Appendix C

Consultation
GRAINGER Andrew

From: Wright, Kevin D [Kevin.D.Wright@team.telstra.com]
Sent: Tuesday, 10 January 2006 11:22 AM
To: GRAINGER Andrew
Subject: Extension of State Highway No 23

Andrew,
I am responding to your letter addressed to Peter Sumner dated 4th January 2006. Peter no longer is employed by Telstra so I have taken over his projects.

I have looked at your proposal and have found four possible sites where there will be some conflict between the proposed road works and existing Telstra network. I do not believe we have any major cable conflicts to solve, but there will be some relocation works required. These conflicts you probably are aware of by the normal acquisition of DBUD plans. When final designs have been completed, with Telstra network shown at the relevant sites, please contact me so we can arrange for suitable resolution to conflicts.

Regards,
Kevin Wright
Damage Minimisation Project Officer
02-4904 4165
Fax 02-4904 4122
Mobile 0428 265 137
Kevin.D.Wright@team.telstra.com

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Metro Core Services
Network Integrity Services; Working with the construction industry to provide Network Integrity Solutions and preventing damage to All underground assets.

Keeping your network "ALIVE"
Dear Sir

Proposed continuation of State Highway No.23 between Shortland and Sandgate

I refer to your letter dated 9 January 2006 requesting comments from the Department of Environment and Conservation (DEC) on issues to be addressed in the preparation of a Review of Environmental Factors for the above proposal.

A brief review of the information provided suggests that the interests of the DEC are likely to be affected by the proposal.

The REF must demonstrate that:

- The proposal is not likely to cause impacts on areas of native vegetation, with special reference to threatened or regionally significant flora and fauna species, populations and ecological communities.

- The proposed development is consistent with relevant provisions of the Threatened Species Conservation Act 1995, State Environmental Planning Policy (SEPP) 44 - Koala Habitat Protection, SEPP 71 - Coastal Protection and the Native Vegetation Conservation Act 1997.

- An appropriate level of archaeological assessment has been undertaken, and that the proposal is not likely to impact on areas of cultural significance to the Aboriginal community.

- Potential direct and indirect impacts on DEC estate, wilderness areas and recognised areas of high conservation value have been adequately considered.

- The requirements of the Commonwealth legislation, the Environment Protection and Biodiversity Conservation Act 1999, have been met. If the proposal affects any species requiring consideration under this legislation then approval may be required from the Department of Environment and Heritage (formerly Environment Australia).
The requirements of the NSW Protection of the Environment Operations Act (1997) have been adequately considered. Based on the information provided, the proposal will require an Environment Protection Licence (EPL). The REF should contain all information required to accompany an application for an EPL.

All issues relating to the following have been addressed:

- Water pollution
- Noise pollution
- Land contamination
- Waste Management

The enclosed attachments provide information which will assist you in determining the required information in more detail.

The enclosed attachments provide information which will assist you in determining the required information in more detail.

If you have any questions concerning the overall project or pollution control issues please contact Jim Clarence on (02) 49086814. For any questions concerning flora and fauna contact Andrew McIntyre on 02 6659 8232 and for Aboriginal cultural heritage matters Brendon Diacono on 02 6659 8220.

Yours sincerely,

TREVOR HENDERSON
A/Head Regional Operations Unit
North East Branch
Environment Protection and Regulation Division

enclosure:
2. Protection of the Environment Operations Act (1997) and Associated Legislation requirements
INTRODUCTION

The following list is provided to assist in the preparation of environmental impact assessment reports. The list details the type of information that is recommended by the Department of Environment and Conservation’s (DEC) Environment Protection and Regulation Division (EPRD) - NorthEast for inclusion in such assessments.

Please note that the provision of information in accordance with this list does not negate the applicant’s obligations under any legislative or planning instruments and deals with those components of DEC’s responsibilities relating to the National Parks and Wildlife Act 1974 and the Threatened Species Conservation Act 1995 only. EPRD suggests that the applicant contact the relevant local council and the Department of Infrastructure Planning and Natural Resources to ascertain these obligations.

GENERAL

1. Map(s) showing the locality of the proposed development in a regional and local context. Local context maps should be based on 1:25 000 topographic plans. Photographs of the site’s key attributes may provide useful documentation.

2. A description of the existing environment on the subject land and surrounding land, the proposed development and ancillary works, and the manner in which the environment will be modified by the proposal (particularly with regard to the clearing of native vegetation and impacts on fauna habitat).

3. The area subject to development should be clearly identified on an appropriately scaled plan. This includes all ancillary works such as buildings and other structures, parking areas, loading/processing/treatment areas, access roads, and material stockpiling areas.

4. The applicability or otherwise of Local Environment Plans (LEP), Regional Environment Plans (REP) and State Environmental Planning Policies (SEPP) and Regional Vegetation Management Plans (RVM/Ps) to the site should be determined and detailed. In particular, your attention is drawn to SEPP No. 14 - Coastal Wetlands, SEPP No. 26 - Littoral Rainforest, SEPP No. 44 - Koala Habitat Protection and the Native Vegetation Conservation Act 1997.

