



EIS to accompany draft Storm Bay North MFDP

Appendix I

Petuna EMS Summary

Petuna Environmental Management - Summary of Systems for Proposed Storm Bay Development



Area	Environmental Aspect	Managing Environmental Aspect		
		Control Measure	Supporting documents/reference	Monitoring (3 rd party audited/accredited EMS)
Waste	Dead fish.	Mortalities transported to rendering facility Mass mortality option is deep burial	Policy and procedures for handling of dead fish. Mass Mortality Plan Biosecurity and Fish Health Management Plan Diver mortality sheet	Number of mortalities recorded in FishTalk Licence Holder Reporting Workbook V1 (MFB) BAP/ASC
	Barge black and grey water	Contained and pumped into tanker	Waste management contractor (e.g. Veolia)	Volumes on invoices, Waste management contractor reports
	Land base grey and black water	Envirocycle checked by provider Septic system	Waste management contractor (e.g. Ozzie Clean)	Volumes on invoices, Waste management contractor reports
	Feed bags	Recycled	Waste management contractor	ENV.D-04 Materials and Waste Inventory
	Paper	Recycled	Kingborough Council	ENV.D-04 Materials and Waste Inventory
	Oil	Recycled	Waste management contractor (e.g. Tasmanian Oil Company Pty)	ENV.D-04 Materials and Waste Inventory
	Batteries	Recycled	Baretta Waste Management	ENV.D-04 Materials and Waste Inventory
	Plastic marine (HDPE)	Recycled	Waste management contractor	ENV.D-04 Materials and Waste Inventory
	Plastic domestic	Recycled	Kingborough Council	ENV.D-04 Materials and Waste Inventory
	Cardboard	Recycled	Kingborough Council	ENV.D-04 Materials and Waste Inventory
	Out of date chemicals/veterinary chemical waste	Disposal	Toxfree / Veolia	WHS-091 Chemical register ENV.D-04 Materials and Waste Inventory
	Empty chemical containers	Disposal	Toxfree/Veolia	ENV.D-04 Materials and Waste inventory
	On-lease generated waste, including feed pipe, rope, dilapidated/broken equipment, domestic waste	Stored in vessel-mounted secured bins, and regularly transferred to shore base disposal facility for recycling and/or disposal via waste management contractor.	ENV-06 Marine Operations Waste Management Plan	ENV.D-04 Materials and Waste inventory
Pollution				
	Odour from mortalities	Mortalities are contained and transported off site frequently. System in place to ensure dead fish are recovered from pens quickly and removed from site efficiently.	Licence conditions Biosecurity and Fish Health Management Plan	Regular site inspections

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		Control Measure	Supporting documents/reference	Monitoring (3 rd party audited/accredited EMS)
	Fuel	Secondary containment as per relevant Australian Standards	Standard operating procedures	Regular site inspection Substantial spills posing a threat to waterways or environment need to be reported to the Environmental Protection Authority (EPA) Helpline 1800 005 171.
	Noise from operations	Remotely located, within Industrial area and/or soundproofed	Noise Impact Assessment	Decibel meter , 3 rd party review if required Environmental Incidence investigation to include corrective action and preventative measure (internal database HR3)
	Chemicals	Chemical storage and handling as per relevant Australian Standards and Safe Work Australia codes of practice	Australian legislative documents: <ul style="list-style-type: none"> • Australian Standard AS1940 • Labelling of Workplace Chemicals CoP (Safe Work Australia) • Managing risks of hazardous Chemicals CoP (Safe Work Australia) Company procedures for handling of chemicals: <ul style="list-style-type: none"> • WHS-SF-013 – Labelling chemicals • Materials Storage Handling and Waste Disposal Plan • WHS-091 Chemical Register • WHS-107 WHS Inspection Checklist • WHS-135 Chemical Inspection Checklist 	BAP/ASC annual audits Internal audit – at least annually Substantial spills posing a threat to waterways or environment need to be reported to the Environmental Protection Authority (EPA) Helpline 1800 005 171.
	Feed Waste	Manually contained and disposed of	Toxfree	
Water Quality	Surrounding water quality	Routine water quality monitoring. Industry water quality monitoring	Licence conditions Petuna operations staff Technical Manager Industry collaboration with research bodies Connie 3 ENV-03 Daily Environmental Monitoring Storm Bay Broadscale Environmental Monitoring report Schedule 3B for initial lease set-up, Schedule 3V thereafter Schedule 3 Marine Farming Licence Conditions TPDNO	Lab results Internal environmental monitoring database Video Survey compliance dives – EPA audited report of video footage Quarterly Leaseholder Report
	In-pen water quality	Routine water quality monitoring conducted daily.	Schedule 3V ENV-03 Daily Environmental Monitoring	Annual compliance dives – EPA audited report of video footage Internal environmental monitoring database

