Secretary's Environmental Assessment Requirements

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

Application Number	SSI-7666
Proposal	Upgrade approximately 14 kilometres of the Pacific Highway with four lanes of divided motorway standard road from south of Englands Road to Korora Hill to bypass the Coffs Harbour urban area.
Location	Land generally located from south of the Englands Road intersection to Korora Hill at the southern end of the Sapphire to Woolgoolga upgrade in the Coffs Harbour local government area.
Proponent	Roads and Maritime Services
Date of Issue	16 June 2016

General SEARs

Desired Performance Outcome	Requirement	Current Guidelines[1]
1. Environmental Impact Assessment Process The process for assessment of the proposal is transparent, balanced, well focussed and legal.	1. The Environmental Impact Statement (EIS) must be prepared in accordance with Part 3 of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (the Regulation). 2. It is the Proponent's responsibility to determine whether the project needs to be referred to the Commonwealth Department of the Environment for an approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The Proponent must contact the Commonwealth Department of the Environment immediately if it is determined that an approval is required under the EPBC Act, as supplementary environmental assessment requirements may need to be issued to ensure a streamlined assessment under the Bilateral agreement can be achieved. 3. Where the project requires approval under the EPBC Act and is being assessed under the Bilateral Agreement the EIS should address: (a) Consideration of any Protected Matters that may be impacted by the development where the Commonwealth Minister has determined that the proposal is a Controlled Action; (b) Identification and assessment of those Protected Matters that are likely to be significantly impacted; (c) Details of how significant impacts to Protected Matters have been avoided, mitigated and, if necessary, offset; and (d) Consideration of, and reference to, any relevant conservation advices, recovery plans and threat abatement plans. 4. The onus is on the Proponent to ensure legislative requirements relevant to the project are met.	EPBC Act Environment Assessment Process (SEWPAC, 2010)

[1] Guidelines listed are the current list of guidelines that may be applicable to a CSSI project. It is the Proponents responsibility to identify, and justify, which guidelines have been applied to a specific project.

Desired Performance Outcome	Requirement	Current Guidelines[1]
2. Environmental Impact Statement The project is described in sufficient detail to enable clear understanding that the project has been developed through an iterative process of impact identification and assessment and project refinement to avoid, minimise or offset impacts so that the project, on balance, has the least adverse biophysical, social and economic impact, including its cumulative impacts.	1. The EIS must include, but not necessarily be limited to, the following: (a) an executive summary; (b) a description of the project and all components and activities (including ancillary components and activities) required to construct and operate it, including: – the proposed route; – design of the motorway and its components, including interchanges, tunnels and bridges, and road user, pedestrian and cyclist facilities, and lighting; – local road upgrade works, including road widening, intersection treatment and grade separation works, property access, parking, pedestrian and cyclist and public transport facilities; – ancillary infrastructure and operational facilities, such as operational and maintenance facilities, ventilation systems, fire and emergency systems and services, and infrastructure, for the project; – location and operational requirements of construction ancillary facilities and access; and – the relationship and/or integration of the project with existing public and freight transport services; (c) a statement of the objective(s) of the project, including how it meets the objectives of the overall Pacific Highway Upgrade program; (d) a summary of the strategic need for the project with regard to its State significance and relevant State Government policy; (e) an analysis of any feasible alternatives to the project[2]; (f) a description of feasible options within the project[3], including: – alternative methods considered for the construction of the project, including the tunnels; and – staging of the project; (g) a description of how alternatives to and options within the project were analysed to inform the selection of the preferred alternative / option. The description must contain sufficient detail to enable an understanding of why the preferred alternative to, and options(s) within, the project were selected, including: – details of the highway corridors and route options from the development of the Coffs Harbour Highway Planning Strategy, and the criteria that was considered in the selection of the preferred route; and – a justification for the preferred proposal taking into consideration the objects of the *Environmental Planning and Assessment Act 1979* (h) a concise description of the general biophysical and socio-economic environment that is likely to be	

[2] Alternatives to a project are different projects which would achieve the same project objective(s) including the consequences of not carrying out the project. For example, alternatives to a road project may be a rail project in the same area and alternate routes for the road, or a combination of these alternatives.

[3] Options within the project are variations of the same project. For example, options within a road project could be design of an intersection; the location or design of a bridge; locations for a ventilation outlet.

