

Jet Zero™

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**STATE CODE 22:
ENVIRONMENTALLY
RELEVANT ACTIVITIES**

State code 22: Environmentally relevant activities

Guideline – SDAP State code 22: Environmentally Relevant Activities provides direction on how to address this code.

Table 22.1: All development

Performance outcomes	Acceptable outcomes	Response
All ERAs		
PO1 Development is suitably located and designed to avoid or mitigate environmental harm to the acoustic environment.	AO1.1 Development meets the acoustic quality objectives for sensitive receptors identified in the Environmental Protection (Noise) Policy 2019.	Complies with AO1.1 The proposed development has been strategically located and designed to mitigate environmental harm to the acoustic environment. A Noise and Vibration Impact Assessment was conducted for the Project, using SoundPLAN 8.2 computational noise modelling, to evaluate construction and operational noise levels under both neutral and adverse weather conditions. The assessment confirmed that predicted noise levels comply with the acoustic quality objectives specified in the <i>Environmental Protection (Noise) Policy 2019</i> for all identified sensitive receptors during both daytime and nighttime periods. Additionally, low-frequency noise impacts were evaluated, with results demonstrating compliance with regulatory limits. To further minimise potential impacts, the project incorporates mitigation measures such as equipment selection, site layout optimisation, and operational noise controls. A complaints management system will also be implemented to address any community concerns.

Performance outcomes	Acceptable outcomes	Response
		Refer to Noise and Vibration Impact Assessment report provided at Appendix 10 .
PO2 Development is suitably located and designed to avoid or mitigate environmental harm to the air environment .	AO2.1 Development meets the air quality objectives of the Environmental Protection (Air) Policy 2019.	Complies with AO2 As outlined in the Air Quality Assessment prepared by Vipac Engineers and Scientists (refer Appendix 9), four potential assessment scenarios are identified: 1) Cooling water failure. 2) Total electric power failure. 3) Closed outlet overfilling. 4) Start-up. The predicted concentrations of all the pollutants modelled for all scenarios are below the criteria at all the identified sensitive receptors (residential, commercial and ecological).
PO3 Development (other than intensive animal industry for poultry farming), is suitably located and designed to avoid or mitigate environmental harm on adjacent sensitive land uses caused by odour.	No acceptable outcome is prescribed.	Complies with PO3 The proposed development has been strategically located and designed to avoid or mitigate environmental harm caused by odour. The Air Quality Assessment prepared by Vipac incorporates emissions inventory analysis and air dispersion modelling, using CALPUFF and TAPM meteorological models, to evaluate odour dispersion under various operating scenarios, including worst-case conditions. The results confirmed that odour levels at all identified sensitive receptors remain well below the relevant criteria. Refer to Air Quality Assessment report provided at Appendix 9.
PO4 Development is suitably located and designed to avoid or mitigate environmental harm to the receiving waters environment .	AO4.1 Development meets the management intent, water quality guidelines and objectives of the	Complies with AO4.1

Performance outcomes	Acceptable outcomes	Response
	Environmental Protection (Water and Wetland Biodiversity) Policy 2019.	The Project is suitably located and designed to avoid and mitigate environmental harm to the receiving waters in accordance with PO4. The Ecological Assessment Report (refer Appendix 6) identifies that the Project is located within the Sandfly Creek catchment, with downstream discharge to Cleveland Bay, being an environmentally sensitive receiving environment containing declared Fish Habitat Areas and habitat for listed migratory shorebird species. While the on-site mapped watercourse is hydrologically constrained by upstream artificial barriers, the assessment recognises the potential for downstream impact via sediment transport, pollutant runoff, and altered flow regimes if not adequately mitigated. To address these risks, a suite of mitigation measures that align with the Environmental Protection (Water and Wetland Biodiversity) Policy 201 is identified, including: • Implementation of erosion and sediment control measures during construction; • Use of surface water diversion features; • Controlled discharge of treated wastewater and trade waste; • Monitoring protocols to detect and respond to water quality impacts. Additionally, the Stormwater Management Plan prepared by GHD (refer Appendix 7) provides a detail assessment of site hydrology, runoff quality and pollutant loads.

Performance outcomes	Acceptable outcomes	Response
		The report assesses the compliance objectives under the State Planning Policy special interest for water associated with the project. This includes those environmental values defined under the <i>Environmental Protection (Water and Wetland Biodiversity) Policy 2019</i> relevant to the applicable Ross River basin catchment (Schedule 1, Basin 118). Key considerations for the design of the facility included the consideration of Appendix 2, Table A, of the State Planning Policy. This incorporates design objectives for stormwater management. This includes consideration of construction to meet the Best Practice in Erosion and Sediment Control (IECA 2008) guidelines and the design objectives for reduction in mean annual loads from unmitigated development. The erosion and sediment control plans are to be developed in accordance with the State Planning Policy requirements for the construction phase of the project. While the annual nutrient and water quality runoff from the facility has been assessed in the stormwater management plan demonstrating compliance with these objective utilising MUSIC and DRAINS modelling. The modelling confirms that stormwater can be appropriately managed through design and mitigation measures to ensure discharge from the site will achieve water quality objectives under the State Planning Policy