5. Your attention is also drawn to the new Commonwealth legislation, the Environment Protection and Biodiversity Conservation Act 2000. The Act specifically focuses on matters of national environmental significance (NES matters) which include listed threatened species and ecological communities, World Heritage properties, Ramsar wetlands of international importance, internationally protected migratory species and Commonwealth Marine Areas. If any NES matters under this legislation may be affected by the proposal, approval for the development may also be required from Environment Australia.

FLORA

1. A comprehensive description of the vegetation on the site. This will include an assessment of the condition of the plant communities present, including the designation of conservation significance at a local, regional and State level, and an assessment of the likely occurrence of any threatened species, populations or ecological communities listed under Schedules 1 or 2 of the Threatened Species Conservation Act 1995 and any Rare or Threatened Australian Plant (ROTAP) species.

2. A plan showing the distribution of any threatened or ROTAP species and the vegetation communities on the site, and the extent of vegetation proposed to be cleared. This plan should be at the same scale as the plan of the area subject to development in order to assist in the assessment the impact of the proposal on the existing vegetation.
3. Where the assessment concludes that threatened species, populations or ecological communities, or
their habitats, exist on or in proximity to the subject land, the effect of the proposed development should
be determined in accordance with the eight point test described in Section 5A of the Environmental
Planning and Assessment Act 1979. An assessment of the impact of the development on the plant
communities and/or ROTAP species should also be provided.

4. A description of the measures proposed to mitigate and/or ameliorate the impact of the development on
the plant communities, threatened and ROTAP species.

FAUNA

1. A fauna survey to identify the distribution and abundance of fauna species known or likely to utilise the
site, including a description of available fauna habitats and an assessment of the conservation status of
each of the faunal components at a local, regional and State level.

2. A plan showing the results of the above survey. This plan should be at the same scale as the plan of the
area subject to development to assist in the assessment of the impact of the proposal on fauna.

3. An assessment of the impact of the development on the identified fauna.

4. An assessment of the existence or likely occurrence of threatened species, populations or ecological
communities, or their habitats on the subject land. Where the assessment concludes that threatened
species, populations or ecological communities, or their habitats exist on or in proximity to the subject
land, the effect of the proposed development should be determined in accordance with the eight point
test described in Section 5A of the Environmental Planning and Assessment Act 1979.

5. A description of the measures proposed to mitigate and/or ameliorate the impact of the development on
fauna.

CULTURAL

1. The presence or absence of Aboriginal objects should be identified and the significance of the area to
the local Aboriginal community must be determined. Accordingly, a search of the DEC Aboriginal
Heritage Information Management System (AHIMS) should be made and the local Aboriginal community
should also be consulted with regard to any Aboriginal heritage issues associated with the proposed
development.

2. Aboriginal objects and pieces of significance to the Aboriginal community are to be detailed on a plan.
This plan should be at the same scale as the plan of the area subject to development to assist in the
assessment of the impact of the proposal on the identified cultural components.

3. An assessment of the impact of the development on the identified cultural sites.

4. A description of the measures proposed to mitigate and/or ameliorate the impact of the development on
the identified cultural sites.

5. A contingency plan that details the measures to be taken in the event that archaeological sites are
discovered during the course of operations must be prepared.

DEPARTMENT OF ENVIRONMENT AND CONSERVATION ESTATE

1. Where the proposal may result in impacts on DEC estate or is on land adjacent to DEC estate, an
assessment of the impact of the development on DEC estate.

2. A description of the measures proposed to mitigate and/or ameliorate the impact of the development on
the DEC estate.

SURVEYS AND ASSESSMENTS
1. Fauna, flora and cultural surveys and assessments should be undertaken by suitably qualified persons and the qualifications and experience of the persons undertaking the work detailed.

2. Dates, site locations, design, methodology, analysis techniques, and weather conditions at the time of the assessments and surveys must be described. The limitations of surveys should be identified and the results interpreted accordingly.

3. Conclusions drawn in surveys and assessments should be substantiated by evidence resulting from those surveys and assessments. The document being supported by the surveys and assessments should reflect these conclusions and clearly state where recommendations of the survey and assessments have been incorporated in the proposal.

DEC DATABASES
1. The DEC can provide records of flora and fauna held in the Wildlife Atlas and/or Rare or Threatened Australian Plants (ROTAP) databases. In addition searches of the DEC AHIMS database can be made. These services generally attract a fee. It should be noted that these databases are not comprehensive, should only be used as a guide and do not negate the need for specific site investigations. Enquiries should be made to DEC Hurstville office, telephone (02) 9585 6444.
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
ENVIRONMENT PROTECTION AND REGULATION DIVISION – NORTH EAST
ENVIRONMENTAL ISSUES TO BE ADDRESSED
Protection of the Environment Operations Act (1997) and Associated Legislation

INTRODUCTION

The following list is provided to assist in the preparation of environmental impact assessment reports. The list details the type of information that is recommended by the Department of Environment and Conservation’s (DEC) Environment Protection and Regulation Division (EPRD) - Northeast for inclusion in such assessments.

Please note that the provision of information in accordance with this list does not negate the applicant’s obligations under any legislative or planning instruments and deals with those components of DEC’s responsibilities relating to the Protection of the Environment Operations Act (1997) and its associated legislation only. EPRD suggests that the applicant contact the relevant local council and the Department of Infrastructure Planning and Natural Resources to ascertain these obligations.

