

| | | | | | | |
|---|-------------------------------------|--|-----------------|-------------------|----------|------|
| Case No: | 2025-0424 | | Date of visit: | 06/11/2025 | | |
| Additional inspector(s): | | | Main Inspector: | | | |
| Site No: | FS1175 | Site Name: | Gob na Hoe | | | |
| Business No: | FB0398 | Business Name: | Loch Duart Plc | | | |
| Case Types: | 1 REP | 2 DIA | 3 | 4 | 5 | 6 |
| Water Temp (°C): | 13 | Thermometer No: | T172 | FHI 045 completed | N/A | |
| Observations: | Region: | HI | Water type: | S | CoGP MA: | M-25 |
| Dead/weak/abnormally behaving fish present? | <input checked="" type="checkbox"/> | If yes, see additional information/clinical score sheet. | | | | |
| Clinical signs of disease observed? | <input checked="" type="checkbox"/> | If yes, see additional information/clinical score sheet. | | | | |
| Post mortem signs observed? | <input checked="" type="checkbox"/> | If yes, see additional information/clinical score sheet. | | | | |
| Diagnostic samples taken? | <input checked="" type="checkbox"/> | | | | | |
| UNI/REG only - if unable to carry out intended visit detail reason below: | | | | | | |
| | | | | | | |

Additional Case Information:

Next input will be cleaner fish: ballan wrasse. Wild caught most likely from around Skye.

Micro jellyfish were reported as the primary cause of the mortality, specifically *Muggia atlantica*.

Routine mortality is usually disposed of using ensiler on the barge. Mass mortality is being disposed of via dead haul to Pelagia (in the Shetland Islands) and Whiteshore.

Barbed wire jelly fish observed visually with the naked eye on site (they cannot be collected using the plankton sweeps due to size).

First mention of barbs in log was 30/08. These were observed on and off until late Sept. *Muggia* were first observed in late Aug 2025 and have been the only species present in plankton samples since early Oct. Of recent *Muggia* has been at levels of 22-80 jellyfish per m3 (since 09/10). Barbs peaked at 92 jellyfish per metre in August (30/08)

AGD was first picked up in wk 14 at low levels from clinical signs, although PCR tests were negative at this time. First picked up via PCR from gill swabs in wk 26 at low levels. Wk 27 the AGD was becoming more of a problem.

Vet report from Pharmaq on 14/10/2025: moderate levels of AGD reported. Biologist told verbally that the jellyfish damage must heal before treating AGD with freshwater.

AGD scores were at 2 (0= perfect, 5= very poor) in week 41 and remained high at 1.26 last week. Treatment started on Monday before inspection. Treatment to last until this weekend (08/11-09/11).

Wk 35 AGD score was 1.65 which decreased to 0.53 following treatment in wk 35.

At the time of the inspection a treatment vessel was on site that had treated 5 of the 8 stocked cages. Cages 1,3 and 8 not treated yet as they were least effected. 142,845 morts this week. Mostly from cage 8 with 106,880.

Mortality worst in cages 4 and 6. Cages were treated by prioritising cages with highest mortality.

SLICE treatments carried out in weeks 33+34. Lice levels before treatments were 1.96 caligus and 0.15 for gravid leps. These figures dropped to 0.16 and 0.06 respectively.

SLICE treatment in mid-July wk 28+29. Lice levels before 0.97 for caligus and 0.28 for female leps. Before figures dropped to 0.38 and 0.08 respectively.

