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## Appendix 06   Environmental Impact Assessment Tables

## Impact Event Uncertainty Evaluation

This appendix provides a summary of the evaluation of uncertainty for all potential impact events that have been identified for the BAM Facility EIS with the exception of Social and Economic impacts and benefits. These are not included in the table due to the differing impact assessment methodology (outlined in Chapter 7). The evaluation follows the method outlined in Chapter 7 Impact Assessment Methodology.

For each impact event, Table 0-1 below outlines:

- the predicted level of impact, as presented in the relevant impact assessment chapter in the EIS
- Acceptability of the level of impact (including assessment of the level of certainty in the assessment of predicted impact (classified using the factors outlined in Table 7-1 in Chapter 7)
- an evaluation of uncertainty using the risk assessment process outlined in Table 7-3 and Table 7-4 in Chapter 7, for impact events with a 'Low' or 'Medium' level of certainty.

Where the level of certainty in assessment of predicted impacts is 'High', uncertainty is not evaluated further.

*Table 0-1 Evaluation of uncertainty for potential impact events*

Description of impact	Impact consequence <sup>1</sup>	Impact acceptability	Level of certainty in assessment	Risk rating	Risk acceptability
8 – Land Use and Site Conditions					
Development creates overshadowing of adjacent private open space, habitable rooms in dwellings, and/or agricultural land within prescribed timeframes.	Negligible	Acceptable	High	Low	Acceptable
Loss of productive land due to activities not associated with agriculture or horticulture.	Negligible	Review	Medium	Low	Acceptable

<sup>1</sup> Assessment considers the credible worst-case consequence that could occur (and the likelihood of such a consequence occurring) if assumptions made in the impact assessment were found to be incorrect

Description of impact	Impact consequence <sup>1</sup>	Impact acceptability	Level of certainty in assessment	Risk rating	Risk acceptability
Dust deposition on vegetation results in reduced plant growth or additional washing requirements.	Minor	Acceptable	Medium	Low	Acceptable
Amenity issues (dust, odour, noise or visual changes) discouraging patrons of nearby commercial / tourism operations.	Minor	Acceptable	High	Low	Acceptable
Illumination at facility (during construction or operations) creates light spill resulting in pilot distraction at Edinburgh RAAF base.	Catastrophic	Review	High	High	ALARP
9 – Soils, Landform and Geology					
Erosion of soils and runoff from stockpiles and disturbed surfaces during construction leads to erosion / gullyng and secondary sedimentation of water courses	Minor	Acceptable	Medium	Low	Acceptable
Imported materials including fill leads to contamination of site or unstable placement leads to erosion or stability issues with facility	Moderate	Review	Medium	Medium	ALARP
Erosion of soils and runoff from stockpiles and disturbed surfaces during operation leads to erosion / gullyng and secondary sedimentation of water courses	Minor	Acceptable	Medium	Low	Acceptable
Accidental spills / loss of containment to land (secondary pathways include surface water and groundwater)	Minor	Acceptable	High	Low	Acceptable
Excavation and earthworks disturb existing acid sulphate soils leading to generation of acid leachate	Moderate	Review	High	Low	Acceptable
Excavation and earthworks disturb existing contamination (including asbestos)	Major	Review	High	Medium	Acceptable
Following completion, the soil beneath the disturbance area is likely to be compacted due to presence of infrastructure with little organic matter, seed bank or nutrients.	Minor	Acceptable	High	Low	Acceptable
9 – Surface Water & Groundwater					

Description of impact	Impact consequence <sup>1</sup>	Impact acceptability	Level of certainty in assessment	Risk rating	Risk acceptability
Groundwater management during construction of footings results in land contamination	Negligible	Acceptable	High	Low	Acceptable
Catchment of surface water onsite reduces availability to other users (including vegetation downgradient and GW)	Negligible	Acceptable	High	Low	Acceptable
Surface water run off contaminating downstream users	Minor	Acceptable	High	Low	Acceptable
9 – Coastal and Marine					
Treated process water from site introduces excess nutrients or heavy metals into the Bolivar outfall channel impacting the coastal and marine environment.	Minor	Acceptable	High	Low	Acceptable
10 – Biosecurity					
Introduced pests, pathogens or weeds cause production losses or introduction of invasive species through construction and operational activities	Moderate	Review	Low	Low	Acceptable
10 – Terrestrial Flora and Fauna					
Land / habitat clearing (clearing more than predicted)	Minor	Acceptable	High	Low	Acceptable
Removal of Regulated and Significant Trees	Minor	Acceptable	High	Low	Acceptable
Vegetation clearance impacts listed threatened ecological communities and flora	Negligible	Acceptable	High	Low	Acceptable
Vegetation clearance impacts fauna	Negligible	Acceptable	High	Low	Acceptable
Dust deposition on native vegetation/listed flora and ecological communities results in reduced plant growth during construction	Minor	Acceptable	Medium	Low	Acceptable
Dust deposition on native vegetation/listed flora and ecological communities results in reduced plant growth during operations	Minor	Acceptable	High	Low	Acceptable

