

Appendix A

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

Appendix A1: 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. <i>Any environmental impact on a community?</i></p> <p>Construction of the proposal would result in some short-term negative impacts on the local community such as a result of construction such as traffic disruptions, visual impacts and potential noise and air emission. Users of the motorway from broader communities may also be impacted by traffic delays. These impacts would be for the duration of construction only. Traffic delays may result from reduced speed zones and other traffic management measures. This is expected to be a minor impact as works would be programmed in line with an approved construction traffic management plan.</p> <p>Potential emissions from noise and dust are expected to be minor due to the distance to sensitive receivers in the vicinity and would be managed with appropriate safeguards proposed in this REF.</p> <p>The primary long-term positive impact of the proposal would include improved travel efficiency and safety along this route by providing additional traffic capacity to reduce traffic congestion through an additional carriageway. The proposal would also improve existing intersections along this alignment and reduce traffic congestion, which is predicted to worsen as traffic volumes increase in the future. Each of these improvements would result in a positive benefit to the local community and motorists using this key road transport route.</p>	<p>Short term amenity and traffic impacts</p> <p>Long term improvement of the capacity and safety of the motorway servicing areas the eastern coast of NSW between Newcastle and Sydney.</p>
<p>b. <i>Any transformation of a locality?</i></p> <p>The construction of the proposal would temporarily impact the existing locality, predominantly through negative visual amenity impacts associated with the placement and movement of construction plant and equipment, and the removal of existing native vegetation and habitat adjacent to the existing M1 corridor.</p> <p>In the longer term, the proposal would result in minor visual changes to the motorway and Kariong Interchange, although this would not be expected to transform the locality.</p> <p>Measures to minimise visual impacts have been incorporated into the design of the proposal, such as the use of ancillary infrastructure that is consistent with existing infrastructure on the motorway. A range of appropriate safeguards have been developed to reduce the visual impacts of the proposal (refer Section 7.2).</p>	<p>Short term amenity impacts and removal of native vegetation</p> <p>Long term minor visual impacts.</p>

Factor	Impact
<p>c. <i>Any environmental impact on the ecosystems of the locality?</i></p> <p>The proposal would require the removal of 12.52 ha of native vegetation, including 12.10 ha of Regrowth and Native Vegetation and 0.01 ha of Duffy's Forest EEC (refer to Section 6.3.3). The proposal would remove one <i>Hibbertia procumbens</i> individual listed as endangered under the TSC Act and thirteen <i>Darwinia glaucophylla</i>, listed as vulnerable under the TSC Act. The removal of these individuals as a result of the proposal is not expected to cause a significant impact to these this species.</p> <p>A biodiversity assessment undertaken for the proposal determined that this action would not significantly impact any threatened species, populations or ecological communities likely to occur in the study area (refer to Section 6.3).</p> <p>The impacts of the proposal on flora and fauna would be managed by a biodiversity management plan that would be developed prior to construction commencing. Where feasible, areas disturbed by the construction of the proposal would be rehabilitated.</p>	<p>Short term minor impacts to native vegetation and fauna habitat</p> <p>No long term impacts expected</p>
<p>d. <i>Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality?</i></p> <p>During construction, the proposal would have the potential to create a reduction in the existing aesthetic quality of the local area as a result of construction impacts including dust and noise generation, visual impacts and increased traffic movements. These impacts would be minimised as far as practicable through the implementation of a range of safeguards outlined in Section 7.2.</p> <p>Some vegetation clearing would take place for the proposal. This would be minimised where possible and remediated in line with a biodiversity management plan by the end of works. The proposal would cause a minor reduction native vegetation, although this is not expected to cause significant impacts to any threatened species, communities or populations that may occur in the adjacent vegetation. Two threatened flora species <i>Hibbertia procumbens</i> and <i>Darwinia glaucophylla</i> will be removed for the proposal however, this is will not cause a significant impact to these or any other threatened species.</p> <p>A range of mitigation strategies have been developed to mitigate the impacts of the proposal (refer to Section 7.2).</p>	<p>Short term minor amenity and visual impacts</p> <p>No long term impacts expected</p>
<p>e. <i>Any effect on a locality, place or building having aesthetic, anthropological, archaeolog</i></p> <p>No known Aboriginal heritage or heritage listed sites or items would be affected by the proposal (refer to Sections 6.8).</p>	<p>No impacts expected to Aboriginal or historic heritage</p>

