

Our Reference : 257233A1/02
Contact : Irwin Perring, 66402509



Ms Caitlin Richards
Development and Infrastructure Assessment
Planning NSW
20 Lee Street
SYDNEY NSW 2000

27 MAR 2002

Dear Ms Richards

BULAHDELAH UPGRADE PACIFIC HIGHWAY PROJECT - ENVIRONMENTAL IMPACT STATEMENT REQUIREMENTS:

I refer to your request for advice from the Environment Protection Authority (EPA) on issues to be addressed when preparing the Environmental Impact Statement (EIS) for the above project during a meeting at Bulahdelah on Thursday 7 March 2002. I also refer to the discussions regarding the Project between yourself, representatives of the RTA and PPK Environment & Infrastructure Pty Ltd and the EPA's Mr Irwin Perring during that meeting

The following information is provided to assist you in the preparation of the EIS for the proposed Bulahdelah Upgrade Project.

GENERAL COMMENTS:

The EIS should be prepared with reference to the Department of Urban Affairs and Planning (DUAP) EIS Guideline "*Roads and Related Facilities - Specific requirements for an EIS*" (September 1996). In doing so the EIS should identify the range of potential short and long term environmental impacts associated with the construction and operation of this Highway / Freeway project as well as provide details of proposed measures to address those potential environmental impacts. To this end we have prepared several tables to supplement the DUAP guideline that may assist you in preparing the EIS to meet specific requirements of the EPA. A copy of those tables are attached for your convenience as "*Appendix: A - Environmental Goals / Targets and Assessment Criteria for Road Construction Projects*" and "*Appendix: B - Additional EPA Issues / Requirements when preparing an EIS for Road Construction*".

We note that some of the documents referred to in the DUAP guideline have been superseded and therefore provide you with a revised list of relevant documents to assist you in the preparation of the EIS. A copy of the revised list is attached for your convenience as "*Appendix: C - List of Relevant EIS / REF Guidance Documents*".

SPECIFIC PROJECT ISSUES:

The following specific information and issues were discussed at the meeting on 7 March 2002 and are provided for your consideration in the investigation of the proposed upgrade project and the preparation of the EIS.

(a) Water Quality:

We note that the potential impacts from construction activities on the water quality will be assessed. However we advise that the EIS should discuss potential water quality impacts and mitigation strategies associated with:

- Construction of the bridges over the Myall River and Frys Creek;
- Installation of any scour protection works proposed for the bridge abutments and other waterway crossings on the alignment;
- Run off from construction activities in the cut at the base of Alum Mountain; and
- Potential disturbance of acid sulphate soils on the alignment.

(b) Noise Impacts:

We note that the construction noise and operational noise impacts will be assessed as part of the EIS process. However we advise that particular attention should be made to the potential impacts:

- on the sensitive noise receivers such as schools and churches adjacent to the alignment;
- from the piling activities associated with the bridge construction across the Myall River; and
- blasting activities that may be required at the base of Alum Mountain.

(c) Co-location of the power transmission line:

We suggest that the feasibility of co-locating the Highway Upgrade and the power transmission line at the base of Alum Mountain should be investigated in an effort to reduce the size of the corridor in that area and relocate the corridor further east away from the township of Bulahdelah.

(d) EIS Format:

We suggest that the format of the EIS should be carefully examined to ensure the preparation of a concise document that addresses the issues identified for the Project. While we appreciate that the EIS must be prepared for wide audience we ask that the Technical Working Papers accompanying the EIS provide the EPA with only the technical details required to assess the particular issue being examined.

Thank you for the opportunity to assist you in the preparation of the EIS for this project. Please contact Mr Irwin Perring on 02 66402509 should you have any further inquiries.

Yours sincerely

**GRAEME BUDD
HEAD, PROGRAMS UNIT
NORTH COAST**

Encl: Appendix: A – *Environmental Goals / Targets and Assessment Criteria for Road Construction Projects*

Appendix: B - *Additional EPA Issues / Requirements when preparing an EIS for Road Construction*

Appendix: C – *List of Relevant EIS / REEF Guidance Documents.*

cc: Mr David Young, PPK, e-mail
Mr Graeme Kinnear, RTA, e-mail

APPENDIX: A - Environmental Goals / Targets and Assessment Criteria for Road Construction Projects:

The following table provide the proponent with the goals / targets the EPA expect to be adopted for the relevant environmental issues when planning the Project.

- Additional EPA issues / requirements when preparing the EIS using DUaP's *EIS Guideline – Roads and Related Facilities*.

