

Appendix F
Navigation Risk Assessment – Trumpeter Bay

Jan-17

SCOPE : Navigational risk assessment for Storm Bay off Trumpeter Bay Amendment No 1 under a variety of weather and light conditions

Project Name: Storm Bay off Trumpeter Bay Navigation Risk Assessment

RISK NO.	IDENTIFIED HAZARD	CONSEQUENCE	PROBABILITY	RISK RATING	GENERAL RISK MITIGATION	POST MITIGATION CONSEQUENCE	POST MITIGATION PROBABILITY	POST MITIGATION RISK RATING	ACTION RELATED TO EIS	WHO	WHEN
PLANNING											
1	Interruption of straight line navigation/major transits	3	4	B(3,4)	Companies assess prior to consultation with MAST/TASPORTS. Once application lodged Marine Farming Branch consults with MAST. Companies consult with MAST/TASPORTS as part of amendment process (EIS). If MAST/TASPORTS identify that a proposed zone will prevent straight line navigation then proposal is modified or deleted. Following this there are communication forums for relevant stakeholder consultation.	2	1	D(2,1)	Adoption of recommended MAST and Tasports navigation lines, with potting of the new zone away from both sets of Navigation Lines. Dismissal of potential zone at old Trumpeter Bay site allows for continued Straightline navigation from Trumpeter Bay to Wedge Bay on the Tasman Peninsula.	Huon Aquaculture with advice from MAST and Tasports	Increase in distance from the coast already incorporated in the amendment.
2	Proximity to anchorages preventing access to/from anchorages	2	4	B(2,4)	Companies assess prior to consultation with MAST. Once application lodged Marine Farming Branch consults with MAST. Companies consult with MAST as part of amendment process (EIS). If MAST identify that a proposed amendment will prevent access to/from existing recognised anchorages then proposal is modified. Following this there are communication forums for relevant stakeholder consultation (EIS).	2	2	D(2,2)	Rejection of a return to the old 'inshore' Trumpeter Bay lease frees that anchorage whilst move north does not impede other anchorages. Subsequent increase of distance to shore provides better access to the north Bruny Island coastline.	Huon Aquaculture	Increase in distance from the coast already incorporated in the amendment.
3	Interruption of anchorage to anchorage straight line navigation	2	4	B(2,4)	Companies assess prior to consultation with MAST. Once application lodged Marine Farming Branch consults with MAST. Companies consult with MAST as part of amendment process (EIS). If MAST identify that a proposed amendment will interrupt anchorage to anchorage straight line navigation, then proposal is modified. Following this there are communication forums for relevant stakeholder consultation (EIS).	2	3	C(3,2)	Increase of distance to shore allowing for easier straightline navigation along North Bruny Island coast. Rejection of old Trumpeter Bay zone allows for continued Straightline navigation from Trumpeter Bay to Wedge Bay anchorages on the Tasman Peninsula.	Huon Aquaculture	Increase in distance from the coast already incorporated in the amendment.
4	Interfering with commercial shipping channels	5	2	A(5,2)	Companies assess prior to consultation with TASPORTS. Once application lodged Marine Farming Branch consults with TASPORTS. Companies consult with TASPORTS as part of amendment process (EIS). If TASPORTS identify that a proposed zone is too close to commercial shipping channels then proposal is modified.	4	1	B(4,1)	Consultation with TASPORTS suggests that this is not an issue.		
5	Location of lease on established yacht race courses	4	4	A(4,4)	Companies assess prior to consultation with MAST. Once application lodged Marine Farming Branch consults with MAST. Companies consult with MAST as part of amendment process (EIS). Companies conduct relevant stakeholder consultation (EIS). Companies communicate lease locations with Yacht Clubs and receive feedback.	3	2	C(3,2)	Consultation in previous EIS with yacht clubs gave recommendation to move sub zones further offshore. Supply clubs with most current farm locations/regularly check MAST notice to mariners.	MAST	Prior to the development of the zones should the amendment be successful.
6	Daylight navigation good visibility	4	2	B(4,2)	Companies assess prior to consultation with MAST/TASPORTS. Once application lodged Marine Farming Branch consults with MAST. Companies consult with MAST/TASPORTS as part of amendment process (EIS). If MAST/TASPORTS identify that a proposed zone will prevent impede safe navigation in daylight navigation then proposal is modified or deleted. Companies conduct relevant stakeholder consultation (EIS) and communicate lease locations with Yacht Clubs, Tasmanian Seafood Industry Council and TARFISH. Corner markers conform with IALA requirements, MAST and DPIPWE licencing conditions and relevant management controls. On-lease moorings conform with DPIPWE and MAST licencing conditions. Other lease infrastructure conforms with DPIPWE management controls. Farm staff monitor channel 16 VHF. Companies communicate emergency response capability of farm staff on water to relevant stakeholders.	3	1	C(3,1)	All Storm Bay leases now use E and W Cardinal marks and Sealite lights with GSM module.	Huon Aquaculture	