Factor	Impact
<p>f. <i>Any impact on the habitat of protected fauna (within the meaning of the National Parks and Wildlife Act 1974)?</i></p> <p>A biodiversity assessment undertaken for the proposal determined that this action would not significantly impact any threatened species, populations or ecological communities likely to occur in the study area (refer to Section 6.3).</p> <p>Three threatened species fauna species, the Grey-headed Flying-fox, Little Bent-wing Bat and Eastern Bent-wing Bat were recorded in the study area during field surveys. Seven additional threatened fauna species including Square-tailed Kite, Eastern False Pipistrelle, Glossy Black-Cockatoo, Spotted-tailed Quoll, Giant Burrowing Frog, Red-crowned Toadlet and Koala, have previously been recorded within, or in the immediate vicinity of the survey area. It was determined that the proposal would not result in impacts to these species.</p> <p>Fauna injury or death could occur as a result of construction activities, particularly when vegetation and habitats are being cleared. Fauna injury or mortality also has the potential to occur as a result of collision with survey/maintenance vehicles and through increased road traffic.</p> <p>The proposal would increase the width of an existing linear road corridor that effectively traverses a modified landscape. However, it is not likely that the proposal would significantly add to direct fauna mortality, which currently occurs in the existing road corridor.</p>	<p>Short term minor impacts to native fauna habitat</p> <p>No long term impacts expected</p>
<p>g. <i>Any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air?</i></p> <p>The proposal would not further endanger any species of animal, plant or other form of life than the existing infrastructure.</p>	<p>Short term and long term neutral impact</p>
<p>h. <i>Any long-term effects on the environment?</i></p> <p>Construction of the proposal would require the clearing of 12.52 ha of native vegetation including woodland, heath, aquatic and regrowth fauna habitat. The proposal would also result in the clearing of 14.83 ha of exotic grassland and 12.1 ha of planted and regrowth vegetation. Vegetation clearing would occur within the central median and on the edges of the motorway at the Kariong Interchange. Vegetation clearing would also occur at the ancillary sites. The proposal would remove one <i>Hibbertia procumbens</i> individual listed as endangered under the TSC Act, and thirteen <i>Darwinia glaucophylla</i> listed as vulnerable under the TSC Act. The removal of these individuals as a result of the proposal is not expected to cause a significant impact to these this species.</p> <p>This is not expected to create significant impacts to any threatened species, populations or ecological communities likely to occur in the study area (refer to Section 6.3).</p>	<p>Minor short term impacts.</p> <p>Long term positive impacts.</p>

Factor	Impact
<p>k. <i>Any reduction in the range of beneficial uses of the environment?</i></p> <p>The proposal would not reduce the range of beneficial uses of the environment in the locality of the proposal. The proposal would result in the expansion of roadways within an existing road corridor and does not require property acquisition or changes to any existing land uses.</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 temporary change in speed limit. These traffic impacts would be temporary and would not reduce the beneficial use of the motorway.</p> <p>The long term benefits of the proposal include improved safety for motorists, improved traffic capacity and travel times, and reduced traffic congestion on surrounding roads. The proposal will increase safety of motorists using the motorway and surrounding feeder roadways. The proposal will also improve provisions for road cyclists who use motorway.</p> <p>In the long-term, the proposal would be consistent with existing and future uses and there would be no reduction in the range of beneficial uses of the environment that currently exist.</p>	<p>No impacts expected to beneficial uses of the environment</p>
<p>l. <i>Any pollution of the environment?</i></p> <p>The proposal would have the potential to result in some minor, negative short-term water pollution risks of impacts which may occur from sedimentation, release of soil contaminants, waste, and spilt fuels or chemicals entering local water bodies. Management of water quality impacts would be undertaken in accordance with the safeguards outlined in Section 7.2.</p> <p>Short-term noise and air quality impacts are expected during the construction phase of the proposal from plant and machinery and the generation of dust during construction. These impacts would be minimal given the substantial distance of the potential receivers from the proposal. Management of noise and air quality impacts would be undertaken in accordance with the safeguards outlined in Section 7.2.</p>	<p>Potential for short term impacts to water quality, soil/water contamination, noise and air pollution.</p>
<p>m. <i>Any environmental problems associated with the disposal of waste?</i></p> <p>Stockpile and compound sites would be managed in a way that minimises waste on site and the management of excess materials. Stockpile site management is to comply with management principles consistent with the Roads and Maritime's Stockpile Site Management Procedure.</p> <p>The disposal of waste resulting from the proposal is not considered to be a substantial issue for the proposal. Waste generated by the proposal would be recycled or reused as far as practical. All materials that cannot be reused or recycled would be disposed of appropriately (refer to Section 6.12). The process for management of excess material would be detailed in a RWMP that would form part of the CEMP.</p>	<p>No impacts expected associated with waste disposal</p>
<p>n. <i>Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply?</i></p> <p>The proposal would require resources such as concrete and asphalt, which are common construction materials. All other required resources for the proposal are considered to be readily available and have not been identified as being short supply. The proposal would not increase the demand on resources that are likely to be in short supply.</p>	<p>No impacts expected to the availability of resources</p>

