

# Appendix A

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Consideration of clause 228(2) factors and matters of national environmental significance

## Clause 228(2) Checklist

In addition to the requirements of the *Is an EIS required?* guideline (DUAP 1995/1996) and the *Roads and Related Facilities EIS Guideline* (DUAP 1996) as detailed in the REF, the following factors, listed in clause 228(2) of the *Environmental Planning and Assessment Regulation 2000*, have also been considered to assess the likely impacts of the proposal on the natural and built environment.

Factor	Impact
<p><b>a. Any environmental impact on a community?</b></p> <p>The proposal involves some impact on a community during construction including noise and vibration impacts, generation of airborne dust, temporary changes to traffic and access, and visual amenity impacts. During construction, a number of sites would be used for ancillary purposes such as construction compounds, material and plant storage, or material stockpiles. Temporary changes to local access would have short term impacts on access to private properties and businesses at locations along The Northern Road. These impacts would be mitigated through a Construction Traffic Management Plan, prepared by the Contractor as part of the overall Construction Environmental Management Plan.</p> <p>In the long term the proposal would result in improvements to traffic efficiency and road safety as well as improved facilities for pedestrians, cyclists and public transport.</p> <p>The proposal would also result in permanent changes to the visual environment and the overall landscape within the proposal area. Construction of a new bridge over the M4 Motorway, and the introduction of noise barriers along parts of The Northern Road, would impact on local views and visual amenity for some viewers. The final detailed design for the proposal would incorporate an integrated urban design and landscape concept plan, to mitigate visual impacts and to improve the proposal's landscape setting.</p> <p>Chapter 6 of this REF describes the likely temporary and permanent impacts of the proposal, and lists recommended measures to mitigate impacts during construction and operation. The Contractor's Construction Environmental Management Plan would incorporate all of the proposed safeguards for implementation throughout the proposal's construction phase.</p>	<p>Short term, minor negative</p> <p>Long term – positive</p> <p>Long term – neutral</p>

Factor	Impact
<p><b>b. Any transformation of a locality?</b>  The proposal area is already a developed urban and semi-urban arterial road carrying high volumes of traffic. The overall effect of the proposal would be to widen the existing road corridor, to increase its capacity. Some partial strip acquisition of property would be required to facilitate the proposed widening. No full acquisition of property would be required. While property boundaries adjoining The Northern Road would therefore be moved, the overall character of the road corridor and of the adjoining land uses would not be transformed.</p> <p>The proposal area would undergo temporary transformation during construction due to clearing of vegetation and earthworks required to widen the road corridor, to construct the new M4 Motorway bridge and to upgrade intersections.</p> <p>There would be some local visual transformations, where noise barriers are proposed to be introduced, north of the M4 Motorway along the west side of The Northern Road between the motorway and Aspen Street.</p>	<p>Long term – neutral</p> <p>Short to medium term – minor negative</p> <p>Long term - negative</p>
<p><b>c. Any environmental impact on the ecosystems of the locality?</b>  The proposal would result in clearing of roadside vegetation within the proposed road footprint. Some of this vegetation has been identified as remnant endangered Cumberland Plain Woodland vegetation. The proposal would impact about 2.4 hectares of remnant native vegetation and up to 3.9 hectares of planted vegetation along the M4 Motorway (6.3 hectares in total). However, this impact would represent only 0.12 per cent of the vegetation within the locality (the area within 10 kilometres of the proposal).</p> <p>As about 1.9 hectares of remnant vegetation meeting the description of the critically endangered Cumberland Plain Woodland in the Sydney Basin Bioregion would be removed as a result of the proposal, an offset strategy is required to be prepared for the proposal. The recommended offset strategy is documented in Section 6.3 of this REF.</p> <p>The proposal would have no long term impacts on any aquatic ecosystems, habitats or species.</p>	<p>Short term – minor negative</p>
<p><b>d. Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality?</b>  The proposal would involve the acquisition of some public open space in parks adjacent to The Northern Road. Rotary Park and Kingswood Lions Park would be permanently reduced in size, while other areas would be temporarily occupied by ancillary sites during construction. This would impact on the aesthetic as well as the recreational value of these parks.</p>	<p>Long term negative</p>
<p><b>e. Any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations?</b>  The proposal is not expected to have an impact on any locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations.</p>	<p>Nil</p>