Desired Performance Outcome	Requirement	Current Guidelines[1]
	impacted by the project (including indirect impacts). Elements of the environment that are not likely to be affected by the project do not need to be described; (i) a demonstration of how the project design has been developed to avoid or minimise likely adverse impacts; (j) the identification and assessment of key issues as provided in the 'Assessment of Key Issues' performance outcome; (k) a statement of the outcome(s) the proponent will achieve for each key issue; (l) measures to avoid, minimise or offset impacts must be linked to the impact(s) they treat, so it is clear which measures will be applied to each impact; (m) consideration of the interactions between mitigation measures, between impacts and between measures and impacts;[4] (n) an assessment of the cumulative impacts of the project taking into account other projects that have been approved but where construction has not commenced, projects that have commenced construction, and projects that have recently been completed; (o) statutory context of the project as a whole, including: – how the project meets the provisions of the EP&A Act and EP&A Regulation; – a list of any approvals that must be obtained under any other Act or law before the project may lawfully be carried out; (p) a chapter that synthesises the environmental impact assessment and provides: – a succinct but full description of the project for which approval is sought; – a description of any uncertainties that still exist around design, construction methodologies and/or operational methodologies and how these will be resolved in the next stages of the project; – a compilation of the impacts of the project that have not been avoided; – a compilation of the proposed measures associated with each impact to avoid or minimise (through design refinements or ongoing management during construction and operation) or offset these impacts; – a compilation of the outcome(s) the proponent will achieve; and – the reasons justifying carrying out the project as proposed, having regard to the biophysical, economic and social considerations, including ecologically sustainable development and cumulative impacts; and (q) relevant project plans, drawings, diagrams in an electronic format that enables integration with mapping and other technical software.	

[4] Measures proposed to avoid or minimise one impact may cause an unintended impact on another issue. Therefore these impacts and their interactions need to be analysed and resolved where possible.

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	2. The EIS must only include data and analysis that is reasonably needed to make a decision on the proposal. Relevant information must be succinctly summarised in the EIS and included in full in appendices. Irrelevant, conflicting or duplicated information must be avoided.	
3. Assessment of Key Issues* Key issue impacts are assessed objectively and thoroughly to provide confidence that the project will be constructed and operated within acceptable levels of impact. * Key issues are nominated by the Proponent in the CSSI project application and by the Department in the SEARs. Key issues need to be reviewed throughout the preparation of the EIS to ensure any new key issues that emerge are captured. The key issues identified in this document are not exhaustive but are key issues common to most CSSI projects.	1. The level of assessment of likely impacts must be proportionate to the significance of, or degree of impact on, the issue, within the context of the proposal location and the surrounding environment. The level of assessment must be commensurate to the degree of impact and sufficient to ensure that the Department and other government agencies are able to understand and assess impacts. 2. For each key issue the Proponent must: (a) describe the biophysical and socio-economic environment, as far as it is relevant to that issue, including adequate baseline data, in terms of temporal, spatial and parameters monitored; (b) describe the legislative and policy context, as far as it is relevant to the issue; (c) identify, describe and quantify (if possible) the impacts associated with the issue, including the likelihood and consequence (including worst case scenario) of the impact (comprehensive risk assessment), and the cumulative impacts; (d) demonstrate how potential impacts have been avoided (through design, or construction or operation methodologies); (e) detail how likely impacts that have not been avoided through design will be minimised, and the predicted effectiveness of these measures (against performance criteria where relevant); and (f) detail how any residual impacts will be managed or offset, and the approach and effectiveness of these measures. 3. Where multiple reasonable and feasible options to avoid or minimise impacts of the preferred route/project are available, they must be identified and considered and the proposed measure justified taking into account the public interest.	
4. Consultation The project is developed with meaningful and effective engagement during project design and preparation of the EIS.	1. The project must be informed by consultation, including with relevant local, State and Commonwealth government agencies, infrastructure and service providers, special interest groups (including Local Aboriginal Land Councils, Aboriginal stakeholders, and pedestrian and bicycle user groups), affected landowners, businesses and the community. The consultation process must be undertaken in accordance with the current guidelines. 2. The Proponent must document the consultation process, and demonstrate how the project has responded to the inputs received.	NSW Sustainable Design Guidelines Version 3.0 (TfNSW, 2013)

