined in the Environmental Assessment and makes the following comments (including but not limited to):-

- land constraints as identified
- flooding and impacts of extensive land fill associated with the proposal
- heritage and Aboriginal archaeological issues
- contamination and remediation issues
- ecological issues and long term environmental impacts inclusive of long term impacts of industry and fluoride from Tomago Aluminium and the potential for devaluation of vegetation. The support of viable populations needs to be reviewed and the connectivity of the area in terms of any populations as identified through ecological assessment.
- detailed consideration on waste water / trade waste / sewage disposal is required given the site is environmentally sensitive (quite large site and adjoining a water catchment). Further consultation with Hunter Water Corporation is required in relation to the issue of sewer and Hunter Water Special Areas.
- access, traffic and transport inclusive of pedestrian and cycle pathways
- drainage
- services and infrastructure provision
- dual street frontage (to some proposed lots) to Tomago Road as a main road. Whilst new lots may not intend to gain access to Tomago Road, consideration is needed to provide adequate setbacks from Tomago Road property boundary / frontage for these new lots. Furthermore, need to consider how the subdivision will dictate or control future built form outcomes on these lots, given the importance of providing / preserving an acceptable streetscape amenity along Tomago Road frontage. That said, it is acknowledged that it will be desirable to maximise the exposure that exists for any industrial business operations on these lots. Therefore careful consideration is needed to providing an acceptable streetscape outcome as part of any final subdivision layout for this site.

I hope these preliminary comments have been of assistance in responding to the Departments request and Council looks forward in providing more detailed comments through the Part 3A process.

Yours faithfully



Amanda Gale  
Development Co-ordinator

DA TRACKER

Development & Building has been listening to your suggestions for improvement. Council has now launched its On-line Application Tracking System and a revised Website so you can access key information, forms and application updates anytime, 24 hours, 7 days a week.. Council welcomes your feedback on these new initiatives. Email [council@portstephens.nsw.gov.au](mailto:council@portstephens.nsw.gov.au) or write to The Manager Development & Building, Port Stephens Council, PO Box 42, Raymond Terrace NSW 2324

**Director-General's Requirements Compliance Table – MP 10\_0185  
Northbank Enterprise Hub Industrial & Business Park – Tomago Road, Tomago**

Item	Environmental Assessment Requirement	Environmental Report Location/Comments	Compliance
<b>GENERAL REQUIREMENTS</b>			
	<b>The Environmental Assessment must include:</b>		
1.	<ul style="list-style-type: none"> <li>an executive summary</li> </ul>	An executive summary has been included within the Environmental Assessment Report.	Yes
2.	<ul style="list-style-type: none"> <li>a detailed description of the project including the:                             <ul style="list-style-type: none"> <li>need for the project</li> <li>alternatives considered</li> <li>various components and stages of the project.</li> </ul> </li> </ul>	<b>Section 2.0</b> of the Environmental Assessment Report provides a comprehensive description of the proposed development.	Yes
		The need for the project is outlined in <b>Section 1.2 – Objectives of the Proposal</b> within the Environmental Assessment Report.	Yes
		This is provided within <b>Section 2.2 – Consideration of Alternatives</b> , of the Environmental Assessment Report.	Yes
		<b>Section 2.1.2</b> and <b>2.1.3</b> of the Environmental Assessment Report outlines in detail the various components of the project.	Yes
3.	<ul style="list-style-type: none"> <li>consideration of any relevant statutory provisions</li> </ul>	<b>Section 4.0</b> of the Environmental Assessment Report considers all the relevant planning and related statutory provisions.	Yes
4.	<ul style="list-style-type: none"> <li>a general overview of the environmental impacts of the project, identifying the key issues for further assessment, and taking into consideration any issues raised during consultation.</li> </ul>	<b>Section 3.0</b> of the Environmental Assessment Report provides a general overview of the environmental impacts of the proposal and identifies key issues for further assessment. Issues raised during consultation are considered within <b>Section 5.0</b> .	Yes
5.	<ul style="list-style-type: none"> <li>a detailed assessment of the key issues specified below, and any other significant issues identified in the general overview of environmental impacts of the project (see above), which includes:                             <ul style="list-style-type: none"> <li>A description of the existing environment, including constraints mapping</li> </ul> </li> </ul>	<b>Section 6.0</b> of the Environmental Assessment Report provides a detailed assessment of the issues identified in <b>Sections 3.0, 5.0</b> and the DGR's.	Yes
		<b>Section 3.0</b> of the Environmental Assessment Report provides a description of the existing environment and includes relevant constraints mapping.	Yes

