

Appendix A

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

Factor	Impact
<p>c. <i>Any environmental impact on the ecosystems of the locality?</i></p> <p>The proposal would require the removal of 1.28 ha of native vegetation, including 0.72 ha of Coastal Freshwater Wetlands, 0.08 ha of Coastal Saltmarsh (<i>Juncus/Phragmites</i> variant) and 0.48 ha of Mangrove Estuarine Complex. Of these, the former two are listed as endangered ecological communities (refer to Section 6.1.2). The proposal would remove 0.72 ha of habitat for aquatic species, including the threatened GGBF. A further 4.9 ha of supplementary habitat for this species would be removed for the proposal. This is not expected to cause significant impacts for this species.</p> <p>The removal of native vegetation and habitat is not predicted to cause significant impacts to species that may use the area.</p> <p>A biodiversity assessment undertaken for the proposal determined that this action would not significantly impact any threatened species, population or ecological community likely to occur in the study area (refer to Section 6.1).</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. A GGBF management plan has been developed to mitigate impacts to the GGBF and is included as Appendix G. 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, including increased heavy vehicle 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>During operation, the proposal would result in a minor reduction to the overall aesthetic quality of the local area due to the removal of some existing vegetation (during construction) and the alteration of the local landscape for the new road and bridge alignment. An urban design, landscape character and visual impact assessment (James Mather Delaney Design 2014) prepared for the proposal (Appendix L) (refer to Section 6.7) determined that its visual impacts would be low in areas surrounded by industrial activities, such as the eastern end of Cormorant Road. Its visual impacts would be moderate in areas where native vegetation and wetland habitat would be removed, such as Cormorant Road adjacent to Long Pond. A range of mitigation strategies have been developed to mitigate the visual impacts of the proposal (refer to Section 6.7.3).</p>	<p>Short term minor amenity and visual impacts</p> <p>Long term minor visual impact</p>
<p>e. <i>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?</i></p> <p>No known Aboriginal heritage or heritage listed sites or items would be affected by the proposal (refer to Sections 6.9 and 6.10).</p>	<p>No impacts expected to Aboriginal or historic heritage</p>
<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>The proposal would remove 1.28 ha of native vegetation, including 0.72 ha of freshwater wetlands that provide habitat for the threatened GGBF and other species. A further 4.9 ha of disturbed freshwater wetlands that provides supplementary habitat for these species would also be removed.</p> <p>A biodiversity assessment undertaken for the proposal determined that this action would not significantly impact any threatened species, population or ecological community likely to occur in the study area (refer to Section 6.1).</p> <p>Impacts to biodiversity could occur during construction through direct collision or indirect impacts. A biodiversity management plan and GGBF management plan would be implemented to mitigate these impacts during and following the construction period.</p>	<p>Short term minor impacts to native vegetation and fauna habitat</p> <p>No long term impacts expected</p>

