



Escapes Contingency Plan

Morrison's Rock, Isle of Benbecula

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Glossary of Abbreviations and Terms

Abbreviation / Term	Definition
BFS	Bakkafrost Scotland Ltd.
CoGP	Code of Good Practice for Scottish Finfish Aquaculture
FHI	Fish Health Inspectorate
FNC	Flying Net Cleaner
NLB	Northern Lighthouse Board
NS	NatureScot
PCP	Predator Control Plan
RONC	Remotely Operated Net Cleaner
SGMD	Scottish Government's Marine Directorate
SPA	Special Protection Area
The Proposed Development	The Proposed Morrison's Rock Fish Farm
UK	United Kingdom
UKHO	United Kingdom Hydrographic Office

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1. Introduction

Bakkafrost Scotland Ltd. (BFS) is committed to stock containment, and as such wish to take all precautionary steps to prevent escapes. All containment measures and notification procedures fully meet the standards outlined by the Code of Good Practice for Scottish Finfish Aquaculture (CoGP) and adhere to strict record keeping policy as required by 'The Fish Farming Businesses (Record Keeping) (Scotland) Order 2008'.

2. Site Equipment Summary

2.1 Pens

There will be 8 x 160 m circumference circular pens installed at the Morrison's Rock fish farm (the Proposed Development). The installations will be designed and built to withstand, at a minimum, the 1 in 50-year return period event environmental conditions predicted for the Proposed Development. All pens are fitted with handrails and walkways to ensure staff safety.

Reference 1: Pen Specification; and
Reference 2: Pen Attestation.

2.2 Moorings

The mooring equipment will be specifically designed to the 1 in 50-year return event environmental conditions predicted at the Proposed Development and installed by competent external contractors. The grid mooring system installed will allow for even spread of stresses and loads imposed by tidal currents and allow a degree of flex on each individual pen.

Reference 3: Mooring Specification; and
Reference 4: Mooring Attestation.

2.3 Nets

All nets are designed to exceed the industry standards laid out in the CoGP, as well as taking into account likely environmental conditions found at the Proposed Development.

Reference 5: Net Specification;
Reference 6: Net Attestation; and
Reference 7: Site Plan and Equipment Inventory.

2.4 Navigational Marking

All BFS farms have navigational markings and lighting installed as required by the Northern Lighthouse Board (NLB), and the farm locations have been logged with the United Kingdom (UK) Hydrographic Office (UKHO) for inclusion in Admiralty chart updates. The Proposed Development will be marked in accordance with the conditions set out by the NLB as specified in the Scottish Government's Marine Directorate (SGMD) Marine Licence.

Reference 8: SGMD Marine Licence.

3. Training and Competency

BFS has implemented an in-house training course on stock containment which is delivered through the BFS Marine Competency Framework for all marine farm staff. BFS will ensure that all staff that are required to undertake equipment maintenance and inspection will be suitably trained and therefore deemed competent. Training records will be kept onsite.

Reference 9: Summary Details from Stock Containment Training Course; and
Reference 10: Farm Staff Training Records.

4. Inspection and Maintenance Schedule

4.1 Daily Checks

Each day, the following checks must be conducted and recorded appropriately:

1. **Bird Net Check:** Look for damage to the net or areas where the net has come away from the pen;
2. **Fish Net Check:** Look for damage to the net or areas where the net has come away from the pen;
3. **Water Line Tie Check:** Look for damaged or untied ropes;
4. **Top Tie Check:** Look for damaged or untied ropes;
5. **Mooring Check:** Look at the bridled connections to the pens;
6. **Sinker Tube Suspension Line Check:** Look for damaged or untied/tangled ropes.
7. **Feed Pipe Check:** Ensure the fish/bird netting around the feed pipe entry point is secure; and
8. **Lift-Up Check:** Ensure the fish/bird netting around the Lift-Up entry point is secure.

4.2 Pens

All surface equipment including pen structures will be visually inspected on a daily basis and logs will be held onsite. In the event that maintenance is required this will be carried out by competent personnel at the earliest opportunity. All pens will be installed by suitably qualified persons.

Reference 11: Daily Inspection Log;
Reference 12: Pen Specification; and
Reference 12: Pen Attestation.

4.3 Mooring Systems

All surface mooring structures are checked on a daily basis by farm staff. A more detailed inspection of surface and sub-surface mooring infrastructure is undertaken by competent specialists at the end of each production cycle. End of cycle inspections are undertaken by specialist competent contractors, who carry out the inspections against the requirements of the SGMD: A Technical Standard for Scottish Finfish Aquaculture¹. If needed, remedial work will be completed, and a 'Declaration of Compliance' will be issued by the specialist contractor stating that the inspected infrastructure meets the standards laid out within the SDMD Technical Standard¹.