Item	Environmental Assessment Requirement	Environmental Report Location/Comments	Compliance
	- An assessment of the potential impacts of all components of the project, including any cumulative impacts from other industrial developments in the area.	Provided in <b>Section 6.0 – Environmental Assessment</b> of the Environmental Assessment Report.	Yes
6.	<ul style="list-style-type: none"> <li>a description of the measures that would be implemented to avoid, minimise, mitigate, offset, manage and/or monitor the impacts of the project</li> </ul>	Provided in <b>Section 6.0 – Environmental Assessment</b> and <b>Section 7.0 – Draft Statement of Commitments</b> of the Environmental Assessment Report.	Yes
7.	<ul style="list-style-type: none"> <li>a draft Statement of Commitments, outlining environmental management, mitigation and monitoring measures</li> </ul>	<b>Section 7.0</b> of the Environmental Assessment Report provides a draft statement of commitments, that outlines all environmental management, mitigation and monitoring measures proposed as part of the project.	Yes
8.	<ul style="list-style-type: none"> <li>a conclusion justifying the project, taking into consideration the environmental impacts of the proposal, the suitability of the site, and the benefits of the project.</li> </ul>	Provided in <b>Section 8.0 – Conclusion</b> of the Environmental Assessment Report.	Yes
9.	<ul style="list-style-type: none"> <li>a signed statement from the author of the Environmental Assessment certifying that the information contained in the report is neither false nor misleading.</li> </ul>	Provided on <b>Page 4</b> of the Environmental Assessment Report.	Yes
<b>KEY ISSUES</b>			
1.	<ul style="list-style-type: none"> <li><b>Strategic and Statutory context</b> – Consideration of any relevant statutory and non-statutory provisions including: <ul style="list-style-type: none"> <li>SEPPs</li> <li>NSW State Plan</li> <li>Lower Hunter Regional Strategy</li> <li>DCPs</li> </ul> </li> </ul>	<b>Section 4.0</b> of the Environmental Assessment Report considers all the relevant statutory and non statutory provisions.	Yes
	- Justify any inconsistencies and identify non-compliances	Not applicable. <b>Section 4.0</b> of the Environmental Assessment Report demonstrates that the proposal remains consistent with all applicable statutory and non statutory provisions.	N/A
2.	<ul style="list-style-type: none"> <li><b>Flora and Fauna</b> – including: <ul style="list-style-type: none"> <li>An assessment of impacts (direct or indirect) on threatened species, populations, ecological communities and their habitat, critical habitat (including riparian habitat) and native vegetation generally, including: <ul style="list-style-type: none"> <li>Impacts on species listed under Section 18 and</li> </ul> </li> </ul> </li> </ul>	Flora and Fauna is addressed within <b>Section 6.3.1</b> and <b>Appendix D</b> of the Environmental Assessment Report.  Matters for consideration under the EPBC Act 1999 are addressed in <b>Section 6.3.1</b> .	Yes

