

Appendix A

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
a) Any environmental impact on a community?	
The proposal would require total and partial acquisition of land within the proposal area. Property acquisition would be carried out in accordance with the Land Acquisition Information guide (Roads and maritime, 2013) and the <i>Land Acquisition (Just Terms Compensation) Act 1991</i> .	Short-term negative
Construction of the proposal would result in environmental impacts, including altered visual amenity and access for some residents, noise and air quality impacts. These impacts would be temporary and managed with the mitigation measures outlined in the REF.	Short-term negative
Aboriginal and non-Aboriginal heritage sites would be impacted by the proposal. The proposal would also result in the removal of 32.1 ha of native vegetation. The proposal has been designed to reduce impacts to these aspects as far as practical. Measures including salvage of heritage items and offsetting of vegetation clearing would mitigate these impacts.	Long-term negative
Operation of the proposal would improve traffic flow, travel times and safety through Singleton by reduced traffic volumes and improve the movement of heavy freight vehicles.	Long-term positive
b) Any transformation of a locality?	
During the construction of the proposal there would be amenity impacts including noise and air quality impacts which would temporarily transform the locality.	Short-term negative
The proposal would result in a permanent change in land use from the existing land uses to a road corridor. This would remove the ability of the land to be developed for residential or agricultural purposes in the future.	Long-term negative
The proposal would also result in low to moderate visual impacts for residents on the western side of Singleton and to road users, due to the raised embankments and bridges included in the design. Landscaping and urban design elements have been incorporated into the design to minimise these impacts.	
c) Any environmental impact on the ecosystems of the locality?	
The proposal is located in a highly modified landscape with limited fauna habitat values, however the proposal would result in the removal of 32.1 ha of vegetation. The mitigation measures provided in the REF would be implemented to minimise further potential impacts to biodiversity.	Long-term negative
d) Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality?	

Factor	Impact
<p>The proposal would have some temporary impacts during construction associated with visual amenity, access arrangements for some residents and noise and vibration. These impacts would be short-term and minimised through the implementation of the safeguards provided in the REF.</p>	Short-term negative
<p>The proposal would result in the removal of up to 32.1 ha of native vegetation, including two EEC's and one CEEC. The mitigation measures provided in the REF, including a biodiversity offset strategy, would help to reduce this impact.</p> <p>The proposal would also impact Aboriginal and non-Aboriginal heritage sites.</p> <p>The proposal would also result in minor visual impacts for residents on the western side of Singleton and to road users, due to the raised embankments and bridges included in the design.</p>	Long-term negative
<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 would impact Aboriginal and non-Aboriginal heritage sites, including the loss of value and removal of some sites. The proposal has been designed to reduce impacts to these aspects as far as practical. Mitigation measures including archival recording and salvage activities would help to conserve the heritage value of some sites.</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 result in the removal of up to 32.1 ha of native vegetation.</p> <p>The proposal will result in a loss of around 15.2 hectares of vegetation listed under the BC Act. About 16.9 hectares of the Central Hunter Valley eucalypt forest and woodland, listed as critically endangered under the EPBC Act will also be impacted. This would result in a reduction of habitat, including hollow-bearing trees, for a range of birds and mammals including threatened species, and loss of fauna habitat connectivity. An aerial fauna crossing over the New England Highway would be provided to help reduce potential impacts.</p> <p>The mitigation measures outlined in the REF including a strategic assessment and biodiversity offsetting would help to reduce the impacts to this CEEC.</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>It is considered likely that the proposed work would significantly impact the <i>Central Hunter Valley Eucalypt Forest and Woodland</i> CEEC (as discussed in Section 6.1.3). The significance assessment carried out for the proposal identified that no other threatened fauna or flora species, populations or ecological communities known or predicted to occur are likely to be significantly impacted by the proposal. The mitigation measures outlined in the REF including a strategic assessment and biodiversity offsetting would help to reduce the impacts to this CEEC.</p>	Long-term negative
<p>h) Any long-term effects on the environment?</p>	