GENERAL

1. Map(s) showing the locality of the proposed development in a regional and local context. Local context maps should be based on 1:25 000 topographic plans. Photographs of the site's key attributes may provide useful documentation.

2. A description of the existing environment on the subject land and surrounding land, the proposed development and ancillary works, and the manner in which the environment will be modified by the proposal.

3. The area subject to development should be clearly identified on an appropriately scaled plan. This includes all ancillary works such as buildings and other structures, parking areas, loading/processing/treatment areas, access roads, and material stockpiling areas.

4. The activity will be scheduled and require a licence issued by the EPA if the work comprises the construction of new, re-route or additional carriageways, that as a result will have:
   1. physically separated carriageways for traffic moving in different directions, and
   2. at least 4 lanes (other than lanes used for entry or exit), and
   3. no access for traffic between interchanges for at least 1 kilometre of their length in a metropolitan area.

Water Pollution

The REF should detail the planning and pollution control measures to be implemented to prevent adverse impacts on water quality in permanent or ephemeral water courses both during construction and after the construction works are completed. The issues to be considered should include but need not be limited to erosion and sediment transport from disturbed areas and pollution from plant and machinery operation and maintenance areas, mobile equipment, fuel storage and staff amenities established for the project.

The information provided in the REF should be suitable for incorporation into an appropriate ‘Erosion and Sediment Control Plan’.

The following publications may be useful guides in the preparation of an Erosion and Sediment Control Plan:

- NSW Department of Housing guidelines, Managing Urban Stormwater: Soils and Construction, 1998 may be a useful guide; and

**Noise Pollution**

The work should not cause offensive levels of noise at neighbouring residences or other sensitive noise receptors. Chapter 171 of the Environmental Noise Control Manual provides guidance on the assessment of noise impacts associated with construction works.

The REF should contain:
- Quantitative information on noise levels for fixed and mobile equipment to be used;
- An assessment of the existing acoustic environment and the predicted noise levels at residences or other sensitive noise receptors likely to be affected by the works proposed;
- Details of any noise control measures to be implemented; and
- Hours of operation.

Noise impacts during the construction and operating phases of the project should be outlined and discussed in the REF. Reference should also be made to the EPA’s NSW Industrial Noise Policy and Environmental Noise Management: Environmental Criteria for Road Traffic Noise documents where necessary.

**Air Pollution**

The REF should identify activities with the potential to produce air pollution including dust, and propose measures that will be implemented to control emissions to within acceptable goals. Work areas, vehicle manoeuvring areas and equipment storage areas should be included in the assessment.

**Contaminated Land**

The REF must determine whether contaminated soils are present, and if the proposed works are likely to disturb these soils. If contaminated soils are likely to be disturbed, the LES should fully investigate the cost of treatment and disposal in accordance with the 1998 Department of Urban Affairs and Planning/EPA document Managing Land Contamination: Planning Guidelines. I also refer you to the following guidelines, which can be obtained by contacting the EPA’s Pollution Line on 131555.

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

**Waste**

The REF should identify sources of waste material that may be generated during the project and proposed suitable treatment or disposal options for the material based on a waste management hierarchy of waste avoidance, followed by reuse and recycling/reprocessing with disposal as a last resource.

The Department of Urban Affairs and Planning (DUAP) EIS Guideline titled “Roads and Related Facilities – Specific requirements for an EIS” (September 1996) may also be a useful reference. I note that some of the documents referred to in the DUAP guideline have been superseded. A copy of a revised guideline index titled “Appendix: A – List of Relevant EIS / REF Guidance Documents” is attached for your information.
## Table 1 - List of Guidance Documents

<table>
<thead>
<tr>
<th>Environment &amp; Water</th>
<th>Soil &amp; Water</th>
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<tr>
<td>Acid Sulphate Soils Key Maps (Soil Conservation Service of NSW, 1996)</td>
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<tr>
<td>Acid Sulphate Soils Manual (Soil Subdivision, Soil Management &amp; Advisory Committee, 1999)</td>
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<tr>
<td>Environmental Watersheds Management Measures Near Waterways (EPA, 2000)</td>
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<td>Wetlands for Treatment Watershed (EPA Manual for Authorised Officers, 1996)</td>
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<td>The Liming of Natural Elements by Inorganic (EPA, 2000)</td>
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<td>Constitution Sites (EPA Manual for Authorised Officers, 1999)</td>
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<tr>
<td>Soil Landscapes Maps (Dept. Land &amp; Water Conservation)</td>
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<tr>
<td>Managing Urban Stormwater, Soils and Conservation (Dept. of Housing, Aug 1998)</td>
<td>(The Blue Book)</td>
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<tr>
<td>Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (EPA, 1999)</td>
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<tr>
<td>Committee (EPA, 1999)</td>
<td>Water Quality and Flow From Intramural Environmental Objectives, Guidelines for River, Estuarine and Water Management</td>
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<tr>
<td>Australian Water Quality Guidelines for Fresh and Marine Waters (ANZECC, 2000, in publication)</td>
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APPENDIX A - List of Relevant ES & REE Guidance Documents