Item	Environmental Assessment Requirement	Environmental Report Location/Comments	Compliance
	<p>18A of the <i>Environmental Protection and Biodiversity Conservation Act 1999</i></p> <ul style="list-style-type: none"> <li>o Impacts on migratory species listed under the <i>Environmental Protection and Biodiversity Conservation Act 1999</i></li> <li>o Impacts on RAMSAR Wetlands, particularly the Hunter Estuary Wetlands</li> <li>o Impacts on the Hunter Wetlands national Park.</li> </ul>	<p>The proposed development has been referred to the Commonwealth Department of Sustainability, Environment, Water, Population and Communities. The referral has determined that the proposal is a 'Controlled Action' (EPBC Referral No. 2010/5660) requiring assessment and approval (see <b>Section 4.2.1</b> of the Environmental Assessment Report).</p> <p>A Public Environmental Report addressing the Schedule 4 Requirements of the EPBC Regulations will be prepared and submitted to the Commonwealth Department of Sustainability, Environment, Water, Population and Communities at a later date for assessment and determination.</p> <p>Development in respect of the RAMSAR Wetlands and Hunter Wetlands National Park is addressed in detail in the Wetlands Interface Strategy in <b>Section 6.22</b> of the EA Report.</p>	
	<ul style="list-style-type: none"> <li>- Proposed measures to avoid, mitigate or offset any significant impacts</li> </ul>	<p>These measures are addressed within <b>Sections 6.3.1, and 7.3.1 and Appendix D</b> of the Environmental Assessment Report.</p>	Yes
3.	<ul style="list-style-type: none"> <li>• <b>Water and Soils – including:</b> <ul style="list-style-type: none"> <li>- Details of the quantity of fill required for the site and the proposed source(s) of the fill</li> </ul> </li> </ul>	<p>Details of fill material are provided within <b>Section 2.1.3</b> of the Environmental Assessment Report.</p>	Yes
	<ul style="list-style-type: none"> <li>- A water balance for the site detailing water sources, water consumption, water recycling, the quantity and quality of water and the impact of any water release from the site on surface water and groundwater.</li> </ul>	<p>These matters are addressed within <b>Section 6.5 and Appendix G</b> of the Environmental Assessment Report.</p>	Yes
	<ul style="list-style-type: none"> <li>- An assessment of the potential impacts of sea level rise and an increase in rainfall intensity on the flood regime of the site and adjacent lands.</li> </ul>	<p>These matters are addressed within <b>Section 6.4</b> and the Regional Flooding Assessment provided within <b>Appendix F</b>.</p>	Yes

Item	Environmental Assessment Requirement	Environmental Report Location/Comments	Compliance
	- An assessment of flooding impacts associated with the proposal including details of flood liability of the site and changes to flooding behaviour	Regional and local flooding impacts are addressed in <b>Section 6.4</b> and <b>Appendix F</b> of this Environmental Assessment Report.	Yes
	- An assessment of the potential impacts, associated with sewage disposal, on surrounding environment.	Sewerage disposal is addressed within <b>Section 6.11</b> and <b>Appendix H</b> of the Environmental Assessment Report.	Yes
	- Proposed erosion and sediment controls (during construction) and the proposed stormwater management system (during operations)	Erosion and sedimentation control is addressed within <b>Section 6.6</b> and <b>Appendix G</b> of the Environmental Assessment Report.	Yes
	- Soil contamination and acid sulphate soils.	Potential soil contamination is addressed in <b>Section 6.14</b> and <b>Appendix O</b> of the Environmental Assessment Report.  Acid sulphate soils are addressed within <b>Section 6.13</b> and <b>Appendix V</b> of the Environmental Assessment Report.	Yes
	- Water quality monitoring programs proposed during construction and operation to ensure the development achieves a satisfactory level of environmental performance.	This matter is addressed within <b>Sections 6.3, 6.5, 7.3 and 7.5</b> and <b>Appendices D &amp; G</b> of the Environmental Assessment Report.	Yes
4.	<ul style="list-style-type: none"> <li><b>Heritage</b> – (Aboriginal and European)</li> </ul>	Aboriginal Heritage is addressed within <b>Section 6.9</b> and <b>Appendix K</b> of the Environmental Assessment Report.  European Heritage and Historical Archaeology are addressed within <b>Sections 6.7</b> and <b>6.8</b> and <b>Appendices I</b> and <b>J</b> of the Environmental Assessment Report.	Yes
5.	<ul style="list-style-type: none"> <li><b>Traffic</b> – including access arrangements, details of the traffic volumes likely to be generated during construction, and an assessment of the predicted impacts of this traffic on the safety and capacity of the surrounding road network, identification of management measures and details of any road upgrades required, particularly on Tomago Road.</li> </ul>	Traffic is addressed within <b>Section 6.10</b> and <b>Appendix L</b> of the Environmental Assessment Report.	Yes

