

North Western Mussels Limited
Western Waikato Spat/Nursery Farm
Operational Management Plan September 2026 Version 1

This document will be reviewed annually to ensure it represents best practice in New Zealand aquaculture.

Review Date	Person(s) Involved	Description of Changes / Review

This Operational Management Plan (OMP) has been prepared for North Western Mussels Limited (NWML) to adhere to when undertaking Greenshell (*Perna canaliculus*) mussel spat catching and nursery activities at three Whāingaroa/Raglan marine farm sites.

The map displays the Waikanae Stream area, showing the proposed locations for three wastewater treatment plant sites (A, B, and C). The map includes contour lines, roads, and various geographical features like hills and valleys. Site A is located near the Waikanae Stream, Site B is near the Waikanae Stream, and Site C is near the Waikanae Stream. The map also shows the Waikanae Stream flowing into the Pacific Ocean.

Preparation of and operation in accordance with this OMP is a condition of consent for coastal permit XXX¹ as follows:

¹ Pending consent

	as a minimum: - A schedule including minimum frequencies, of regular inspections including inspections of servicing and maintenance performance carried out on all structures, ropes, buoys and navigational aids; - Noise management details; - Description and location of loading and unloading facilities; - Procedures that will be followed to ensure that all waste from the activity is collected and transported in a safe manner to a site that is authorised for the disposal of such waste, including: - Details of best practice processes and procedures to prevent waste discharges to the coastal marine area during farming activities; - Details of best practice processes and procedures to remove accidental waste discharges from the coastal environment including nearby beaches; - Details of staff training and awareness; - Details of how complaints will be recorded and responded to; and, - Details of record keeping and reporting of waste management practices and their effectiveness in achieving the purpose of this plan.
29	An updated OMP must be submitted by the consent holder for certification by no later than 30 September 2031 and at five yearly intervals thereafter, and within two months of any request from WRC. The certified plan and any subsequent certified updates must be implemented by the consent holder.
30	Any information recorded in accordance with the requirements in the OMP must be made available to the WRC within two weeks of a request in writing from the WRC.

The objective of the OMP is to:

1. Ensure all structures are secure and maintained so as not to create a navigational hazard or a hazard to marine wildlife.
2. Ensure that loss of debris is minimised and where at all possible retrieved.

This OMP has been aligned with industry best practice management as set out in the A+ Sustainable Management Framework for Greenshell Mussels², specifically relating to:

- **Water Quality** – avoiding the release of pollutants into the aquatic environment.
- **Waste** – managing waste responsibly.
- **Farming Debris** – minimising and mitigating the discharge of waste materials.
- **Farm Structures** – maintaining farm structures so they are fit for purpose, strong and secure.
- **Navigation** – ensuring Aids to Navigation are in place and operational.

This OMP includes mitigation measures specifically proposed by wildlife experts in the development of the consent application.

2.0 Roles and Responsibilities

NWML shall designate a contact person(s) (and their contact details), who is responsible for the

² www.aplusaquaculture.nz

monitoring, reporting and implementation of this OMP. NWML will inform the Waikato Regional Council (WRC) and the Harbourmaster of any changes in the details of the designated contact person. The following is a summary of the key contacts, roles and responsibilities.

Name	Organisation	Role/Responsibility
Jake Bartrom	NWML	Overall responsibility for OMP including all aspects of training, monitoring, reporting and implementation.
Christin Atchinson	WRC	Consent regulator
Chris Bredenbeck	WRC	Harbourmaster

3.0 Farm Design

The farm design is illustrated in Appendix One. In summary:

- Within each row, double (paired) or single backbone lines are 50 metres apart anchored by screw anchors.
- Deployment of single or double backbones will be according to operational requirements but as a guideline, double backbones may be installed over approximately half of the total area.
- The screw anchors will be buried to a depth of approximately 6-12 metres, depending on the substrate.
- The backbones will be oriented parallel to tidal flows.
- The backbone lines will each be suspended approximately 3 metres below the surface using approximately 20 300L buoys.
- The buoys will be separated by 2-10 metres, depending on the length of dropper lines.
- Dropper lines will be approximately 8 metres long and joined to the backbone in a continuous catching rope.
- The dropper lines consist of 'hairy' weighted 75/80 mm rope onto which the microscopic free-swimming spat larvae will settle and grow.