Factor	Impact
<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>The proposal would have a moderate visual impact at locations adjacent to existing freshwater wetlands. A range of visual management measures would be implemented as described in Section 6.7.3 to mitigate these impacts.</p> <p>The proposal would remove 1.28 ha of native vegetation, including 0.72 ha of freshwater wetlands. This is not expected to create significant impacts to any threatened species, population or ecological community likely to occur in the study area (refer to Section 6.1).</p> <p>The construction of the proposed new bridge in the Hunter River would cause a minor increase in flood levels upstream of the bridge, during flood events. This is not expected to cause any impacts and would be mitigated by further dredging of the Hunter River downstream, which is currently being proposed as part of port development activities.</p>	<p>Long term negative impacts</p>
<p>i. <i>Any degradation of the quality of the environment?</i></p> <p>The proposal would have a number of impacts on the biodiversity of the study area, including the loss of vegetation and potential fauna habitat. This would be minor in the context of the large area of bushland surrounding the proposal site. Fauna would be expected to migrate from the disturbance areas during the construction period and, as such, the proposal would not have substantial lasting adverse effects on fauna.</p> <p>The proposed work areas and site compound would be rehabilitated as far as practicable post-construction which would reduce the risk of long-term degradation to the environment. It is anticipated that rehabilitation of areas that are currently unsuitable for GGBF habitat will create 0.52 ha compensatory habitat for the GGBF. Safeguards would be implemented during construction including measures to prevent the spread of noxious weeds which would have the potential to degrade the quality of the environment in the long-term (refer to Section 6.1.3).</p> <p>A number of potential water and visual impacts have potential to result in the degradation of the quality of the environment. Water quality could be reduced as a result of pollutants such as sediment, waste, and spilt fuels and chemicals entering drainage lines and creeks. Excavation and piling works required for the proposal also have the potential to disturb existing contaminants within soils and river sediments within the study area, particularly around the southern abutment.</p> <p>Mitigation measures would be implemented to reduce potential impacts to water quality, site contamination, hydrology and soils. Air quality, noise and traffic impacts would result from the construction phase only. These impacts would be minimised through the implementation of safeguards outlined in Section 7.2.</p> <p>Revegetation and landscaping of the proposal site would occur using indigenous species wherever possible in accordance with an approved planting and revegetation plan. No additional degradation of the quality of the environment is expected to occur during the operation of the proposal.</p>	<p>Short term minor impacts to native vegetation and fauna habitat</p> <p>Short term amenity and visual impacts</p> <p>Long term minor visual impacts</p>
<p>j. <i>Any risk to the safety of the environment?</i></p> <p>The proposal includes the onsite stockpiling of excavated material and fill and use of oil, fuels, which would cause harm to the environment should storage measures fail. The proposal includes a number of safeguards and mitigation measures intended to minimise the risk to the safety of the environment through pollution.</p> <p>There is potential for road safety to be decreased during construction due to the need for works on Tourle Street and Cormorant Road. Traffic management safeguards including the preparation of a construction traffic management plan, would address safety risks (refer to Section 6.5.3).</p> <p>Environmental management plans and work health and safety plans would be implemented to minimise any safety risk during the construction of the proposal.</p> <p>The proposal would result in an improvement to road safety from the construction of an improved road alignment and crossing of the Hunter River. This would reduce the potential for road accidents and reduce the risk to safety of motorists.</p>	<p>Potential for short term impacts to water quality and soil/water contamination</p> <p>Potential for short term reduction in road safety</p> <p>Long term positive impacts to road safety and efficiency</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 extension 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 MR 108.</p> <p>The long term benefits of the proposal include improved accessibility to Newcastle Airport, Kooragang Island and other areas to the north of Newcastle. The proposal will also improve provisions for road cyclists who use MR108.</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 or ASS materials, 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 6.2.3.</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 6.6.5 and Section 6.8.4 respectively.</p>	<p>Potential for short term impacts to water quality and soil/water contamination</p>
<p>m. <i>Any environmental problems associated with the disposal of waste?</i></p> <p>The proposal has the potential to excavated or disturb contaminated or ASS materials, which may require treatment or off-site disposal (refer to Section 6.11.2). 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 RMS 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 6.11.3). The process for management of excess material would be detailed in a waste management plan 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>
<p>o. <i>Any cumulative environmental effect with other existing or likely future activities?</i></p> <p>The proposal affects the major road transport route to Kooragang Island. Several major developments have been identified on Kooragang Island that have the potential to create cumulative impacts during the construction phase of the proposal, if undertaken concurrently (refer to Section 6.14). These projects are unlikely to impact on operation of the proposal.</p> <p>None of the identified projects have been approved or have anticipated commencement dates. Therefore, the proposal is considered unlikely to cause any additional cumulative environmental effects.</p>	<p>No cumulative impacts anticipated</p>

Factor	Impact
<p>p. <i>Any impact on coastal processes and coastal hazards, including those under projected climate change conditions?</i></p> <p>The proposal would result in the removal of 0.72 ha of Coastal Freshwater Wetlands, 0.08 ha of Coastal Saltmarsh and 0.48 ha of Mangrove Estuarine Complex. A biodiversity assessment undertaken for the proposal determined that this action would not significantly impact any threatened species, population or ecological community likely to occur in the study area (refer to Section 6.1).</p> <p>The proposal is located in an estuarine environment and would result in the construction of a new bridge in a tidal area. Hydrological modelling undertaken for this bridge shows that it would have a negligible effect on water velocities associated with river movements (refer to Section 6.2.3).</p> <p>The construction of the proposed new bridge in the Hunter River would cause a minor increase in flood levels upstream of the bridge, during flood events. This is not expected to cause any impacts and would be mitigated by further dredging of the Hunter River downstream, which is currently being proposed as part of port development activities.</p>	<p>Short term impact to Long Pond and mangroves within the Hunter River estuary</p> <p>No long term impacts expected to local hydrology or flooding</p>

Appendix A2: 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
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 National 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 communities have been identified as having the potential to occur within the study area. Of particular importance to the proposal is the GGBF (listed as vulnerable under the EPBC Act) which has been identified in Long Pond, an ephemeral freshwater pond that would be impacted by the proposal. Based on available information and likely impacts of the proposal, the assessment of significance for the GGBF under the EPBC Act (Appendix F) concluded that whilst the proposal would trigger listed thresholds for impacts upon this species, such impacts are not likely to be significant in nature. Therefore a referral to the Commonwealth Department of the Environment was not made under the EPBC Act. Nevertheless, Roads & Maritime would make an assessment as to whether the proposal is referred under this Act due to impacts that align with thresholds listed in the EPBC Act Policy Statement 3.19 (Department of the Environment Water Heritage and the Arts 2009a). Three other threatened flora species and 10 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 these species.	Minor impact
e. <i>Any impacts on listed migratory species?</i> Three migratory species have been recorded within the study area and it has been determined that a further 9 species have a moderate to greater potential to occur. It is anticipated that the proposal is unlikely to cause substantial impacts to migratory species due to its relatively small impact to potential habitat.	Minor to negligible impact
d. <i>Any impact on a Commonwealth marine area?</i> The proposal would not impact on a Commonwealth marine area.	Nil
g. <i>Does the proposal involve a nuclear action (including uranium mining)?</i> The proposal would not impact on a Commonwealth marine area.	
<i>Additionally, any impact (direct or indirect) on Commonwealth land?</i> The proposal would not impact (either directly or indirectly) on Commonwealth land.	Nil