Item	Environmental Assessment Requirement	Environmental Report Location/Comments	Compliance
6.	<ul style="list-style-type: none"> <li>• <b>Site Layout and design</b> – including:               <ul style="list-style-type: none"> <li>- Demonstration of how the project will fit into the broader urban design framework for the area and how it addresses wider urban design objectives in terms of connectivity of roads, infrastructure and reticulation synergies and relationships to adjoining areas.</li> </ul> </li> </ul>	<p>These matters are addressed in <b>Section 2.1.3</b> of the Environmental Assessment Report.</p> <p>Roads (<b>Section 6.10 &amp; Appendix L</b>) and infrastructure servicing (<b>Section 6.11 &amp; Appendix H</b>) are also further detailed within the Environmental Assessment Report.</p>	Yes
	<ul style="list-style-type: none"> <li>- Details of the subdivision of the site, including adequate setbacks, site coverage, lot sizes and positioning of lots.</li> </ul>	<p>Details of the subdivision are provided within <b>Section 2.1.2</b> and <b>2.1.3</b> of the Environmental Assessment Report and within the subdivision plans provided within <b>Appendix C</b>.</p>	Yes
	<ul style="list-style-type: none"> <li>- Development controls and guidelines for the design and future development of the site covering, but not limited to, building heights and design, setbacks, floor space ratio, stormwater management and drainage, flooding, access and parking, landscaping, waste removal and storage, and energy and water efficiency/conservation requirements.</li> </ul>	<p>Development controls and guidelines for the design and future development of the site are addressed in <b>Section 2.1.3</b> and <b>Appendix N</b> of the Environmental Assessment Report.</p>	Yes
7.	<ul style="list-style-type: none"> <li>• <b>Infrastructure</b> – including               <ul style="list-style-type: none"> <li>- Details of the servicing capacity, destination/origination sources, site allocation and costs to adequately service the area to the capacity required.</li> </ul> </li> </ul>	<p>Infrastructure and servicing is addressed within <b>Section 6.11</b> and <b>Appendix H</b> of the Environmental Assessment Report.</p>	Yes
	<ul style="list-style-type: none"> <li>- A detailed written and graphical description of the infrastructure to be made available; its location, capacity, staging/timing and maintenance requirements.</li> </ul>		
	<ul style="list-style-type: none"> <li>- Identification of the infrastructure upgrades that are required off-site to facilitate the orderly and economic development of the project, and a description of the arrangements that would be put in place to ensure these upgrades are implemented in a timely manner and maintained.</li> </ul>		
	<ul style="list-style-type: none"> <li>- A description of how the provision of infrastructure both on and offsite would be co-ordinated and funded to ensure the necessary infrastructure is in place prior to the detailed development of the site.</li> </ul>		