Lice levels very low the week before the inspection. Female leps 0.09 and caligus at 0.06

Case No: 2025-0424

Site No: FS1175

Date of Visit: 06/11/2025

Main Insp:

Registration/Authorisation Details

1. Business/site details summary checked by site representative?
2. Changes made to details?

Y
Y

Site Details (include cleaner fish for all sections)

| | | | | | |
|---------------------------------------|--|------------------------|---------------------------------|-------------------------|---|
| Total No facilities | 8 | Facilities stocked | 6 | No facilities inspected | 8 |
| Species | Atlantic salmon | | | | |
| Age group | S1 2025 | | | | |
| No Fish | 698 437 | | | | |
| Mean Fish Wt | 778g | | | | |
| Next Fallow Date (Site) | Dec-26 | Next Input Date (Site) | May 2026 | | |
| Recent (last 4 wks) disease problems? | | Y | Any escapes (since last visit)? | | N |
| If yes, detail: | Barbed wire siphonophore (appeared Aug 2025) damage, Muggia atlantica (appeared 21/08/25) damage, AGD. | | | | |

Movement Records

1. Movement records for **all species** held available for inspection?

Y

2. Date of last inspection:

04/07/2024

3. Are records complete and correctly entered?

Y

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

N

5. Are records complete and correctly entered?

N/A

6. Have all introductions and imports (since last inspection) from outwith the GB health zone been recorded in the movement records?

N/A

Transport Records

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

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

Mortality Records

1. Mortality records for **all species** held available for inspection?

Y

2. How are mortalities disposed of?

Ensiled - on site

If other detail:

3. Mortality records complete and correctly entered?

Y

4. Recent mortality (last 4 wks):
wk 45 (so far): 145,845 fish (20.9%), wk 44: 247,000 fish (26.13%), wk 43: 133,524 fish (12.37%), wk 42: 158,630 fish (12.81%), wk 41: 32,748 fish (2.58%)

5. Evidence of recent increased/atypical mortalities?

Y

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

See additional comments

6. Any other peaks in mortality during period checked?

Y

If yes, detail: Wk 43 and wk 46 2024 there were issues with jellyfish (Muggia sp.).

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

N/A

If yes, detail action:

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

Y

Treatments and Medicines Records

1. Recent treatments (see comment)?

Y

If yes, detail:

T.M.S.

If other, detail:

2. Medicines records available for inspection?

Y

3. Are records complete and correctly entered?

Y

4. Are fish in a withdrawal period?

Y

5. If yes, what treatment(s)?

T.M.S.

If other, detail:

6. Are medicines stored appropriately?

Y

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).

AGD pathology and jellyfish damage observed.

Records checked between:

04/07/2024 - 06/11/2025

Case no:

2025-0424

Site No:

FS1175

Date of visit/
Sampling:

06/11/2025

06/

Priority samples:

VI

BA

PA

MG

HI

Time sampling
starts/ends:

Main Insp:

VMD No.

0

Environmental conditions:

1

Indoors

2

3

4

5

Summary samples

HIST

Y

BA

Y

MG

Y

VI

PA

Total Samples

Add Fish/ Pools - click button

| | | | | | | | | | | | | | |
|---------------|----------------|---|---|-----------------------------|-----------------------------|-----------------------------|--|--|--|--|--|--|--|
| | Pool/Fish No | F1 | F2 | F3 | F4 | F5 | | | | | | | |
| | Fish nos | 1 | 2 | 3 | 4 | 5 | | | | | | | |
| | Pool Group | | | | | | | | | | | | |
| Stock Details | Species | SAL | SAL | SAL | SAL | SAL | | | | | | | |
| | Average weight | 770g | 770g | 770g | 770g | 770g | | | | | | | |
| | Sex | N/A | N/A | N/A | N/A | N/A | | | | | | | |
| | Water Type | SW | SW | SW | SW | SW | | | | | | | |
| | | Ormsary smolt unit (FS0575) and Clachbreac (FS0892) | Ormsary smolt unit (FS0575) and Clachbreac (FS0892) | Ormsary smolt unit (FS0575) | Ormsary smolt unit (FS0575) | Ormsary smolt unit (FS0575) | | | | | | | |
| | Stock Origin | | | | | | | | | | | | |
| | Facility No | 4 | 4 | 8 | 8 | 8 | | | | | | | |