Environment and Conservation (NSW)
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<thead>
<tr>
<th>Category</th>
<th>Documents/Handbooks</th>
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<tbody>
<tr>
<td><strong>LICENSING</strong></td>
<td>Source Selection: Assessment and Remediation (EPA NSW Manual for Authorized Officers, 1996)</td>
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<td>Compliance Manual for Authorized Officers, 1995</td>
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<td>Contaminated Sites - Sampling Design Guidelines (EPA 1998)</td>
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<tr>
<td></td>
<td>Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites (ANZECC, 1999)</td>
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<tr>
<td><strong>CONSTRUCTION</strong></td>
<td>Construction Innovation, NSW (Aust)</td>
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<td></td>
<td>Not to Scale, Construction Waste: An Information and Training Package for Construction Workers (EPA, 1996)</td>
</tr>
<tr>
<td><strong>ENVIRONMENTAL</strong></td>
<td>Environmental Guidelines Assessment, Classification and Management of Liquid and Non-Liquid Wastes (EPA 1999)</td>
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<tr>
<td><strong>WASTE AND LITTER</strong></td>
<td>Building and Spill Management (EPA Manual for Authorized Officers, 1997)</td>
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<tr>
<td><strong>FUEL &amp; CHEMICAL</strong></td>
<td>Environmental Noise Control Manual (EPA 1994)</td>
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<td></td>
<td>Technical Basis for Guidelines in Noise Control: Guidance to Blasting Overpressure &amp; Ground Vibration (ANZEC)</td>
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<td>NSW Industrial Noise Policy (EPA 2000)</td>
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<tr>
<td><strong>NOISE</strong></td>
<td>Environmental Noise Management Environmental Control for Road Traffic Noise (EPA 1999)</td>
</tr>
<tr>
<td><strong>AIR</strong></td>
<td>Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (EPA 2000)</td>
</tr>
</tbody>
</table>

Table 1 - List of Guidance Documents (Cont'd)
Andrew

Please find attached DNR (Hunter) response regarding the above matter. A hard copy is in the mail.

Regards

Vicki McBride
Acting Resource Access Manager
Hunter Region
Department of Natural Resources
PO Box 2213
DANGAR NSW 2309
Ph: 02 4929 9850
Fax: 02 4929 6364

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Roads and Traffic Authority
Environmental Technology
Level 5, Pod D
99 Phillip Street
PARRAMATTA NSW 2150

Attention: Andrew Grainger

Dear Mr Grainger

Proposed Continuation of State Highway No. 23 (SH23) between Shortland and Sandgate

I refer to your letter of 4 January 2006 concerning the above proposal. The following advice is provided for consideration in the preparation of the Review of Environmental Factors (REF) for the proposed activity.

**Water Act 1912**

If any proposed works intercept the groundwater table, a licence under Part 5 of the Water Act 1912 will be required. In order to assist determination of any application for a licence, the REF should include:

- Details of any proposed works likely to intercept groundwater
- Details of the predicted highest groundwater table at the development site
- Details of proposed method of disposal of tail or waste water
- Details of the predicted impacts of any final landform on the groundwater regime

**Rivers and Foreshores Improvement Act 1948**

Provided the works are carried out under the authority of the Roads and Traffic Authority (RTA), a permit under Part 3A of the Rivers and Foreshores Improvement Act 1948 (RFIA) is not required for the proposed activity. However, DNR requests that the RTA consider the following in planning and undertaking the works:

- The works should not damage or interfere in any way with:
  - vegetation outside the area of the works;
  - the stability of any adjacent or nearby watercourse bank or bed; and
  - the quality of water in any watercourse.
- Any displaced materials should be stabilised or relocated and made secure so that these materials will not detrimentally affect any watercourse or riparian area.
- No materials should be used that may pollute any watercourse.
- Works should be designed and constructed such that there is no detrimental change in hydraulic behaviour, causing sedimentation, erosion, reduction in waterway or permanent diversion or pollution of any watercourse.

Should there be any further enquiry in this matter, please contact me on (02) 4928 3850.

Yours sincerely

Vicki McBride
Acting Resource Access Manager
Hunter Region
GRAINGER Andrew

From: John Simpson [JSIMPSON@ncc.nsw.gov.au]
Sent: Friday, 20 January 2006 9:55 AM
To: GRAINGER Andrew
Cc: Karenne Jurd; Frank O'Regan; Tina Harding; Peter Coventry; Peter McMahon; Belinda Smith; Sharon Pope; Peter Sylvester; Mark Johnson; Robert Crook; Tanya Guthrie
Subject: RE: continuation of State Highway 23 - Shortland to Sandgate

Hello Andrew,

Further to our telephone discussion this morning, please find below brief comments regarding matters of interest to Newcastle Council/ suggested requirements for the REF on the above project. Other sections in Council have indicated that they have no specific comments on the project.

Notwithstanding acknowledgement of the existing long standing plan & easement for the SH23 northern extension and acknowledgement of existing provisions for its future construction (such as earlier negotiations with the Wetlands Centre & pass Council?) and associated tenure modifications to accommodate the project, we consider the following matters to warrant attention in the preparation of the REF from a natural resources management viewpoint:

* adherence to the principles outlined in the NSW Floodplain & Estuary Management Manuals.

