

Submission on the referral

Aurizon Operations Ltd – Berrimah Freight Terminal Expansion Project

This submission is made under regulation 53 of the Environment Protection Regulations 2020

Government authority: NT Health – Public Health Division – Medical Entomology branch

Summary: There is no requirement for further biting insect studies. The current biting insect populations are relatively well known at East Arm. The East Arm Freight Terminal Referral document mentions a Biting Insect Management Plan will be created. This would satisfy Medical Entomology requirements for this development. Specific comments related to the development of the BIMP are provided in this submission.

Section of Referral	Theme or issue	Comment
Section 17.3 Proposed Environmental Management Plans	Biting Insects Management Plan	<ul style="list-style-type: none"> • There are no significant impacts that require addressing as part of this referral from a Medical Entomology perspective. The proposed activity is similar to what has previously been carried out in East Arm. The East Arm port expansion project biting insect investigation October to December 2010 report contains detailed information regarding peak biting midge and mosquito populations and general mitigation strategies, which in-part will apply to the proposed project. Therefore, no further biting insect studies are required. • There are some specific management measures to consider in the proposed Biting Insect Management Plan, in addition to the information already provided in the referral document and in the biting insect report. The additional information is provided below: <ol style="list-style-type: none"> a) Medical Entomology prepares salt marsh mosquito and biting midge pest calendars, which predict problem periods based on high tides or moon phase. These calendars are available from the NT Government Insects of Medical Importance website, and should be used to inform workers of impending problem periods. b) Land reclaiming activities have the high potential to create productive salt marsh mosquito breeding during the construction phase. It is mentioned that the seawall for this development will be built first, and the land behind the seawall reclaimed from the highest to lowest point. This methodology could result in the creation of large salt marsh mosquito breeding areas, if the drainage outlets from the seawall are too high. For example, this occurred during the initial railway development in the East Arm area, with the subsequent embanked mangrove areas requiring helicopter and ground mosquito insecticide treatments. <p>Therefore, an important mosquito mitigation option to implement during the construction phase would be to install temporary low flow drainage outlets in the seawall, to allow drainage of the upstream embanked mangrove areas. Ideally, the drainage outlet pipes should be installed flush with the lowest levels in the embanked areas to allow complete drainage. Tide flap valves could be installed to prevent tidal movement into the embanked area.</p>

Environmental impact assessment under the Environment Protection Act 2019

		<p>If residual ponding is desired for sediment control, the low flow drainage outlets through the seawall should be at least below the 6.8m high tide level, with the lower the better to allow greater tidal flushing and fish movement. An emergency valve-controlled drainage pipe should still be installed at the lowest points in the embanked mangrove areas in this scenario, to allow complete drainage if widespread mosquito breeding occurs, such as after rain events.</p> <p>The proposed embanked mangrove areas are relatively large and are likely to require helicopter control if mosquito breeding becomes a problem, hence the above recommendations to reduce the potential to create large mosquito breeding sites during the construction phase. Salt marsh mosquitoes are day biting mosquitoes, therefore have the potential to affect nearby businesses as well as construction workers.</p> <p>c) Sediment control devices such as ponds and rock check dams across drains are prone to breeding pest and potential disease carrying salt marsh mosquitoes in the East Arm area, particularly within and adjacent to tidal areas and in reclaimed areas. To prevent successful mosquito breeding, water should only pond for a maximum of 3 days in any sediment control device in the project area.</p> <p>d) The design of final stormwater drains and WSUD structures should be completely free draining, to prevent the creation of legacy mosquito breeding sites in the development area.</p> <p>e) Whilst Medical Entomology is not a handover authority for developments, it is recommended that Medical Entomology carries out a post construction wet season inspection in conjunction with the handover authority/landowner, during the defect's liability period. This is recommended to check that the final finished site is free from potential mosquito breeding sites such as drains and depressions that pond water.</p>