Key Issue SEARs

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
1. Transport and Traffic Network connectivity, safety and efficiency of the transport system in the vicinity of the project are managed to minimise impacts. The safety of transport system customers is maintained. Impacts on network capacity and the level of service are effectively managed. Works are compatible with existing infrastructure and future transport corridors.	1. The Proponent must assess construction transport and traffic (vehicle, pedestrian and cyclists) impacts, including, but not necessarily limited to: (a) a considered approach to the identification of transport routes and movements, particularly outside standard construction hours; (b) the indicative number, frequency and size of construction related vehicles (passenger, commercial and heavy vehicles, including spoil management movements); (c) indicative construction worker parking requirements; (d) the nature of existing traffic (types and number of movements) on construction access routes (including consideration of peak traffic times, land uses, in particular sensitive receivers, and parking arrangements); (e) access constraints and impacts on public transport, pedestrians and cyclists; (f) impacts to the operation of the North Coast railway line; (g) the need to close, divert or otherwise reconfigure elements of the road and cycle network associated with construction of the project; and (h) the cumulative traffic impacts of other major development projects preparing for or commencing construction in the vicinity of the proposal. 2. The Proponent must assess (and model) the operational transport impacts of the project including, but not necessarily limited to: (a) forecast travel demand and traffic volumes for the project and the surrounding road, cycle and public transport network; (b) travel time analysis; (c) performance of key interchanges and intersections by undertaking a level of service analysis at key locations; (d) wider transport interactions and modifications (local and regional roads, cycling, public and freight transport, and the North Coast railway line); (e) access to identified and future urban release areas, such as North Boambee Valley; (f) impacts on cyclists and pedestrian access and safety; and	Guide to Traffic Management – Part 3 Traffic Studies and Analysis (Austroads, 2007) Guide to Traffic Generating Developments Version 2.2 (RTA, 2002) Cycling Aspects of Austroads Guides (Austroads, 2014) NSW Bicycle Guidelines v 1.2 (RTA, 2005) Planning Guidelines for Walking and Cycling (DIPNR, 2004) NSW Sustainable Design Guidelines Version 3.0 (TfNSW, 2013)

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
	(g) opportunities to integrate cycling and pedestrian elements with surrounding networks (existing and proposed) and within the project.	
2. Noise and Vibration - Amenity Construction noise and vibration (including airborne noise, ground-borne noise and blasting) are effectively managed to minimise adverse impacts on acoustic amenity. Increases in noise emissions affecting nearby properties and other sensitive receivers during operation of the project are effectively managed to protect the amenity and well-being of the community.	1. The Proponent must assess construction and operational noise and vibration impacts in accordance with relevant NSW noise and vibration guidelines. The assessment must include consideration of impacts to sensitive receivers, and include consideration of sleep disturbance and, as relevant, the characteristics of noise and vibration. 2. An assessment of construction noise and vibration impacts which must address: (a) the nature of construction activities (including transport, tonal or impulsive noise-generating works and the removal of operational noise barriers, as relevant); (b) the intensity and duration of noise and vibration impacts (both air and ground borne); (c) the nature, sensitivity and impact to receivers (including Bishop Druitt College and Korora Public School); (d) the need to balance timely conclusion of noise and vibration-generating works with periods of receiver respite, and other factors that may influence the timing and duration of construction activities (such as traffic management); (e) the potential for extended standard construction hours and/or works outside standard construction hours, including predicted levels, exceedances and number of potentially affected receivers and justification for the activity in terms of the Interim Construction Noise Guideline (DECCW, 2009); and (f) a cumulative noise and vibration assessment inclusive of impacts from other major development projects preparing for or commencing construction in the vicinity of the proposal. 3. The Proponent must demonstrate that blast impacts are capable of complying with the current guidelines, if blasting is required.	Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration (ANZECC, 1990) Assessing Vibration: a technical guideline (DEC, 2006) Australian Standard AS 2187.2-2006 Explosives – Storage and use – Part 2 use of explosives Interim Construction Noise Guideline (DECCW, 2009) NSW Industrial Noise Policy (EPA, 2000) Construction Noise Strategy (TfNSW, 2012) NSW Road Noise Policy (DECCW, 2011) Environmental Noise Management Manual (RMS 2001) Noise Mitigation Guideline (RMS, 2015) Noise Criteria Guideline (RMS, 2015)
3. Noise and Vibration - Structural Construction noise and vibration (including airborne noise, ground-borne noise and	1. The Proponent must assess construction and operation noise and vibration impacts in accordance with relevant NSW noise and vibration guidelines. The assessment must include consideration of impacts to the	German Standard DIN 4150-3: 1999-02 - Structural Vibration - effects of vibration on structures