4.4 Net Installations

Net Replacement Strategy

All net traceability is held with the net supplier (WJ Knox) and includes the following details;

- Date of Manufacture;
- Service ID;
- Net Number;
- Manufacture ID;
- Location of receiving site;
- Date of dispatch to site;
- Anti-foulant type;
- Net dimensions;
- Break Tests:
 - Above water line;
 - Below water line;
 - Base; and
 - Supplier.

All nets are ID tagged and these numbers are recorded by the Site Manager, identifying which pen they are assigned to.

¹ SGMD: A Technical Standard for Scottish Finfish Aquaculture. [Online] Available at: <https://www.gov.scot/publications/technical-standard-scottish-finish-aquaculture/>

Once nets arrive at the Proposed Development they must be stored away from direct sunlight/out of the weather. They should remain covered until they are in use.

BFS is committed to replacing all nets within 6 years of purchase, with a max of 6 years 6 months for nets that are hung just prior to the 6-year cut off.

Should any break test show unsatisfactory results of <60 %, the net manufacturer is responsible for its repair. If beyond repair, then the decision to remove that net from service will be made by the net company along with the BFS Production Manager/Area Manager.

Any changes/modifications to the nets must be agreed by both the net manufacturer and the BFS Site/Area Managers.

All nets may be fitted with a seal 'blind' bottom and correctly tensioned, to deter seal attacks. Top nets, with a ceiling mesh size of 100 mm and a sidewall mesh size of 75 mm, net supports, and net tensioning are also used as part of the predator control strategy to reduce stock damage, and interactions with wildlife.

Surface and upper sub-surface netting is inspected every day by farm staff as part of routine containment checks. High definition, movable cameras, typically used for monitoring feed response, located within the pens will also be used to inspect the condition of the containment netting on a daily basis. During net washing operations, which will take place on average once every ten days, cameras on the net washers will also be used to check containment net integrity. Contracted dive staff will also carry out detailed containment checks at least every four weeks on all sub-surface netting, with dive reports produced, and stored onsite.

4.5 Uplifts

All surface equipment will be visually inspected on a daily basis. All equipment will be installed by suitably qualified persons. Submerged equipment will be inspected at least every four weeks by divers.

4.6 Husbandry/Operations

There is a potential containment risk that can arise from daily husbandry and operational activities which BFS assesses and appropriately mitigates against.

Reference 13: Risk Assessment for Containment Onsite.

5. Predator risk assessment

BFS recognises that the presence of predators in the vicinity of a fish farm may present a risk to containment of fish. A Predator Control Plan (PCP) has been drafted for the Proposed Development and will be reviewed annually by the Site and Area Manager.

Reference 14: Predator Control Plan; and

Reference 15: Fish Mortality Plan.

6. Actions to be Taken in the Event of an Escape

6.1 Immediate Actions

The actions listed below must be undertaken immediately upon discovery of an escape, in order to optimise recapture attempts by minimising the time in which escaped stock may disperse from the point of escape. The below actions must also be taken immediately to ensure that all stakeholders can be notified of the event in accordance with BFS obligations under the CoGP and relevant legislation.

1. If an escape event is suspected, staff should initially conduct a visual assessment of equipment and the surrounding area for escapee fish, and immediately make safe any obvious equipment failures;
2. Staff should then contact their line manager with any escape suspicions or escape confirmations, their line manager should keep a record of the potential escape incident and contact the Area Manager with the details;
3. The Area Manager/Site Manager is responsible for reporting suspected escape incidence to the Biology Department with the details of the incident;
4. The Biology Director/Senior Biologist(s) will then call and report the incident to SGMD in Aberdeen, followed by an initial notification form submitted to the Scottish Government (if the Director/Senior is unavailable the Biological Stakeholder Manager should be contacted in their absence); and
5. The Biological Stakeholder Manager is responsible for making a notification to the District Salmon Fisheries Board giving the details of the escape with the offer of assistance for any recapture attempt that they may wish to make. The local Fisheries Trust and Salmon Scotland should also be informed. Netting recapture is illegal without fishery board approval. In the Biological Stakeholder Manager absence Biology Director/Senior Biologist(s) will contact the relevant parties.

