

Case No: 2024-0381 Date of visit: 18/09/2024

Time spent on site: 2.5h Main Inspector: [Redacted]

Site No: FS1336 Site Name: Applecross Hatchery  
Business No: FB0169 Business Name: Bakka frost Scotland

Case Types: 1 REP 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6 [ ]

Water Temp (°C): [ ] Thermometer No: [ ] FHI 045 completed [ ]

Observations: Region: HI Water type: F CoGP MA: [ ]

Dead/weak/abnormally behaving fish present?  N If yes, see additional information/clinical score sheet.  
Clinical signs of disease observed?  N If yes, see additional information/clinical score sheet.  
Gross pathology observed?  N If yes, see additional information/clinical score sheet.  
Diagnostic samples taken?  N

UNI/REG only - if unable to carry out intended visit detail reason below:  
[Redacted]

**Additional Case Information:**

The site was inspected due to a mortality event report received by the FHI for wk 36. mortality records were inspected with the last four weeks being:

Wk 38, 3521 (0.1%), wk 37 213558 (5.75%), wk36 382624 (16.95%), Wk 35 694 (0.03%), mortality event due to water quality issue. No other peaks in mortality noted during the period checked.

The cause of the mortality was a water quality issue. The site has a large 'make up' fresh water storage tank that supplies all the Applecross sites, there was a huge demand placed on the storage tank as contractors started to fill up tanks in one of the smolt on-growing units and also lorry transport tanks were being filled with water. The level inside the tank dropped by around four meters still leaving 2 meters within the tank however, due to the influent water and discharge pipes being located one above the other, the low levels resulted in turbulence that caused sediment to be disturbed which went into the pipeline that feeds the sites, the Applecross Hatchery being the first on the line. This resulted in a spike in hydrogen sulphide which increased to 0.03 milligrams/litre stressing the fish and causing a rapid decrease in oxygen. The emergency oxygen was used to bring the O2 levels back up.

On investigation it was found that the water tank had a hole in the roof likely from a storm but this had gone unobserved. They suspect that here has been sediment build up from organic matter landing in the tank as the influent water is screened to 30 microns, ozone and uv treated prior to being in the tank.

The water tank itself was newly installed however the specification it was built too may not be adequate for the conditions on the site as it is fairly exposed, talks are on-going with the contractors.

By the time of the inspection a cherry picker had been used to repair the roof. Ozone has been increased within the refreshing loop to further sterilise the water.

It was reported that the low water level was not really an issue as it was not low enough to trigger the low water alarm.

The system is to be put onto an effective flow through configuration to allow the tank to be fully drained, cleaned and disinfected. The pipe configuration is to be changed so that the influent water pipe is opposite the outflow pipe which should result in less turbulence when water levels decrease.

Histo samples had been taken, which revealed damage consistent with acute gill insult, damage to other tissues indicate an acute water borne insult.

On inspection of the site no moribunds or clinical signs of disease were observed.

Wk 38 mortality data was amended on the 27/9/2024 following communications with the company and shows the data for the full week.

Case No:  Site No:

Date of Visit:  Inspector(s):

**Registration/Authorisation Details**

1. Business/site details summary checked by site representative?

2. Changes made to details?

**Site Details (include cleaner fish for all sections)**

Total No facilities	<input type="text" value="16"/>	Facilities stocked	<input type="text" value="7"/>	No facilities inspected	<input type="text" value="7"/>
Species	<input type="text" value="SAL"/>	<input type="text" value="SAL"/>			
Age group	<input type="text" value="24 Q1"/>	<input type="text" value="23 Q4"/>			
No Fish	<input type="text" value="716,999"/>	<input type="text" value="668,803"/>			
Mean Fish Wt	<input type="text" value="9.5g"/>	<input type="text" value="68.3g"/>			
Next Fallow Date (Site)	<input type="text" value="on-going cycle"/>		Next Input Date (Site)	<input type="text" value="December 2024"/>	
Recent (last 4 wks) disease problems?	<input type="text" value="N"/>		Any escapes (since last visit)?	<input type="text" value="N"/>	
If yes, detail:	<input type="text" value=""/>				

**Movement Records**

1. Movement records available for inspection?

2. Date of last inspection:

3. Are records complete and correctly entered?

4. Are movement records available for dead fish and waste?

5. Are records complete and correctly entered?

6. Are health certificates for introductions (outwith GB) available?

**Transport Records**

1. Are any movements carried out by (or on behalf) of the business (not using a STB)?

If yes, is there a system in place for maintenance of transportation records?