4.0 Marking and Navigational Aids

Aids to navigation will be in accordance with Maritime New Zealand (MNZ) 'Marine farm guidelines: navigational safety (2018) and MNZ 'New Zealand's system of buoys and beacons' 2008 and/or as required by Maritime New Zealand and as directed by the WRC Harbourmaster. The WRC Harbourmaster has confirmed that the locations are appropriate providing the farms are sufficiently lit³.

The proposal is as follows:

- Orange buoys will be placed at each end of the backbone and one at the mid-point of the outside longlines.
- Navigation marker buoys with yellow flashing lights will be placed 200 metres outside the nursery sites.
- The open ocean nature of the site means that 5nm range lights will be required.
- Reflectors will be placed on the corner buoys of each block.
- Perimeter lights will be placed at each 950 metre intervals along the length and 650 metre intervals along the width of each site, 200 metres outside the edge of the spat catching/nursery operation.

³ Chris Bredenbeck, WRC Harbourster, pers comm.

- Alternative marking and navigational aids will be installed as appropriate if guided by the Harbourmaster.

5.0 Farm Construction

Construction of the sites will be undertaken by specialist contractors and NWML. One row will be constructed at a time with a 4 to 5 person team.

- Once the anchors are in place, the backbone and mooring lines and buoys will be attached. All structures will be installed and maintained to best industry practice.
- Long lines may be submerged to the seafloor when not in use. Submerged lines must be weighted at 3 points, the bridle point at each end of the line and at the centre of the line. These weights must be a minimum of 10kg and should be clearly identified.
- Navigation and lighting would then be installed as required.
- Finally, the dropper lines would be hung out to catch spat and/or to seed spat for the juvenile nursery activity.

6.0 Farm Maintenance

The spat catching/nursery activity will be carried out year round. The dropper lines will be seeded, harvested and maintained by specialist vessels (e.g. a 25m long aluminium mussel barge) and supported by land-based activities in that spat/seed will be transported to and from Whāingaroa/Raglan by road. As is normal in mussel farm seed nursery operations there will be instances where the spat will be transferred or reseeded onto other ropes in lower densities, particularly if they are being grown to the larger seed sizes of 70mm average.

Harvesting of the spat/seed ropes will occur on an average of 2 days each fortnight at full development with maintenance carried out as part of these visits, as required. If there are times where the spat/seed operation is not active, maintenance will be carried out monthly over 2 days. During maintenance activities NWML will assess the structural integrity and rectify any wear and tear on lines, buoys and lighting. The most common maintenance activities expected include:

- Tightening ropes and fittings.
- Replacement of worn ropes.
- Fixing or replacing navigational lights.
- Fixing or replacing buoys.
- Inspecting and tightening anchors.

The mooring system for each aid to navigation will be inspected at least annually.

NWML will take all necessary actions to ensure any breakages to structures are remedied as soon as is practical and ensure permanent repair as soon as possible. NWML will also visit the site to inspect and maintain structures as soon as practicable after any storm or similar event which might impact the security of the structures.

7.0 Waste Management

NWML will ensure that floats, ropes and ties are secured in such a way that they are not prone to loss to the marine environment. NWML will retrieve any floats, ropes and ties that are inadvertently lost to the

marine environment as soon as practicable.

All refuse from the marine farm and from service vessels shall be collected and transported in a secure manner to a site that is authorised for the disposal of such waste.

NWML does not anticipate that marine farm debris will make its way to adjacent beaches but a 6 monthly beach rubbish/debris monitoring and clean-up programme will be implemented in accordance with industry best practice. Any rubbish/debris will be removed from the beach and disposed of in an appropriate manner.

8.0 Discharges

NWML will take all reasonable and practical steps to avoid unauthorised discharge from the marine farm or from any vessels servicing the farm.

Should any unauthorised discharges occur, all reasonable steps shall be taken as soon as practicable to terminate the discharge and to remedy its effects, or mitigate its effects if remedy is not possible.

NWML shall notify the Harbourmaster of any unauthorised discharge.

9.0 Farm Management and Compliance

The farm will be managed in accordance with industry best practice including A+. NWML will complete the annual A+ checklists and make these, and any third party verification assessments available to the WRC on request.

NWML will adhere to the applicable New Zealand health and safety legislation including doing all that is necessary to comply with the Health and Safety at Work Act 2015 and any future amendments.

NWML will adhere to the Resource Management (Marine Pollution) Regulations 1998 and any future amendments.

All conditions of resource consent will be complied with.

10.0 Loading and Unloading

Loading and unloading will be undertaken at Raglan Wharf, following all relevant operational requirements for safe operation at that location.

11.0 Emergency Response

NWML will take steps to recover, secure and make safe any structure or part of a structure that breaks free or otherwise causes a navigational hazard as soon as practicable.

