

# Appendix B Secretary's Environmental Assessment Requirements

## Secretary's Environmental Assessment Requirements

### Section 78A(8A) of the *Environmental Planning and Assessment Act 1979*

<b>Application Number</b>	SSD 6624
<b>Proposal</b>	<p>The proposed Sly's Quarry Expansion Project includes:</p> <ul style="list-style-type: none"><li>• expanding the existing main quarry pit;</li><li>• closing and rehabilitating two other quarry pits;</li><li>• increasing the maximum extraction rate of sandstone to 500,000 tonnes a year; and</li><li>• increasing the quarry's hours of truck dispatch, Monday to Friday.</li></ul>
<b>Location</b>	Tullymorgan-Jackybulbin Road, Mororo NSW 2469
<b>Applicant</b>	Newman Quarrying Pty Ltd
<b>Date of Issue</b>	21 August 2014
<b>General Requirements</b>	<p>The Environmental Impact Statement (EIS) for the development must comply with the requirements in Clauses 6 and 7 of Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i>.</p> <p>In particular, the EIS must include:</p> <ul style="list-style-type: none"><li>• a full description of the development, including:<ul style="list-style-type: none"><li>– the resource to be extracted, demonstrating efficient resource recovery within environmental constraints, and having regard to DRE's requirements (see Attachment 2);</li><li>– the site layout and extraction plan;</li><li>– processing activities;</li><li>– a waste (overburden, leachate, etc.) management strategy;</li><li>– a water management strategy, dealing with the EPA's and Department of Primary Industries' requirements (see Attachment 2);</li><li>– a rehabilitation strategy, having regard to the key principles in the <i>Strategic Framework for Mine Closure</i>; and</li><li>– the likely interactions between the development and any other existing, approved or proposed extractive industry development in the vicinity of the site, including the proposed explosives depot;</li></ul></li><li>• a list of any approvals that must be obtained before the development may commence;</li><li>• an assessment of the likely impacts of the development on the environment, focussing on the specific issues identified below, including:<ul style="list-style-type: none"><li>– a description of the existing environment likely to be affected by the development, <u>using sufficient baseline data</u>;</li><li>– an assessment of the likely impacts of all stages of the development, including any cumulative impacts, taking into consideration any relevant laws, environmental planning instruments, guidelines, policies, plans and industry codes of practice;</li><li>– a description of the measures that would be implemented to mitigate and/or offset the likely impacts of the development, and an assessment of:<ul style="list-style-type: none"><li>○ whether these measures are consistent with industry best practice, and represent the full range of reasonable and feasible mitigation measures that could be implemented;</li><li>○ the likely effectiveness of these measures; and</li><li>○ whether contingency plans would be necessary to manage any residual risks; and</li></ul></li><li>– a description of the measures that would be implemented to monitor and report on the environmental performance of the development if</li></ul></li></ul>

	<p>it is approved;</p> <ul style="list-style-type: none"> <li>• a consolidated summary of all the proposed environmental management and monitoring measures, identifying all the commitments in the EIS;</li> <li>• consideration of the development against all relevant environmental planning instruments (including Part 3 of the <i>State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007</i>); and</li> <li>• the reasons why the development should be approved having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development.</li> </ul> <p>While not exhaustive, Attachment 1 contains a list of some of the environmental planning instruments, guidelines, policies, and plans that may be relevant to the environmental assessment of this development.</p> <p>In addition to the matters set out in Schedule 1 of the <i>Environmental Planning and Assessment Regulation 2000</i>, the development application must be accompanied by a signed report from a suitably qualified expert that includes an accurate estimate of the:</p> <ul style="list-style-type: none"> <li>• capital investment value (as defined in Clause 3 of the <i>Environmental Planning and Assessment Regulation 2000</i>) of the development, including details of all the assumptions and components from which the capital investment value calculation is derived; and</li> <li>• jobs that would be created during each stage of the development.</li> </ul>
<b>Key Issues</b>	<p>The EIS must address the following specific matters:</p> <ul style="list-style-type: none"> <li>• <b>Noise and Blasting</b> – including: <ul style="list-style-type: none"> <li>– an assessment of the likely operational noise impacts of the development under the <i>NSW Industrial Noise Policy</i>, paying particular attention to the obligations in Chapters 8 and 9 of the policy;</li> <li>– if a claim is made for specific construction noise criteria for certain activities, then this claim must be justified and accompanied by an assessment of the likely construction noise impacts of these activities under the <i>Interim Construction Noise Guideline</i>;</li> <li>– an assessment of the likely road noise impacts of the development under the <i>NSW Road Noise Policy</i>; and</li> <li>– an assessment of the likely blasting impacts of the development on people, animals, buildings, and infrastructure, and significant natural features, having regard to the relevant ANZEC guidelines;</li> </ul> </li> <li>• <b>Water</b> – including: <ul style="list-style-type: none"> <li>– an assessment of the likely impacts of the development on the quantity and quality of the region's surface and groundwater resources, having regard to the EPA's and DPI's requirements (see Attachment 2);</li> <li>– an assessment of the likely impacts of the development on aquifers, watercourses, riparian land, water-related infrastructure, and other water users; and</li> <li>– the development of a Stormwater Management Plan;</li> </ul> </li> <li>• <b>Social &amp; Economic</b> – including an assessment of the likely social and economic impacts of the development, paying particular attention to: <ul style="list-style-type: none"> <li>– the significance of the resource;</li> <li>– economic benefits of the project for the State and region; and</li> <li>– the demand for the provision of local infrastructure and services;</li> </ul> </li> <li>• <b>Traffic</b> – including: <ul style="list-style-type: none"> <li>– an assessment of the likely traffic impacts of the development on the capacity, condition, safety and efficiency of the local and State road network, having regard to any requirements of the RMS and Council's requirements (see Attachment 2); and</li> <li>– consideration of access arrangements for the proposed development, as well as the proposed explosives depot;</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• <b>Biodiversity</b> – including: <ul style="list-style-type: none"> <li>– an assessment of the likely biodiversity impacts of the development, having regard to OEH's requirements (see Attachment 2); and</li> <li>– a biodiversity offset strategy to ensure the development would maintain or improve the biodiversity values of the region in the medium to long term;</li> </ul> </li> <li>• <b>Hazards</b> – including: <ul style="list-style-type: none"> <li>– a consideration of the associated local development proposal for the explosives depot; and</li> <li>– the potential for bushfire;</li> </ul> </li> <li>• <b>Visual</b> – including an assessment of any visual impacts of the development on nearby private landowners and key vantage points in the public domain, including potential lighting impacts;</li> <li>• <b>Heritage</b> – including an assessment of the likely Aboriginal and historic heritage (cultural and archaeological) impacts of the development, having regard to the Heritage Council's and OEH's requirements (see Attachment 2);</li> <li>• <b>Land</b> – an assessment of the compatibility of the development with other land uses in the vicinity of the development in accordance with the requirements in Clause 12 of <i>State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007</i>; and</li> <li>• <b>Air</b> – including an assessment of the likely air quality impacts of the development in accordance with the <i>Approved Methods for the Modelling and Assessment of Air Pollutants in NSW</i>.</li> </ul>
<b>Consultation</b>	<p>During the preparation of the EIS, you must consult with relevant local, State or Commonwealth Government authorities, infrastructure and service providers, Aboriginal stakeholders, community groups and affected landowners.</p> <p>The EIS must describe the consultation that was carried out, identify the issues raised during this consultation, and explain how these issues have been addressed in the EIS.</p>

## ATTACHMENT 1

### Environmental Planning Instruments, Policies, Guidelines & Plans

#### Traffic

Guide to Traffic Generating Development (RMS)  
Road Design Guide (RMS) & relevant Austroads Standards

