

Environmental Assessment Requirements

Section 115Y of the *Environmental Planning and Assessment Act 1979*

Application number	SSI - 4963
Infrastructure (project)	Pacific Highway Upgrade – Woolgoolga to Ballina - the construction and operation of approximately 155 kilometres of four-lane divided carriageway, from approximately 5 kilometres north of Woolgoolga to approximately 6 kilometres south of Ballina. The project does not include the upgrades at Glenugie and Devils Pulpit, located between Woolgoolga and Ballina.
Location	Land generally located: (i) from Arrawarra Beach Road approximately 5 kilometres north of Woolgoolga to approximately 21 kilometres south of Grafton (the Franklins Road intersection with the Pacific Highway), and (ii) from approximately 13 kilometres south of Grafton (the Eight Mile Lane intersection with the Pacific Highway) to approximately 66 kilometres north of Grafton, and (iii) from approximately 72 kilometres north of Grafton to the Ballina Bypass approximately 6 kilometres south of Ballina, in the Ballina, Clarence Valley, Coffs Harbour and Richmond Valley local government areas.
Proponent	Roads and Maritime Services
Date issued	23 November 2011
General requirements	The Environmental Impact Statement (EIS) must be prepared in accordance with and meet the minimum requirements of Part 3 of Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i> (the Regulation) and include the following: 1. the information required under clause 6 of Schedule 2 of the Regulation; and 2. the content listed in clause 7 of Schedule 2 of the Regulation, including but not limited to: - o a summary of the environmental impact statement, - o a statement of the objectives of the project, including a description of the strategic need, justification, objectives and outcomes for the Pacific Highway Upgrade Program, the aims and objectives of relevant strategic planning and transport policies, including <i>NSW 2021</i>, the <i>Far North Coast Regional Strategy</i> and the <i>Mid North Coast Regional Strategy</i>, and the cumulative and synergistic impacts associated with the Pacific Highway Upgrade Program as a whole, and - o an analysis of feasible alternatives to the carrying out of the project and project justification, including: ➤ an analysis of alternatives/ options considered, having regard to the project objectives (including an assessment of the environmental costs and benefits of the project relative to alternatives and the consequences of not carrying out the project), and the provision of a clear discussion of the route development and selection process, the suitability of the chosen alignment and whether or not the project is in the public interest, and ➤ justification for the preferred project taking into consideration the objects of the <i>Environmental Planning and Assessment Act 1979</i>.

	- o an analysis of the project, including an assessment, with a particular focus on the requirements of the listed key issues, in accordance with clause 7(1)(d) of Schedule 2 of the Regulation (where relevant), including an identification of how relevant planning, land use and development matters (including relevant strategic and statutory matters) have been considered in the impact assessment (direct, indirect and cumulative impacts) and/or in developing management/ mitigation measures, and - o detail how the principles of ecologically sustainable development will be incorporated in the design, construction and ongoing operation phases of the project.
Key issues	The EIS must address the following specific matters: Traffic and Transport – including but not limited to: • demonstration of how the preferred route and road design meets the traffic and transport objectives of the project; • construction traffic impacts, including: - o the identification of routes and the nature of existing traffic on these routes, - o an assessment of construction traffic volumes (including spoil haulage/ delivery of materials and equipment to the road corridor and ancillary facilities), and - o potential impacts to the regional and local road network (including safety and level of service) and potential disruption to existing public transport/ school bus services and access to properties and businesses; • operational traffic and transport impacts to the local and regional road network, including: - o changes to access arrangements/ service roads to properties, businesses and State forest road network, - o changes to local road connectivity and impacts on local traffic arrangements, road capacity/ safety, service roads and modified access to the upgraded highway (including potential impacts of changed traffic arrangements on public transport/ school bus services and access for emergency services), - o traffic capacity of the project and its ability to cater for predicted future growth. Consideration should be given to what effect potential major land use changes in the locality may have on the traffic assessment outcomes, and - o opportunities for the provision of pedestrian and cycle access and connections along the highway and to adjoining communities; and • impacts on maritime use of the Richmond and Clarence rivers and safety of navigation for water based traffic. Biodiversity - including but not limited to: • impacts on the biodiversity values of the site and adjoining areas, including flora and fauna and their habitat (terrestrial, riparian and aquatic); • impacts on Endangered Ecological Communities, critical habitat, threatened and protected species, populations and their habitats, listed under both State and Commonwealth legislation that have been recorded or considered likely to occur on the site and surrounding land based on the presence of suitable habitat, and whether the proposal or specific aspects of the proposal constitute Key Threatening Processes in terms of the <i>Threatened Species Conservation Act 1995</i>; • targeted surveys of threatened flora and fauna species and their habitat that are known or likely to occur within the project's study area based on the presence of suitable habitat. The targeted surveys must include but not limited to the following species:

	- o Oxleyan Pygmy Perch (<i>Nannoperca oxleyana</i>), Purple Spotted Gudgeon (<i>Mogurnda adspersa</i>), - o Squirrel Glider, Yellow-bellied Glider, Brush-tailed Phascogale, Eastern Pygmy-possum, - o Wallum Froglet, Olongburra Frog, Pouched Frog, Giant-barred Frog, Green-thighed Frog, Green and Golden Bell Frog, - o White-crowned Snake, Pale Headed Snake, Stephen's Banded Snake, - o Microbats – all threatened species, - o Forest Owls – Masked, Sooty, Barking, Powerful, Grass Owl, - o Brolga, Black-necked Stork, Comb-crested Jacana, Magpie Goose, Black Bittern, - o Bush Stone – curlew, Albert's Lyrebird, Grey-crowned Babbler, - o Koala, Long-nosed Potoroo, Common Planigale, Rufous Bettong, and - o Emu (<i>Dromaius novaehollandiae</i>). Details of the survey methodology employed, including survey effort and timing and representativeness for the species targeted, should be identified; • impacts on wildlife and habitat corridors, and habitat fragmentation and details of mitigation measures, having regard to the range of fauna species and opportunities for connectivity (terrestrial, arboreal and aquatic) across the project; • impacts on/from vegetation loss, weed infestation (terrestrial and aquatic), edge effects, groundwater dependent ecosystems, wetlands including State Environmental Planning Policy No. 14 – Coastal Wetlands, and aquatic and riparian species and their habitats; • consideration of regional scale cumulative impacts and the significance of the biodiversity impacts of the project in the context of the Pacific Highway Upgrade Program; • details of how impacts would be managed during construction and operation for project components (including ancillary facilities), the suitability of measures and adaptive management and maintenance protocols and monitoring programs; • the details of available offset measures to compensate the biodiversity impacts of the proposal where offset measures are proposed to address residual impacts, consistent with the <i>Principles for the use of biodiversity offsets in NSW</i>; and • taking into account the <i>Draft Guidelines for Threatened Species Assessment</i> (Department of Environment and Conservation, 2005); <i>Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna - Amphibians</i> (DECCW, 2009); and <i>Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities – Working Draft</i> (DEC, 2004). Noise and Vibration – including but not limited to: • construction noise and vibration impacts, including impacts from construction traffic, ancillary facilities, batch plants and blasting. The EIS must identify sensitive receivers and assess construction noise/ vibration generated by representative construction scenarios focusing on high noise generating works. Where work hours outside of standard construction hours are proposed, clear justification and detailed assessment of these work hours must be provided, including alternatives considered, mitigation measures proposed and details of construction practices, work methods, compound design, etc; • cumulative impacts during construction, having regard to other developments (both existing and approved) in the locality, the staged construction of the project and the construction of adjoining Pacific Highway Upgrade projects;
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	- operational road traffic noise impacts of the project (including service roads and rest areas) on sensitive receivers, including reflective noise impacts from proposed noise mitigation barriers and bridges; and - taking into account the following guidelines, as relevant: <i>NSW Road Noise Policy</i> (Department of Environment, Climate Change and Water, 2011), <i>Interim Construction Noise Guideline</i> (Department of Environment and Climate Change, 2009), <i>Assessing Vibration: A Technical Guideline</i> (Department of Environment and Conservation, 2006), and <i>Technical Basis for Guidelines to Minimise Annoyance Due to Blasting Overpressure and Ground Vibration</i> (Australian and New Zealand Environment and Conservation Council, 1990). Soils, Sediments and Water – including but not limited to: - impacts on surface water flows, quality and quantity, with particular reference to any likely impacts on surrounding water bodies, wetlands and their habitats, including potential indirect impacts on the Solitary Island Marine Park by works in the Arrawarra Creek and Corindi River catchments; - groundwater impacts, taking into consideration local impacts at deep cuttings and fill locations, and cumulative impacts on regional hydrology. The assessment shall consider: the extent of drawdown, impacts to groundwater characteristics, quality, quantity, and connectivity, discharge and recharge rates, and implications for surface flows, groundwater users, groundwater dependent ecosystems and wetlands; - impacts to the Rous Water Regional Water Supply (Woodburn) bore fields drinking water source, taking into account discharge/ recharge rates and groundwater yield, and consideration of the relevant public health and environmental water quality criteria specified in the <i>Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000</i> ((Australian and New Zealand Environment and Conservation Council) and the <i>Australian Drinking Water Guidelines 2004</i> (National Health and Medical Research Council and the Natural Resource Management Ministerial Council); - flooding impacts and characteristics, to and from the project, with an assessment of the potential changes to flooding behaviour (levels, velocities and direction) and impacts on bed and bank stability, through flood modelling, including: - hydraulic modelling for a range of flood events, - description, justification and assessment of design objectives (including bridge, culvert and embankment design), - an assessment of afflux and flood duration (inundation period) on land, infrastructure, property and business operations (including agricultural land and stock movement to flood refuges and evacuation routes), hazard and emergency service within the affected area, and future development potential of access affected land, and - consideration of the effects of sea level rise, changes to rainfall frequency and/or intensity as a result of climate change, including an assessment of the capacity of proposed (and existing) stormwater drainage structures; - waterways to be modified as a result of the project, including ecological, hydrological and geomorphic impacts (as relevant), including temporary crossings, and measures to rehabilitate the waterways to pre-construction conditions or better, including fish passage requirements consistent with <i>Policy and Guidelines for Fish Friendly Waterway Crossings</i> (Department of Primary Industries, 2004); - identification and assessment of soil characteristics and properties that may impact or be impacted by the proposal; and - identification and assessment of soft soils, soil contamination, acid
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sulfate soils, and details of erosion and sedimentation control measures.

