Secretary's Environmental Assessment Requirements

Section 5.16 of the *Environmental Planning and Assessment Act 1979*

Application Number	SSI 7319
Proposal	M1 Pacific Motorway Extension to Raymond Terrace
Location	Land generally between Black Hill (M1 Pacific Motorway 1.5 kilometres south of John Renshaw Drive) and Raymond Terrace (A1 Pacific Highway 2.5 kilometres north of Masonite Road, Heatherbrae) in the Newcastle and Port Stephens local government areas
Proponent	Roads and Maritime Services
Date of Issue	20 March 2019

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. The project will impact matters of national environmental significance (MNES) protected under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and will be assessed in accordance with the NSW Bilateral Agreement (2015). The Proponent must assess impacts to MNES protected under the EPBC Act. The assessment must be in accordance with the requirements listed in Attachment A. 3. The onus is on the Proponent to ensure legislative requirements relevant to the project are met.	EPBC Act Environment Assessment Process (SEWPAC, 2010)
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 road and its components, including interchanges; bridges and viaducts; structures over roads, rail lines and pipelines; road user, pedestrian and cyclist facilities; and lighting; – road upgrade works, including road widening, intersection treatment and grade separation works, property access, parking, pedestrian and cyclist and public transport facilities; – location and operational requirements of construction ancillary facilities and access; and – the relationship and/or integration of the project with existing and proposed[2] public and freight transport services; (c) a statement of the objective(s) of the project; (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[3]; (f) a description of feasible options within the project[4]; (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	

[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.

[2] Proposed – as identified in relevant State strategies and the like.

[3] 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.

[4] 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]
	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 considered, 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* (EP&A Act)*;* (h) a concise description of the general biophysical and socio-economic environment that is likely to be impacted by the project (including offsite 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;[5] (n) identification of other environmental impacts (such as protected and sensitive lands, sedimentation and erosion) and proposed measures for managing and/or mitigating the level of impact; (o) 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; (p) 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; (q) 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;	

[5] 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.

Desired Performance Outcome	Requirement	Current Guidelines[1]
	– 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 (r) relevant project plans, drawings, diagrams in an electronic format that enables integration with mapping and other technical software. 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.	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 the predicted 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.	

Desired Performance Outcome	Requirement	Current Guidelines[1]
	2. The Proponent must document the consultation process, and demonstrate how the project has responded to the inputs received. 3. The Proponent must describe the timing and type of community consultation proposed during the design and delivery of the project, the mechanisms for community feedback, the mechanisms for keeping the community informed, and procedures for complaints handling and resolution.	

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 and planned 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) the identification of transport routes and scheduling of 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; (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 rail lines in the Lower Hunter, including the Main Northern Rail Line and rail infrastructure in Hexham; (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	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)

	regional roads, cycling, public and freight transport); (e) access to identified and future development areas, such as the Beresfield and Tomago industrial areas;	

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	(f) transport connectivity to and from existing communities and centres (such as Newcastle, Raymond Terrace, the Lower Hunter and Port of Newcastle), (g) impacts on Newcastle Airport and Williamstown RAAF Base, maritime traffic on the Hunter River, Port of Newcastle and rail infrastructure; (h) impacts on cyclists and pedestrian access and safety; and (i) 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 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); (d) 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); (e) potential noise and vibration mitigation measures, including timing of implementation; 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.	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) Construction Noise Strategy (TfNSW, 2012) NSW Road Noise Policy (DECCW, 2011) Noise Mitigation Guideline (RMS, 2015) Noise Criteria Guideline (RMS, 2015) Noise Policy for Industry (EPA 2017)

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
	3. The Proponent must demonstrate that blast impacts are capable of complying with the current guidelines, if blasting is required.	
3. Noise and Vibration - Structural Construction noise and vibration (including airborne noise, ground-borne noise and 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.	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 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.	German Standard DIN 4150-3: 1999-02 - Structural Vibration - effects of vibration on structures 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 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 assess any impacts on biodiversity values not covered by the FBA, as specified in section 2.3[6], including but not limited to aquatic biodiversity values covered by the *Fisheries Management Act 1994*, relating to aquatic species, riparian and marine vegetation, instream macrophytes and habitat condition. 3. The Proponent must survey and assess impacts on EECs, threatened species and/or populations[7] and provide the information specified in section 9.2 of the FBA. Species specific surveys shall be undertaken for those species and in accordance with the survey requirements specified by the OEH. 4. The Proponent must identify whether the project as a whole, or any component of the project, would be classified as a Key Threatening	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) Aquatic Ecology in Environmental Impact Assessment – EIA Guideline (Marcus Lincoln Smith 2003) Guidelines for developments adjoining land and water managed by DECCW (DECCW 2010)

[6] OEH will provide specific assessment requirements for any such impacts during agency consultation on the SEARs.
[7] OEH will provide this list of species during agency consultation on the SEARs.