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
blasting) are effectively managed to minimise adverse impacts on the structural integrity of buildings and items including Aboriginal places and environmental heritage. Increases in noise emissions and vibration affecting environmental heritage as defined in the *Heritage Act 1977* during operation of the project are effectively managed.	structural integrity and heritage significance of items (including Aboriginal places and items of environmental heritage). 2. The Proponent must demonstrate that blast impacts are capable of complying with the current guidelines, if blasting is required.	Australian Standard AS 2187.2-2006 Explosives – Storage and use – Part 2 use of explosives
4. Biodiversity The project design considers all feasible measures to avoid and minimise impacts on terrestrial and aquatic biodiversity. The delivery of offsets and/or supplementary measures required for the project is assured and which are equivalent to any remaining impacts from its construction and operation.	1. The Proponent must assess biodiversity impacts in accordance with the current guidelines including the Framework for Biodiversity Assessment (FBA) and be carried out by a person accredited in accordance with section 142B(1)(c) of the *Threatened Species Conservation Act, 1995*. 2. The Proponent must survey and assess any impacts on biodiversity values not covered by the FBA, as specified in section 2.3[5], including but not limited to aquatic species, riparian vegetation, instream macrophytes and habitat condition. 3. The Proponent must assess impacts on EECs, threatened species and/or populations[6] and provide the information specified in section 9.2 of the FBA. 4. The Proponent must identify whether the project as a whole, or any component of the project, would be classified as a Key Threatening Process (KTP) in accordance with the listings in the *Threatened Species Conservation Act 1995* (TSC Act), *Fisheries Management Act 1994* (FM Act) and *Environmental Protection and Biodiversity Conservation Act 2000* (EPBC Act).	NSW Biodiversity Offsets Policy for Major Projects (OEH, 2014) Framework for Biodiversity Assessment (OEH, 2014) Policy and Guidelines for Fish Habitat Conservation and Management – Update 2013 (DPI, 2013) Threatened Species Survey and Assessment Guidelines Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (NSW Fisheries, 2003) NSW Sustainable Design Guidelines Version 3.0 (TfNSW, 2013) Aquatic Ecology in Environmental Impact Assessment – EIA Guideline (Marcus Lincoln Smith 2003)
5. Urban Design The project design complements the visual amenity, character and quality of the surrounding environment.	1. The Proponent must: (a) identify the urban design and landscaping aspects of the project and its components, including interchanges, tunnel portals, bridges, noise	AS4282-1997 Control of the obtrusive effects of outdoor lighting Beyond the Pavement: RTA urban design policy, procedures and design principles (RMS, 2014)

[5] OEH will provide specific assessment requirements for any such impacts during agency consultation on the SEARs.

[6] OEH will provide this list of species during agency consultation on the SEARs.