* recognition of significant wetland values in & around the study area, identification & assessment of wetland related issues and how to manage these (e.g. Ramsar listed wetlands & associated habitats containing significant biota, hydrology regimes, economic importance of fishery production & tourism).

* assessment & management of significant biota occurring in & around the study area, including listed Threatened species & ecological communities, and species protected under international treaties. Examples include significant Green & Golden Bell Frog habitat & population known from the northern part of the study area, presence of freshwater wetlands and coastal floodplain forest in or in the near vicinity of the proposed road, the presence of migratory and other significant bird species in the near vicinity. The commissioning of specialist ecological studies is acknowledged and these will presumably deal comprehensively with these issues.

* assessment & management of floodplain & wetland hydrology, hydraulic & drainage issues, particularly including management of drainage in & around high value wetlands and sensitive habitats such as for Green & Golden Bell Frogs in the northern part of the study area. It is noted that a 240m bridge is proposed for crossing the wetland/drainage system.

* assessment & management of soil materials & sediments, particularly including Potential Acid Sulphate Soils.

* assessment & management of indigenous cultural heritage values associated with the estuary. The specialist study commissioned on this subject is acknowledged.

Asset Management staff have indicated that they have no specific comments. I am not sure if, or to what extent, Council assets might be affected and what management measures might be required if that is the case. Possible impacts could include altered drainage patterns in upstream lands/ wetlands due to the road construction. Changes to site access are acknowledged.

Regards, JS

20/1/2006
John Simpson
Coast & Estuary Program Coordinator
City Strategy Group
Newcastle City Council
PO Box 489
Newcastle NSW 2300
Telephone: 02 4974 2857
Mobile: 0438 626360
Facsimile: 02 4974 2804
email: jsimpson@ncc.nsw.gov.au

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20/1/2006
RE: continuation of State Highway 23 - Shortland to Sandgate

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Newcastle City Council


E-mail: mail@ncc.nsw.gov.au

20/1/2006
Attention: Andrew Grainger

Dear Mr Grainger

Proposed Continuation of State Highway No. 23 (SH23) between Shortland and Sandgate

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If any proposed works intercept the groundwater table, a licence under Part 5 of the Water Act 1912 will be required. In order to assist determination of any application for a licence, the REF should include:
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- Details of the predicted impacts of any final landform on the groundwater regime

Rivers and Foreshores Improvement Act 1948
Provided the works are carried out under the authority of the Roads and Traffic Authority (RTA) a permit under Part 3A of the Rivers and Foreshores Improvement Act 1948 (RFIA) is not required for the proposed activity. However, DNR requests that the RTA consider the following in planning and undertaking the works:
- The works should not damage or interfere in any way with:
  - vegetation outside the area of the works;
  - the stability of any adjacent or nearby watercourse bank or bed; and
  - the quality of water in any watercourse.
- Any displaced materials should be stabilised or relocated and made secure so that these materials will not detrimentally affect any watercourse or riparian area.
- No materials should be used that may pollute any watercourse.
- Works should be designed and constructed such that there is no detrimental change in hydraulic behaviour, causing sedimentation, erosion, reduction in waterway or permanent diversion or pollution of any watercourse.

Should there be any further enquiry in this matter, please contact me on (02) 4929 9850.

Yours sincerely,

Vicki McBride
Acting Resource Access Manager
Hunter Region

Department of Natural Resources

Roads and Traffic Authority
Environmental Technology
Level 5, Pod D
99 Philip Street
PARRAMATTA NSW 2150

Attention: Andrew Grainger

Dear Mr Grainger

Proposed Continuation of State Highway No. 23 (SH23) between Shortland and Sandgate

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Should there be any further enquiry in this matter, please contact me on (02) 4929 9850.

Yours sincerely,

Vicki McBride
Acting Resource Access Manager
Hunter Region
Dear Andrew,

I refer to your letter dated 4 January 2006 regarding the above proposal. I am aware that other sections of Council have provided comment on the proposal, and although I haven't seen their submissions given the timeframes for reply and holidays, I have an understanding of the type of issues they have raised.

I have listed below a couple of additional issues which I don't believe were raised in their submissions, but if they were, feel free to ignore my comments:

- Acid Sulphate soils - I assume that an acid sulphate soil assessment will be carried out over the proposal area (addressed in previous council comment).
- Contaminated land investigation - although Council may not possess contaminated land reports specifically relating to the land in question, Council is aware of a of contaminated sites adjacent to the proposed land, which may have some impact on the land in question. In addition, the land in question may have been filled in the past with material that may contain contaminants. As such, the REF should consider this issue and address OH&S or environmental issues that arise as a result, including the appropriate assessment and reuse or disposal of any excavated material.

Yours sincerely,

Paul McMurray

Environmental Services Co-ordinator

Phone 02 49742533

Fax 02 49742501

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23 January 2006

Andrew Grainger
RTA - Environmental Technology
Level 5, Pod D
99 Phillip Street
PARRAMATTA NSW 2150

Dear Sir,

Re: Proposed continuation of SH23 - Shortland to Sandgate

Thank you for your letter requesting REF requirements from Department of Primary Industries relating to Fisheries issues, for the proposal cited above. The information listed below and in the attachment may be of some assistance in the preparation of the REF for this proposal.