#### Noise & Blasting

NSW Industrial Noise Policy and associated Application Notes (EPA)  
NSW Road Noise Policy (EPA)  
Interim Construction Noise Guideline (EPA)  
Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZEC)

#### Air

Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA)  
Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (EPA)

#### Land

Agricultural Issues for Extractive Industries (DPI)  
State Environmental Planning Policy No. 55 – Remediation of Land  
State Environmental Planning Policy Rural Lands 2008

#### Biodiversity

Draft NSW Biodiversity Offsets Policy (OEH)  
BioBanking Assessment Methodology (OEH)  
NSW State Groundwater Dependent Ecosystem Policy 2002 (NOW)  
State Environmental Planning Policy No.44 – Koala Habitat Protection  
Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna – Amphibians (OEH)  
Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities – Working Draft (OEH)  
Threatened Species Assessment Guideline – The Assessment of Significance (OEH)  
Guidelines for Threatened Species Assessment 2005  
Risk Assessment Guidelines for Groundwater Dependent Ecosystems 2012 (NOW)

#### Heritage

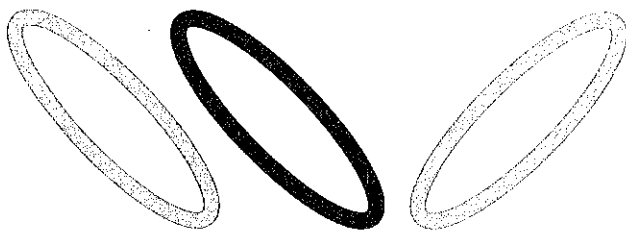
Aboriginal Cultural Heritage Consultation Requirements for Proponents (OEH)  
Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW (OEH)  
Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation 2005  
Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH)

#### Water

##### Groundwater

NSW State Groundwater Policy Framework Document 1997 (NOW)  
NSW State Groundwater Quality Protection Policy 1998 (NOW)  
NSW Water Extraction Monitoring Policy 2007 (NOW)  
Groundwater Monitoring and Modelling Plans - Information for prospective mining and petroleum exploration activities (NOW)  
NSW Aquifer Interference Policy 2012 (NOW)  
Australian Groundwater Modelling Guidelines 2012 (Commonwealth)  
National Water Quality Management Strategy Guidelines for Groundwater

Surface Water	Protection in Australia (ARMCANZ/ANZECC)
	Guidelines for the Assessment & Management of Groundwater Contamination (EPA)
	NSW Government Water Quality and River Flow Objectives (EPA)
	Using the ANZECC Guideline and Water Quality Objectives in NSW (EPA)
	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)
	Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (EPA)
	Managing Urban Stormwater: Soils & Construction (Landcom) and associated Volume 2E: Mines and Quarries (EPA)
	Managing Urban Stormwater: Treatment Techniques (EPA)
	Managing Urban Stormwater: Source Control (EPA)
	Technical Guidelines: Bunding & Spill Management (EPA)
	Environmental Guidelines: Use of Effluent by Irrigation (EPA)
	NSW Guidelines for Controlled Activities on Waterfront Land 2012 (NOW)
	NSW State Rivers and Estuaries Policy 1993 (NOW)
	NSW Wetlands Management Policy 1996 (NOW)
<b>Waste</b>	
	Waste Classification Guidelines (EPA)
<b>Hazards</b>	
	State Environmental Planning Policy No.33 – Hazardous and Offensive Development
	Explosives Act 2003
	Explosives Regulations 2005
<b>Rehabilitation</b>	
	Mine Rehabilitation – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth)
	Mine Closure and Completion – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth)
	Strategic Framework for Mine Closure (ANZMEC-MCA)
<b>Environmental Planning Instruments - General</b>	
	State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007
	State Environmental Planning Policy (State and Regional Development) 2011
	State Environmental Planning Policy (Infrastructure) 2007
	The Clarence Valley Local Environmental Plan 2011
<b>Development Control Plans</b>	
	The North Coast Regional Environmental Plan
	Clarence Valley Local Environmental Plan 2011
	The Clarence Valley Council DCP – Development in Rural Zones
	Clarence Valley Contributions Plan 2011
	The Mid North Coast Regional Strategy (DPI)
	The Clarence Valley Settlement Strategy



8 August 2014

Reference: Dws 1325911  
Contact: Cheryl Sisson

Major Projects Section  
Department of Planning & Environment  
GPO Box 39  
SYDNEY NSW 2001

Attention: Thomas Watt

Dear Sir

**Secretary's Requirements for Sly's Quarry Extension Project (SSD6624) –  
Jackybulbin Road, Tullymorgan – lot 2 DP1055044**

Reference is made to your email dated 29 July 2014, attaching the Preliminary Environmental Assessment (PEA) and seeking Council's input into the request for requirements. Our comments are summarised below.

1. Planning

- (a) As you would be aware, the quarry is in existence and has approval to operate over three areas on the land (sites A, B and C) to a capacity of 100,000 tonne per annum (DA1977/111). At a recent pre-lodgement meeting, the owners advised that they have an EPA licence to extract up to 500,000 tonne per annum (Council has not sighted that licence).
- (b) It is noted that a planning proposal to allow an explosives depot is also proposed (by a separate applicant) on the same lot as the quarry extraction.

The quarry area has considerable separation from the area of lot sought be used for the explosives depot, which is still subject to the planning proposal/rezoning process. The explosives depot is not part of the sandstone quarry and has no operational relationship to the quarry. The company intending to operate the explosives depot provides blasting services to many other quarries in the Northern Rivers area, including the subject quarry. This process has been delayed pending resolution by the proponent of post – exhibition issues

We note that the PEA document acknowledges the planning proposal/rezoning process for the proposed explosives depot. We request that any proposal for expansion of the extractive area consider the explosives depot proposal and note any conflicts or impacts.

In particular, the proposed explosives depot intends to utilise the existing quarry entrance and internal quarry access road to the existing quarry site office & weighbridge, and the existing track west from that point to quarry site C being the chosen site for the proposed explosives depot. Assuming the expanded quarry will use the existing quarry entrance and internal quarry roads, it is considered that a

DA/EIS for the expanded quarry should address access arrangements for both enterprises and associated traffic management arrangements see further comment under 'engineering' below).

It should be noted that the site is covered by the Bushfire Prone Land Overlay and is referable to the NSW Rural Fire Service as Integrated Development.

- (c) The effects on the existing water course should be addressed in any application, as well as proposals for remediation of the site post development.
- (d) If Council were assessing the application, Section 94 contributions would apply to any approval. The calculation used is as per the table below, and we ask that this requirement be kept in mind when the application is decided.

<b>Clarence Valley Contributions Plan 2011 Section 94A Levy Rates for Development Other Than Residential Accommodation.</b>		
Development Type*	Levy Rate	
Proposed cost of carrying out the development is up to and including \$100,000	Nil	
Proposed cost of carrying out the development is more than \$100,000 and up to and including \$200,000	\$ (Value of Development) x 0.005 = \$	
Proposed cost of carrying out the development is more than More than \$200,000	\$ (Value of Development) x 0.01 = \$	

There is also a Section 94 Plan specific to maintenance of quarry roads for this area. Details can be provided to the Director General at a later date.

## **2. Engineering**

A Traffic Impact Assessment and Road Safety Audit should be provided that lists a number of relevant issues ('Section 5.1.5 Traffic & Access'). This would consider the intersection servicing the quarry site off Tullymorgan-Jackybulbin Road, Tullymorgan-Jackybulbin Road and the intersection with the Pacific Highway. The report should include an assessment of;

- a) Conflict/potential for conflict between the quarry operation and the proposed Explosives Depot (should it be approved); ie, traffic movements (as mentioned above); and
- b) The suitability of internal access roads including widths, drainage and pavement to safely accommodate both activities.