**Mortality Records**

1. Mortality records available for inspection?

2. How are mortalities disposed of?

If other detail:

3. Mortality records complete and correctly entered?

4. Recent mortality (last 4 wks):

5. Evidence of recent increased/atypical mortalities?

If yes, facility nos/no mortality per facility/no stock per facility/reason:

6. Any other peaks in mortality during period checked?

If yes, detail:

7. Have increased (unexplained) mortalities been reported to vet or FHI?

If yes, detail action:

8. Have 'mortality events' been reported to FHI? If no, enter details on mortality events sheet.

**Treatments and Medicines Records**

1. Recent treatments (see comment)?

If yes, detail:

If other, detail:

2. Medicines records available for inspection?

3. Are records complete and correctly entered?

4. Are fish in a withdrawal period?

5. If yes, what treatment(s)?

If other, detail:

6. Are medicines stored appropriately?

**Biosecurity Records**

1. Biosecurity records available for inspection?

2. Has the manner and frequency of mortality removal, recording and safe disposal been considered?

3. Has the manner and period in which the APB will notify Scottish Ministers or veterinary professional of any *increased (unexplained)* mortality at the site been included?

4. Has the action that will be taken in the event that the presence or suspicion of the presence of a listed disease is detected been included and *how* and *when* that will be notified to Scottish Ministers?

5. Has the health status of aquaculture animals being stocked on the farm site been covered (equal or higher health status, certification if required)?

6. Have the husbandry and biosecurity measures implemented between each epidemiological unit to minimise transmission of disease been covered (movement of staff, visitors, equipment, live or dead fish etc.)?

7. Is documentation available regarding the measures in place to maintain the physical containment of aquaculture animals held on site?

8. Have the biosecurity procedures been adequately implemented on site?

If no, detail:

**Results of Surveillance**

1. Has any animal health surveillance been carried out by, or on behalf of, the business?  Y

2. If yes, are results available for inspection?  Y

3. Any significant results?  Y

If yes, detail (if not detailed under recent disease problems).  Histo indicative of water borne insult.

Records checked between:  4/3/2024 to 18/9/2024





# FISH HEALTH INSPECTORATE VISIT REPORT

## SUMMARY FOR INFORMATION OF SITE OPERATOR

<b>BUSINESS No</b>	FB0169	<b>DATE OF VISIT</b>	18/09/2024
<b>SITE No</b>	FS1336	<b>SITE NAME</b>	Applecross Hatchery
<b>CASE No</b>	20240381	<b>INSPECTOR</b>	[REDACTED]

The above site was inspected following reports of elevated mortalities occurring on site. All stocked epidemiological units were inspected. On this occasion no samples were taken for disease analysis. The Inspector did not observe any clinical signs associated with the listed diseases as described in the Aquatic Animal Health (Scotland) Regulations 2009.

### Records

Aquaculture animal and aquaculture animal product movement records were inspected and appeared to be adequately maintained.

Mortality records were inspected and found to be adequately maintained.

Mortality levels had exceeded the reporting criteria since the last inspection and had been reported to the Fish Health Inspectorate as required.

Reports detailing the results of animal health surveillance carried out by or on behalf of the business and/or Marine Scotland were available for inspection.

Please contact myself or the duty inspector should you require any further information or have any queries regarding this report.

Signed:

[REDACTED]

Date: 30/9/2024

Fish Health Inspector

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Scottish Government website at [Fish Health Inspectorate Service Charter - gov.scot \(www.gov.scot\)](https://www.gov.scot/Topics/marine/science)