Item	Environmental Assessment Requirement	Environmental Report Location/Comments	Compliance
	<ul style="list-style-type: none"> <li>- Identify any technologies that may reduce the demand or need for servicing or provide for the supply of sustainable services.</li> </ul>		
8.	<ul style="list-style-type: none"> <li>• <b>Noise</b> – including construction, operation and traffic.</li> </ul>	Noise is addressed in <b>Section 6.15</b> and <b>Appendix Q</b> of the Environmental Assessment Report.	Yes
9.	<ul style="list-style-type: none"> <li>• <b>Air quality</b> – during construction, as well as greenhouse gas emissions.</li> </ul>	Air Quality is addressed in <b>Section 6.16</b> of the Environmental Assessment Report.	Yes
10.	<ul style="list-style-type: none"> <li>• <b>Waste Management</b> – including the quantity and type of all liquid and solid waste to be generated at the site and a description of how this waste would be handled, processed and, if necessary, disposed of.</li> </ul>	Waste Management is addressed in <b>Section 6.17</b> of the Environmental Assessment Report.	Yes
11.	<ul style="list-style-type: none"> <li>• <b>Hazards and Risk</b> – including an assessment of the potential hazards and risks associated with the proposed project. A preliminary risk screening must be completed in accordance with <i>State Environmental Planning Policy No.33 – Hazardous and Offensive Development (SEPP 33)</i> and <i>Applying SEPP 33 (DUAP, 1994)</i>, and where necessary, a Preliminary Hazard Analysis (PHA) undertaken.</li> </ul>	Hazards and Risk are addressed in <b>Section 6.18</b> of the Environmental Assessment Report.	Yes
<b>REFERENCES</b>			
	The Environmental Assessment must take into account relevant State and Commonwealth government technical and policy guidelines. While not exhaustive, guidelines which may be relevant to the project are included in the attached list.	The specialist reports that have been prepared to accompany the Environmental Assessment Report (refer <b>Section 6</b> ) have been undertaken with regard to State and Commonwealth Government technical and policy guidelines.	Yes
<b>CONSULTATION</b>			
	During the preparation of the Environmental Assessment, you should consult with the relevant local, State or Commonwealth government authorities, service providers, community groups or affected landowners. The consultation process and the issues raised must be described in the Environmental Assessment. In particular, you should	Significant consultation was undertaken with all relevant authorities and stakeholders during the preparation of the Major Project Application (refer to <b>Section 5.3</b> of the EA Report)	Yes

Item	Environmental Assessment Requirement	Environmental Report Location/Comments	Compliance
	consult with:		
	<ul style="list-style-type: none"> <li>Commonwealth Department of Sustainability, Environment, Water, Population and Communities (former Department of Environment, Water, Heritage and the Arts).</li> </ul>	<p>The Commonwealth Department of Sustainability, Environment, Water, Population and Communities have confirmed that the proposal is a 'Controlled Action' (EPBC Referral 2010/5660). This matter is addressed within <b>Section 5.3.1</b> of the Environmental Assessment Report.</p>	Yes
	<ul style="list-style-type: none"> <li>Roads and Maritime Services</li> </ul>	<p>Details of consultation with the RMS is provided in <b>Section 5.3.2</b> of the Environmental Assessment Report.</p>	Yes
	<ul style="list-style-type: none"> <li>NSW Office of Environment Protection Authority</li> </ul>	<p>Details of consultation with the EPA is provided in <b>Section 5.3.3</b> of the Environmental Assessment Report.</p>	Yes
	<ul style="list-style-type: none"> <li>NSW Office of Water</li> </ul>	<p>Details of consultation with the NSW Office of Water (part of EPA) is provided in <b>Section 5.3.3</b> of the Environmental Assessment Report.</p>	Yes
	<ul style="list-style-type: none"> <li>Ausgrid</li> </ul>	<p>Details of consultation with Ausgrid is provided in <b>Section 5.3.6</b> of the Environmental Assessment Report.</p>	Yes
	<ul style="list-style-type: none"> <li>Hunter Water Corporation</li> </ul>	<p>Details of consultation with Hunter Water is provided in <b>Section 5.3.5</b> of the Environmental Assessment Report.</p>	Yes
	<ul style="list-style-type: none"> <li>Port Stephens Council</li> </ul>	<p>Details of consultation with Port Stephens Council is provided in <b>Section 5.3.8</b> of the Environmental Assessment Report.</p>	Yes