NWML will undertake emergency responses as required. Emergency response requirements include the following:

- Response to severe storms;
- Marine mammal entanglement;

- Any NWML, or general public boating incidents;
- Damage or failure of marine farm structures;
- Navigational hazard from drifting structures;
- Accidental spills of contaminants
- Significant water quality issues;
- Biosecurity threats.

12.0 Record Keeping and Reporting

NWML will notify the Harbourmaster and the WRC as soon as practicable after any emergency response has been taken.

NWML will keep full records of all structural integrity incidents, debris on beaches, emergency situations and complaints and also the action taken to remedy the problem. These records will be made available to WRC on request.

NWML will keep maintenance records including at least:

- Records of the checks on aids to navigation.
- Records of checks on structural integrity, mooring lines, anchoring systems etc, together with any maintenance carried out. Records of surveys and underwater checks.
- Records of checks on the position of the farm.
- Comprehensive records of regular maintenance and training activities.

Maintenance records will be provided to WRC on request.

NWML will maintain up-to-date records of longline installation and operation status for each development stage and site, including dates of installation, commissioning and any decommissioning, and will make these records available to WRC on request and as supporting documentation for any request to progress to the next stage.

13.0 Staff Training

All staff and contractors shall receive training at induction and every 6 months on all the aspects of the OMP. NWML will maintain a training record and provide it to the WRC on request.

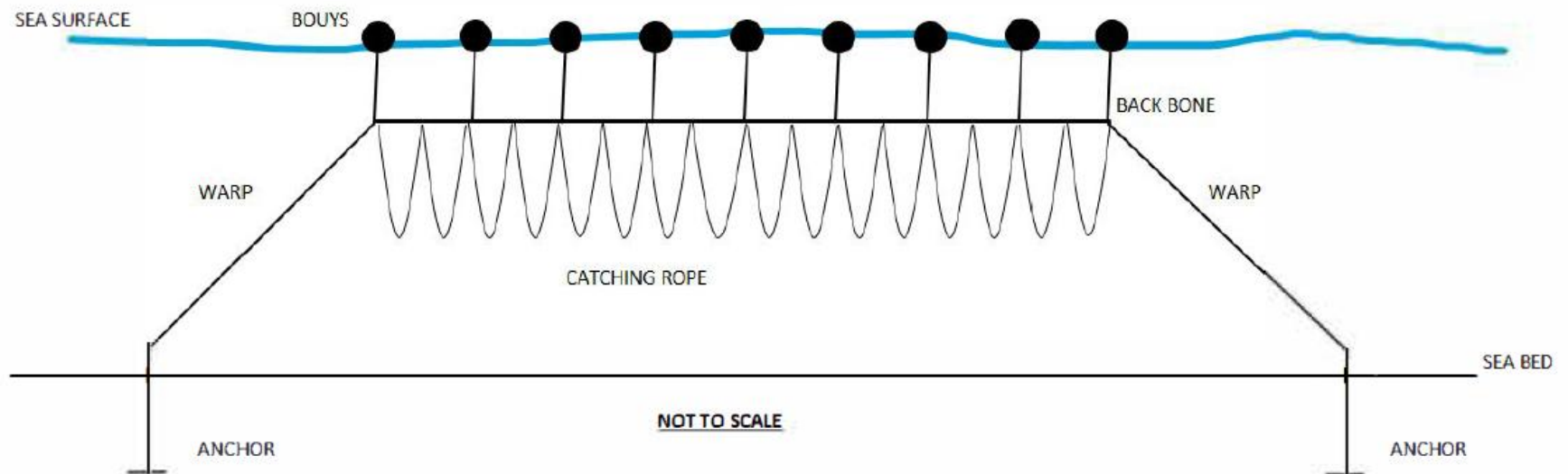
14.0 Review

NWML will review this OMP as follows:

- If any material changes are made to marine farm operations.
- Upon the occurrence of any emergency response.
- Upon request from the Harbourmaster or the WRC.
- Otherwise every five years.

Appendix One – Farm Design

Waikato West Coast Mussel Spat Catching and Nursery Long Line Structure



- Anchors: To be drilled into the seabed 6m - 12m depending on site substrate
- Warps: To be 32mm to 44mm diameter rope with 30ton plus breaking strain
- Buoys: Spaced 2m to 10m apart
- Backbone: 150m in length and 32mm diameter
- Catching rope: 8m down in length. 60mm-80mm diameter weighted fribulated self tensioning catching rope