A Stormwater management plan ('Section 5.1.7 Water Resources') should be included.

## **3. Building**

From the documents submitted there doesn't appear to be any buildings proposed to be constructed on the site so no Construction Certificates will be required. However, if buildings are proposed for site management, etc, the location of those structures should be included on the plans.



If employees/contractors are based on the site then appropriate sanitary facilities and associated waste water management facilities will need to be provided on site for their use. This should be addressed.

4. Environmental health

Council's Environmental health section has requested that the following matters be fully addressed:

- a) Noise issues – noise will be a major consideration. Noise from drilling, blasting, trucks, crushing, transport and machinery etc.
- b) Air quality – dust emissions
- c) Surface water run off
- d) Ground water impacts and monitoring
- e) Vibrations from processes
- f) Sediment and erosions controls – during building phase and ongoing during operation
- g) Trade waste and adequate environmental management of commercial operation by- products, such as fuel storage, oils
- h) Correct waste management procedures from persons on site, also from unwanted commercial by-products etc.

We thank you for this opportunity to comment and be involved and will look forward to assisting with input or comment as the project progresses.

If you require further information please contact me on telephone 02 66430224.

Yours faithfully



**Cheryl Sisson**  
**Development Services Coordinator**



## Department of Primary Industries

OUT14/26002

Mr Thomas Watt  
Mining Projects  
NSW Department of Planning and Environment  
GPO Box 39  
SYDNEY NSW 2001

22 AUG 2014

Thomas.Watt@planning.nsw.gov.au

Dear Mr Watt,

**Sly's Quarry Extension Project [SSD\_6624]  
Request for input into Secretary's Environmental Assessment Requirements**

I refer to your email dated 29 July 2014 to the Department of Primary Industries in respect to the above matter.

Comment by Agriculture NSW

Agriculture NSW advise that a DPI guideline, *Agriculture issues for extractive industry development*, sets out the relevant agricultural issues to consider in the preparation of an EIS for an extractive industry development. Refer to the guideline at (<http://www.dpi.nsw.gov.au/agriculture/resources/lup/development-assessment/extractive-industries>).

For further information contact Selina Stillman, Resource Management Officer (Wollongbar office) on 6626 1215 or at [selina.stillman@dpi.nsw.gov.au](mailto:selina.stillman@dpi.nsw.gov.au).

Comment by Fisheries NSW

Fisheries NSW advise the proponent to note that Tabbimobile Creek located on the same lot as the proposal, south of the Tullymorgan-Jackybulbin Road, is considered a key fish habitat.

For further information please contact Patrick Dwyer, Fisheries Conservation Manager (Wollongbar Office), on 6626 1397 or at [patrick.dwyer@dpi.nsw.gov.au](mailto:patrick.dwyer@dpi.nsw.gov.au).

Comment by Crown Lands

Crown Lands advise the following issues;

- The eastern boundary of the proposed quarry expansion comprises a Crown Public road that is excluded from the development proposal (as shown on the

site survey plan and referred to in final paragraph of Site, Location & Land Uses on P8 of the Preliminary Environmental Assessment.)

- The EIS should recognise the status of the Crown Public road and acknowledge legal rights of public access under the Roads Act 1993.
- There should be no obstruction of legal public access along the Crown Public road.
- The EIS should address potential impacts and risks associated with the Crown Public road.
- The necessity for a fence along the road boundary should be addressed. The Crown road is not subject to an enclosure permit administered by Crown Lands. It should therefore be fenced out of the adjoining Lot 2 DP 1055044 owned by Noel & Kerry Newman.
- It is inappropriate for the limits of extraction to extend to the Crown Public road boundary as shown by the Preliminary Environmental Assessment. The EIS should adjust the boundary of the proposed extraction limit and provide an appropriate buffer zone and batters to protect the road reserve and address any risks to public rights of access.
- Alternatively, the option of applying to close and purchase the road should be considered. Contact Crown Lands for further details at [http://www.lpma.nsw.gov.au/crown\\_land/roads](http://www.lpma.nsw.gov.au/crown_land/roads)

For further information please contact Peter Baumann, Natural Resource Management Project Officer, (Grafton Office) on 6640 3401 or at [peter.baumann@crownland.nsw.gov.au](mailto:peter.baumann@crownland.nsw.gov.au).

#### Comment by NSW Office of Water

The NSW Office of Water (Office of Water) has reviewed the supporting documentation accompanying the request for Secretary's Requirements (SRs) and provides the following comments below, and further detail in Attachment A.

It is recommended that the EIS be required to include:

- Details of water proposed to be taken (including through inflow and seepage) from each surface and groundwater source as defined by the relevant water sharing plan.
- Assessment of any volumetric water licensing requirements (including those for ongoing water take following completion of the project).
- The identification of an adequate and secure water supply for the life of the project. Confirmation that water can be sourced from an appropriately authorised and reliable supply. This is to include an assessment of the current market depth where water entitlement is required to be purchased.
- A detailed and consolidated site water balance.
- A detailed assessment against the NSW Aquifer Interference Policy (2012) using the NSW Office of Water's assessment framework.
- Assessment of impacts on surface and ground water sources (both quality and quantity), related infrastructure, adjacent licensed water users, basic landholder rights, watercourses, riparian land, and groundwater dependent ecosystems, and measures proposed to reduce and mitigate these impacts.

- Full technical details and data of all surface and groundwater modelling, and an independent peer review.
- Proposed surface and groundwater monitoring activities and methodologies.
- Proposed management and disposal of produced or incidental water
- Details surrounding the final landform of the site, including final void management (where relevant) and rehabilitation measures.
- Assessment of any potential cumulative impacts on water resources, and any proposed options to manage the cumulative impacts.
- Consideration of relevant policies and guidelines.
- A statement of where each element of the SRs is addressed in the EIS (i.e. in the form of a table).

The Office of Water notes the proponent's comments about groundwater. If the proposal will not interfere with an aquifer, then it may not be an aquifer interference activity, however this would need to be demonstrated through adequate on-site studies.

The southern and eastern sections of the property contain upriver alluvials which are currently embargoed from new water licences.

For further information please contact Christie Jackson, Water Regulation Officer, (Tamworth office) on (02) 6701 9652 or at [christie.jackson@water.nsw.gov.au](mailto:christie.jackson@water.nsw.gov.au).

Yours sincerely



Kristian Holz  
**Director Policy, Legislation and Innovation**

## Attachment A

### Sly's Quarry Extension Project [SSD\_6624] Request for Input into Secretary's Environmental Assessment Requirements Additional Comment by NSW Office of Water

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

For further information visit the NSW Office of Water website, [www.water.nsw.gov.au](http://www.water.nsw.gov.au).

#### Key Relevant Legislative Instruments

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

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

#### *Water Management Act 2000 (WMA 2000)*

Key points:

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

#### *Water Act 1912 (WA 1912)*

Key points:

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

#### *Water Management (General) Regulation 2011*

Key points:

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

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

*Access Licence Dealing Principles Order 2004*



## *Harvestable Rights Orders*

### **Water Sharing Plans**

The proposed quarry expansion is not located within an area covered by a Water Sharing Plan, therefore any licensing requirements are under the *Water Act 1912*. Once a Water Sharing Plan is gazetted for the area, on site groundwater and/ or surface water would be regulated by the *Water Management Act 2000*.

A water sharing plan for the area is currently targeted for commencement in 2015.