Description of impact	Impact consequence <sup>1</sup>	Impact acceptability	Level of certainty in assessment	Risk rating	Risk acceptability
Noise and vibration from plant machinery (including trucks) (construction and operation) impacting fauna on and beyond the Project site	Negligible	Acceptable	Medium	Low	Acceptable
Erosion of soils and runoff from stockpiles and disturbed surfaces leads to erosion / gullyng and secondary sedimentation of native vegetation off site	Minor	Acceptable	Medium	Low	Acceptable
Vehicle strike leads to fauna mortality	Negligible	Acceptable	High	Low	Acceptable
Accidental spills / loss of containment spreading to native vegetation, with fauna eating contaminated vegetation.	Minor	Acceptable	High	Low	Acceptable
Introduction or spread of weeds, pests or pathogens impacting habitat value and native flora elsewhere	Negligible	Acceptable	High	Low	Acceptable
Vehicle movements leads to introduction and / or spread of weeds, pests or pathogens to surrounding horticultural / agricultural areas	Minor	Acceptable	High	Low	Acceptable
Introduction or spread of pest, or nuisance species, diseases and pathogens	Minor	Acceptable	High	Low	Acceptable
Impacts of illumination on native fauna (Inc. migrating birds and nocturnal fauna)	Minor	Acceptable	High	Low	Acceptable
Bushfire/Fire	Minor	Acceptable	High	Low	Acceptable
10 – Marine Flora and Fauna					
Impact of treated process water on nursery habitat.	Negligible	Acceptable	High	Low	Acceptable
Impact of treated process water on MNES.	Negligible	Acceptable	High	Low	Acceptable
Impact of treated process water on conservation areas.	Negligible	Acceptable	High	Low	Acceptable
11 – Air Quality					

Description of impact	Impact consequence <sup>1</sup>	Impact acceptability	Level of certainty in assessment	Risk rating	Risk acceptability
Construction activities including land clearing and material movement and vehicles on unpaved roads generate particulate emissions (PM2.5 and PM10) that result in health impacts to the local community	Minor	Acceptable	Medium	Low	Acceptable
Construction activities including land clearing and material movement and vehicles on unpaved roads generate dust emissions that result in amenity impacts to the local community.	Minor	Acceptable	Medium	Low	Acceptable
Manufacturing emissions (including particulate matter, CO, NOx) during operations result in health impacts to the local community.	Minor	Acceptable	High	Low	Acceptable
Activities including land clearing and material movement and vehicles on unpaved roads generate dust emissions that result in amenity impacts to the local community.	Minor	Acceptable	High	Low	Acceptable
Graphite dust from manufacturing process impacting adjacent powerlines.	Minor	Acceptable	Medium	Low	Acceptable
Odour from manufacturing process that result in amenity impacts to the local community.	Minor	Acceptable	High	Low	Acceptable
<b>11 - Noise</b>					
Construction noise decreasing amenity of adjacent landowners	Minor	Acceptable	High	Low	Acceptable
Operational noise decreasing amenity of adjacent landowners	Minor	Review	High	Low	ALARP
<b>11 – Traffic</b>					
Interaction between pedestrians, light and heavy vehicles	Catastrophic	Review	High	High	ALARP
Increase in traffic volumes disrupting the existing transport network	Negligible	Acceptable	High	Low	Acceptable
Increased traffic resulting in degradation of road pavements	Minor	Acceptable	High	Low	Acceptable
<b>11 – Visual Amenity</b>					

Description of impact	Impact consequence <sup>1</sup>	Impact acceptability	Level of certainty in assessment	Risk rating	Risk acceptability
Reduced visual amenity for landowners along Robinson Road, east of site.	Moderate	Review	High	High	ALARP
Reduced visual amenity for landowners north of the site	Minor	Acceptable	High	Medium	ALARP
Reduced visual amenity from main roads	Negligible	Acceptable	High	Low	Acceptable
Reduced visual amenity to tourism locations	Negligible	Acceptable	High	Low	Acceptable
<b>13 – Cultural Heritage</b>					
Impacts to Aboriginal sites, objects or remains during construction	Moderate	Review	High	Low	Acceptable
Impacts to Aboriginal sites, objects or remains during operations	Moderate	Review	High	Low	Acceptable
Impacts to Heritage Places or Areas as a result of construction or operation	Negligible	Acceptable	High	Low	Acceptable
<b>15 – Hazard and Risks</b>					
Ignition source from Project starting a fire	Catastrophic	Review	High	High	ALARP
Fire on site (started internally or externally) resulting in a chemical spill	Minor	Acceptable	High	Low	Acceptable
Flooding resulting in a loss of containment of dangerous substances.	Minor	Acceptable	High	Low	Acceptable
Development of site increasing flooding risk on adjacent land.	Minor	Acceptable	High	Low	Acceptable