The Department has particular concerns with the crossing over Deepbridge Creek and the potential impacts of any pile or supports constructed in the vicinity of the creek and its floodways. This is of particular concern as there are potential plans to carry out rehabilitation works in the creek to assist in the reinstatement of substantial fisheries habitat in the creek. Consequently any design proposals should ensure the creek and its floodplain area is left as intact as possible.

Should you require any further information on these requirements please contact the Office of Conservation at Port Stephens on 4916 3931.

Yours sincerely

Scott Carter
Senior Conservation Manager - Central
Matters to be Addressed

Definitions
The definitions given below are relevant to these requirements:

*Fish* means any part of marine, estuarine or freshwater fish or other aquatic animal life at any stage of their life history (whether alive or dead). This includes aquatic molluscs, crustaceans, echinoderms, worms, aquatic insect larvae and other macroinvertebrates.

*Marine vegetation* means any species of plant that at any time in its life must inhabit water (other than fresh water).

*Waters* refers to all waters including tidal waters as well as flowing streams, irregularly flowing streams, gullies, rivers, lakes, coastal lagoons, wetlands and other forms of natural or man made water bodies on both private and public land.

GENERAL REQUIREMENTS
- Area which may be affected either directly or indirectly by the development or activity should be identified and shown on an appropriately scaled map (1:25000) and aerial photographs.
- All waterbodies and waterways within the proposed area of development are to be identified.
- Description and maps of aquatic vegetation, snags, gravel beds and any other protected, threatened or dominant habitats should be presented. Description should include area, density and species composition.
- A survey of fish species should be carried out and results included. Existing data should be used only if collected less than 5 years previously.
- Identification of recognised recreational and commercial fishing grounds, aquaculture farms and/or other waterways users.
- Details of the location of all component parts of the proposal, including any auxiliary infrastructure, timetable for construction of the proposal with details of various phases of construction.
- Aspects of the management of the proposal, both during construction and after completion, which relate to impact minimisation and site rehabilitation eg Environment Management Plans, Rehabilitation Plans, Compensatory offsets.
- For each freshwater body identified on the plan, the plan should include, either by annotation or by an accompanying table, hydrological and stream morphology information such as: flow characteristics, including any seasonal variations, bed substrate, and bed width.
- For each marine or estuarine area identified on the plan, the plan should include, either by annotation or by an accompanying table, hydrological and stream morphology information such as: tidal characteristics, bed substrate, and depth contours.

DREDGING AND RECLAMATION ACTIVITIES
- Purpose of works
- Type(s) and distribution of marine vegetation in the vicinity of the proposed works
- Method of dredging to be used
- Timing and Duration of works
- Dimension of area of works including levels and volume of material to be extracted or placed as fill
- Nature of sediment to be dredged, including Acid Sulphate Soil, contaminated soils etc
- Method of marking area subject to works
- Environmental safeguards to be used during and after works
• Measures for minimising harm to fish habitat under the proposal
• Spoil type and source location for reclamation activities
• Method of disposal of dredge material
• Location and duration of spoil stockpiling, if planned

ACTIVITIES THAT DAMAGE MARINE VEGETATION
• Type of marine vegetation to be harmed
• Map and density distribution of marine vegetation
• Reasons for harming marine vegetation
• Methods of harming marine vegetation
• Construction details
• Duration of works/activities
• Measures for minimising harm to marine vegetation under the proposal and details of compensatory habitat development to replace lost vegetation.
• Method and location of transplanting activities or disposal of marine vegetation

ACTIVITIES THAT BLOCK FISH PASSAGE
• Type of activity eg works in a stream that change flow or morphological characteristics of the stream, including culvert and causeway construction, sediment and erosion control measures, stormwater diversion structures.
• Length of time fish passage is to be restricted, whether permanent or temporary
• Timing of proposed restriction. Should be timed to avoid interfering with migratory movements of fish.
• Remediation or compensatory works to offset any impacts

THREATENED SPECIES
• Threatened aquatic species assessment (Section 5c, EP&A Act 1979). This must be addressed even if there are no Threatened Species present on the site.
• Eight Part Test

FISHING AND AQUACULTURE
• Outline and document commercial, recreational and indigenous fishing activities that may be affected by the activity, including regular commercial fishing grounds, popular recreational fishing sites, recognised indigenous harvesting sites.
• Will the activity interfere with or cause an impact on the continuing operation and viability of nearby aquaculture or mariculture ventures.

2. Initial Assessment

A list of threatened species, endangered populations and endangered ecological communities must be provided. In determining these species, consideration must be given to the habitat types present within the study area, recent records of threatened species in the locality and the known distributions of these species.

In describing the locality in the vicinity of the proposal, discussion must be provided in regard to the previous land and water uses and the effect of these on the proposed site. Relevant historical events may include land clearing, agricultural activities, water abstraction/diversion, dredging, de-snagging, reclamation, silting, commercial and recreational activities.
A description of habitat including such components as stream morphology, in-stream and riparian vegetation, water quality and flow characteristics, bed morphology, vegetation (both aquatic and adjacent terrestrial), water quality and tide/flow characteristics must be given. The condition of the habitat within the area must be described and discussed, including the presence and prevalence of introduced species. A description of the habitat requirements of threatened species likely to occur in the study area must be provided.