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	Process (KTP) in accordance with the listings in the *Threatened Species Conservation Act 1995* (TSC Act)[8], *Fisheries Management Act 1994* (FM Act) and *Environmental Protection and Biodiversity Conservation Act 2000* (EPBC Act).	
5. 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. Identification of potential impacts and benefits of the proposal on existing flood regimes, consistent with the *Floodplain Development Manual* (Department of Natural Resources 2005), with an assessment of the potential changes to flooding behaviour (levels, velocities, storage and direction) and impacts on bed and bank stability, through flood modelling (using a validated model), including: (a) detailed description, justification and assessment of the flood management objectives, and other design objectives and design (including bridge, culvert and embankment design); (b) flood assessment and modelling undertaken for a range of flood events, including (as a minimum) the 1 in 10 year, 1 in 100 year flood events and the probable maximum flood, or an equivalent extreme event. The assessment is to demonstrate how the assessment, including the use of the modelled events listed above, provides consideration of blockage, climate change and impacts of land use change on flood hydrology, noting below; (c) modelling of the effect of the proposal (including fill) on current and future flood behaviour for the range of design events identified above, with use of the 1 in 200 year and 1 in 500 year flood events as proxies for assessing sensitivity to an increase in rainfall intensity due to climate change; (d) 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, evacuation and emergency service provision within the affected area, and future development potential of upstream and access affected land; (e) an assessment of impacts associated with the Hunter Valley Flood Mitigation Scheme; (f) an assessment of flooding during construction of the proposal;	NSW Government's Floodplain Development Manual (Department of Natural Resources, 2005) PS 07-003 New guideline and changes to section 117 direction and EP&A Regulation on flood prone land Practical Consideration of Climate Change - Flood risk management guideline (DECC, 2007)

[8] Under the savings and transitional provisions of the *Biodiversity Conservation Act 2016* the project is a pending planning application and the former provisions of the TSC Act remain in force.

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	(g) a cumulative flood assessment of the impact of other major projects recently completed, approved or preparing for construction; and (h) an assessment of emergency management, evacuation and access, and contingency measures for the development considering the full range of flood risk (based upon the probable maximum flood or an equivalent extreme flood event).	
6. Soils The environmental values of land, including soils, subsoils and landforms, are protected. Risks arising from the disturbance and excavation of land and disposal of soil are minimised, including disturbance to acid sulfate soils and site contamination.	1. The Proponent must verify the risk of acid sulfate soils (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Risk Map) within, and in the area likely to be impacted by, the project. 2. The Proponent must assess the impact of the project on acid sulfate soils (including impacts of acidic runoff offsite) in accordance with the current guidelines. 3. 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 remediation is required, the Proponent must describe how the assessment and/or remediation would be undertaken in accordance with current guidelines. 4. 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. 5. The Proponent must assess the impacts of the project on soil salinity and how it may affect groundwater resources and hydrology. 6. The Proponent must assess the impacts on soil and land resources (including 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.	Acid Sulfate Soils Assessment Guidelines (DoP, 2008) Acid Sulfate Soils Manual (Acid Sulfate Soils Management Advisory Committee, 1998) Managing Land Contamination: Planning Guidelines SEPP 55 –Remediation of Land, (DUAP & EPA, 1998) 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)

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		Other guidelines made or approved under section 105 of the *Contaminated Land Management Act 1997*
7. 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 prepare a detailed water balance for ground and surface water including the proposed intake and discharge locations, volume, frequency and duration. 3. 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 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) impacts on regional hydrology, in particular the Tomago Sandbeds Catchment Area drinking water supply; (d) changes to environmental water availability and flows, both regulated/licensed and unregulated/rules-based sources; (e) direct or indirect increases in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses; (f) minimising the effects of proposed stormwater and wastewater management during construction and operation on natural hydrological attributes (such as volumes, flow rates,	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) Guideline for Controlled Activities on Waterfront Land - Riparian Corridors (DOI, 2018) Relevant Water Sharing Plans (https://www.industry.nsw.gov.au/water)

	management methods and re-use options) and on the conveyance capacity of	

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	existing stormwater systems where discharges are proposed through such systems; and (g) water take (direct or passive) from all surface and groundwater sources with estimates of annual volumes during construction and operation. 4. The Proponent must identify any requirements for baseline monitoring of hydrological attributes. 5. The assessment must include details of proposed surface and groundwater monitoring.	
8. 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; (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	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 of Services; B. Waste Landfills; C. Unsealed Roads; D. Main Roads; E. Mines and Quarries) (DECC, 2008)