11/2025 Additional Sample Information:

| |
|--|
| |
|--|

5

Total Tests assigned

2

[illegible]

| | | | | | |
|----------------|------------|------------|--------|--------------------|------------|
| Case no: | 2025-0424 | Site No: | FS1175 | Method of killing: | Percussive |
| Date of visit: | 06/11/2025 | Main Insp: | | Sheet Relevant: | Y |

S for strong presence: M for medium presence: W for weak presence

| Fish Number | | 1 | 2 | 3 | 4 | 5 | | | | | | | | |
|--|-----------------------|--------|---------|--------|--------|--------|--|--|--|--|--|--|--|--|
| Time sampled after death (if > 45 minutes) | | 40 min | 40 mins | 1 hour | 1 hour | 1 hour | | | | | | | | |
| External Signs | | | | | | | | | | | | | | |
| Behaviour | Moribund | S | S | S | S | S | | | | | | | | |
| | Lethargic | S | S | S | S | S | | | | | | | | |
| | Hanging vertical | | | | | | | | | | | | | |
| | Spiralling | | | | | | | | | | | | | |
| | Flashing | | | | | | | | | | | | | |
| | Loss of equilibrium | | | | | | | | | | | | | |
| Body | Dark | | | | | | | | | | | | | |
| | Distended abdomen | | | | | | | | | | | | | |
| | Anorexic | W | W | W | W | W | | | | | | | | |
| | Scale Oedema | | | | | | | | | | | | | |
| Opercula | Shortened | | | | | | | | | | | | | |
| | Flared | | | | | | | | | | | | | |
| Haemorrhaging | Throat | | | | | | | | | | | | | |
| | Ventrum | | | | | | | | | | | | | |
| | Base of fins | | | | | | | | | | | | | |
| | Elsewhere | | | | | | | | | | | | | |
| Eyes | Exophthalmic | | | | | | | | | | | | | |
| | Enophthalmic (sunken) | | | | | | | | | | | | | |
| | Cataract | | | | | | | | | | | | | |
| | Haemorrhagic | | | | | | | | | | | | | |
| Gills | Pale | | | | | | | | | | | | | |
| | Zoned | | | | | | | | | | | | | |
| | Necrotic | | M | | | M | | | | | | | | |
| Lesions | Flank | | | | | | | | | | | | | |
| | Elsewhere | | | | | | | | | | | | | |
| Vent | Inflamed | | | | | | | | | | | | | |
| | Trailing faeces | | | | | | | | | | | | | |
| Lice Load | Estimate numbers | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Internal Signs | | | | | | | | | | | | | | |
| Ascites | Clear | | | | | | | | | | | | | |
| | Bloody | | | | | | | | | | | | | |
| Oedema | In tissues | | | | | | | | | | | | | |
| Heart | Pale/anaemic | | | | | | | | | | | | | |
| | Granulomas | | | | | | | | | | | | | |
| | Deformed | | | | | | | | | | | | | |
| Liver | Petechial haem | | | | | | | | | | | | | |
| | Gross haem | | | | | | | | | | | | | |
| | Tissue breakdown | | | | | | | | | | | | | |
| | Enlarged | | | | | | | | | | | | | |
| | Colour number(s) | | | | | | | | | | | | | |
| | Granulomas | | | | | | | | | | | | | |
| | Lesions | | | | | | | | | | | | | |
| Pyloric caeca | Petechial haem | | | | | | | | | | | | | |
| | Tubules mauve | | | | | | | | | | | | | |
| | Lack of fat | S | M | S | S | M | | | | | | | | |
| Spleen | Enlarged | | | | | | | | | | | | | |
| | Granulomas | | | | | | | | | | | | | |
| Gut | No food present | S | S | S | S | S | | | | | | | | |
| | Yellow pseudo-faeces | | M | | M | M | | | | | | | | |
| | External haem | | | | | | | | | | | | | |
| | Internal haem | | | | | | | | | | | | | |
| Body wall | Haemorrhaging | | | | | | | | | | | | | |
| Swim bladder | Haemorrhaging | | | | | | | | | | | | | |
| | Fluid filled | | | | | | | | | | | | | |
| Kidney | Swollen | | | | | | | | | | | | | |
| | Grey | | | | | | | | | | | | | |
| | Granular | | | | | | | | | | | | | |
| | Liquefied | | | | | | | | | | | | | |
| General | Parasites present | | | | | | | | | | | | | |
| | Anaemia | | | | | | | | | | | | | |

