

Appendix H

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>The proposal would have construction impacts through generation of noise, potential traffic impacts and potential reduction in air quality. These would be managed through safeguards listed in Section 7.</p> <p>The proposal are likely to increase road traffic noise impact to sensitive receivers along the road. 10 years after the opening of Stage 1, eight residences would experience an increase of more than 2dB(A) during the day-time and six residences during the night-time when compared to conditions without the upgrade. 10 years after the opening of stage 2 two residences would expect an increase of greater than 2dB(A) during the day-time and six residences during the night-time.</p> <p>The proposal in combination with the predicted increase in population in the south west region would also contribute to traffic impacts and air quality impacts. However, the proposal is likely to improve traffic conditions and air quality by increasing the road carrying capacity.</p> <p>The proposal would improve access in the region and provide shared bicycle and pedestrian paths.</p>	<p>Short term negative impacts</p> <p>Long term positive and negative impacts.</p>

Factor	Impact
<p>b. Any transformation of a locality?</p> <p>The works would result in changes to the locality through provision of a wider road with a wide central median creating a much larger road corridor. Changes to intersections designs and property access are also included in the new road design. A number of mitigation measures have been provided to minimise any negative impacts (Section 7).</p> <p>Some changes to the locality would be positive such as greater pedestrian and cyclist provisions and improved access potential in the south west region. Urban design principles would improve the landscape character and visual amenity of the area.</p>	<p>Long term positive and negative impacts.</p>
<p>c. Any environmental impact on the ecosystems of the locality?</p> <p>The proposal would require the removal of 68.1 hectares of vegetation removal including around nine hectares in non-biocertified areas. The loss of vegetation in non-biocertified areas is unlikely to have a significant impact on threatened species. Measures would be implemented to minimise vegetation removal and landscape the proposal area following completion of works.</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, waterways and property boundaries. Mitigation measures would be implemented to reduce visual 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, retention of vegetation where possible and minimisation of the footprint over major creeks</p>	<p>Long term minor negative impacts</p>

Factor	Impact
<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>The proposal have has the potential to impact a number of Aboriginal and non-Aboriginal items (refer to section 6.4 and 6.5) in particular part of the State Heritage Register listed Upper Canal System. Where possible the design of the road has been adjusted to avoid impacts to these items. Where impacts could not be avoided measures such as protection fencing would be installed. For Aboriginal heritage items salvaging representative artefacts would be undertaken.</p>	Long term negative
<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>The proposal would require the removal of hollow bearing trees which provide for various threatened species of microbats. Vegetation removal may further fragment an already fragmented landscape. Landscaping and other safeguards recommended in Section 7 would minimise impacts.</p>	Long term negative
<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 would remove habitat for a number of species. Assessments of Significance have been undertaken for two EECs, six flora species/populations and 15 fauna species listed under the TSC Act. It has been determined that significant impacts are unlikely to result from the proposal. Mitigation measures have been proposed in Section 7 to avoid or minimise impacts.</p>	Nil

Factor	Impact
<p>h. Any long-term effects on the environment? The proposed upgrade to Bringelly Road would increase the number of traffic lanes, incorporate a wide median, signalise intersections and provide a shared cyclist and pedestrian path would improve traffic conditions, including road user safety and traffic flow. The proposal would also improve access in the South West Growth Centre.</p> <p>Vegetation would need to be removed in biocertified and non-biocertified areas.</p> <p>Visual impact would result. However, urban design principles would be incorporated in the detailed design to minimise impacts.</p>	<p>Long term positive and negative impacts</p>
<p>i. Any degradation of the quality of the environment? The proposal would include consideration of landscape and urban design which would minimise degradation of the environment.</p> <p>Proposal has the potential to degrade the quality of the environment through accidental spills and erosion and sedimentation during construction. The construction site would be rehabilitated as work progresses to minimise impacts.</p>	<p>Short term negative.</p>
<p>j. Any risk to the safety of the environment? The proposal would provide shared pedestrian and cyclist paths and safety barriers in strategic sections of the road. The carriageway would be divided by a median and traffic lights would be provided at intersections. This would likely improve road user safety and decrease the high rate of accidents currently encountered on the road.</p> <p>The proposal is likely to reduce safety along the road during construction due to construction activities. This would be managed through appropriate signage and a traffic management plan.</p>	<p>Short term negative impact</p> <p>Long term positive impact</p>
<p>k. Any reduction in the range of beneficial uses of the environment? The proposal would improve public transport, pedestrian and cycling facilities, access within the Sydney South West Growth Centre and Leppington Town Centre.</p>	<p>Long term positive impacts</p>

Factor	Impact
<p>l. Any pollution of the environment? There is the potential for accidental spills of chemicals during the construction period which could impact surrounding land including waterways.</p> <p>Air quality would be reduced during construction. The proposal would improve traffic conditions in the region as population size grows in the region. Improved traffic flow would therefore minimise potential air quality impacts as a result of increased traffic potential to the development of the south west growth centre.</p>	Short term and long term negative impacts
<p>m. Any environmental problems associated with the disposal of waste? Waste would be managed in accordance with the <i>Waste Avoidance and Resource Recovery Act 2001</i> and recycled where possible. It is not anticipated that there would be issues encountered with the disposal of waste.</p>	Nil
<p>n. Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply? All resources required are not in short supply and are readily available.</p>	Nil
<p>o. Any cumulative environmental effect with other existing or likely future activities? The proposal is likely to occur concurrently with the development of the Sydney South West Growth Centre and the South West Rail Link. Cumulative noise and traffic construction impacts may result. The proposal concurrently with the South West Rail Link would improve transport in the region.</p> <p>Vegetation would be removed in biocertified and non-biocertified areas for the proposal and as part of other developments in the region.</p> <p>Safeguards listed in Section 7 would minimise potential impacts.</p>	Long term negative and positive impacts. Short term negative impacts.

Factor	Impact
<p data-bbox="197 353 994 427">p. Any impact on coastal processes and coastal hazards, including those under projected climate change conditions.</p> <p data-bbox="197 472 994 651">Proposed works are located in Western Sydney outside the coastal zone and would therefore not impact coastal processes or coastal hazards. The impact of the proposal on climate change and the impact of climate change on the proposal have been assessed in section 6.13.</p>	<p data-bbox="1018 353 1054 383">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 the Environment, Water, Heritage and the Arts.

Factor	Impact
<p>a. Any impact on a World Heritage property? There are no World Heritage properties in the area.</p>	Nil
<p>b. Any impact on a National Heritage place? There are no National Heritage Places in the area.</p>	Nil
<p>c. Any impact on a wetland of international importance? There are no Wetlands of International importance in the area.</p>	Nil
<p>d. Any impact on a listed threatened species or communities? There are 30 threatened species and one threatened ecological community with the potential to occur within 10 kilometres of the study area. The proposal has the potential to impact on the Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest listed as a Critically Endangered Ecological Community under the EPBC Act.</p> <p>A referral to the Minister would be prepared.</p>	Negative impact
<p>e. Any impacts on listed migratory species? There are 14 migratory species within 10 kilometres of the study area. none would be impacted by the proposal.</p>	Nil
<p>d. Any impact on a Commonwealth marine area? No Commonwealth marine area occurs in the area.</p>	Nil
<p>g. Does the proposal involve a nuclear action (including uranium mining)? No.</p>	Nil
<p>Additionally, any impact (direct or indirect) on Commonwealth land? There are five commonwealth lands within 10 kilometres of the area. None would be impacted by the proposal.</p>	Nil