

# 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 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>a. Any environmental impact on a community?</p> <p>Construction of the proposal would result in some short-term negative impacts associated with construction such as traffic disruptions, noise and air emission impacts and visual amenity impacts. These issues could impact on the local community as described in Sections 6.3.3, 6.4.4, 6.8.3 and 6.10.3 of this REF respectively.</p> <p>Potential traffic impacts during construction would include an increase in the volume of heavy vehicles, interruption of traffic flows and travel times, and temporary changes in speed limits and access.</p> <p>Construction noise would be generated from construction plant, machinery and vehicles. Air quality impacts during construction would result from dust, vehicle emissions, and odour production.</p> <p>The operation of the proposal would likely increase road traffic noise impacts to sensitive receivers along the road. Mitigation measures would be put in place to minimise these impacts, as outlined in Section 6.4.6.</p> <p>The total area of land that would be acquired as part of this proposal is about 2.96 ha across 39 properties.</p> <p>The proposal, in combination with the predicted increase in population due to local developments, would also contribute to operational traffic impacts; however, the proposal is likely to improve traffic conditions by increasing the road carrying capacity. The proposal would also improve access in the region and provide shared bicycle and pedestrian paths.</p>	<p>Short-term negative</p> <p>Long-term negative</p> <p>Long-term negative and positive impacts. Long-term negative and positive impacts.</p>
<p>b. Any transformation of a locality?</p> <p>The proposal would result in changes (amenity, visual aspects) to the locality through provision of a wider road. Changes to intersection designs are also included in the new road design. A number of mitigation measures have been provided to minimise any negative impacts (Section 7.2).</p> <p>Some changes to the locality would be positive, such as greater pedestrian and cycling provisions and improved car travel times.</p>	<p>Long-term negative and positive impacts</p>

Factor	Impact
<p>c. Any environmental impact on the ecosystems of the locality?</p> <p>The proposal would involve the loss of native vegetation, including threatened ecological communities. A total of 0.65 hectares of native vegetation would be directly impacted within the proposal area. The areas to be cleared consist predominantly of disturbed native regrowth. The proposal may result in the expansion of edge effects associated with the new road edge, including weed invasion, altered hydrology and increased sedimentation and runoff.</p> <p>The proposal would result in loss of flora and fauna habitat, including potential habitat for threatened flora and fauna species. Vegetation removal would result in potential impacts on nesting, roosting and foraging habitat for birds, mammals, reptiles and frogs that occur in disturbed and urban landscapes.</p> <p>Measures, as outlined in Section 6.5.4 of this REF, would be implemented to minimise impacts on the ecosystems associated with the proposal.</p>	<p>Long-term minor negative impacts</p>
<p>d. Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality?</p> <p>There would be a minor reduction in the aesthetic quality of the locality due to the removal of vegetation, increase in road width and changes to intersections and property boundaries. Mitigation measures would be implemented to reduce impacts and detailed design would be undertaken in line with the urban design objectives of the proposal. These include revegetation and landscaping of the road corridor and retention of vegetation where possible (see Section 6.5.4).</p>	<p>Long-term negligible negative impacts</p>
<p>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?</p> <p>There would be no impacts 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>f. Any impact on the habitat of protected fauna (within the meaning of the <i>National Parks and Wildlife Act 1974</i>)?</p> <p>All native fauna species fall within the meaning of protected fauna under the <i>National Parks and Wildlife Act 1974</i>. A total of 27 native fauna species, including 16 bird species, 9 mammal species, 1 amphibian species, 1 reptile species and 1 invertebrate species were recorded in the study area.</p> <p>The proposal would result in removal of fauna habitats, including remnant and planted street trees, landscaped vegetation, riparian habitat and modified fauna habitats in disturbed and developed areas. The removal of vegetation in potential impacts on nesting, roosting and foraging habitat for birds, mammals, reptiles and frogs that occur in disturbed and urban landscapes. The proposal may impact on one potential hollow-bearing tree. Removal of this tree could impact arboreal fauna roosting/nesting in hollows</p> <p>Safeguards recommended in Section 6.5.4 would minimise impacts.</p>	<p>Long term minor negative</p>
<p>g. Any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air?</p> <p>The proposal is unlikely to have a significant impact on any threatened species, population or community listed under the TSC Act or EPBC Act</p> <p>The proposal would result in the removal of about 0.190 hectares of disturbed Cumberland Plain Woodland and about 0.067 hectares of disturbed Swamp Oak Floodplain Forest, listed as Endangered Ecological Communities under the TSC Act.</p> <p>Assessments of significance under the TSC Act and Significant Impact Assessments under the EPBC Act were undertaken for all threatened species, populations and communities recorded or considered to have a high to moderate likelihood of occurrence in non-certified areas. The assessments concluded that the proposal would not have a significant impact on any of the threatened species, populations or communities considered.</p> <p>Safeguards recommended in Section 6.5.4 would minimise impacts on threatened species and communities.</p>	<p>Nil</p>