7	Daylight navigation restricted visibility or inclement weather (fog, heavy rain)	4	3	A(4,3)	Companies assess prior to consultation with MAST/TASPORTS. Once application lodged Marine Farming Branch consults with MAST. Companies consult with MAST/TASPORTS as part of amendment process (EIS). If MAST/TASPORTS identify that a proposed zone will prevent impede safe navigation in daylight navigation then proposal is modified or deleted. Companies conduct relevant stakeholder consultation (EIS) and communicate lease locations with Yacht Clubs, Tasmanian Seafood Industry Council and TARFISH. Lease markers and lighting conforms with IALA requirements, MAST and DPIPWE licencing conditions and relevant management controls. On-lease moorings conform with DPIPWE and MAST licencing conditions. Other lease infrastructure conforms with DPIPWE management controls. Night watch monitor channel 16 VHF. Companies communicate emergency response capability of farm staff on water to relevant stakeholders. EIS siting criteria. Marine farming zones marked on navigational charts. Leases sited to allow vessel manoeuvrability.	3	1	C(3,1)			
8	Night time navigation (good weather conditions)	4	4	A(4,4)	Companies assess prior to consultation with MAST/TASPORTS. Once application lodged Marine Farming Branch consults with MAST. Companies consult with MAST/TASPORTS as part of amendment process (EIS). If MAST/TASPORTS identify that a proposed zone will prevent impede safe navigation in nighttime navigation then proposal is modified or deleted. Companies conduct relevant stakeholder consultation (EIS) and communicate lease locations with Yacht Clubs, Tasmanian Seafood Industry Council and TARFISH. Lease lighting and intermediate lighting (if required) conforms with IALA requirements, MAST and DPIPWE licencing conditions and relevant management controls. Distinctive flash codes if required. On-lease moorings conform with DPIPWE and MAST licencing conditions. Other lease infrastructure conforms with DPIPWE management controls. Night watch monitor channel 16 VHF. Companies communicate emergency response capability of farm staff on water to relevant stakeholders. EIS siting criteria. Marine farming zones marked on navigational charts. Leases sited to allow vessel manoeuvrability.	3	1	C(3,1)	Review lease lighting requirements with relevant regulators and stakeholders. All Storm Bay leases now use E and W Cardinal marks and Sealite lanterns (3-5 nautical mile range) with GSM module.	Huon Aquaculture, MAST, TASPORTS DPIPWE and other commercial and recreational stakeholders.	Prior to the development of the zones should the amendment be successful.
9	Night time navigation (bad weather and/or changing conditions)	5	3	A(5,3)	Companies assess prior to consultation with MAST/TASPORTS. Once application lodged Marine Farming Branch consults with MAST. Companies consult with MAST/TASPORTS as part of amendment process (EIS). If MAST/TASPORTS identify that a proposed zone will prevent impede safe navigation in nighttime navigation then proposal is modified or deleted. Companies conduct relevant stakeholder consultation (EIS) and communicate lease locations with Yacht Clubs, Tasmanian Seafood Industry Council and TARFISH. Lease lighting and intermediate lighting (if required) conforms with IALA requirements, MAST and DPIPWE licencing conditions and relevant management controls. Distinctive flash codes if required. On-lease moorings conform with DPIPWE and MAST licencing conditions. Other lease infrastructure conforms with DPIPWE management controls. Night watch monitor channel 16 VHF. Companies communicate emergency response capability of farm staff on water to relevant stakeholders. EIS siting criteria. Marine farming zones marked on navigational charts. Leases sited to allow vessel manoeuvrability.	3	2	C(3,2)	Review lease lighting requirements with relevant regulators and stakeholders. All Storm Bay leases now use E and W Cardinal marks and Sealite lights with GSM module.	Huon Aquaculture, MAST, TASPORTS DPIPWE and other commercial and recreational stakeholders.	Prior to the development of the zones should the amendment be successful.
10	Interference with existing navigational aids causing confusion	3	3	B(3,3)	Evaluating new farms/changes to farms in context to baseline risk assessment. Companies assess prior to consultation with MAST/TASPORTS.	3	3	B(3,3)	Not identified as an issue for the present EIS.		