S for strong presence: **M** for medium presence: **W** for weak presence

| | | | | | | | | | | |
|--|-----------------------|--|--|--|--|--|--|--|--|--|
| Fish Number | | | | | | | | | | |
| Time sampled after death (if > 45 minutes) | | | | | | | | | | |
| External Signs | | | | | | | | | | |
| Behaviour | Moribund | | | | | | | | | |
| | Lethargic | | | | | | | | | |
| | Hanging vertical | | | | | | | | | |
| | Spiralling | | | | | | | | | |
| | Flashing | | | | | | | | | |
| | Loss of equilibrium | | | | | | | | | |
| Body | Dark | | | | | | | | | |
| | Distended abdomen | | | | | | | | | |
| | Anorexic | | | | | | | | | |
| | Scale Oedema | | | | | | | | | |
| Opercula | Shortened | | | | | | | | | |
| | Flared | | | | | | | | | |
| Haemorrhaging | Throat | | | | | | | | | |
| | Ventrum | | | | | | | | | |
| | Base of fins | | | | | | | | | |
| | Elsewhere | | | | | | | | | |
| Eyes | Exophthalmic | | | | | | | | | |
| | Enophthalmic (sunken) | | | | | | | | | |
| | Cataract | | | | | | | | | |
| | Haemorrhagic | | | | | | | | | |
| Gills | Pale | | | | | | | | | |
| | Zoned | | | | | | | | | |
| | Necrotic | | | | | | | | | |
| Lesions | Flank | | | | | | | | | |
| | Elsewhere | | | | | | | | | |
| Vent | Inflamed | | | | | | | | | |
| | Trailing faeces | | | | | | | | | |
| Lice Load | Estimate numbers | | | | | | | | | |
| | | | | | | | | | | |
| Internal Signs | | | | | | | | | | |
| Ascites | Clear | | | | | | | | | |
| | Bloody | | | | | | | | | |
| Oedema | In tissues | | | | | | | | | |
| Heart | Pale/anaemic | | | | | | | | | |
| | Granulomas | | | | | | | | | |
| | Deformed | | | | | | | | | |
| Liver | Petechial haem | | | | | | | | | |
| | Gross haem | | | | | | | | | |
| | Tissue breakdown | | | | | | | | | |
| | Enlarged | | | | | | | | | |
| | Colour number(s) | | | | | | | | | |
| | Granulomas | | | | | | | | | |
| | Lesions | | | | | | | | | |
| Pyloric caeca | Petechial haem | | | | | | | | | |
| | Tubules mauve | | | | | | | | | |
| | Lack of fat | | | | | | | | | |
| Spleen | Enlarged | | | | | | | | | |
| | Granulomas | | | | | | | | | |
| Gut | No food present | | | | | | | | | |
| | Yellow pseudo-faeces | | | | | | | | | |
| | External haem | | | | | | | | | |
| | Internal haem | | | | | | | | | |
| Body wall | Haemorrhaging | | | | | | | | | |
| Swim bladder | Haemorrhaging | | | | | | | | | |
| | Fluid filled | | | | | | | | | |
| Kidney | Swollen | | | | | | | | | |
| | Grey | | | | | | | | | |
| | Granular | | | | | | | | | |
| | Liquefied | | | | | | | | | |
| General | Parasites present | | | | | | | | | |
| | Anaemia | | | | | | | | | |

Additional comments:

In photos F4 exhibited exophthalmia, however, this was post mortem.