Table: 1 – Environmental Goals / Targets and Assessment Criteria

Issue	Goals / Targets / Assessment criteria
Noise and Vibration	<ul style="list-style-type: none"> • All practical measures be taken to ensure that the existing noise levels do not increase and where it is practicable to achieve lower noise levels, we consider that this should occur. • The target noise level of "background + 10 dB(A)" contained in Chapter 171 <i>Construction Site Noise</i> of the EPA's Environmental Noise Control Manual should <u>generally</u> be adopted as target / goals for construction noise. All reasonable endeavours should be made to reduce the level of noise impacts in circumstances where it is identified that the guideline level will not be achieved. • The limits contained in the "<i>Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure & Ground Vibration</i>" (ANZECC) should be adopted when assessing impacts from blasting activities. • The environmental guideline "<i>Environmental Noise Management: Environmental Criteria for Road Traffic Noise</i>" should be used when assessing road traffic noise associated with the Project. This document provides specific guidance on the <u>minimum</u> information required by the EPA in any assessment of road traffic noise.
Air Quality	<ul style="list-style-type: none"> • All construction plant, equipment, vehicles and machinery must be maintained to meet the requirements of the <i>Protection of the Environment Operations Act, 1997</i> and associated Regulations. • The generation of particulate on site during construction should be <u>controlled</u> to the greatest extent practicable. • Particulate generated by the project should be <u>contained within the construction site area</u> to the maximum extent practicable. • Construction activities should be managed to minimise adverse effects on the amenity of local residents and sensitive land uses.
Waste Management	<ul style="list-style-type: none"> • EPA goal is based on a waste management hierarchy of waste avoidance, followed by reuse and recycling/ reprocessing with disposal as a last resort.
Soils	<ul style="list-style-type: none"> • The assessment of the project site for Potential Acid Sulphate Soils (PASS) and Acid Sulphate Soils (ASS) should be carried out with reference to the ASSMAC Manual (ASSMAC, 1998).

Table: 1 – Environmental Goals / Targets and Assessment Criteria (Cont'd)

Issue	Goals / Targets / Assessment criteria
Soils (Cont'd)	<ul style="list-style-type: none"> • Management strategies and procedures adopted for PASS and ASS should be consistent with those described in the ASSMAC Manual. • The temporary erosion and sediment controls proposed for the Project must be designed (stability, location, type and size), constructed, operated and maintained in accordance with the guideline "Managing Urban Stormwater – Soils and Construction, 3rd edition, 1998" produced by the NSW Department of Housing unless otherwise agreed to in writing by the EPA. • A 'design particle' of 0.02 mm and a 'design flow' of one-quarter of the 1 year ARI flow must be adopted when designing the sediment basin(s) if the soil type in the catchment of any temporary sediment basin(s) is confirmed as 'Type C' soils. • The relevant 80th percentile Rainfall Depth (mm) value obtained in the "Table 6.5 – 5 Day Rainfall Events for Sites in NSW" contained in the guideline "Managing Urban Stormwater – Soils and Construction, 3rd edition, 1998" must be adopted when designing the sediment basin(s) if the soil type in the catchment of the sediment basin(s) is confirmed as 'Type F' or 'Type D' soils.
Water Quality	<ul style="list-style-type: none"> • Waters can include permanent and ephemeral watercourses, wetlands, canals and dams and groundwater. Reference should be made to the definition of "waters" and "pollution" contained in the POEO Act 1997 when preparing the EIS for the Project. • All practical measures should be used to control and treat water leaving construction sites to ensure discharges from the site will not degrade receiving waters. • Additional waterway pollution control measures such as retention basins and gross pollutant traps should be installed in strategic locations to minimise the effects of road spills on waterways. These mitigation measures should be incorporated into the road design, particularly in sensitive receiver environments and areas of higher runoff.
Licensing	<ul style="list-style-type: none"> • The Protection of the Environment Operations Act, 1997 (the POEO Act) commenced on 1 July 1999. Chapter 3 of the POEO Act requires that an Environment Protection Licence (EPL) be obtained from the EPA by the occupier of any premises use to carry out "scheduled activities". A list of those "scheduled activities" is contained in Schedule 1 of the POEO Act "<i>Schedule of EPA - licensed activities</i>". One of the Activities listed in that Schedule is "Freeway or Tollway construction". The POEO Act also has provision for an EPL to be issued for a "<i>Miscellaneous Discharge to Waters</i>" where a discharge may occur to waters and the premises is not a scheduled premises. • Any individual items of equipment to be used during construction which may be scheduled will need to be operated under the appropriate EPLs. These items could include mobile concrete batching plants, crushing and screening equipment and mobile bitumen batching plants.