In defining the proposal area, discussion must be provided in regard to possible indirect effects of the proposal on species/habitats in the area surrounding the subject site: for example, through altered hydrological regimes, soil erosion or pollution. The study area must extend downstream and/or upstream as far as is necessary to take all potential impacts into account.

Please Note: Persons undertaking aquatic surveys may be required to hold or obtain appropriate permits or licences under relevant legislation. For example:

*Fisheries Management Act 1994*  
- Permit to take fish or marine vegetation for research or other authorised purposes (Section 37)  
- Licence to harm threatened (aquatic) species, and/or damage the habitat of a threatened species (Section 220ZW).

*Animal Research Act 1985:*  
- Animal Research Authority to undertake fauna surveys.

It is recommend that, prior to any field survey activities taking place, those persons proposing to undertake those activities give consideration to their obligation to obtain appropriate permits or licences which may be required in the specific context of the proposed survey activities.

3. Assessment of Likely Impacts

The REF must:  
- describe and discuss significant habitat areas within the study area;  
- outline the habitat requirements of threatened species likely to occur in the study area;  
- indicate the location, nature and extent of habitat removal or modification which may result from the proposed action;  
- discuss the potential impact of the modification or removal of habitat;  
- identify and discuss any potential for the proposal to introduce barriers to the movement of fish species; and  
- describe and discuss any other potential impacts of the proposal on fish species or their habitat.

For all species likely to have their lifecycle patterns disrupted by the proposal to the extent that individuals will cease to occupy any location within the subject site, the REF must describe and discuss other locally occurring populations of such species. The relative significance of this location for these species in the general locality must be discussed in terms of the extent, security and viability of remaining habitat in the locality.
4. Ameliorative Measures

The REF must consider how the proposal has been or may be modified and managed to conserve fisheries habitat on the subject site and in the study area.

In discussing alternatives to the proposal, and the measures proposed to mitigate any effects of the proposal, consideration must be given to developing long term management strategies to protect areas within the study area which are of particular importance for fish species. This may include proposals to restore or improve habitat.

Any proposed pre-construction monitoring plans or on-going monitoring of the effectiveness of the mitigation measures must be outlined in detail, including the objectives of the monitoring program, method of monitoring, reporting framework, duration and frequency.

In the event of a request for concurrence or consultation of the Director of Department of Primary Industries, one (1) copy of the REF should be provided to Department of Primary Industries in order for the request to be processed.

It should be noted that Department of Primary Industries has no regulatory or statutory role to review draft REFs unless they are accompanied by or are requested as part of a licence application under Part 7A of the FM Act. However, Department of Primary Industries is available to provide advice to consent and determining authorities regarding Fisheries' opinion as to whether the requirements have been met if requested, pending the availability of resources and other statutory priorities.

Useful Information
To help you in the preparation of an REF, the publication "Guidelines for the Assessment of Aquatic Ecology in EIA" (Draft 1998) produced by the Department for Urban Affairs and Planning may prove useful in outlining appropriate procedures and methodologies for conducting aquatic surveys.
Andrew,

Thank you for your letter of 4 January 2006 re the above and the opportunity to comment on the proposal prior to the preparation of the REF.

Hunter Water operates two large diameter water mains (900mm diameter and 1350mm diameter) that roughly parallel and cross over the route of the proposed road. These will eventually need to be replaced or duplicated. There will likely be a range of smaller services that will also be affected by the proposed roadworks.

While none of these would present any issues that cannot be overcome it will be necessary to take account of these in the concept design phase and for RTA to liaise closely with HWC to ensure that the roadworks are designed to suitably allow for the operation and maintenance of HWC assets and for the planned future works.

Please liaise further with HWC at the appropriate time re the above issues.

regards

Greg Small
R/Manager Network Planning
HWC

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Dear Mr Grainger

PROPOSED CONTINUATION OF STATE HIGHWAY 23 – SHORTLAND TO SANDGATE NSW
APPLICATION OF THE ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999

I refer to your letter of 4 January 2006 seeking our input on the Review of Environmental Factors (REF) for the above proposal.

As you may be aware, the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) provides for the protection of certain defined matters of national environmental significance (NES). Approval is needed under the Act for proposals or actions likely to have a significant impact these matters. In relation to the above proposal, potentially relevant protected matters are:

- wetlands which are listed as Ramsar wetlands of international importance;
- nationally threatened species and communities which are listed under the EPBC Act (note that these species may not be the same as those listed under state legislation);
- migratory species that are listed under the EPBC Act (these are migratory species protected under international agreements);

Not all actions potentially affecting these matters will have a significant impact and need referral or approval under the Act. The Administrative Guidelines on Significance give guidance on what types of actions and impacts may be considered significant and for which referral may be needed. These guidelines are available from Department's web site (www.deh.gov.au/epbc).

We have undertaken a search of our database and we have no record of having received a referral for the above action.

If significant impacts are likely on a matter protected as a result of this proposal proceeding, the NSW RTA will need to refer under the EPBC Act. If you are unsure as to whether or not the action is significant, it can still be referred and the Department will advise whether or not approval is needed within 20 business days. A form for making a referral is available from Department's web site.