	water pollution and protect human health and the environment from harm	

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	are investigated and implemented; (h) identify sensitive receiving environments (including estuarine and marine waters downstream and the Tomago Sandbeds Catchment Area) 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. 2. The assessment should consider the results of any current water quality studies, as available, in the project catchment.	
9. Climate Change Risk The project is designed, constructed and operated to be resilient to the future impacts of climate change.	1. The Proponent must assess the risk and vulnerability of the project to climate change in accordance with the current guidelines. 2. The Proponent must quantify specific climate change risks with reference to the NSW Government's climate projections at 10km resolution (or lesser resolution if 10km projections are not available) and incorporate specific adaptation actions in the design.	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 Technical Guide for Climate Change Adaptation for the State Road Network (RMS, in draft)
10. Urban Design The project design complements the visual amenity, character and quality of the surrounding environment. The project contributes to the accessibility and connectivity of communities.	1. The Proponent must: (a) identify the urban design and landscaping aspects of the project and its components, including interchanges, bridge and viaduct structures, embankments, noise barriers (including walls and mounds), ancillary buildings, and road infrastructure facilities and 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	AS4282-1997 Control of the obtrusive effects of outdoor lighting Beyond the Pavement: RTA 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) 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

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	(e) describe urban design and landscape mitigation measures, having regard to the urban design and landscape objectives for the project.	Healthy Urban Development *Checklist* (NSW Health, 2009) Pacific Highway Urban Design Framework 2013 (RMS, 2013)
11. 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 barriers) 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)
12. Socio-economic, Land Use and Property The project minimises adverse social and economic impacts and capitalises on opportunities potentially available to affected communities. 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	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, Crown Land, Council assets and services, recreational users, and land and water users (including recreational and commercial fishers, and oyster and aquaculture farmers), including property acquisitions/adjustments, access, amenity and relevant statutory rights. 3. The Proponent must assess impacts on: (a) any operating mines, extractive industries or known mineral or petroleum resources; (b) exploration activities in the vicinity of the project; and (c) access for future exploration in the area. 4. The design, construction and operation of the project should address and minimise (existing and future) land use conflicts and operations (including existing and ongoing agricultural activities). Siting of project	Environmental Planning and Impact Assessment Practice Note: Socio-economic Assessment (RMS, 2013) Guidelines for developments adjoining land and water managed by the office of Environment and Heritage (OEH 2013) Revocation, Re-categorisation and Road Adjustment Policy (OEH, 2017) TransGrid's Easement Guidelines for Third Party development (V10) Land Use Conflict Risk Assessment (LUCRA) Guide (DPI, 2011) Infrastructure Proposals on Rural Land (DPI, 2013)

delivery.	elements	

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
	should be located in such a way that functional, contiguous areas of residual land and land uses are maximised. 5. The Proponent must undertake an assessment of biosecurity risks and management measures relating to the potential for spread of pests, disease or weeds, in accordance with the 'general biosecurity duty' under the *Biosecurity Act 2015*. 6. The Proponent must assess potential impacts on utilities (including communications, electricity, gas, and water and sewerage) and the relocation of these utilities. 7. 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, cyclist and pedestrian access), (b) landscaping/urban design matters, (c) hydrology and flooding, (d) staging and timing of construction activities including out of hours work and utility relocation, (e) noise and vibration mitigation and management, (f) soil erosion and water quality management, and (g) interaction with existing land uses.	
13. 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	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)

the		

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
greatest extent possible, on the heritage significance of environmental heritage and 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). In the event that harm to existing archaeological relics cannot be avoided, a Research Design and Excavation Methodology should be prepared to guide excavation works. 4. Where impacts to Aboriginal objects and/or places are proposed, consultation must be undertaken with Aboriginal people in	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

	accordance with the current guidelines. The significance of cultural heritage values	

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
	for Aboriginal people who have a cultural association with the land must be assessed.	
14. 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, treatment of acid sulfate soils and stockpiling of mulch), 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 (EPA 2016) 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)
15. 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	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)

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
	(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.	
16. 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 project against the current guidelines including targets and strategies to improve Government efficiency in use of water, energy and transport.	
17. 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 and contaminated material. 2. The Proponent must assess the biosecurity risk of the project to minimise the inadvertent spread of disease and pathogens affecting agricultural activities, native vegetation and threatened fauna.	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 Technical Guide for Climate Change Adaptation for the State Road Network (RMS, in draft)

ATTACHMENT A – EPBC Act Requirements

Australian Government
Department of the Environment and Energy

M1 Motorway Extension to Raymond Terrace, NSW (EPBC 2018/8288, SSI 15_7319)

The proposed action is being assessed for the purposes of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) under Division 5.2 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). This document is intended to assist the NSW Department of Planning and Environment (NSW DPE) to manage the environmental impact assessment process. It is not legally binding and does not replace the requirements of the EPBC Act.