Factor	Impact
<p><i>o. Any cumulative environmental effect with other existing or likely future activities?</i></p> <p>The proposal affects the major road transport route between Sydney and Newcastle. Several major developments have been identified in the locality that have the potential to create cumulative impacts during the construction phase of the proposal, if undertaken concurrently (refer to Section 6.13). These projects are unlikely to impact on operation of the proposal.</p> <p>Planning for the M1 Widening: Tuggerah to Doyalson Project is currently several months in advance of the proposal. As both projects would result in increased travel times for users of the motorway, cumulative traffic impacts would be likely if both projects are constructed at the same time. However, given the separation distance between the two projects, it is considered unlikely that other impacts could occur, cumulative impacts are not expected for all other projects identified. Therefore, the proposal is considered unlikely to cause any additional cumulative environmental effects.</p>	<p>No cumulative impacts anticipated</p>
<p><i>p. Any impact on coastal processes and coastal hazards, including those under projected climate change conditions?</i></p> <p>The proposal is not located within a coastal area and follows the existing motorway alignment between Kariong and Somersby.</p> <p>The proposal is not expected to result in impacts to coastal processes and hazards.</p>	<p>No impacts expected</p>

Appendix A2: Matters of National Environmental Significance

Under the environmental assessment provisions of the *Environment Protection and Biodiversity Conservation Act 1999*, the following MNES 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
a. <i>Any impact on a World Heritage property?</i> The proposal would not impact on a World Heritage property.	Nil
b. <i>Any impact on a National Heritage place?</i> The proposal would not impact on a World Heritage place.	Nil
c. <i>Any impact on a wetland of international importance?</i> The proposal would not impact on a wetland of international importance.	Nil
d. <i>Any impact on a listed threatened species or communities?</i> A number of threatened species and ecological communities have been identified as having potential to occur within the study area. Of particular importance to the proposal is Duffy' Forest EEC which 0.01 ha would be impacted by the proposal. Two threatened flora species will also be impacted by the proposal. About one <i>Hibbertia procumbens</i> and 13 <i>Darwinia glaucophylla</i> individuals will be removed by the proposal. Significance assessments prepared for these threatened species and communities found the proposal to be unlikely to significantly impact these species and communities (refer Section 6.3). One other threatened flora species, one other ecological community and 41 species of animal have been identified as having potential habitat in the study area. Significance assessments have been prepared and have determined that the proposal is unlikely to cause a significant impact to any of these species or communities.	Minor impact
e. <i>Any impacts on listed migratory species?</i> The proposal would not impact on any listed migratory species.	Nil
d. <i>Any impact on a Commonwealth marine area?</i> The proposal would not impact on any commonwealth marine areas.	Nil
g. <i>Does the proposal involve a nuclear action (including uranium mining)?</i> The proposal would not involve a nuclear action.	Nil
<i>Additionally, any impact (direct or indirect) on Commonwealth land?</i> The proposal would not impact Commonwealth land.	Nil