APPENDIX: B - ADDITIONAL EPA ISSUES / REQUIREMENTS WHEN PREPARING AN EIS FOR ROAD CONSTRUCTION

The following table provide the proponent with additional EPA issues / requirements that should be addressed when preparing the EIS for the Project using DUaP's *EIS Guideline – Roads and Related Facilities*.

Table: 1 Additional EPA issues / requirements

DUaP Reference	Issue	EPA Requirement
C.1. (c)	Location	The diagrams and mapping should include the location of environmentally sensitive areas such as wetlands (SEPP 14 included), watercourses and water supplies.
C.2. (a)	Rainfall	Discussion of the potential for the rainfall intensity, frequency, duration and seasonal distribution to impact on the timing / staging of works and the potential to increase risks of off site impacts.
E.4. (a)	Existing acoustic environment	The existing acoustic environment should be assessed and reported with reference to the relevant Sections of the EPA's Environmental Noise Management Guidelines, "NSW Industrial Noise Policy" and "Environmental Criteria for Road Traffic Noise".
E.4. (a)	High noise level sources	The location of sources of high noise levels such as depots, CBP, BBP, wood chippers, crushers, etc should be clearly identified on any diagrams provided with the noise assessment report.
E.4. (a)	Sensitive receivers	The location of sensitive noise receivers such as schools, residences, hospitals, etc should be clearly identified on any diagrams provided with the noise assessment report (NAR).
E.4. (b)	Sensitive receivers	The predicted noise and vibration levels at all potentially affected sensitive receivers should be included in the NAR.
E.4. (b)	Impact Assessment	The assessment of the noise, vibration and blasting impacts NAR should include any impacts associated with the frequency and duration of intermittent noise on sensitive receivers.
E.4. (b)	Assessment Criteria	The criteria used to develop the proposed mitigation measures to control noise, vibration and blasting impacts caused by construction activities and associated traffic should be included in the NAR.
E.4. (b)	Mitigation Measures	The NAR should include noise and vibration mitigation measures proposed for construction <u>and</u> blasting activities. This includes installation of noise barriers, attenuation treatment of noisy equipment (eg. Piling hammers, concrete saws, tunnel ventilation systems) and programming noisy construction activities to minimise impact on receivers;

Table: 1 - Additional EPA issues / requirements (Cont'd)

DUaP Reference	Issue	EPA Requirement
E.4. (b)	Mitigation measures	The NAR should identify the maintenance requirements for any mitigation and control measures proposed.
E.5. (b)	Sensitive receptors	The EIS should identify the location of sensitive receptors likely to be impacted by particulate and other air emissions from the Project site (eg: Schools, residents, etc);
E.5. (b)	Mitigation measures	The EIS should identify the maintenance requirements for any mitigation and control measures proposed.
E.6. (b)	Soil constraints	The dispersibility of the soil must also be considered when describing and assessing the potential direct and indirect effects of soils on the project.
E.6. (b)	Soil constraints	The assessment of the soils should include the potential environmental constraints / impacts associated with the soils during construction.
E.6. (c)	ESCP	The Erosion and Sediment Control Plan (ESCP) prepared for the temporary control measures must be consistent with "the Blue Book".
E.7. (a)	Potentially affected waters	The description of the potentially affected waters should include the classification (if applicable) and current use of the waters. The EIS should include the details of the water Quality Monitoring Program (WQMP) carried out to prepare the description.
E.7. (b)	Water Quality	The assessment of water quality impacts should reference the ANZECC guidelines and interim water quality objectives to assist in the description.
E.7. (b)	WQMP	The EIS should include an outline of the proposed construction WQMP to be implemented to monitor discharges from the Project site and construction impacts on potentially affected waters.

Table: 1 - Additional EPA issues / requirements (Cont'd)

DUaP Reference	Issue	EPA Requirement
	Waste Management	<p>The EIS should:</p> <ul style="list-style-type: none"> · Identify waste streams associated with the construction and operation of the Project in accordance with the EPA document, <i>Environmental Guideline: Assessment, Classification and Management of Liquid and Non-Liquid Wastes (1999)</i>. · Detail the proposed waste minimisation and management strategies and procedures that will be adopted for each stream identified; · Identify the potential to use recycled construction materials; and · Discuss the cut / fill earth works balance for the Project.
G.	ECPs	<p>Along with the outline of the EMP the EIS should include an outline of the individual Environmental Control Plans (ECPs) proposed for the Project such as:</p> <ul style="list-style-type: none"> · Soil and Water Management Plan (S&WMP) including a site rehabilitation / revegetation plan. · Erosion and Sediment Control Plan (ESCP) (including dust suppression initiatives) · Noise and Vibration Management Plan (NVMP) · Waste Management Plan · Water Quality Monitoring Program (for surface and ground water) · Pollution incident management procedures
G.	Method Statements / procedures	<p>Method statements and procedures are an important tool that can be used to assist in managing environmental issues that can arise when carrying out high risk construction activities in sensitive environments (eg: piling in watercourses, constructing temporary watercourse crossings, concrete paving and sawcutting, etc). The EIS should provide details of any proposed method statements / procedures that will be included in the EMP and ECPs for the project.</p>