Case No:

2025-0424

Date of visit:

06/11/2025

Site No:

FS1175

Main Insp:

| Results Summary | Freq. | Date of Notification | | | | | | |
|----------------------|-------|----------------------|------|------------|------|------------|------|----------------------|
| | | Database | Insp | Phone | Insp | Writing | Insp | 2 nd Insp |
| AGDQ | 5/5 | 12/11/2025 | | 12/11/2025 | | 04/12/2025 | | |
| IHNP | 0/5 | 12/11/2025 | | 12/11/2025 | | 04/12/2025 | | |
| IPNM | 0/5 | 12/11/2025 | | 12/11/2025 | | 04/12/2025 | | |
| ISAQ | 0/5 | 12/11/2025 | | 12/11/2025 | | 04/12/2025 | | |
| P.theridion | 5/5 | 12/11/2025 | | 12/11/2025 | | 04/12/2025 | | |
| PMCV | 0/5 | 12/11/2025 | | 12/11/2025 | | 04/12/2025 | | |
| Salmon gill poxvirus | 5/5 | 12/11/2025 | | 12/11/2025 | | 04/12/2025 | | |
| SAV | 0/5 | 12/11/2025 | | 12/11/2025 | | 04/12/2025 | | |
| VHSP | 0/5 | 12/11/2025 | | 12/11/2025 | | 04/12/2025 | | |
| VSPE | 3/5 | 21/11/2025 | | 21/11/2025 | | 04/12/2025 | | |
| BURK | 5/5 | 21/11/2025 | | 21/11/2025 | | 04/12/2025 | | |
| NSIG | 5/5 | 21/11/2025 | | | | | | |
| AMGD | 5/5 | 21/11/2025 | | 21/11/2025 | | 04/12/2025 | | |
| CGDH | 5/5 | 21/11/2025 | | 21/11/2025 | | 04/12/2025 | | |
| GPAT | 5/5 | 21/11/2025 | | 21/11/2025 | | 04/12/2025 | | |
| LPAT | 3/5 | 21/11/2025 | | 21/11/2025 | | 04/12/2025 | | |
| MICR | 1/5 | 21/11/2025 | | 21/11/2025 | | 04/12/2025 | | |
| SPAT | 2/5 | 21/11/2025 | | 21/11/2025 | | 04/12/2025 | | |
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| Report Summary | | | |
|----------------|------------|------|----------------------|
| Case Type | Date | Insp | 2 nd Insp |
| REP | 19/11/2025 | | |
| DIA | 04/12/2025 | | |
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Fish Health Inspectorate visit report

Summary for information of site operator

| | | | |
|--------------|----------|----------------|--|
| Business no: | FB0398 | Date of visit: | 06/11/2025 |
| Site no: | FS1175 | Site name: | Gob na Hoe |
| Case no: | 20250424 | Inspector: |  |

The above site was inspected, in accordance with the Aquatic Animal Health (Scotland) Regulations 2009, following reports of increased mortality.

All epidemiological units were inspected and samples were taken for diagnostic purposes. A separate report will be issued detailing the results of these tests.

Records

The information required for the public record of aquaculture production businesses regarding this site was verified and where necessary updated. The following records were also inspected to ensure that the conditions of authorisation for your Aquaculture Production Business (APB) are being met:

Aquaculture animal and aquaculture animal product movement records were inspected and appeared to be inadequately maintained. Since the inspection, adequately maintained records have been submitted to the Fish Health Inspectorate. No further action is necessary.

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.

Medicine records were inspected and found to be adequately maintained.