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The project contributes to the accessibility and connectivity of communities.	walls, landscaped mounds, ancillary buildings, and infrastructure services; (b) assess the impact of the project on the urban, rural and natural fabric, including residual land treatment, and demonstration of how the proposed hard and soft urban design elements of the project would be consistent with the existing and desired future character of the area traversed or affected by the project; (c) explore the use of Crime Prevention Through Environmental Design (CPTED) principles during the design development process, including natural surveillance, lighting, walkways, signage and landscaping; (d) identify urban design strategies to enhance healthy, cohesive and inclusive communities directly impacted by the project; and (e) describe urban design and landscape mitigation measures, having regard to the urban design and landscape objectives for the project and the overall Pacific Highway Upgrade program.	Bridge Aesthetics: Design guidelines to improve the appearance of bridges in NSW (RMS, 2012) NSW Sustainable Design Guidelines Version 3.0 (TfNSW, 2013) Crime prevention and the assessment of development applications (DUAC, 2001) Crime Prevention through Environmental Design (CPTED) (Queensland Government, 2007) Technical guideline for Urban Green Cover in NSW Healthy Urban Development *Checklist* (NSW Health, 2009) Pacific Highway Urban Design Framework 2013 (RMS, 2013)
6. Visual Amenity The project minimises adverse impacts on the visual amenity of the built and natural environment (including public open space) and capitalises on opportunities to improve visual amenity.	1. The Proponent must assess the visual impact of the project and any ancillary infrastructure (including noise walls) on: (a) views and vistas; (b) streetscapes, key sites and buildings; (c) heritage items including Aboriginal places and environmental heritage; and (d) the local community (including view loss and overshadowing). 2. The Proponent must provide artist impressions and perspective drawings of the project from a variety of locations along and adjacent to the route to illustrate how the project has responded to the visual impact through urban design and landscaping.	AS4282-1997 Control of the obtrusive effects of outdoor lighting Beyond the Pavement: urban design policy, procedures and design principles (RMS, 2014) Bridge Aesthetics: Design guidelines to improve the appearance of bridges in NSW (RMS, 2012) NSW Sustainable Design Guidelines Version 3.0 (TfNSW, 2013) Technical guideline for Urban Green Cover in NSW (OEH, 2015)
7. Socio-economic, Land Use and Property The project minimises adverse social and economic impacts and capitalises on opportunities potentially available to affected communities.	1. The Proponent must assess social and economic impacts in accordance with the current guidelines (including cumulative ongoing impacts of the project). 2. The Proponent must assess impacts from construction and operation on potentially affected properties, businesses, Council assets and services,	Environmental Planning and Impact Assessment Practice Note: Socio-economic Assessment (RMS, 2013) Guidelines for developments adjoining land and water managed by DECCW (DECCW 2010)

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
The project minimises impacts to property and business and achieves appropriate integration with adjoining land uses, including maintenance of appropriate access to properties and community facilities, and minimisation of displacement of existing land use activities, dwellings and infrastructure. Effective engagement is undertaken with stakeholders during project design and delivery.	recreational users and land and water users, including property acquisitions/adjustments, access amenity and relevant statutory rights. 3. The design, construction and operation of the project should address and minimise (existing and future) land use conflicts and operations (including existing and ongoing horticultural activities). Siting of project elements should be located in such a way that functional, contiguous areas of residual land and land uses are maximised. 4. The Proponent must assess potential impacts on utilities (including communications, electricity, gas, and water and sewerage) and the relocation of these utilities. 5. A draft Community Consultation Framework must be prepared identifying relevant stakeholders, procedures for distributing information and receiving/responding to feedback and procedures for resolving stakeholder and community complaints during the design, construction and operation of the project. Key issues that must be addressed in the draft Framework include, but are not limited to: (a) traffic management (including property access, pedestrian access), (b) landscaping/urban design matters, (c) construction activities including out of hours work, and (d) noise and vibration mitigation and management, (e) soil erosion and water quality management, and (f) interaction with existing land uses.	Revocation, Re-categorisation and Road Adjustment Policy (OEH, 2012)
8. Heritage The design, construction and operation of the project facilitates, to the greatest extent possible, the long term protection, conservation and management of the heritage significance of items of environmental heritage and Aboriginal objects and places. The design, construction and operation of the project avoids or minimises impacts, to the greatest extent possible, on the heritage significance of environmental heritage and	1. The Proponent must identify and assess any direct and/or indirect impacts (including cumulative impacts) to the heritage significance of: (a) Aboriginal places and objects, as defined under the *National Parks and Wildlife Act 1974* and in accordance with the principles and methods of assessment identified in the current guidelines; (b) Aboriginal places of heritage significance, as defined in the Standard Instrument – Principal Local Environmental Plan; (c) environmental heritage, as defined under the *Heritage Act 1977*; and (d) items listed on the National and World Heritage lists.	Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (OEH, 2011) Aboriginal Cultural Heritage Consultation requirements for proponents (DECCW, 2010) Code of practice for archaeological investigation of Aboriginal objects in NSW (DECCW, 2010) NSW Skeletal Remains: Guidelines for Management of Human Remains (Heritage Office, 1998) Aboriginal site recording form