### **Relevant Policies and Guidelines**

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

- NSW Guidelines for Controlled Activities on Waterfront Land (NOW, 2012),
- NSW Aquifer Interference Policy (NOW, 2012),
- Risk Assessment Guidelines for Groundwater Dependent Ecosystems (NOW, 2012),
- Australian Groundwater Modelling Guidelines (NWC, 2012),
- NSW State Rivers and Estuary Policy (1993),
- NSW Wetlands Management Policy (1996),
- NSW State Groundwater Policy Framework Document (1997),
- NSW State Groundwater Quality Protection Policy (1998),
- NSW State Groundwater Dependent Ecosystems Policy (2002),
- NSW Water Extraction Monitoring Policy (2007).

Office of Water policies can be accessed at the following links:

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

<http://www.water.nsw.gov.au/Water-licensing/Approvals/Controlled-activities/default.aspx>

An assessment framework for the NSW Aquifer Interference Policy can be found online at:

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

### **Licensing Considerations**

The EIS is required to provide:

- Identification of water requirements for the life of the project in terms of both volume and timing (including predictions of potential ongoing groundwater take following the cessation of operations at the site – such as evaporative loss from open voids or inflows).
- Details of the water supply source(s) for the proposal including any proposed surface water and groundwater extraction from each water source as defined in the relevant Water Sharing Plan/s and all water supply works to take water.
- Explanation of how the required water entitlements will be obtained (i.e. through a new or existing licence/s, trading on the water market, controlled allocations etc).
- Information on the purpose, location, construction and expected annual extraction volumes including details on all existing and proposed water supply works which take surface water, (pumps, dams, diversions, etc).
- Details on all bores and excavations for the purpose of investigation, extraction, dewatering, testing and monitoring. All predicted groundwater take must be accounted for through adequate licensing.
- Details on existing dams/storages (including the date of construction, location, purpose, size and capacity) and any proposal to change the purpose of existing dams/storages.
- Details on the location, purpose, size and capacity of any new proposed dams/storages.

- Applicability of any exemptions under the *Water Management (General) Regulation 2011* to the project.

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

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

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

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

### **Dam Safety**

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

See [www.damsafety.nsw.gov.au](http://www.damsafety.nsw.gov.au) for further information.

### **Surface Water Assessment**

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

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

### **Groundwater Assessment**

To ensure the sustainable and integrated management of groundwater sources, the EIS needs to include adequate details to assess the impact of the project on all groundwater sources including:

- Works likely to intercept, connect with or infiltrate the groundwater sources.
- Any proposed groundwater extraction, including purpose, location and construction details of all proposed bores and expected annual extraction volumes.
- Bore construction information is to be supplied to the Office of Water by submitting a "Form A" template. The Office of Water will supply "GW" registration numbers (and licence/approval numbers if required) which must be used as consistent and unique bore identifiers for all future reporting.
- A description of the watertable and groundwater pressure configuration, flow directions and rates and physical and chemical characteristics of the groundwater source (including connectivity with other groundwater and surface water sources).
- Sufficient baseline monitoring for groundwater quantity and quality for all aquifers and GDEs to establish a baseline incorporating typical temporal and spatial variations.
- The predicted impacts of any final landform on the groundwater regime.
- The existing groundwater users within the area (including the environment), any potential impacts on these users and safeguard measures to mitigate impacts.
- An assessment of groundwater quality, its beneficial use classification and prediction of any impacts on groundwater quality.
- An assessment of the potential for groundwater contamination (considering both the impacts of the proposal on groundwater contamination and the impacts of contamination on the proposal).
- Measures proposed to protect groundwater quality, both in the short and long term.
- Measures for preventing groundwater pollution so that remediation is not required.
- Protective measures for any groundwater dependent ecosystems (GDEs).
- Proposed methods of the disposal of waste water and approval from the relevant authority.
- The results of any models or predictive tools used.

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

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

### **Groundwater Dependent Ecosystems**

The EIS must consider the potential impacts on any Groundwater Dependent Ecosystems (GDEs) at the site and in the vicinity of the site and:

- Identify any potential impacts on GDEs as a result of the proposal including:



- the effect of the proposal on the recharge to groundwater systems;
- the potential to adversely affect the water quality of the underlying groundwater system and adjoining groundwater systems in hydraulic connections; and
- the effect on the function of GDEs (habitat, groundwater levels, connectivity).
- Provide safeguard measures for any GDEs.

### **Watercourses, Wetlands and Riparian Land**

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

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

### **Drill Pad, Well and Access Road Construction**

- Any construction activity within 40m of a watercourse, should be designed by a suitably qualified person, consistent with the *NSW Guidelines for Controlled Activities on Waterfront Land* (July 2012).
- Construction of all wells must be undertaken in accordance with the *Minimum Construction Requirements for Water Bores in Australia* (3rd edition 2012) by a driller holding a bore drillers' licence valid in New South Wales.
- The length of time that a core hole is maintained as an open hole should be minimised.

### **Landform rehabilitation (including final void management)**

The Environmental Impact Statement report should include:

- Justification of the proposed final landform with regard to its impact on local and regional surface and groundwater systems;
- A detailed description of how the site would be progressively rehabilitated and integrated into the surrounding landscape;
- Outline of proposed construction and restoration of topography and surface drainage features if affected by the project;

- Detailed modelling of potential groundwater volume, flow and quality impacts of the presence of an inundated final void (where relevant) on identified receptors specifically considering those environmental systems that are likely to be groundwater dependent;
- An outline of the measures to be put in place to ensure that sufficient resources are available to implement the proposed rehabilitation; and
- The measures that would be established for the long-term protection of local and regional aquifer systems and for the ongoing management of the site following the cessation of the project.

**End Attachment A**

**Subject:** FW: Heritage Council's Requirements for Sly's Quarry Extension Project 9SSD 6624)

Dear Thomas,

The Heritage Division received your request for Secretary's Requirements for the Sly's Quarry Extension Project (SSD 6624) sent via email on Tuesday the 29<sup>th</sup> July. After consideration of the documentation provided it is requested that the Secretary's Requirements should contain the following:

- The heritage significance of the site and any impacts the development may have upon this significance should be assessed. This assessment should include natural areas and places of Aboriginal, historic or archaeological significance. It should also include a consideration of wider heritage impacts in the area surrounding the site.
- The Heritage Council maintains the State Heritage Inventory which lists some items protected under the Heritage Act, 1977 and other statutory instruments. This register can be accessed through the Heritage Division home page on the internet (<http://www.heritage.nsw.gov.au>).
- In addition, you should consult lists maintained by the National Trust, any heritage listed under the Australian Government's Environment Protection and Biodiversity Conservation Act 1999 and the local council in order to identify any identified items of heritage significance in the area affected by the proposal. Please be aware, however, that these lists are constantly evolving and that items with potential heritage significance may not yet be listed.
- Non-Aboriginal heritage items within the area affected by the proposal should be identified by field survey. This should include any buildings, works, relics (including relics underwater), gardens, landscapes, views, trees or places of non-Aboriginal heritage significance. A statement of significance and an assessment of the impact of the proposal on the heritage significance of these items should be undertaken. Any policies/measures to conserve their heritage significance should be identified. This assessment should be undertaken in accordance with the guidelines in the NSW Heritage Manual. The field survey and assessment should be undertaken by a qualified practitioner/consultant with historic sites experience. The Heritage Division can provide a list of suitable consultants.
- The proposal should have regard to any impacts on places, items or relics of significance to Aboriginal people. Where it is likely that the project will impact on Aboriginal heritage, adequate community consultation should take place regarding the assessment of significance, likely impacts and management/mitigation measures.

Regards,

**Katrina Stankowski**

A/Senior Team Leader

Archaeological Heritage - Conservation Section

**Heritage Division**

A: 3 Marist Place, Parramatta, NSW, 2150

M: Locked Bag 5020, Parramatta, NSW, 2150

E: [Katrina.Stankowski@environment.nsw.gov.au](mailto:Katrina.Stankowski@environment.nsw.gov.au)

P: 9873 8569

This email is intended for the addressee(s) named and may contain confidential and/or privileged information.