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

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

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Signed:



Date: 19/11/2025

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/publications/fish-health-inspectorate-service-charter/pages/1-2-introduction-and-standards-of-service.aspx)

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UKAS Accredited Inspection Body - Type C No. 0269
Marine Laboratory, 375 Victoria Road, Aberdeen, AB11 9DB
Telephone – 0131 244 3498
Email – ms.fishhealth@gov.scot
[Fish Health Inspectorate Website](https://www.gov.scot/publications/fish-health-inspectorate-website/pages/1-2-introduction.aspx)

Fish Health Inspectorate visit report

Summary for information of site operator

| | | | |
|--------------|----------|----------------|------------|
| Business no: | FB0398 | Date of visit: | 06/11/2025 |
| Site no: | FS1175 | Site name: | Gob na Hoe |
| Case no: | 20250424 | Inspector: | ██████████ |

Section one: summary

The site was visited following the notification of increased mortality by the operator. During the inspection five moribund and lethargic fish were removed for diagnostic testing.

Histopathological examination revealed mild, complex gill pathology with features consistent with amoebic gill disease (AGD). Gram-negative bacteria also observed on gill cell debris. Hepatocellular and splenic necrosis were also observed.

Vibrio sp. was identified. The level and purity of the growth would suggest it would be implicated in the morbidity of fish F1 and be contributing to the morbidity of fish F2 and F4.

Burkholderia cepacia was identified. Although prevalent, it is likely to be present as a secondary pathogen and of environmental origin.

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

Section two: case detail

Observations

The operator of the above site contacted the fish health inspectorate with a notification of increased mortality (as required) in week 39 2025. The mortality rate that week was 1.6% which increased steadily to 26.13% in week 44 2025. The reason for the mortality provided by the operator was complex gill disease (CGD), jellyfish (predominantly *Muggiaea atlantica*) and AGD. A freshwater bath treatment was to be undertaken on site but was delayed due to veterinary advice and weather. A freshwater bath treatment was undertaken in week 45. The mortality rate fell following the treatment in weeks 45 and 46 to 19.85% and 11.7% respectively.

R09

During the inspection many moribund fish were observed across the site. Almost all the fish observed were also lethargic and appeared anorexic. Despite the fish swimming very close to the surface, no lice were observed. This matches the lice count records that were observed during the inspection with an average of less than 0.1 adult female *Lepeophtheirus salmonis* per fish.

Five of the moribund fish were removed for diagnostic testing. As well as moribund, all of the fish removed were also lethargic and anorexic. Two of these fish displayed necrotic gill tissue. No lice were observed.

Internally, all fish had a lack of fat associated with the pyloric caeca and no food present in the gut. The gut of three of these fish contained yellow pseudo-faeces.

Samples

Samples were collected from five fish according to the table below:

| Fish number | Facility number | Species | Stage | Origin |
|-------------|-----------------|---|--------------------|---|
| F1 and F2 | 4 | Atlantic salmon (<i>Salmo salar</i>) | 2025 S1 at 778g | Ormsary smolt unit (FS0575) and Clachbreac (FS0892) |
| F3 - F5 | 8 | Atlantic salmon (<i>Salmo salar</i>) | 2025 S1 at 778g | Ormsary smolt unit (FS0575) |

Results

Bacteriology:

Kidney and gill material from F1 – F5 was inoculated onto appropriate media for the isolation of bacteria.

The following bacteria were isolated:

- *Vibrio* sp. (kidney of F1, F2 and F4)
- *Burkholderia cepacia* (gill of F1 – F5)

R09

Virology:

Tissue samples were tested for segments of nucleic acid indicative of the presence of the pathogens specified below using real-time PCR (qPCR).