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Aboriginal objects and places.	2. Where impacts to State or locally significant heritage items are identified, the assessment must: (a) include a significance assessment and statement of heritage impact for all heritage items (including any unlisted places that are assessed as having heritage value); (b) provide a discussion of alternative locations and design options that have been considered to reduce heritage impacts; (c) in areas identified as having potential archaeological significance, undertake a comprehensive archaeological assessment in line with Heritage Council guidelines which includes a methodology and research design to assess the impact of the works on the potential archaeological resource and to guide physical archaeological test excavations and include the results of these excavations; (d) consider impacts to the item of significance caused by, but not limited to, vibration, demolition, archaeological disturbance, altered historical arrangements and access, increased traffic, visual amenity, landscape and vistas, curtilage, subsidence and architectural noise treatment (as relevant); (e) outline measures to avoid and minimise those impacts in accordance with the current guidelines; and (f) 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). 3. Where archaeological investigations of Aboriginal objects are proposed these must be conducted by a suitably qualified archaeologist, in accordance with section 1.6 of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010). 4. Where impacts to Aboriginal objects and/or places are proposed, consultation must be undertaken with Aboriginal people in accordance with the current guidelines.	Aboriginal site impact recording form Aboriginal Heritage Information Management System site registration form Care agreement application form Criteria for the assessment of excavation directors (NSW Heritage Council, 2011) NSW Heritage Manual (Heritage Office and Department of Urban Affairs and Planning, 1994) Assessing Heritage Significance (NSW Heritage Office, 2001) The Australia ICOMOS Burra Charter
9. Soils The environmental values of land, including soils, subsoils and landforms, are protected.	1. The Proponent must assess whether the land is likely to be contaminated and identify if remediation of the land is required, having regard to the ecological and human health risks posed by the contamination in the context of past, existing and future land uses. Where assessment and/or	Managing Land Contamination: Planning Guidelines SEPP 55 –Remediation of Land, (DUAP & EPA, 1998)

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Risks arising from the disturbance and excavation of land and disposal of soil are minimised, including disturbance to acid sulfate soils and site contamination.	remediation is required, the Proponent must document how the assessment and/or remediation would be undertaken in accordance with current guidelines. 2. The Proponent must assess whether salinity is likely to be an issue and if so, determine the presence, extent and severity of soil salinity within the project area. 3. The Proponent must assess the impacts of the project on soil salinity and how it may affect groundwater resources and hydrology. 4. The Proponent must assess the impacts on soil and land resources (including bank stability, erosion risk or hazard). Particular attention must be given to soil erosion and sediment transport consistent with the practices and principles in the current guidelines.	Guidelines for Consultants Reporting on Contaminated Sites (OEH, reprinted 2011) Guidelines for the NSW Site Auditor Scheme (DEC, 2006) Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997 (EPA, 2015) Urban and regional salinity – guidance given in the Local Government Salinity Initiative booklets (http://www.environment.nsw.gov.au/salinity/solutions/urban.htm) which includes *Site Investigations for Urban* Salinity (DLWC, 2002) Landslide risk management guidelines presented in Australian Geomechanics Society (2007) Soil and Landscape Issues in Environmental Impact Assessment (DLWC 2000) Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2004) and Volume 2 (A. Installation of Services; B. Waste Landfills; C. Unsealed Roads; D. Main Roads; E. Mines and Quarries) (DECC, 2008) Other guidelines made or approved under section 105 of the *Contaminated Land Management Act 1997*
10. Water - Quality The project is designed, constructed and operated to protect the NSW Water Quality Objectives where they are currently being achieved, and contribute towards achievement of the Water Quality Objectives over time where they are currently not being achieved, including downstream of the project to the extent of the project impact including estuarine and marine waters (if applicable).	1. The Proponent must: (a) state the ambient NSW Water Quality Objectives (NSW WQO) and environmental values for the receiving waters relevant to the project, including the indicators and associated trigger values or criteria for the identified environmental values; (b) identify and estimate the quality and quantity of all pollutants that may be introduced into the water cycle by source and discharge point and describe the nature and degree of impact that any discharge(s) may have on the receiving environment, including consideration of all pollutants that pose a risk of non-trivial harm to human health and the environment;	NSW Water Quality and River Flow Objectives at http://www.environment.nsw.gov.au/ieo/ Using the ANZECC Guidelines and Water Quality Objectives in NSW (DEC, 2006) Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC/ ARMCANZ, 2000) Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (DECC, 2008) Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2004) and Volume 2 (A. Installation