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Any views expressed in this email are those of the individual sender except where the sender expressly and with authority states them to be the views of the NSW Office of Environment and Heritage.

**PLEASE CONSIDER THE ENVIRONMENT BEFORE PRINTING THIS EMAIL**



Office of  
Environment  
& Heritage

Your reference: SSD 6674  
Our reference: DOC14/146947  
Contact: Krister Waern (02)66402503

Mr Thomas Watt  
Planning Officer - Mining Projects  
Department of Planning & Environment  
GPO Box 39  
SYDNEY NSW 2001

Dear Mr Watt

**Re: Request for Secretary's Environmental Assessment Requirements – Sly's Quarry  
Extension Project (SSD 6674)**


Thank you for your email of 29 July 2014 inviting input from the Office of Environment and Heritage (OEH) for the preparation of Secretary's Environmental Assessment Requirements (SEARs) for the above proposal. I appreciate the opportunity to provide input.

OEH notes that the project will be assessed in accordance with Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The SEARs provided by OEH are limited to Aboriginal cultural heritage, historic heritage, biodiversity, acid sulphate soils, flooding and coastal erosion, stormwater, and OEH estate.

The proponent should ensure that the Environmental Assessment (EA) will be sufficiently comprehensive to enable unambiguous determination of the extent of the direct and indirect impact(s) of the proposal. The EA should include an appropriate assessment of the potential impacts likely to occur on or near the subject site. OEH considers that this information is necessary to assess an EA for the proposal.

The full list of OEH requirements that may need to be addressed in the EA is provided in **Attachment 1**. In preparing the EA, the proponent should refer to the relevant guidance material listed in **Attachment 2**. If you require any further information or clarification regarding this matter please contact Krister Waern, Senior Operations Officer, on (02) 66402503.

Yours sincerely

 11 August 2014

**DIMITRI YOUNG**  
Senior Team Leader Planning, North East Region  
Regional Operations

File No: NTH13/00051 CR2014/003955

Mr Thomas Watt  
Planning Officer Mining Projects  
Department of Planning & Environment.  
thomas.watt@planning.nsw.gov.au

*Attention: Sophie Butcher*

Dear Sir

**Secretary's Requirements Input Request – Sly's Quarry Extension Project (SSD 6624).**

I refer to your email of 29 July 2014 requesting Roads and Maritime Services to provide details of key issues and assessment requirements regarding the abovementioned development for inclusion in the environmental assessment (EA) requirements.

**Roles & Responsibilities**

The key interests for Roads and Maritime are the safety and efficiency of the road network, traffic management, the integrity of infrastructure assets and the integration of land use and transport.

In accordance with *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007* Clause 16(3), Roads and Maritime is given the opportunity to review and provide comment on the subject development application.

**Roads and Maritime Response**

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

- The total impact of existing and proposed development on the state road network with consideration for a 10 year horizon.
- The volume and distribution of traffic generated
- Intersection sight distances at key intersections along the primary haulage route
- Existing and proposed access conditions
- Details of improvements for road intersections with consideration for the current Austroads Guidelines, particularly;
  - The intersection of Jacky Bulbin Road with the Pacific Highway.
- Detail of servicing and parking arrangements
- Traffic Management for construction and operational phases of the proposed development

**Roads & Maritime Services**

- Impact on public transport (public and school bus routes) and consideration for alternative transport modes, eg. cyclists and pedestrians
- Impacts of road traffic noise and dust generated along the primary haulage route.
- Consideration for Clause 16(1) of the *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007* regarding;
  - Impact on School Zones and Residential areas.
  - Truck Management Plan
  - Code of Conduct for Haulage Operators
  - Road Safety Assessment of key haulage routes

Where any road safety assessment of the key haulage routes identifies potential safety concerns, Roads and Maritime recommends that the traffic impact assessment be supported by a road safety audit undertaken by suitably qualified persons.

The current Austroads Guidelines, Australian Standards and Roads and Maritime Services supplements are to be adopted for any proposed works on the classified road network.

The Developer would be required to enter into a 'Works Authorisation Deed' (WAD) with Roads and Maritime for any works deemed necessary on the Pacific Highway. The developer would be responsible for all costs associated with the works and administration for the WAD.

Further information on undertaking private developments adjacent to classified roads can be accessed at:

[http://www.rms.nsw.gov.au/roadprojects/community\\_environment/private\\_developments.html](http://www.rms.nsw.gov.au/roadprojects/community_environment/private_developments.html)

It is recommended that developers familiarise themselves with the requirements of the WAD process and contact our office to obtain further advice where necessary.

If you require further information please contact Mr Michael Baldwin on 6640 1362 or email [Development.Northern@rms.nsw.gov.au](mailto:Development.Northern@rms.nsw.gov.au).

Yours sincerely,



6 August 2014

for Monica Siroi  
Network & Safety Manager, Northern Region

CC:  
ENC:



**OEH's Recommended Secretary's  
Environmental Assessment  
Requirements (SEARs)**

**Sly's Quarry Extension Project  
(SSD 6674)**



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## 1. Environmental impacts of the project

Impacts related to the following environmental issues need to be assessed, quantified and reported on:

- Aboriginal cultural heritage
- Historic heritage
- Biodiversity
- OEH Estate
  - Land reserved or acquired under the NPW Act
- Water and Soils
  - Acid sulfate soils
  - Flooding and coastal erosion
  - Water quality

Environmental assessments (EAs) should address the specific requirements outlined under each heading below and assess impacts in accordance with the relevant guidelines mentioned. A full list of guidelines is at **Attachment 2**.

## 2. Aboriginal cultural heritage

The EA report should contain:

1. A description of the Aboriginal objects and declared Aboriginal places located within the area of the proposed development.
2. A description of the cultural heritage values, including the significance of the Aboriginal objects and declared Aboriginal places, that exist across the whole area that will be affected by the proposed development, and the significance of these values for the Aboriginal people who have a cultural association with the land.
3. A description of how the requirements for consultation with Aboriginal people as specified in clause 80C of the National Parks and Wildlife Regulation 2009 have been met.
4. The views of those Aboriginal people regarding the likely impact of the proposed development on their cultural heritage. If any submissions have been received as a part of the consultation requirements, then the report must include a copy of each submission and your response.
5. A description of the actual or likely harm posed to the Aboriginal objects or declared Aboriginal places from the proposed activity, with reference to the cultural heritage values identified.
6. A description of any practical measures that may be taken to protect and conserve those Aboriginal objects or declared Aboriginal places.
7. A description of any practical measures that may be taken to avoid or mitigate any actual or likely harm, alternatives to harm or, if this is not possible, to manage (minimise) harm.
8. A specific Statement of Commitment that the proponent will complete an Aboriginal Site Impact Recording Form and submit it to the Aboriginal Heritage Information Management System (AHIMS) Registrar, for each AHIMS site that is harmed through the proposed development.

In addressing these requirements, the proponent must refer to the following documents:

- a) *Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* (Department of Planning, 2005). These guidelines identify the factors to be considered in Aboriginal cultural heritage assessments for development proposals under Part 3A of the EP&A Act.
- b) *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010) - <http://www.environment.nsw.gov.au/licences/consultation.htm>. This document further explains the consultation requirements that are set out in clause 80C of the National Parks and Wildlife Regulation 2009. The process set out in this document must be followed and documented in the Environmental Assessment Report.

- c) *Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW, 2010) - <http://www.environment.nsw.gov.au/licences/archinvestigations.htm>. The process described in this Code should be followed and documented where the assessment of Aboriginal cultural heritage requires an archaeological investigation to be undertaken.