If it is determined that an action is not likely to have a significant impact, then the action is not a controlled action and further involvement or environmental approvals are not needed. However, if it is determined that an action is likely to have a significant impact, and approval is therefore required, the action is called a controlled action. The proposal will then have to

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Internet: www.deh.gov.au
go through a formal assessment process (albeit through an accredited State process), and cannot proceed until approval has been granted.

Please do not hesitate to contact the undersigned (02 6274 1092) if you require further information.

Yours sincerely

[Signature]

Fiona Jinman
Acting Director
EPBC Act Referrals Section
Approvals and Wildlife Division

7-2 January 2006
30 January 2006

Mr Andrew Grainger
Environmental Officer
RTA Environmental Technology
Level 5, Pod D
99 Phillip Street
PARRAMATTA NSW 2150

RE: SUBMISSION ON STATE HIGHWAY 23

Thank you for your letter of 4 January requesting input into your Review of Environmental Factors for the State Highway 23 proposal (between Shortland and Sandgate).

As you know, the construction will be alongside Shortland Wetlands, which is a Ramsar-listed wetland - a wetland of International significance, and therefore covered under the Environmental Protection and Biodiversity Conservation (EPBC) Act. As such we request that the works be referred to the Australian Government Dept of Environment & Heritage for consideration under EPBC.

We also offer the following items of concern and/or suggestion for more detailed consideration as requested:

During construction:
- Minimise impacts from roadworks on the operations of the Hunter Wetlands Centre. Impacts could include dust, noise and visitor access to the Hunter Wetlands Centre.
- Do not impede natural water flows into the wetlands and ensure that water quality is maintained (e.g., no sediment loading).
- Note that water pumped from the creek draining the market site and used as inflow to our BHP Pond runs via pipe from the other side of the proposed highway. Thus an under highway pipe would be required.
- Ensure best practice environmental management during construction works. In particular, the following matters that are present in the vicinity of Deepbridge creek:
- minimise clearing of established or establishing native vegetation and habitats, such as Swamp Oak trees and reed beds, in the construction area;
- minimise disturbance of alluvial and wetland soils during construction and use of geotextile fabrics where relevant; and
- minimise disturbance of potential acid sulphate soils in establishing foundations for the road.

Design features that would add biodiversity and or tourism values could include:

- Recognition of the significant values of wetlands in the area and their interconnections. The proposed long span bridge over Deepbridge Creek is acknowledged. We would value the opportunity to discuss and comment on the adequacy of the proposed design for the bridge.
- Water management structures to minimise impacts on wetlands, control and treat run-off from the road.
- Small constructed wetlands to handle above, with opportunities to incorporate their design and function in the educational program at the Hunter Wetlands Centre.
- Methods to maintain the hydraulic connections between the Hunter Wetlands Centre land and adjacent wetlands and to minimise impacts on the local hydrology (maintain wetland species movement including the endangered Green and Golden Bell Frog, surface water hydraulics, groundwater interactions, local catchment drainage and flooding issues, etc.) in the surrounding wetlands.
- Environmental assessment to consider the implications for the canoe channel of the road construction and opening of the Ironbark Creek floodgates.
- Good screening of the road from the Centre so the sight of vehicles does not detract from the amenity of the place, and disturb the wildlife. At this stage we believe visual impacts can be best managed through mass plantings of suitable local species (advice from Hunter Wetlands Centre Site Management Committee on species is available).
- Plantings should be combined with sound barriers (designed to provide glimpses of the wetlands to passing motorists) to manage noise pollution. We note the planned bridge structures in the vicinity of the Centre and would appreciate the opportunity to discuss this aspect further to determine the likelihood and level of noise and visual impacts and how these can be best managed.
- Use wetland fauna for relief features on concrete sound walls and possible incorporation of other art work using native species into the road design.
- Management of significant habitats and species that occur in the vicinity of the planned road so that there is at least no net loss of biodiversity values and if possible, a net gain. The Hunter Wetlands Centre must maintain its connectivity to surrounding wetlands and natural habitats.
- Site rehabilitation that complements the existing values of the floodplain and wetland environments.
- Development of a secure access to the Newcastle Wetlands (and through to the University at some stage) so that utilisation of those areas in the future is not cut off. This access should include:
  - Adequate safe passage for ducks, swans, green and golden bell frogs and other wildlife;
  - People and cyclist safe access facility between the HWCA site and Newcastle Wetlands Reserve and Sandgate railway station. Planning for the proposed construction of a long span bridge over Deepbridge Creek could/should include such a facility and would provide an excellent opportunity for provision of recreation & tourism infrastructure in this area.
- Good signage for the centre and surrounding wetlands.
- Road entry and exit to HWCA should continue to be in same or improved conditions where possible.
- Safe access to the site for vehicles including buses.

We look forward to further consultation on this project.

Regards

[Signature]

Tara Ure
Chief Executive Officer
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GRAINGER Andrew

From: Small Greg [greg.small@hunterwater.com.au]
Sent: Wednesday, 1 February 2006 3:21 PM
To: GRAINGER Andrew
Subject: Continuation of state highway 23 between Sandgate and Shortland

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1/2/2006
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Environmental Officer  
RTA Environmental Technology  
Level 5 Pod D  
99 Phillip Street  
PARRAMATTA NSW 2150

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Fiona Jinman
Acting Director
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