Factor	Impact
<p>h. Any long-term effects on the environment?</p> <p>The proposal would result in short-term environmental impacts, largely restricted to the construction period. These include traffic, noise and air.</p> <p>Long-term impacts include clearing of vegetation, including about 0.190 hectares of disturbed Cumberland Plain Woodland and about 0.067 hectares of disturbed Swamp Oak Floodplain Forest (endangered ecological communities). The removal of this vegetation is considered not significant in the context of the transitional nature of the proposal area from rural residential to higher density residential and commercial development. The vegetation to be removed has been previously disturbed.</p> <p>Visual impacts shall be minimised through application of urban design principles.</p>	<p>Long term positive and negative impacts</p>
<p>i. Any degradation of the quality of the environment?</p> <p>The proposed upgrade has the potential to degrade the quality of the environment through noise, visual, water, air, erosion and sedimentation pollution, as well as accidental spills during construction. These potential impacts would be managed using a suite of safeguards and mitigation measures. The construction footprint would be reduced as far as practicable and the site would be rehabilitated as work progresses to minimise impacts. Removal of vegetation would be kept to a minimum and appropriate mitigation incorporated to minimise impacts on native flora and fauna.</p> <p>In the long-term, the project would provide a range of benefits including improved traffic conditions; bus, cyclist and pedestrian facilities and drainage and flood immunity.</p>	<p>Short-term negative</p> <p>Long-term positive</p>
<p>j. Any risk to the safety of the environment?</p> <p>The proposal is likely to reduce safety along the road during construction. This would be managed through appropriate signage and a traffic management plan.</p> <p>The proposal would provide a shared pedestrian and bicycle path and signalise intersections. This would improve road user safety.</p>	<p>Short-term negative</p> <p>Long-term positive</p>

Factor	Impact
<p>k. Any reduction in the range of beneficial uses of the environment?</p> <p>The proposal would result in traffic impacts during construction which would include an increase in the volume of heavy vehicles, interruption of traffic flow and speeds, and temporary impacts to access. These traffic impacts would reduce the beneficial use of Memorial Avenue during the construction phase.</p> <p>In the long-term, the proposal would be consistent with future uses and there would be no reduction in the range of beneficial uses of the environment.</p>	<p>Short-term negative</p> <p>Nil</p>
<p>l. Any pollution of the environment?</p> <p>There would be some potential noise, visual, air, water, erosion and sedimentation impacts associated with construction of the proposed upgrade. Construction activities would be carefully managed with numerous safeguard for protection of the environment from pollution (refer to Chapter 7).</p>	<p>Short-term negative</p>
<p>m. Any environmental problems associated with the disposal of waste?</p> <p>Waste would be generated across a number of waste streams during construction. These streams would be managed in accordance with Roads and Maritime specification, the <i>Waste Avoidance and Resource Recovery Act 2001</i> and recycled where possible.</p> <p>It is not anticipated that there would be any issues associated with the disposal of waste during the operation of the proposal.</p>	<p>Short-term negative</p> <p>Nil</p>
<p>n. Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply?</p> <p>None of the resources required to effect this proposal are, or are likely to become, in short supply.</p>	<p>Nil</p>

