

Time spent on site: 6hrs Main Inspector: [REDACTED]

Site No: FS0264 Site Name: Inverpolly
Business No: FB0132 Business Name: Finfish Ltd

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

Water Temp (°C): 7.84 Thermometer No: T308 FHI 045 completed []

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

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

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

Additional Case Information:

Stock origin: Q4 2024- Kindrum Ireland, input as ova 12/01/2024. Q2 2025- Kindrum Ireland, input as ova 28/03/2024.

Site operates as a flow through system, fed from the River Polly.

Increased Mortality since wk 13 2024: Following report of increased mortality within the Q4 fish, received on 11/04/2024. Initial report for w/b 25/03/2024 noted poor performers in Q4 fish. Following samples being taken on 26/03/2024 and 28/03/2024, results returned on 02/04/2024 positive for *Flavobacterium psychrophilum* (RTFS). Under veterinary advice, site started treating for RTFS with florfenicol on 04/04/2024 (10 day prescription inspected; end date 13/04/2024; 500DD withdrawal). Health report from 13/03/2024 was also inspected - showed that samples were taken from fry within the hatchery, to screen for *Flavobacterium*, salmon gill pox virus, IPN, SAV, PRV, PMCV and *Yersinia*. This increased surveillance was conducted due to health challenges in previous cohorts.

Health sampling by business was conducted 15/04/2024 and confirmed salmon gill pox virus and *Costia* in Q4 fish, as a secondary infection. Treatment began in all tanks on 17/04/2024 with Aquacen formaldehyde and Pyceze/Bronopol under veterinary advice (200ppm and 400ppm respectively).

Mortalities occurred in all tanks similarly; A site inspection and diagnostic test was carried out on 17/04/2024, where 5 tanks were sampled (~60 fish removed). During site inspection, the I-J tanks with fish experiencing increased mortality were inspected and in all tanks, a few fish were seen with pale bodies and darker heads. Few mortalities were observed in the top hat of the tanks. In general, fish were observed to be swimming well and noted to be feeding better.

Site is currently planning to improve and stabilise the water input from environmental influences by installing new filters/disinfection equipment. Currently there is no filtration in I-J rows, except for in the hatchery. Plans to review and improve filtration on site currently being conducted, which includes installing 10micron mesh filters, and potentially disinfection. Works should commence in May 2024.

Site inspection was accompanied by APHA.

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 | 1 Fw hatchery and 58 tanks | Facilities stocked | 1 FW hatchery and 19 tanks | No facilities inspected |
|---------------------------------------|--|------------------------|----------------------------|-------------------------|
| Species | SAL | | | |
| Age group | Q4 2024 | Q2 2025 | | |
| No Fish | 1,143,011 | 1,558,925 | | |
| Mean Fish Wt | 0.41g | 0.1g alevins | | |
| Next Fallow Date (Site) | November 2024 | Next Input Date (Site) | Jan 2025 | |
| Recent (last 4 wks) disease problems? | Y Any escapes (since last visit)? | | | |
| If yes, detail: | flavobacterium psychrophilum, costia (ichthyobodo sp.) and salmon gill pox virus. Reported high mortality from | | | |

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:

florfenicol, T.M.S

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)?

florfenicol, T.M.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?

2. If yes, are results available for inspection?

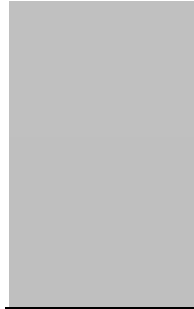
3. Any significant results?

If yes, detail (if not detailed under recent disease problems).

see additional information

Records checked between:

11/11/2023-17/04/2024



1 FW hatchery
and 19 tanks



N

wk 13 2024.



Y

04/2024

Y

Y

Y

Y



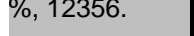
Y



Y

4%; Wk15,

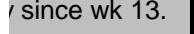
%, 12356.



Y



/ since wk 13.



N



N/A



Y



Case no: Site No: Date of visit/
 Sampling:

Priority samples: VI BA PA MG HI

Time sampling starts/ends: Inspector: VMD No.