Performance outcomes	Acceptable outcomes	Response
		2017 and the Environmental Protection (Water and Wetland Biodiversity) Policy 2019).
PO5 Development is designed to include elements which: 1. prevent or minimise the production of hazardous contaminants and waste as by-products; or 2. contain and treat hazardous contaminants on-site rather than releasing them into the environment; and 3. provide secondary containment to prevent the accidental release of hazardous contaminants to the environment from spillage or leaks.	No acceptable outcome is prescribed.	Complies with PO5 The Project includes integrated design measures to prevent, contain, and manage hazardous contaminants, as detailed in the Stormwater Management Plan prepared by GHD and provided at Appendix 7. Contaminated and uncontaminated catchments are hydraulically separated. Runoff from process and hardstand areas is captured within the internal bunding system for the site. Stormwater runoff is directed to a contaminated water storage tank as part of the first flush stormwater treatment system for the first 15mm of a rainfall event. The onsite stormwater system also incorporates a detention basin to reduce flow velocities and provide for drop out of coarse materials within the stormwater system prior to release. Process water from the manufacturing process is captured and treated on-site or discharged under controlled conditions to Council's reticulated wastewater network under a trade waste agreement. Secondary containment is provided through bunded hardstands, double-walled tanks, and stormwater diversion infrastructure. These measures ensure all potential contaminants are retained and managed on-

Performance outcomes	Acceptable outcomes	Response
		site, preventing environmental harm in both normal and accidental scenarios. Further, a Construction Environmental Management Plan and an Operation Environmental Management Plan will be implemented.
PO6 Environmentally hazardous materials located on-site are stored to avoid or minimise their release into the environment due to inundation during flood events.	No acceptable outcome is prescribed.	Complies with PO6 As detailed in the Flood Impact Assessment prepared by Northern Consulting Engineers, the subject site is primarily outside flood hazard area. Additionally, we note the site is subject to further filling associated with approved Operational Works Development Permit OPW24/0107. All areas designated for the storage and handling of environmentally hazardous materials will be located above the defined flood event level and the storm tide inundation level and protected by bunding and stormwater diversion measures. Processing and other areas on site which have the potential for picking up contaminants will be directed to a first flush stormwater capture system which will be used to capture the initial 15mm rainfall events prior to bypassing to the on-site stormwater management network. The stormwater management network is then designed to detain water flows on site and keep the flow velocities from the site to the existing levels to prevent erosion and scouring from the stormwater system discharge points.

Performance outcomes	Acceptable outcomes	Response
		Accordingly, these measures ensure that hazardous materials remain secure and minimise potential for mobilisation during inundation events, thereby minimising any potential for off-site environmental harm.
All development – matters of state environmental significance		
PO7 Development is designed and sited to: 1. avoid impacts on matters of state environmental significance; or 2. minimise and mitigate impacts on matters of state environmental significance after demonstrating avoidance is not reasonably possible; and 3. provide an offset if, after demonstrating all reasonable avoidance, minimisation and mitigation measures are undertaken, the development results in an acceptable significant residual impact on a matter of state environmental significance. Statutory note: For Brisbane core port land, an offset may only be applied to development on land identified as E1 Conservation/Buffer, E2 Open Space or Buffer/Investigation in the Brisbane Port LUP precinct plan.	No acceptable outcome is prescribed.	Complies with PO7 The Ecological Assessment Report (refer Appendix 6) confirms that the Project has been sited and designed to avoid or minimise and mitigate impacts on identified MSES. The location of the facility is within a previously disturbed site with minimal suitable habitat on site other than for foraging by some fauna species. An existing operational works approval (OPW24/0107) over the land has been approved for the purpose of vegetation clearing to support the development of the site. The project will develop the site following the completion of works under that approval. Works will primarily focus on civil construction of the cleared site. No direct clearing of regulated vegetation or significant disturbance to MSES area is proposed. Where potential indirect impacts (e.g. from water quality, noise or light) were identified, mitigation measures have been incorporated into the design and construction methodology. These include sediment and erosion controls, controlled lighting design, and surface water management infrastructure to maintain downstream ecological values. Accordingly, the development avoids direct impacts on MSES, and with proposed mitigation measures, does not result in a

Performance outcomes	Acceptable outcomes	Response
		significant residual impact. An environmental offset is not required.
Intensive animal industry – poultry farming (ERA 4(2))		
PO8 Poultry farming development (where farming more than 200,000 birds) is suitably located and designed to avoid or mitigate environmental harm on adjacent sensitive land uses , caused by odour.	AO8.1 For poultry farming involving 300,000 birds or less, development meets the separation distances as determined using the S-factor methodology to: 1. a sensitive land use in a rural zone; and 2. boundary of a non-rural zone. OR AO8.2 Development meets the separation distances as determined by odour modelling using the following criteria: 1. 2.5 odour units, 99.5 percent, 1 hour average for a sensitive land use in a rural zone; or 2. 1.0 odour units, 99.5 percent, 1 hour average for the boundary of a non-rural zone.	N/A. The proposed development does not involve poultry farming.

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