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	(c) identify the rainfall event that the water quality protection measures will be designed to cope with; (d) assess the significance of any identified impacts including consideration of the relevant ambient water quality outcomes; (e) demonstrate how construction and operation of the project will, to the extent that the project can influence, ensure that: – where the NSW WQOs for receiving waters are currently being met they will continue to be protected; and – where the NSW WQOs are not currently being met, activities will work toward their achievement over time; (f) justify, if required, why the WQOs cannot be maintained or achieved over time; (g) demonstrate that all practical measures to avoid or minimise water pollution and protect human health and the environment from harm are investigated and implemented; (h) identify sensitive receiving environments (which may include estuarine and marine waters downstream such as the Solitary Islands Marine Park) and develop a strategy to avoid or minimise impacts on these environments; and (i) identify proposed monitoring locations, monitoring frequency and indicators of surface and groundwater quality.	of Services; B. Waste Landfills; C. Unsealed Roads; D. Main Roads; E. Mines and Quarries) (DECC, 2008)
11. Water - Hydrology Long term impacts on surface water and groundwater hydrology (including drawdown, flow rates and volumes) are minimised. The environmental values of nearby, connected and affected water sources, groundwater and dependent ecological systems including estuarine and marine water (if applicable) are maintained (where values are achieved) or improved and maintained (where values are not achieved). Sustainable use of water resources.	1. The Proponent must describe (and map) the existing hydrological regime for any surface and groundwater resource (including reliance by users and for ecological purposes) likely to be impacted by the project, including stream orders, as per the FBA. 2. The Proponent must assess (and model if appropriate) the impact of the construction and operation of the project and any ancillary facilities (both built elements and discharges) on surface and groundwater hydrology in accordance with the current guidelines, including: (a) natural processes within rivers, wetlands, estuaries, marine waters and floodplains that affect the health of the fluvial, riparian, estuarine or marine system and landscape health (such as modified discharge volumes, durations and velocities), aquatic connectivity and access to habitat for spawning and refuge; (b) impacts from any permanent and temporary interruption of	Framework for Biodiversity Assessment – Appendix 2 (OEH, 2014) Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2004) and Volume 2 (A. Installation of Services; B. Waste Landfills; C. Unsealed Roads; D. Main Roads; E. Mines and Quarries) (DECC, 2008) NSW Aquifer Interference Policy (DPI, 2012) NSW Sustainable Design Guidelines Version 3.0 (TfNSW, 2013) Risk assessment Guidelines for Groundwater Dependent Ecosystems (Office of Water, 2012)

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	groundwater flow, including the extent of drawdown, barriers to flows, implications for groundwater dependent surface flows, ecosystems and species, groundwater users and the potential for settlement; (c) changes to environmental water availability and flows, both regulated/licensed and unregulated/rules-based sources; (d) direct or indirect increases in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses; (e) minimising the effects of proposed stormwater and wastewater management during construction and operation on natural hydrological attributes (such as volumes, flow rates, management methods and re-use options) and on the conveyance capacity of existing stormwater systems where discharges are proposed through such systems; and (f) water take (direct or passive) from all surface and groundwater sources with estimates of annual volumes during construction and operation. 3. The Proponent must identify any requirements for baseline monitoring of hydrological attributes. 4. The assessment must include details of proposed surface and groundwater monitoring.	
12. Flooding The project minimises adverse impacts on existing flooding characteristics. Construction and operation of the project avoids or minimises the risk of, and adverse impacts from, infrastructure flooding, flooding hazards, or dam failure.	1. The Proponent must assess and (model where required) the impacts from the project on flood behaviour, in particular Coffs Creek, during construction and operation for a full range of flood events up to the probable maximum flood (taking into account sea level rise and storm intensity due to climate change) including: (a) any detrimental increases in the potential flood affectation of the project infrastructure and other properties, assets and infrastructure; (b) consistency (or inconsistency) with applicable Council floodplain risk management plans; (c) compatibility with the flood hazard of the land; (d) compatibility with the hydraulic functions of flow conveyance in flood ways and storage areas of the land; (e) whether there will be adverse effect to beneficial inundation of the	NSW Government's Floodplain Development Manual (Department of Natural Resources, 2005) Practical Consideration of Climate Change - Flood risk management guideline (DECC, 2007) Coffs Creek Floodplain Risk Management Study draft Report October 2005 (CHCC)