Project details

The proposed action is to extend the M1 Pacific Motorway at Black Hill to the A1 Pacific Highway at Raymond Terrace, NSW.

Matters of National Environmental Significance

There are likely to be significant impacts on the following controlling provisions:

- Listed threatened species and communities (sections 18 and 18A).

All matters of national environmental significance (MNES) protected under the triggered controlling provisions are potentially relevant, however the Department of the Environment and Energy considers that there is likely to be a significant impact on the following:

- Coastal Swamp Oak (*Casuarina glauca*) Forest of New South Wales and South East Queensland ecological community – endangered
- Koala (*Phascolarctos cinereus*) (combined populations of Qld, NSW and the ACT) – vulnerable
- Swift Parrot (*Lathamus discolor*) – critically endangered
- Regent Honeyeater (*Anthochaera phrygia*) – critically endangered
- Grey-headed Flying-fox (*Pteropus poliocephalus*) – vulnerable

Note that this may not be a complete list. It is the responsibility of the proponent to ensure any protected matters under these controlling provisions are assessed for the Commonwealth decision-maker's consideration.

Based on the referral documentation, it was determined that significant impacts are unlikely for Earp's Gum (*Eucalyptus parramattensis subsp. decadens*), Small-flower Grevillea (*Grevillea parviflora subsp. parviflora*), Tall Knotweed (*Persicaria elatior*), Australasian Bittern (*Botaurus poiciloptilus*), Australian Painted Snipe (*Rostratula australis*), and Green and Golden Bell Frog (*Litoria aurea*). If the assessment process identifies any new or increased impacts on these species compared to the impacts described in the referral, such impacts must be addressed in the EIS.

Key Issues

Key significant impacts associated with proposed action on MNES are associated with the removal of native vegetation, particularly the Coastal Swamp Oak Forest ecological community, and habitat critical to the survival of the Koala, Swift Parrot, Regent Honeyeater, and Grey-headed Flying-fox. These impacts must be appropriately offset for EPBC Act purposes.

General Assessment Requirements

The EIS must address the matters outlined in Schedule 4 of the EPBC Act Regulations and the matters outlined below in relation to the controlling provisions.

For each of the EPBC Act-listed species and ecological communities impacted by the proposed action, the EIS must provide:

1. Survey results, including details of the scope, timing and methodology for studies or surveys used and how they are consistent with (or justification for divergence from) published Commonwealth guidelines and policy statements. For ecological communities, this includes any condition thresholds provided in the listing advice or approved conservation advice.
2. A description and quantification of habitat in the study area (including suitable breeding habitat, suitable foraging habitat, important populations and habitat critical for survival), with consideration of, and reference to, any relevant Commonwealth guidelines and policy statements including listing advices, conservation advices and recovery plans, threat abatement plans.
3. Maps displaying the above information (specific to EPBC matters) overlaid with the proposed action. It is acceptable, where possible, to use the mapping and assessment of Plant Community Types (PCTs) and the species surveys prescribed by the BAM as the basis for identifying EPBC Act-listed species and communities. The EIS must clearly identify which PCTs are considered to align with habitat for the relevant EPBC Act-listed species or community, and provide individual maps for each species or community.
4. Description of the nature, geographic extent, magnitude, timing and duration of any likely direct, indirect and consequential impacts on any relevant EPBC Act-listed species and communities. It must clearly identify the location and quantify the extent of all impact areas to each relevant EPBC Act-listed species or community.
5. Information on proposed avoidance and mitigation measures to deal with the impacts of the action, and a description of the predicted effectiveness and outcomes that the avoidance and mitigation measures will achieve.
6. Quantification of the offset liability for each species and community significantly impacted, and information on the proposed offset strategy, including discussion of the conservation benefit for each species and community, how offsets will be secured, and the timing of protection. It is a requirement that offsets directly contribute to the ongoing viability of the specific protected matter impacted by a proposed action i.e. 'like-for-like'.

Like-for-like includes protection of native vegetation that is the same ecological community or habitat being impacted (preferably in the same region where the impact occurs), or funding to provide a direct benefit to the matter being impacted e.g. threat abatement, breeding and propagation programs or other relevant conservation measures.