6.2 Post-Notification Actions

1. If an immediate repair can be made without endangering staff or increasing the risk of further loss of fish, this should be carried out and documented (log in site diary what was done, when and by who);
2. If no obvious cause of escape can be identified, all farm operations should be stopped, such as grading, treating etc. Finding a breach in containment must take priority;
3. Feed response should be closely monitored following a suspected breach, as a drop in appetite could indicate a loss. Record all feed rates, as well as water quality, so that an assessment of feed response to fish numbers can be made;
4. If the fish are crowded and it is suspected that the breach is within the crowd, the crowd should be slackened until the net is inspected to reduce the risk of further fish escaping the net. The remotely operated net cleaner (RONC), the flying net cleaner (FNC), or feed cameras should be utilised to get an immediate view of any damage. If the breach is thought to be outside the crowd, nets should be dropped to reduce the risk of fish finding a hole;
5. Divers should be organised to inspect the farm as a priority to check net, mooring and pen integrity. Any repairs made by the divers should be logged in the dive report. Where divers cannot attend immediately, if it is safe to do so, the pen net may be changed. This is only to occur if the net has been inspected and deemed whole by RONC/FNC/feed camera and no further fish are likely to escape;
6. Any observations of fish outside of the pen or in the vicinity of the farm should be recorded;
7. A wellboat count of the farm or affected pens should be conducted as soon as possible, taking fish welfare into consideration;
8. All actions taken must be documented and communicated to the Senior Biologist and Area Manager so that appropriated bodies can be informed; and
9. Farm staff should prepare for recovery attempts. In the event that the equipment is required to attempt recapture of escaped stock, check on location of nearest gill or fyke nets (to be used on agreement with wild fish interests).

Reference 16: Staff Sign Off Sheet.

Table 1: Escape event checklist.

#	Action	Who?	Timeframe	Action completed?
1	Visually assess equipment and surrounding area for escapee fish and make safe any obvious equipment failures.	Farm Staff	Immediately without delay	
2	Document all observations	Farm Staff		
3	Notify Site Manager/Area Manager	Farm Staff		
4	Relay escape information to Senior Biologist	Site Manager/Regional Manager	Immediately	
5	Locate gill-nets and keep on stand-by in case of recapture attempt (these will be located at the Loch a Laip shorebase)	Farm Staff		
6	Verbal notification to Fish Health Inspectorate (FHI)	Senior Biologist	Immediately	
7	Written notification to FHI	Senior Biologist	Within 24 hours	
8	Notify all other stakeholders e.g., local trust, Salmon Scotland	Senior Biologist/Biological Stakeholder Manager	Immediately (Within 48 hours)	
9	Establish suitability for recapture attempt with local fisheries interests	Biological Stakeholder Manager	Immediately (Within 48 hours)	
10	Follow 'Actions for Recapture' if deemed appropriate.	All involved – as delegated	As dictated by licensing and consultation	
11	Written Final Notification	Senior Biologist	Within 28 days of event	

6.3 Recapture of Escapee Fish

Whether or not a recapture attempt is deemed appropriate will be subject to discussions between BFS, the local wild fisheries interests and the SGMD. **Deployment of nets without the necessary licences and permissions is illegal.**

1. Permission to deploy gillnets must be sought from the Local District Salmon Fishery Board;
2. NatureScot (NS) must be consulted on any nature conservation designations as part of the recapture method licencing process i.e., any Special Protected Areas (SPA) designated for ornithological features which may be present in the local area;
3. Gillnets will be on standby following identification of the escape;
4. The gillnets are of a mesh size sufficient to capture BFS farmed smolt, and therefore also the larger farmed fish;
5. BFS will liaise with all local wild fisheries interests to identify appropriate recapture methods;
6. The location of the recapture attempt will depend on whether sightings of escaped stock have been observed locally. E.g., if escapees have been sighted/reported in a local river, efforts may target the river mouth/estuary. Alternatively, if the escaped fish have remained in the vicinity of the farm, the recapture attempt may need to be deployed around the farm; and

7. Nets will be deployed and manned during daylight hours and will cease when no farmed stock has been caught for 48 hours, or when otherwise directed by the relevant stakeholders. If any wild salmonids are caught, fishing effort will immediately cease.

Reference 17: SGMD Guidance 'What to do in the event of an escape from a fish farm'

7. Related Farms

- **Maaey (FS1315);**
- **Maragay Mor (FS1304);**
- **Uiskevagh (FS1255); and**
- **Greanamul (FS1282).**

7.1 Local Contact Numbers.

SGMD in Aberdeen:
Initial and Final Escapes Notification to:
Benmore Estate:
Salmon Scotland:
Gill Net Store

Duty/On Call Inspector 0131 244 3498
ms.fishhealth@gov.scot
01680 300229
01738 537 000
Loch a' Laip Shorebase

Reference Documents

Reference 1: Pen Specification;
Reference 2: Pen Attestation;
Reference 3: Mooring Specification;
Reference 4: Mooring Attestation;
Reference 5: Net Specification;
Reference 6: Net Attestation;
Reference 7: Site Plan and Equipment Inventory;
Reference 8: SGMD Marine Licence;
Reference 9: Summary Details from Stock Containment Training Course;
Reference 10: Farm Staff Training Records;
Reference 11: Daily Inspection Log;
Reference 12: Pen Attestation;
Reference 12: Risk Assessment for Containment Onsite;
Reference 13: Predator Control Plan;
Reference 14: Fish Mortality Plan;
Reference 15: Staff Sign Off Sheet; and
Reference 16: SGMD Guidance 'What to do in the event of an escape from a fish farm'.