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
	floodplain environment, on, or adjacent to or downstream of the site; (f) downstream velocity and scour potential; (g) impacts the project may have upon existing community emergency management arrangements for flooding, including Council's upper catchment detention basins. These matters must be discussed with the State Emergency Services and Coffs Harbour City Council; (h) any impacts the project may have on the social and economic costs to the community as consequence of flooding; (i) whether there will be direct or indirect increase in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses; and (j) any mitigation measures required to offset potential flood risks attributable to the project.	
13. Air Quality The project is designed, constructed and operated in a manner that minimises air quality impacts (including nuisance dust and odour) to minimise risks to human health and the environment to the greatest extent practicable.	1. The Proponent must undertake an air quality impact assessment (AQIA) for construction and operation of the project in accordance with the current guidelines. 2. The Proponent must ensure the AQIA also includes the following: (a) demonstrated ability to comply with the relevant regulatory framework, specifically the *Protection of the Environment Operations Act 1997* and the *Protection of the Environment Operations (Clean Air) Regulation 2010*; (b) an assessment of the impacts of the construction and operation of the project on sensitive receivers and the local community, including risks to human health; (c) details of the proposed mitigation measures to minimise the generation and emission of dust (particulate matter and TSP) and air pollutants (including odours) during the construction of the project, particularly in relation to the operation of ancillary facilities (such as concrete and asphalt batching), the use of mobile plant and machinery, stockpiles and the processing and movement of spoil, and construction vehicle movement along the alignment; and (d) a cumulative assessment of the local and regional air quality.	Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (DEC, 2005) Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (DEC, 2005) Technical Framework - Assessment and Management of Odour from Stationary Sources in NSW (DEC, 2006)

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14. Waste All wastes generated during the construction and operation of the project are effectively stored, handled, treated, reused, recycled and/or disposed of lawfully and in a manner that protects environmental values.	1. The Proponent must assess predicted waste generated from the project during construction and operation, including: (a) classification of the waste in accordance with the current guidelines; (b) estimates / details of the quantity of each classification of waste to be generated during the construction of the project, including bulk earthworks and spoil balance; (c) handling of waste including measures to facilitate segregation and prevent cross contamination; (d) management of waste including estimated location and volume of stockpiles; (e) waste minimisation (particularly of unsuitable material) and reuse; (f) lawful disposal or recycling locations for each type of waste; and (g) contingencies for the above, including managing unexpected waste volumes. 2. The Proponent must assess potential environmental impacts from the excavation, handling, storage on site, and transport and disposal of the waste particularly with relation to sediment/leachate control, noise and dust, and traffic and transport.	EPA's Waste Classification Guidelines (as in force from time to time) NSW Sustainable Design Guidelines Version 3.0 (TfNSW, 2013) Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2004) and Volume 2 (A. Installation of Services; B. Waste Landfills; C. Unsealed Roads; D. Main Roads; E. Mines and Quarries) (DECC, 2008)
15. Sustainability The project reduces the NSW Government's operating costs and ensures the effective and efficient use of resources. Conservation of natural resources is maximised.	1. The Proponent must assess the sustainability of the project in accordance with the Infrastructure Sustainability Council of Australia (ISCA) *Infrastructure Sustainability Rating Tool* and recommend an appropriate target rating for the project. 2. The Proponent must assess the project against the current guidelines including targets and strategies to improve Government efficiency in use of water, energy and transport.	Infrastructure Sustainability Rating Tool Scorecard relating to energy and carbon for large infrastructure projects, ISCA
16. Safety and Risk The project avoids, to the greatest extent possible, risk to public safety. The project is designed, constructed and operated to be resilient to the future impacts of climate change.	1. The Proponent must assess the likely risks of the project to public safety, paying particular attention to pedestrian safety, subsidence risks, bushfire risks and the storage, handling and use of dangerous goods. 2. The Proponent must assess the risk and vulnerability of the project to climate change in accordance with the current guidelines.	State Environmental Planning Policy No. 33 - Hazardous and Offensive Development Australian Government's Climate Change Impacts and Risk Management – A Guide for Business and Government (2006) AS/NZS 3100:2009 Risk Management – Principles and Guidelines

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
	3. The Proponent must assess the biosecurity risk of the project to minimise the inadvertent spread of disease and pathogens affecting horticultural activities, vegetation and threatened fauna.	Technical Guide for Climate Change Adaptation for the State Road Network (RMS, in draft)