Heritage – including but not limited to:

- impacts to *Aboriginal heritage* (including cultural and archaeological significance), in particular impacts to Aboriginal heritage sites identified within or near the project should be assessed. Where impacts are identified, the assessment shall:
 - o outline the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the measures) generally consistent with the *Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* (Department of Environment and Conservation, 2005),
 - o be undertaken by a suitably qualified heritage consultant(s),
 - o demonstrate effective consultation with Aboriginal communities in determining and assessing impacts and developing and selecting options and mitigation measures (including the final proposed measures), and
 - o develop an appropriate archaeological assessment methodology, including research design, to guide physical archaeological test excavations of the areas of PAD identified in a manner that establishes the full spatial extent and significance of any archaeological evidence across each area of PAD, and include the results of these excavations; and
- impacts to *State and local historic heritage* (including archaeology, heritage items conservation areas and natural areas), in particular impacts to the New Italy Settlement and High Conservation Value Old Growth Forest should be assessed. Where impacts to State or locally significant historic heritage items are identified, the assessment shall:
 - o outline the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the mitigation measures) generally consistent with the guidelines in the NSW Heritage Manual (1996),
 - o be undertaken by a suitably qualified heritage consultant(s) (note: where archaeological excavations are proposed the relevant consultant must meet the NSW Heritage Council's Excavation Director criteria),
 - o include a statement of heritage impact for all heritage items (including significance assessment),
 - o consider impacts from vibration, demolition, archaeological disturbance, altered historical arrangements and access, landscape and vistas, and architectural noise treatment, and
 - o develop an appropriate archaeological assessment methodology, including research design, to guide physical archaeological test excavations and include the results of these excavations.