Notes:

1. An Aboriginal Site Impact Recording Form (<http://www.environment.nsw.gov.au/licences/DECCAHIMSSiteRecordingForm.htm>) must be completed and submitted to the Aboriginal Heritage Information Management System (AHIMS) Registrar, for each AHIMS site that is harmed through archaeological investigations required or permitted through these environmental assessment requirements.
2. Under section 89A of the *National Parks and Wildlife Act 1974*, it is an offence for a person not to notify OEH of the location of any Aboriginal object the person becomes aware of, not already recorded on the Aboriginal Heritage Information Management System (AHIMS). An AHIMS Site Recording Form should be completed and submitted to the AHIMS Registrar (<http://www.environment.nsw.gov.au/contact/AHIMSRegistrar.htm>), for each Aboriginal site found during investigations.



### 3. Biodiversity

1. The EA report should include a detailed biodiversity assessment, including assessment of impacts on threatened biodiversity, native vegetation and habitat. This assessment should address the matters included in the following sections.
2. A field survey of the site should be conducted and documented in accordance with relevant guidelines, including:
  - the *Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna -Amphibians* (DECCW, 2009)
  - *Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities - Working Draft* (DEC, 2004), and
  - Threatened species survey and assessment guideline information on [www.environment.nsw.gov.au/threatenedspecies/surveyassessmentguidlns.htm](http://www.environment.nsw.gov.au/threatenedspecies/surveyassessmentguidlns.htm).

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

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

- been undertaken in seasons, weather conditions or following extensive disturbance events when the subject species are unlikely to be detected or present, or
- utilised methodologies, survey sampling intensities, timeframes or baits that are not the most appropriate 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. If a previous survey is used, any additional species listed under the TSC Act since the previous survey took place, must be surveyed for.

Determining the list of potential threatened species for the site must be done in accordance with the *Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities - Working Draft* (DEC, 2004) and the *Guidelines for Threatened Species Assessment* (Department of Planning, July 2005). The OEH Threatened Species website <http://www.environment.nsw.gov.au/threatenedspecies/> and the *Atlas of NSW Wildlife* database must be the primary information sources for the list of threatened species present. The BioBanking Threatened Species Database, the Vegetation Types databases (available on OEH website at <http://www.environment.nsw.gov.au/biobanking/biobankingtspd.htm> and <http://www.environment.nsw.gov.au/biobanking/vegtypedatabase.htm>, respectively) and other data sources (e.g. PlantNET, Online Zoological Collections of Australian Museums (<http://www.ozcam.org/>), previous or nearby surveys etc.) may also be used to compile the list.

3. The EA should contain the following information as a minimum:
  - a. The requirements set out in the *Guidelines for Threatened Species Assessment* (Department of Planning, July 2005).
  - b. Description and geo-referenced mapping of study area (and spatial data files), e.g. overlays on topographic maps, satellite images and /or aerial



- photos, including details of map datum, projection and zone, all survey locations, vegetation communities (including classification and methodology used to classify), key habitat features and reported locations of threatened species, populations and ecological communities present in the subject site and study area.
- c. Description of survey methodologies used, including timing, location and weather conditions.
  - d. Details, including qualifications and experience of all staff undertaking the surveys, mapping and assessment of impacts as part of the EA.
  - e. Identification of national and state listed threatened biota known or likely to occur in the study area and their conservation status.
  - f. Description of the likely impacts of the proposal on biodiversity and wildlife corridors, including direct and indirect and construction and operation impacts. Wherever possible, quantify these impacts such as the amount of each vegetation community or species habitat to be cleared or impacted, or any fragmentation of a wildlife corridor.
  - g. Identification of the avoidance, mitigation and management measures that will be put in place as part of the proposal to avoid or minimise impacts, including details about alternative options considered and how long term management arrangements will be guaranteed.
  - h. Description of the residual impacts of the proposal. If the proposal cannot adequately avoid or mitigate impacts on biodiversity, then a biodiversity offset package is expected (see the requirements for this at point 5 below).
  - i. Provision of specific Statement of Commitments relating to biodiversity.
4. An assessment of the significance of direct and indirect impacts of the proposal must be undertaken for threatened biodiversity known or considered likely to occur in the study area based on the presence of suitable habitat. This assessment must take into account:
    - a. the factors identified in s.5A of the EP&A Act, and
    - b. the guidance provided by *The Threatened Species Assessment Guideline – The Assessment of Significance* (DECCW, 2007) which is available at: <http://www.environment.nsw.gov.au/resources/threatenedspecies/tsaguide07393.pdf>
  5. OEH recommends that the SEARs address the offsetting principles and policy as set out below. This requires the use of the Biobanking Assessment Methodology (BBAM) to assess biodiversity impacts arising from the proposal. The NSW Government is currently developing a new whole of government draft *Biodiversity Offsets Policy for Major Projects* which will be used in assessing impacts to biodiversity and determining acceptable offsets for state significant development and state significant infrastructure projects. This policy has been recently publicly exhibited and submissions are now being considered. In the interim, the following advice is provided.

### ***Biodiversity Offsetting Principles***

*Projects must avoid and minimise impacts and offset any remaining impacts in accordance with the following seven offsetting principles:*

- a. *Before offsets are considered, impacts must first be avoided and unavoidable impacts minimised through mitigation measures. Only then should offsets be considered for the remaining impacts.*
- b. *Offset requirements should be based on a reliable and transparent assessment of losses and gains.*

- c. *Offsets must be targeted to the biodiversity values being lost or to higher conservation priorities.*
- d. *Offsets must be additional to other legal requirements.*
- e. *Offsets must be enduring, enforceable and auditable.*
- f. *Supplementary measures can be used in lieu of offsets.*
- g. *Offsets can be discounted where significant social and economic benefits accrue to NSW as a consequence of the proposal.*

During this transitional phase OEH is willing to provide assistance to applicants to ensure they meet their offsetting obligations.

- 6. Where appropriate, likely impacts (both direct and indirect) on any adjoining and/or nearby OEH estate reserved under the *National Parks and Wildlife Act 1974* or any marine and estuarine protected areas under the *Fisheries Management Act 1994* or the *Marine Parks Act 1997* should be considered. Refer to the [Guidelines for developments adjoining land and water managed by the Department of Environment, Climate Change and Water](#) (DECC, 2010).
- 7. With regard to the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*, the assessment should identify any relevant Matters of National Environmental Significance and whether the proposal has been referred to the Commonwealth or already determined to be a controlled action.



## 4. Historic heritage

The EA report should address the following:

1. The heritage significance of the site and any impacts the development may have upon this significance should be assessed. This assessment should include natural areas and places of Aboriginal, historic or archaeological significance. It should also include a consideration of wider heritage impacts in the area surrounding the site.
2. The Heritage Council maintains the State Heritage Inventory which lists some items protected under the Heritage Act 1977 and other statutory instruments. This register can be accessed through the Heritage Branch home page on the internet (<http://www.heritage.nsw.gov.au>). In addition, lists maintained by the National Trust, any heritage listed under the Australian Government's Environment Protection and Biodiversity Conservation Act 1999 and the local council should be consulted in order to identify any known items of heritage significance in the area affected by the proposal. These lists are constantly evolving and items with potential heritage significance may not yet be listed
3. Non-Aboriginal heritage items within the area affected by the proposal should be identified by field survey. This should include any buildings, works, relics (including relics underwater), gardens, landscapes, views, trees or places of non-Aboriginal heritage significance. A statement of significance and an assessment of the impact of the proposal on the heritage significance of these items should be undertaken. Any policies/measures to conserve their heritage significance should be identified. This assessment should be undertaken in accordance with the guidelines in the NSW Heritage Manual. The field survey and assessment should be undertaken by a qualified practitioner/consultant with historic sites experience. The Manager, OEH Heritage Division Conservation Team, can be contacted on telephone (02) 9873 8599 for a list of suitable consultants.