Factor	Impact
<p><b>f. Any impact on the habitat of protected fauna (within the meaning of the <i>National Parks and Wildlife Act 1974</i>)?</b> The proposal would not impact on the habitat of protected fauna (within the meaning of the National Parks and Wildlife Act 1974).</p>	Nil
<p><b>g. Any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air?</b> The proposal would not endanger any species of animal, plant or other form of life.</p>	Nil
<p><b>h. Any long-term effects on the environment?</b> Long-term negative effects on the environment are not expected. Benefits would be realised in terms of reduced congestion and improvements in road safety.</p>	Positive
<p><b>i. Any degradation of the quality of the environment?</b> Construction would have the potential to result in water quality, visual, noise and air quality impacts. These potential impacts would be managed by the implementation of safeguards listed in section 7 of this REF.</p>	Short term – minor negative  Long term – nil
<p><b>j. Any risk to the safety of the environment?</b> Traffic management safeguards including the preparation of a traffic management plan, would address safety risks during construction.  The proposal would improve safety for road users during operation by reducing congestion, improved intersection performance and pedestrian/cyclist facilities.</p>	Short term – potential negative  Long term – positive
<p><b>k. Any reduction in the range of beneficial uses of the environment?</b> The proposal would not reduce the range of beneficial uses of the environment</p>	Nil
<p><b>l. Any pollution of the environment?</b> There is the potential for accidental spills of chemicals during construction which could affect the surrounding land, surface water and groundwater. Management of impacts on surface and ground water quality is addressed in Section 6.7 of this REF.  There is the potential for air quality and acoustic amenity to be reduced during construction activities.</p>	Short-term – minor negative
<p><b>m. Any environmental problems associated with the disposal of waste?</b> Waste streams generated during construction are common and would pose no difficulty in their disposal. Waste would be recycled wherever possible.</p>	Nil
<p><b>n. Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply?</b> All resources required for the proposal are readily available and are not in short supply.</p>	Nil

Factor	Impact
<p><b>o. Any cumulative environmental effect with other existing or likely future activities?</b></p> <p>Temporary potential cumulative impacts may occur as a result of construction activities occurring simultaneously with the construction of the proposed adjoining upgrades of The Northern Road. Construction of the proposal may potentially overlap with the construction of the proposed M12 Motorway. However, no commitment has yet been made in respect of the scheduling for construction of the proposed M12 Motorway.</p> <p>The long-term effect of the proposal would have a positive cumulative impact on travel times, road safety and efficiency, facilitating the anticipated increase in traffic volumes as a result of future traffic predictions and population growth.</p> <p>Cumulative impacts of the proposal are discussed in detail in Section 6.16 of this REF.</p>	<p>Short term – minor negative</p>
<p><b>p. Any impact on coastal processes and coastal hazards, including those under projected climate change conditions?</b></p> <p>The proposal is not located within a coastal area and would not result in any impact on coastal processes and coastal hazards.</p>	<p>Nil</p>

## Matters of National Environmental Significance

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Under the environmental assessment provisions of the *Environment Protection and Biodiversity Conservation Act 1999*, the following matters of national environmental significance and impacts on Commonwealth land are required to be considered to assist in determining whether the proposal should be referred to the Australian Government Department of the Environment.

A referral is not required for proposed actions that may affect nationally listed threatened species, populations, endangered ecological communities and migratory species. Impacts on these matters are still assessed as part of the REF in accordance with Australian Government significant impact criteria and taking into account relevant guidelines and policies.

Factor	Impact
a. Any impact on a World Heritage property?	Nil
b. Any impact on a National Heritage place?	Nil
c. Any impact on a wetland of international importance?	Nil
<p><b>d. Any impact on a listed threatened species or communities?</b>            The proposal would not impact on EPBC listed Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest.</p> <p>No EPBC listed species would be impacted by the proposal.</p>	Nil
e. Any impacts on listed migratory species?	Nil
f. Any impact on a Commonwealth marine area?	Nil
g. Does the proposal involve a nuclear action (including uranium mining)?	Nil
Additionally, any impact (direct or indirect) on Commonwealth land?	Nil