APPENDIX: C - List of Relevant EIS / REF Guidance Documents

The following documents / maps / manuals should be used (where appropriate):

- To obtain relevant **assessment criteria**,
- As references for appropriate techniques and processors to be used when collecting and analysing data and modelling potential environmental impacts;
- When preparing proposed ameliorative measures to minimise those impacts; and
- As references when discussing exceedances of the assessment criteria.

The following (and other) relevant EPA publications may be referenced on the EPA's web site at www.epa.nsw.gov.au, with copies available by telephoning the EPA's Pollution Line on 131555.

Table: 1 – List of Guidance documents

SOIL & WATER	<ul style="list-style-type: none"> • <i>Australian Water Quality Guidelines for Fresh and Marine Waters</i> (ANZECC, 2000 "In Publication") • <i>Water Quality and River Flow Interim Environmental Objectives: Guidelines for River, Groundwater and Water Management Committees</i> (EPA, 1999) • <i>Approved Methods for the Sampling and Analysis of Water Pollutants in NSW</i> (EPA, 1998) • <i>Managing Urban Stormwater: Soils and Construction</i> (Dept of Housing, August 1998) ("<i>The Blue Book</i>") • <i>Soil Landscape Maps</i> (Dept Land & Water Conservation) • <i>Construction Sites</i> (EPA Manual for Authorised Officers, 1995) • <i>The Utilisation of Treated Effluent by Irrigation</i> (EPA, Draft, August, 2000) • <i>Wetlands for Treating Wastewater</i> (EPA Manual for Authorised Officers, 1995) • <i>Environment Matters Series: Using Herbicides Near Water</i> (EPA's Draft, April, 2000)
ACID SULFATE SOILS	<ul style="list-style-type: none"> • <i>Acid Sulphate Soils Manual</i> (Acid Sulphate Soil Management & Advisory Committee, 1998) • <i>Acid Sulfate Soils Risk Maps</i> (Soil Conservation Service of NSW, 1995)

Table: 1 – List of Guidance documents (Cont'd)

AIR	<ul style="list-style-type: none"> · <i>Approved Methods for the Sampling and Analysis of Air Pollutants in NSW</i> (EPA, 2000)
NOISE	<ul style="list-style-type: none"> · <i>Environmental Noise Management: Environmental Criteria for Road Traffic Noise</i> (EPA, 1999) · <i>NSW Industrial Noise Policy</i> (EPA, 2000) · <i>Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure & Ground Vibration</i> (ANZECC) · <i>Environmental Noise Control Manual</i> (EPA,1994)
FUEL & CHEMICAL STORAGE	<ul style="list-style-type: none"> · <i>Bunding and Spill Management</i> (EPA Manual for Authorised Officers, 1997)
WASTE AND LITTER	<ul style="list-style-type: none"> · <i>Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes"</i> (EPA, 1999) · <i>Concrete Wastes</i> (EPA Manual for Authorised Officers, 1995) · <i>Not Too Hard: Minimising Waste. An information and training package for construction workers</i> (EPA, The Aust. Centre for Construction Innovation, Uni. Of NSW)
CONTAMINATED SITES	<ul style="list-style-type: none"> · <i>Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites</i> (ANZECC, 1992) · <i>Guidelines for Consultants Reporting on Contaminated Sites</i> (EPA, 1997) · <i>Guidelines for the NSW Site Auditor Scheme</i> (EPA, 1998) · <i>Contaminated Sites - Sampling Design Guidelines</i> (EPA 1995) · <i>Contaminated Agricultural Land</i> (EPA Manual for Authorised Officers, 1995) · <i>Service Station Site: Assessment and Remediation</i> (EPA Manual for Authorised Officers, 1995)
LICENSING	<ul style="list-style-type: none"> · <i>Guide to Licensing Under the protection of the Environment Operations Act 1997 – Parts A and B</i> (EPA, 1999)