## 5. Water and soils

### Acid sulfate soils

1. The potential impacts of the development on acid sulfate soils must be assessed in accordance with the relevant guidelines in the *Acid Sulfate Soils Manual* (Stone *et al.* 1998) and the *Acid Sulfate Soils Laboratory Methods Guidelines* (Ahern *et al.* 2004).
2. Describe mitigation and management options that will be used to prevent, control, abate or minimise potential impacts from the disturbance of acid sulfate soils associated with the project and to reduce risks to human health and prevent the degradation of the environment. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.

### Flooding and coastal erosion

The EA report should include an assessment of the following referring to the relevant guidelines in Attachment 2:

1. The potential effect of coastal processes and coastal hazards including potential impacts of climate change such as sea level rise:
  - on the proposed development; and
  - arising from the proposed development.
2. Whether the proposal is consistent with any coastal zone management plans.
3. Whether the proposal is consistent with any floodplain risk management plans.
4. Whether the proposal is compatible with the flood hazard of the land.
5. Whether the proposal will significantly adversely affect flood behaviour resulting in detrimental increases in the potential flood affectation of other development or properties.
6. Whether the proposal will significantly adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.
7. Whether the proposal incorporates appropriate measures to manage risk to life from flood.
8. Whether the proposal is likely to result in unsustainable social and economic costs to the community as a consequence of flooding.

The EA should take into account the considerations set out in the NSW Government Floodplain Development Manual (see Attachment 2). The implications of flooding over the full range of potential flooding, including the probable maximum flood, should be considered.

## **Water**

### Describe Proposal

1. Describe the proposal including position of any intakes and discharges, volumes, water quality and frequency of all water discharges.
2. Demonstrate that all practical options to avoid discharge have been implemented and environmental impact minimised where discharge is necessary.
3. Where relevant include a water balance for the development including water requirements (quantity, quality and source(s)) and proposed storm and wastewater disposal, including type, volumes, proposed treatment and management methods and re-use options.

### Background Conditions

4. Describe existing surface and groundwater quality. An assessment needs to be undertaken for any water resource likely to be affected by the proposal.
5. State the Water Quality Objectives for the receiving waters relevant to the proposal. These refer to the community's agreed environmental values and human uses endorsed by the NSW Government as goals for ambient waters (<http://www.environment.nsw.gov.au/ieo/index.htm>). Where groundwater may be impacted the assessment should identify appropriate groundwater environmental values.
6. State the indicators and associated trigger values or criteria for the identified environmental values. This information should be sourced from the ANZECC (2000) Guidelines for Fresh and Marine Water Quality ([http://www.mincos.gov.au/publications/australian\\_and\\_new\\_zealand\\_guidelines\\_for\\_fresh\\_and\\_marine\\_water\\_quality](http://www.mincos.gov.au/publications/australian_and_new_zealand_guidelines_for_fresh_and_marine_water_quality)).
7. State any locally specific objectives, criteria or targets which have been endorsed by the NSW Government.

### Impact Assessment

8. Describe the nature and degree of impact that any proposed discharges will have on the receiving environment.
9. Assess impacts against the relevant ambient water quality outcomes.  
Demonstrate how the proposal will be designed and operated to:
  - protect the Water Quality Objectives for receiving waters where they are currently being achieved; and
  - contribute towards achievement of the Water Quality Objectives over time where they are not currently being achieved.
10. Where a discharge is proposed that includes a mixing zone, the proposal should demonstrate how wastewater discharged to waterways will ensure the ANZECC (2000) water quality criteria for relevant chemical and non-chemical parameters are met at the edge of the initial mixing zone of the discharge, and that any impacts in the initial mixing zone are demonstrated to be reversible.
11. Assess impacts on groundwater and groundwater dependent ecosystems.

12. Describe how stormwater will be managed both during and after construction. The EA needs to identify all site drainage, stormwater quality devices and erosion/sedimentation control measures. The EA should also detail the onsite treatment of stormwater and effluent runoff and predicted stormwater discharge quality from the development.

#### Monitoring

13. Describe how predicted impacts will be monitored and assessed over time.



## Attachment 2 – Guidance Material

Title	Web address
<b><u>Relevant Legislation</u></b>	
<i>Coastal Protection Act 1979</i>	<a href="http://www.legislation.nsw.gov.au/maintop/view/inforce/act+13+1979+cd+0+N">http://www.legislation.nsw.gov.au/maintop/view/inforce/act+13+1979+cd+0+N</a>
<i>Commonwealth Environment Protection and Biodiversity Conservation Act 1999</i>	<a href="http://www.austlii.edu.au/au/legis/cth/consol_act/epabca1999588/">http://www.austlii.edu.au/au/legis/cth/consol_act/epabca1999588/</a>
<i>Floodplain Development Manual</i>	<a href="http://www.environment.nsw.gov.au/floodplains/manual.htm">http://www.environment.nsw.gov.au/floodplains/manual.htm</a>
<i>Environmental Planning and Assessment Act 1979</i>	<a href="http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N">http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N</a>
<i>Fisheries Management Act 1994</i>	<a href="http://www.legislation.nsw.gov.au/maintop/view/inforce/act+38+1994+cd+0+N">http://www.legislation.nsw.gov.au/maintop/view/inforce/act+38+1994+cd+0+N</a>
<i>Marine Parks Act 1997</i>	<a href="http://www.legislation.nsw.gov.au/maintop/view/inforce/act+64+1997+cd+0+N">http://www.legislation.nsw.gov.au/maintop/view/inforce/act+64+1997+cd+0+N</a>
<i>National Parks and Wildlife Act 1974</i>	<a href="http://www.legislation.nsw.gov.au/maintop/view/inforce/act+80+1974+cd+0+N">http://www.legislation.nsw.gov.au/maintop/view/inforce/act+80+1974+cd+0+N</a>
<i>Protection of the Environment Operations Act 1997</i>	<a href="http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N">http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N</a>
<i>Threatened Species Conservation Act 1995</i>	<a href="http://www.legislation.nsw.gov.au/maintop/view/inforce/act+101+1995+cd+0+N">http://www.legislation.nsw.gov.au/maintop/view/inforce/act+101+1995+cd+0+N</a>
<i>Water Management Act 2000</i>	<a href="http://www.legislation.nsw.gov.au/maintop/view/inforce/act+92+2000+cd+0+N">http://www.legislation.nsw.gov.au/maintop/view/inforce/act+92+2000+cd+0+N</a>
<b><u>Aboriginal Cultural Heritage</u></b>	
Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation (2005)	Available from DPI.
Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010)	<a href="http://www.environment.nsw.gov.au/licences/consultation.htm">http://www.environment.nsw.gov.au/licences/consultation.htm</a>
Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010)	<a href="http://www.environment.nsw.gov.au/licences/archinvestigations.htm">http://www.environment.nsw.gov.au/licences/archinvestigations.htm</a>
Aboriginal Site Impact Recording Form	<a href="http://www.environment.nsw.gov.au/licences/DECCAHIMSSiteRecordingForm.htm">http://www.environment.nsw.gov.au/licences/DECCAHIMSSiteRecordingForm.htm</a>
Aboriginal Heritage Information Management System (AHIMS) Registrar	<a href="http://www.environment.nsw.gov.au/contact/AHIMSRegistrar.htm">http://www.environment.nsw.gov.au/contact/AHIMSRegistrar.htm</a>
<b><u>Biodiversity</u></b>	
BioBanking Assessment Methodology (DECC, 2008)	<a href="http://www.environment.nsw.gov.au/resources/biobanking/08385bbassessmethod.pdf">http://www.environment.nsw.gov.au/resources/biobanking/08385bbassessmethod.pdf</a>
BioBanking Assessment Methodology and Credit Calculator Operational Manual (DECCW, 2008)	<a href="http://www.environment.nsw.gov.au/biobanking/operationalmanual.htm">http://www.environment.nsw.gov.au/biobanking/operationalmanual.htm</a>