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Biodiversity				
	Impacts of surrounding native flora and fauna	Land base located in existing precinct, no clearance of threatened or conservation significance flora, or fauna habitat proposed.	Planning permit to construct and operate shore base	Annual audit on legal land use practices (BAP and ASC) and planning permit
	Fish escapes	Preventative measures in place at the operational level to mitigate escapes	ENV-05 Fish Escape Prevention and Response Plan Internal company documents support practices to minimise interaction with birds on our leases Staff training – Training Matrix OPS-90 Recording and Reporting of Escapes OPS-37 OT Daily Environmental Monitoring and Feed Sheet	Annual audit of unexplained losses (ASC and BAP) Schedule 3V Licence conditions Internal company audits
	Birds (sea eagles, cormorants, gulls)	Preventative measures in place at the operational level to mitigate interactions with wildlife. Net-pen infrastructure incorporates seal proof bird netting to physically exclude birds from the pens.	Staff are trained to handle wildlife to minimise stress and maximise survival. Internal company documents support practices to minimise interaction with birds on our leases OPS-09 Wildlife Interaction Plan ENV-10 Bird Protocol Staff training – Training Matrix Birdlife Tasmanian Gull Count ENV.D-03 Net Pen Maintenance and Wildlife Interactions Form 2 Monthly Bird Report (DPIPWE)	BAP/ASC annual audits Internal audit – at least annually
	Whales	Preventative measures focus on operational housekeeping: regular net inspections, net maintenance, waste management, to minimise risk of cetacean interactions. Vessel movements guidelines for manoeuvring near whales.	OPS-09 Wildlife Interaction Plan	BAP/ASC annual audits Internal audit – at least annually
Predator Management				
	Seals	Preventative measures in place at the operational level to mitigate interactions with wildlife. Net-pen infrastructure incorporates seal proof bird netting to physically exclude seals from the pens.	Seal Management Framework 2014 OPS-88 Wildlife Mortality Report Dead Seal Report Form (DPIPWE)	HR3 – environmental incidences BAP/ASC annual audits Internal audit – at least annually ENV.D-03 Net Pen Maintenance and Wildlife Interactions
	Birds	Preventative measures in place at the operational level to mitigate interactions with wildlife. Net-pen infrastructure takes into account bird interactions e.g. using seal proof bird nets	Staff are trained to handle wildlife to minimise stress and maximise survival. Internal company documents support practices to minimise interaction with birds on our leases OPS-09 Wildlife Interaction Plan ENV-10 Bird Protocol Staff training – Training Matrix Birdlife Tasmanian Gull Count ENV.D-03 Net Pen Maintenance and Wildlife	Internal audit – at least annually

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			Interactions Form 2 Monthly Bird Report (DPIPWE)	
	Sharks	Preventative measures in place at the operational level to mitigate interactions with sharks. Net-pen infrastructure takes into account shark interactions	OPS-09 Wildlife Interaction Plan	ENV.D-03 Net Pen Maintenance and Wildlife Interactions
	Dolphins	Preventative measures in place at the operational level to mitigate interactions with dolphins. Net-pen infrastructure takes into account shark interactions	OPS-09 Wildlife Interaction Plan	ENV.D-03 Net Pen Maintenance and Wildlife Interactions
Environmental Enhancement				
	Land base enhancement	Revegetation of land base utilising local native species as required Opportunity to incorporate renewable energy into shore base energy supply		
GHG/Energy use				
	Monitoring of energy use	Electricity and fuel invoices	Reporting template to calculate out at kg/CO ₂ e/unit and MJ/per T of fish produced	Annual audit on GHG emissions at farm (ASC)