Factor	Impact
<p data-bbox="252 264 1072 331">o. Any cumulative environmental effect with other existing or likely future activities?</p> <p data-bbox="252 365 1066 566">The proposal would likely be effected at the same time as the development associated with the Balmoral Road Release Area, the NWRL and other commercial developments such as a Woolworth's supermarket. Cumulative noise, traffic, visual and air quality impacts may result during construction. These would be short-term and manageable.</p> <p data-bbox="252 600 1072 667">All cumulative impacts are considered justifiable by the long-term positive impacts of the proposal.</p>	<p data-bbox="1094 365 1241 432">Short-term negative</p> <p data-bbox="1094 600 1347 633">Long-term positive</p>
<p data-bbox="252 701 1072 801">p. Any impact on coastal processes and coastal hazards, including those under projected climate change conditions?</p> <p data-bbox="252 835 1072 936">Proposed works are located in western Sydney outside of the coastal zone and would not impact coastal processes or coastal hazards.</p>	<p data-bbox="1094 835 1136 869">Nil</p>

# Matters of National Environmental Significance

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 Sustainability, Environment, Water, Population and Communities.

Factor	Impact
<p>a. Any impact on a World Heritage property?</p> <p>The proposal would not impact on a World Heritage property. No sites in or near the proposal area are included on the World Heritage List.</p>	<p>Nil</p>
<p>b. Any impact on a National Heritage place?</p> <p>The proposal would not impact on a National Heritage property. No sites in or near the proposal area are included on the National Heritage List.</p>	<p>Nil</p>
<p>c. Any impact on a wetland of international importance?</p> <p>The proposal would not impact on a wetland of international importance. There are no wetlands of international importance (listed under the Ramsar Convention) in or near the proposal area.</p>	<p>Nil</p>
<p>d. Any impact on a listed threatened species or communities?</p> <p>The proposal is unlikely to have a significant impact on any threatened species, population or community listed under the TSC Act or EPBC Act</p> <p>The proposal would result in the removal of about 0.190 hectares of disturbed Cumberland Plain Woodland and about 0.067 hectares of disturbed Swamp Oak Floodplain Forest, listed as Endangered Ecological Communities under the TSC Act.</p> <p>Assessments of significance under the TSC Act and Significant Impact Assessments under the EPBC Act were undertaken for all threatened species, populations and communities recorded or considered to have a high to moderate likelihood of occurrence in non-certified areas. The assessments concluded that the proposal would not have a significant impact on any of the threatened species, populations or communities considered.</p> <p>Safeguards recommended in Section 6.5.4 would minimise impacts on threatened species and communities.</p>	<p>Minor</p>

Factor	Impact
<p>e. Any impacts on listed migratory species?</p> <p>A search of the DoE Protected Matters Search Tool found 12 migratory species listed under the EPBC Act known or likely to occur within 10 kilometres of the study area. The likelihood of each threatened species occurring in the study area was assessed (Appendix G). All migratory species identified in the search were assessed to have a low likelihood of occurrence in the study area.</p>	<p>Nil</p>
<p>f. Any impact on a Commonwealth marine area?</p> <p>The proposal would not impact on a Commonwealth marine area. There are no Commonwealth marine areas in or near the proposal area.</p>	<p>Nil</p>
<p>g. Does the proposal involve a nuclear action (including uranium mining)?</p> <p>The proposal would not involve a nuclear action.</p>	<p>Nil</p>
<p>Additionally, any impact (direct or indirect) on Commonwealth land?</p> <p>Additionally, any impact (direct or indirect) on Commonwealth land? The proposal would not impact (either directly or indirectly) on Commonwealth land.</p>	<p>Nil</p>

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