Salmon gill pox virus (SGPV)

| Fish Number | Endogenous control Cp value | Cp Values | | | Reported Result (PCR) |
|-------------|-----------------------------|-----------|-------|-------|-----------------------|
| F1 | 18.22 | 30.24 | 30.01 | 30.33 | POSITIVE |
| F2 | - | - | - | - | Negative |
| F3 | - | - | - | - | Negative |
| F4 | 18.12 | 23.53 | 23.67 | 23.61 | POSITIVE |
| F5 | 19.52 | 24.02 | 24.03 | 23.93 | POSITIVE |

The samples tested negative for infectious haematopoietic necrosis virus (IHNV), infectious pancreatic necrosis virus (IPNV), infectious salmon anaemia virus (ISAV), salmonid alphavirus (SAV) piscine myocarditis virus (PMCV) and viral haemorrhagic septicemia virus (VHSV).

Parasitology:

Tissue samples were tested for segments of nucleic acid indicative of the presence of the parasites specified below using real-time PCR (qPCR).

Neoparamoeba perurans (AGD)

| Fish Number | Endogenous control Cp value | Cp Values | | | Reported Result (PCR) |
|-------------|-----------------------------|-----------|-------|-------|-----------------------|
| F1 | 18.22 | 23.71 | 23.83 | 23.80 | POSITIVE |
| F2 | 18.50 | 24.76 | 24.81 | 24.82 | POSITIVE |
| F3 | 18.31 | 24.82 | 24.72 | 24.71 | POSITIVE |
| F4 | 18.12 | 24.57 | 24.50 | 24.62 | POSITIVE |
| F5 | 19.52 | 25.67 | 25.41 | 25.40 | POSITIVE |

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Paranucleospora theridion

| Fish Number | Endogenous control Cp value | Cp Values | | | Reported Result (PCR) |
|-------------|-----------------------------|-----------|-------|-------|-----------------------|
| F1 | 18.22 | 23.90 | 23.54 | 24.00 | POSITIVE |
| F2 | 18.50 | 30.54 | 31.05 | 30.88 | POSITIVE |
| F3 | 18.31 | 23.58 | 23.70 | 23.39 | POSITIVE |
| F4 | 18.12 | 27.38 | 27.39 | 27.44 | POSITIVE |
| F5 | 19.52 | 28.18 | 28.31 | 28.39 | POSITIVE |

Histology:

Tissue samples of gill, skin and skeletal muscle, heart, pyloric caeca, pancreas, hind gut, liver, spleen and kidney were taken from F1 – F5. The tissue samples were fixed in 10% neutral buffered formalin.

Histopathological examination revealed the following:

Gill: Lamellar hyperplasia, multifocal, mild (F1-F4) with presence of few amoeboid cells resembling *Neoparamoeba perurans* (F1-F5), F4 is more severely affected. F2, F4 & F5 displayed cell debris with bacteria among gill filaments and F3 some adhesions. Few basophilic epithelial inclusions (likely epitheliocystis) (F5). Aneurysmal dilations and telangiectasias observed (F3, F4, F5).

Skin & Muscle: A cluster of parasite spores observed in the white musculature (resembles microsporidium).

Heart: Myocarditis, minor, multifocal (F1, F2) and F4 displayed minor cellular inflammation at the compact-spongy layer junction, few thrombi (F2, F3, F5). Epicarditis, mild (F1-F5).

Gut and pyloric caeca: Peritonitis, mild (potentially associated with vaccine administration (F1).

Pancreas: No abnormalities detected.

Liver: Hepatocellular necrosis, minor-up-to mild, multifocal (F1, F2, F4).

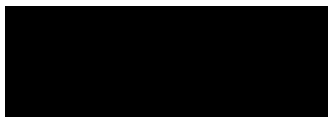
Kidney: Some melanomacrophage aggregates increase (F1).

Spleen: Parenchymal necrosis, mild, multifocal (F1). Capsulitis (F3).

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

Signed:



Date: 04/12/2025

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 \(www.gov.scot\)](http://www.gov.scot/Fish_Health_Inspectorate_Service_Charter)

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Photo 1: Fish 5 exhibiting necrotic gills and whitening of gill filaments



Photo 2: Fish 1 – 5 (exophthalmia in fish 4 was postmortem)