Visual Amenity, Urban Design and Landscaping – including but not limited to:

- a description of the visual significance of the affected landscape, particularly where the corridor traverses greenfield areas;
- an assessment of the visual impact of the project on the landscape character of the area, including built form (materials and finishes) and the urban design (height, bulk and scale) of key components including bridge crossings, floodplain embankments, interchanges, and views to and from the project; and
- details of landscaping treatment and design (including noise barriers, retaining walls and landscaping) consistent with the overall design of the Pacific Highway Upgrade Program and integration with the existing (and desired) character of affected localities;

	- taking into account the <i>Noise Wall Design Guideline</i> (Roads and Traffic Authority, 2006). Land Use and Property - including but not limited to: - impacts on directly affected properties and land uses, including impacts related to access, land use, property infrastructure, future development potential, property acquisition and land sterilisation and severance; - the agricultural sector taking into account fragmentation and potential loss of regionally significant farmland as identified in the <i>Northern Rivers Farmland Protection Project</i> (Department of Planning, 2005) and <i>Mid North Coast Farmland Mapping Project</i> (Department of Planning, 2008), food production, stock/ agricultural diseases and the impact on quarantined properties of a revised road network, and impacts on travelling stock routes/ reserves (as relevant); - the operation of State forest estate, including potential for fragmentation and sterilisation of resources, and access by forestry and other users; - impacts on Crown land, reserves and assets, and land reserved under the <i>National Parks and Wildlife Act 1974</i>; - impacts on natural resources, including mining, petroleum production and extractive resources utilisation; - impacts on commercial fishing access and aquaculture operations, including impacts on oyster priority areas in accordance with the <i>NSW Oyster Industry Sustainable Aquaculture Strategy 2006</i> (Department of Primary Industries); and - identification of services and utilities to be relocated. Social and Economic - including but not limited to: - social and economic impacts on local and regional communities (including towns and villages directly impacted by the project and those bypassed by the project); - impact on highway-based businesses and agribusinesses from traffic, access, property, public domain and amenity related changes; - impact of the project on tourist and recreational access and use of towns and villages, National Parks and nature reserves, State forests and waterways; and - connectivity (including pedestrian and cycleway opportunities) and contiguity of existing and planned settlement and activity clusters. Environmental Risk Analysis – notwithstanding the above key assessment requirements, the EIS must include an environmental risk analysis to identify potential environmental impacts associated with the project (construction and operation), proposed mitigation measures and potentially significant residual environmental impacts after the application of proposed mitigation measures. Where additional key environmental impacts are identified through this environmental risk analysis, an appropriately detailed impact assessment of this additional key environmental impact must be included in the EIS.
Consultation	You should undertake an appropriate and justified level of consultation with relevant parties during the preparation of the EIS, including but not limited to: - local, State and Commonwealth government authorities, including the: - Department of Primary Industries (Agriculture, Forests, Fisheries, Minerals and Crown Land divisions), - Heritage Council of NSW, - Marine Parks Authority NSW, - Maritime Services, - NSW Office of Water, - Office of Environment and Heritage, - Transport for NSW, and - Ballina, Clarence Valley, Coffs Harbour and Richmond Valley

	councils; • specialist interest groups, including Local Aboriginal Councils, Aboriginal stakeholders and industry/ growers associations, mining and petroleum title holders; • utilities and service providers, including Rous Water; and • the public, including community groups and adjoining and affected landowners. The EIS must describe the consultation process, document consultation undertaken and identify the issues raised (including where these have been addressed in the EIS).
Further Consultation after 2 years	If you do not lodge an EIS for the development within 2 years of the issue date of these DGRs, you must consult with the Director General in relation to the preparation of the EIS.