Factor	Impact
Operation of the proposal would improve traffic flow, travel times and safety through Singleton by reduced traffic volumes and improve the movement of heavy freight vehicles.	Long-term positive
The proposal would impact Aboriginal and non-Aboriginal heritage sites, including the loss of value and removal of some sites. The proposal would also result in the removal of up to 32.1 ha of native vegetation. It is considered likely that the proposed work would significantly impact the <i>Central Hunter Valley Eucalypt Forest and Woodland</i> CEEC however offsetting in accordance with the Roads and Maritime Strategic Assessment would mitigate this impact.	Long-term negative
i) Any degradation of the quality of the environment?	
The proposal would have some temporary impacts during construction associated with visual amenity, dust and noise and vibration. These impacts would be short-term and minimised through the implementation of the safeguards provided in the REF.	Short-term negative
Operation of the proposal is unlikely to result in the ongoing degradation of the environment.	Long-term neutral
j) Any risk to the safety of the environment?	
During construction, an increase in heavy vehicle movements associated with the transportation of equipment and materials may decrease road safety. The increased transportation of dangerous goods and hazardous materials may also impact safety risk. This is considered minor given the current levels of heavy vehicles using the road network in and around Singleton. Nevertheless, traffic management safeguards are provided in the REF to reduce traffic impacts. Potential impacts could occur where some working area occur within areas subject to inundation during a flood event, leading to changes in flood patterns or redistributing flows. However, flood behaviour within and surrounding the proposal area is well understood, with adequate advance flood warning available to evacuate equipment and protect the work prior to inundation.	Short-term negative
Operation of the proposal would improve safety for road users, especially through Singleton by reducing traffic volumes and improving traffic flow and travel times. The proposal would also see an increase in safety for pedestrians and access throughout Singleton. The proposal has been designed to achieve a one in 100 year (one per cent Annual Exceedance Probability) flood immunity on the bypass whilst minimising flooding impacts on surrounding land. The proposal would result in minor changes to the peak flood level locally around the Putty Road connection and the southern connection. The impact is localised and typically limited to rural property and the proposal area. In addition, there are reduced peak flood levels through much of Singleton and Glenridding. The proposal would provide additional flood evacuation routes and improve local accessibility during flood events up to and including a one in 20 year event.	Long-term positive
k) Any reduction in the range of beneficial uses of the environment?	
The proposal would result in the acquisition and a permanent change in land use from the existing land uses to a road corridor. This would remove the ability of the land to be developed for residential or agricultural purposes in the future.	Long-term negative

Factor	Impact
l) Any pollution of the environment?	
The proposal would have some temporary impacts during construction associated with visual amenity, dust and noise and vibration. The proposal could also result in minor impacts to water quality from erosion and sedimentation impacts and from potential oil or fuel spills from construction machinery. These impacts would be short-term and minimised through the implementation of the safeguards provided in the REF.	Short-term negative
Operational pollution is likely to be consistent with the existing New England highway.	Long-term neutral
m) Any environmental problems associated with the disposal of waste?	
Construction of the proposal would result in a number of waste streams to be generated, including the potential for asbestos and other hazardous waste. Mitigation measures for the disposal of waste streams likely to be produced during construction are detailed in the REF. Waste streams would be managed in accordance with <i>Management of Wastes on Roads and Maritime Services Land</i> procedure.	Short-term negative
Waste generation during operation of the proposal is likely to be minor consistent with the operation of the existing New England Highway	Long-term neutral
n) Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply?	
The proposal is unlikely to affect any resources that are or are likely to become in short supply.	Nil
o) Any cumulative environmental effect with other existing or likely future activities?	
There is potential for cumulative impacts to occur as a result of the construction of the proposal occurring simultaneously with other projects, including traffic, noise, air quality and visual impacts. The impacts would be temporary during the construction period and would be minimised with the mitigation measures provided in the REF.	Short-term negative
The operation of the proposal would have a positive cumulative impact on travel times, road safety and efficiency. The proposal would result in improved safety for Singleton by reducing congestion and heavy vehicle volumes through the town.	Long-term positive
p) Any impact on coastal processes and coastal hazards, including those under projected climate change conditions?	
The proposal is located about 70 kilometres from the coast. The proposal would not impact coastal processes or hazards including those predicted under climate change conditions.	Nil

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 and Energy.

A referral is not required for proposed actions that may affect nationally listed threatened species, 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
Any impact on a World Heritage property?	Nil
Any impact on a National Heritage place?	Nil
q) Any impact on a wetland of international importance? One wetland of international importance was identified being the Hunter estuary wetlands. This occurs 45 to 50 kilometres downstream of the proposal area.	Nil
r) Any impact on a listed threatened species or communities? An Assessment of Significance under the EPBC Act was undertaken for five threatened fauna species and one TEC recorded or with high potential to occur in the proposal area. It is likely that the proposed work would significantly impact the <i>Central Hunter Valley Eucalypt Forest and Woodland</i> CEEC. This REF has considered the consistency of the activity with relevant recovery plans, threat abatement plans, conservation advices and guidelines provided by the Australian Government. The REF finds that the activity will not threaten the long term survival of nationally listed biodiversity matters and that suitable offset measures can be secured as set out in the Biodiversity Offset Strategy for the proposal. No other significant impacts are likely for other EPBC listed threatened species, endangered populations or TECs.	Significant
s) Any impacts on listed migratory species? An Assessment of Significance under the EPBC Act was undertaken for one migratory species, being the White-throated Needletail (<i>Hirundapus caudacutus</i>). The assessment concluded that the proposal is not likely to substantially impact on this species.	Nil
Any impact on a Commonwealth marine area?	Nil
Does the proposal involve a nuclear action (including uranium mining)?	Nil
Additionally, any impact (direct or indirect) on the environment of Commonwealth land?	Nil