11	Increase in aquaculture vessel/equipment traffic	4	3	A(4,3)	MAST licencing requirements, company specific protocols radio communications. Companies are reducing frequency of vessel movement	3	2	C(3,2)	Traffic to and from zones minimised through use of personnel transfer vessel from Northwest bay and mooring operations vessels at the lease when weather permits. Use of Well-boat eliminates the need for tow boats and use of feed barges eliminates the need for feed boats.	Huon Aquaculture	Annual Review	
12	Changes to the number or size or position of fish farms in Storm Bay.	4	4	A(4,4)	Marine Farming planning process. Evaluating new farms/changes to farms in context to baseline risk assessment. Companies undertake extensive stakeholder consultation.	1	1	D(1,1)	Review lease marking requirements with relevant regulators and stakeholders	Industry, MAST, TASPOTS DPIPWE and other	Prior to the development of the zones should the amendment be successful.	
13	Mariners lack access to accurate information on location of fish farms	4	4	A(4,4)	DPIPWE to regularly update MAST - MAST issues Notice to Mariners - Industry Annual Review to changes to leases.	2	2	D(2,2)	Huon Aquaculture to provide Geospatial information updates to MAST and through MAST all boating organisations regarding any changes to its zones and/or leases. Following a successful application for any amendment all lease coordinates supplied to hydrographic survey.	Huon Aquaculture	Updates when relevant	
OPERATIONAL												
14	Failure of special marks	4	4	A(4,4)	Huon has a marine farm crew (LIC) dedicated to the maintenance and integrity of the lease areas. Operations and Feed crews notify LIC if lights not working or equipment appears outside of the lease. Nightwatch crews record operational status of special marks every night and take corrective action when required. Operations crews maintain all ropes through farm SOP's according to Management controls & Licence conditions. Huons special lit marks all conform to IALA Standards. Leases subject to DPIPWE Management controls, Licence conditions and routine on-water audits.	4	1	B(4,1)	Huon Aquaculture is committed to continuous improvement in all areas and the implementation of that improvement through up to date SOP's. All Storm Bay leases now use E and W Cardinal marks and Sealite lights with GSM module, allowing for the tracking of the lanterns to within 20m, and which send daily updates on status of lights (charge etc.).		New robust special/cardinal marks now deployed at all leases. Increased in size to accommodate more powerful/reliable lanterns.	
15	Lights/markers out of place	3	4	B(3,4)	Huon has a marine farm crew (LIC) dedicated to the maintenance and integrity of the lease areas. Operations and Feed crews notify LIC if lights not working or equipment appears outside of the lease. Nightwatch crews record operational status of special marks every night and take corrective action when required. Operations crews maintain all ropes through farm SOP's according to Management controls & Licence conditions. Leases also subject to DPIPWE routine on-water audits.	3	1	C(3,1)	Huon Aquaculture is committed to continuous improvement in all areas and the implementation of that improvement through up to date SOP's. All Storm Bay leases now use E and W Cardinal marks and Sealite lights with GSM module, allowing for the tracking of the lanterns to within 20m.		New GSM lanterns already adopted.	
16	Infrastructure failure	4	2	B(4,2)	All mooring and pens designed by Structural engineers to approved standards taking into account the conditions at the lease. Dedicated moorings crew and vessel with the responsibility of maintaining all moorings. Moorings routinely serviced while leases followed.	3	1	C(3,1)	Huon Aquaculture is committed to continuous improvement in all areas and the implementation of that improvement through up to date SOP's. Lantern and marker spares carried by the company for rapid deployment.			
17	Floating ropes/equipment outside of lease areas	4	3	A(4,3)	Huon has a marine farm crew (LIC) dedicated to the maintenance and integrity of the lease areas. Nightwatch crews record operational status of special marks every night and take corrective action when required. Operations and Feed crews notify LIC if lights not working or equipment appears outside of the lease. Operations crews maintain all ropes through farm SOP's according to Management controls & Licence conditions.	3	1	C(3,1)	Huon Aquaculture is committed to continuous improvement in all areas and the implementation of that improvement through up to date SOP's. Increased distance between lease boundary and farming gear (grids/pens) will ensure that no loose ropes will extend beyond lease boundary.		Provided for by the current Amendment	
18	Mooring construction periods	3	2	C(3,2)	All mooring construction periods are the subject of a Notice to Mariners for any works taking place outside of the lease area. Moorings construction is also covered by SOP's. Lease markers and lights in place prior to installation of moorings.	2	1	D(2,1)	Huon Aquaculture is committed to continuous improvement in all areas and the implementation of that improvement through up to date SOP's.			
19	Marine Debris	3	3	B(3,3)	Huon Aquaculture has a marine debris policy (AQM0130.7) that sets out; commitments to reduce marine debris; describes the methods and actions to reduce it at source and manage it once in the water; determines organisational responsibility with respect to it's management and reduction; monitoring and reporting processes and procedures.	3	2	B(3,3)	Huon Aquaculture is committed to continuous improvement in all areas and the implementation of that improvement through up to date SOP's. Huon now using GPS transmitters on all large equipment such as Mamba lines to track them if they break free from moorings. Mambas now coloured orange for ease of spotting from the air.			