Title	Web address
Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna -Amphibians (DECCW, 2009)	<a href="http://www.environment.nsw.gov.au/resources/threatenedspecies/09213amphibians.pdf">http://www.environment.nsw.gov.au/resources/threatenedspecies/09213amphibians.pdf</a>
Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities - Working Draft (DEC, 2004)	<a href="http://www.environment.nsw.gov.au/resources/nature/TBSAGuidelinesDraft.pdf">http://www.environment.nsw.gov.au/resources/nature/TBSAGuidelinesDraft.pdf</a>
Guidelines for Threatened Species Assessment (Department of Planning, July 2005)	Draft available from DPI
DECCW Threatened Species website	<a href="http://www.environment.nsw.gov.au/threatenedspecies/">http://www.environment.nsw.gov.au/threatenedspecies/</a>
Atlas of NSW Wildlife	<a href="http://wildlifeatlas.nationalparks.nsw.gov.au/wildlifeatlas/watlas.jsp">http://wildlifeatlas.nationalparks.nsw.gov.au/wildlifeatlas/watlas.jsp</a>
BioBanking Threatened Species Database	<a href="http://www.environment.nsw.gov.au/biobanking/biobankingtspd.htm">http://www.environment.nsw.gov.au/biobanking/biobankingtspd.htm</a>
Vegetation Types databases	<a href="http://www.environment.nsw.gov.au/biobanking/vegtypedatabase.htm">http://www.environment.nsw.gov.au/biobanking/vegtypedatabase.htm</a>
PlantNET	<a href="http://plantnet.rbgsyd.nsw.gov.au/">http://plantnet.rbgsyd.nsw.gov.au/</a>
Online Zoological Collections of Australian Museums	<a href="http://www.ozcam.org/">http://www.ozcam.org/</a>
Threatened Species Assessment Guideline - The Assessment of Significance (DECCW, 2007)	<a href="http://www.environment.nsw.gov.au/resources/threatenedspecies/tsaguide07393.pdf">http://www.environment.nsw.gov.au/resources/threatenedspecies/tsaguide07393.pdf</a>
Principles for the use of biodiversity offsets in NSW	<a href="http://www.environment.nsw.gov.au/biocertification/offsets.htm">http://www.environment.nsw.gov.au/biocertification/offsets.htm</a>
<b><u>OEH Estate</u></b>	
<b>Land reserved or acquired under the NPW Act</b>	
List of national parks	<a href="http://www.environment.nsw.gov.au/NationalParks/parksearchatoz.aspx">http://www.environment.nsw.gov.au/NationalParks/parksearchatoz.aspx</a>
OEH Revocation of Land Policy	<a href="http://www.environment.nsw.gov.au/policies/RevocationOfLandPolicy.htm">http://www.environment.nsw.gov.au/policies/RevocationOfLandPolicy.htm</a>
Guidelines for developments adjoining land and water managed by the Department of Environment, Climate Change and Water (DECCW, 2010)	<a href="http://www.environment.nsw.gov.au/resources/protectedareas/10509devadjdeccw.pdf">http://www.environment.nsw.gov.au/resources/protectedareas/10509devadjdeccw.pdf</a>
<b><u>Water and Soils</u></b>	
<b>Acid sulphate soils</b>	
Acid Sulfate Soils Planning Maps	<a href="http://canri.nsw.gov.au/download/">http://canri.nsw.gov.au/download/</a>
Acid Sulfate Soils Manual (Stone et al. 1998)	<p>Manual available for purchase from:  <a href="http://www.landcom.com.au/whats-new/the-blue-book.aspx">http://www.landcom.com.au/whats-new/the-blue-book.aspx</a>            Chapters 1 and 2 are on DPI's Guidelines Register at:            Chapter 1 Acid Sulfate Soils Planning Guidelines:  <a href="http://www.planning.nsw.gov.au/rdaguidelines/documents/NSW%20Acid%20Sulfate%20Soils%20Planning%20Guidelines.pdf">http://www.planning.nsw.gov.au/rdaguidelines/documents/NSW%20Acid%20Sulfate%20Soils%20Planning%20Guidelines.pdf</a>            Chapter 2 Acid Sulfate Soils Assessment Guidelines:  <a href="http://www.planning.nsw.gov.au/rdaguidelines/documents/NSW%20">http://www.planning.nsw.gov.au/rdaguidelines/documents/NSW%20</a></p>

Title	Web address
	<a href="#">0Acid%20Sulfate%20Soils%20Assessment%20Guidelines.pdf</a>
Acid Sulfate Soils Laboratory Methods Guidelines (Ahern et al. 2004)	<a href="http://www.derm.qld.gov.au/land/ass/pdfs/lmg.pdf">http://www.derm.qld.gov.au/land/ass/pdfs/lmg.pdf</a> This replaces Chapter 4 of the Acid Sulfate Soils Manual above.
<b>Flooding and Coastal Erosion</b>	
Reforms to coastal erosion management	<a href="http://www.environment.nsw.gov.au/coasts/coastalerosionmgmt.htm">http://www.environment.nsw.gov.au/coasts/coastalerosionmgmt.htm</a>
Floodplain development manual	<a href="http://www.dnr.nsw.gov.au/floodplains/manual.shtml">http://www.dnr.nsw.gov.au/floodplains/manual.shtml</a>
Coastline management manual	<a href="http://www.environment.gov.au/coasts/publications/nswmanual/index.html">http://www.environment.gov.au/coasts/publications/nswmanual/index.html</a> <b>Note:</b> To be replaced by the Guidelines for preparing coastal zone management plans, due for release by end of 2010. This document will be available on OEH's website – draft currently available at <a href="http://www.environment.nsw.gov.au/coasts/coastalmgtdocs.htm">http://www.environment.nsw.gov.au/coasts/coastalmgtdocs.htm</a> .
Estuary management manual	Available on request from OEH or on interlibrary loan <b>Note:</b> To be replaced by the Guidelines for preparing coastal zone management plans, due for release by end of 2010. This document will be available on OEH's website – draft currently available at <a href="http://www.environment.nsw.gov.au/coasts/coastalmgtdocs.htm">http://www.environment.nsw.gov.au/coasts/coastalmgtdocs.htm</a> .
<b>Water</b>	
Water Quality Objectives	<a href="http://www.environment.nsw.gov.au/ieo/index.htm">http://www.environment.nsw.gov.au/ieo/index.htm</a>
ANZECC (2000) Guidelines for Fresh and Marine Water Quality	<a href="http://www.mincos.gov.au/publications/australian_and_new_zealand_guidelines_for_fresh_and_marine_water_quality">http://www.mincos.gov.au/publications/australian_and_new_zealand_guidelines_for_fresh_and_marine_water_quality</a>
Applying Goals for Ambient Water Quality Guidance for Operations Officers – Mixing Zones	<a href="http://deccnet/water/resources/AWQGuidance7.pdf">http://deccnet/water/resources/AWQGuidance7.pdf</a>
Approved Methods for the Sampling and Analysis of Water Pollutant in NSW (2004)	<a href="http://www.environment.nsw.gov.au/resources/legislation/approvedmethods-water.pdf">http://www.environment.nsw.gov.au/resources/legislation/approvedmethods-water.pdf</a>