Environmental conditions: 1 2 3 4 5

Summary samples HIST BA MG VI PA Total Samples

Add Fish/Pools - click

| Pool/Fish No | P1 | P2 | P3 | P4 | P5 | F1 | F2 | F3 | F4 | F5 | F6 | F7 |
|----------------|--------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Fish nos | F8-F12 | F20-F24 | F34-F38 | F46-F50 | F59-F63 | F1 | F2 | F3 | F4 | F5 | F6 | F7 |
| Pool Group | P1 | P2 | P3 | P4 | P5 | | | | | | | |
| Species | SAL | SAL | SAL | SAL | SAL | SAL | SAL | SAL | SAL | SAL | SAL | SAL |
| Average weight | 0.41g | 0.41g | 0.41g | 0.41g | 0.41g | 0.41g | 0.41g | 0.41g | 0.41g | 0.41g | 0.41g | 0.41g |
| Sex | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Water Type | FW | FW | FW | FW | FW | FW | FW | FW | FW | FW | FW | FW |
| Stock Details | | Inverpolly (FS0264) | Inverpolly (FS0264) | Inverpolly (FS0264) | Inverpolly (FS0264) | Inverpolly (FS0264) | Inverpolly (FS0264) | Inverpolly (FS0264) | Inverpolly (FS0264) | Inverpolly (FS0264) | Inverpolly (FS0264) | Inverpolly (FS0264) |
| | Stock Origin | | | | | | | | | | | |
| Facility No | J9 | J8 | J9 | J10 | J8 | J9 | J9 | J9 | J9 | J9 | J9 | J9 |

04/2024 Additional Sample Information:

Virology pooled due to size of fish. Histology samples taken as whole fish. For imprint samples, liver was used (F13, F25, F38, F51 and F62; imprint test assigned).

45

Total Tests assigned

12

| F13 | F14 | F15 | F16 | F17 | F18 | F19 | F25 | F26 | F27 | F28 | F29 | F30 | F31 | F32 | F33 |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| F13 | F14 | F15 | F16 | F17 | F18 | F19 | F25 | F26 | F27 | F28 | F29 | F30 | F31 | F32 | F33 |
| SAL | SAL | SAL | SAL | SAL | SAL | SAL | SAL | SAL | SAL | SAL | SAL | SAL | SAL | SAL | SAL |
| 0.41g | 0.41g | 0.41g | 0.41g | 0.41g | 0.41g | 0.41g | 0.41g | 0.41g | 0.41g | 0.41g | 0.41g | 0.41g | 0.41g | 0.41g | 0.41g |
| N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| FW | FW | FW | FW | FW | FW | FW | FW | FW | FW | FW | FW | FW | FW | FW | FW |
| Inverpolly (FS0264) | Inverpolly (FS0264) | Inverpolly (FS0264) | Inverpolly (FS0264) | Inverpolly (FS0264) | Inverpolly (FS0264) | Inverpolly (FS0264) | Inverpolly (FS0264) | Inverpolly (FS0264) | Inverpolly (FS0264) | Inverpolly (FS0264) | Inverpolly (FS0264) | Inverpolly (FS0264) | Inverpolly (FS0264) | Inverpolly (FS0264) | Inverpolly (FS0264) |
| J9 | J8 | J8 | J8 | J8 | J8 | J8 | J8 | I9 | I9 | I9 | I9 | I9 | J8 | I9 | I9 |

Case no: 2024-0107

Site No: FS0264

Method of killing: Anaesthetic

Date of visit: 17/04/2024

Inspector(s):

Sheet Relevant: Y

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

| Fish Number | | F1-F13 | F14-25 | F26-F3 | F39-F5 | F52-F62 | | | | |
|--|-----------------------|--------|--------|--------|--------|---------|--|--|--|--|
| Time sampled after death (if > 45 minutes) | | | | | | | | | | |
| External Signs | | | | | | | | | | |
| Behaviour | Moribund | W | W | W | W | W | | | | |
| | Lethargic | W | W | W | W | W | | | | |
| | 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:

Fish removed for sampling were held alive in buckets whilst sampling conducted. Prior to each sampling, each pooled group were anaesthetised which allowed fish to be sampled within 45 minutes of death.

2nd Insp

| | | | | | |
|-------------------------|-----|-----|--|--|--|
| F34-F37 | 3 | I9 | | | |
| F46-F50 | 4 | I10 | | | |
| F59-F61 | 5 | I8 | | | |
| F1-F13 | N/A | J9 | | | |
| F14-25, F31 | N/A | J8 | | | |
| F26- F30,F32- F38 | N/A | I9 | | | |
| F39-F51 | N/A | I10 | | | |
| F52-F62 | N/A | I8 | | | |

Results

Bacteriology: Kidney, gill and spleen material from 15 fish were inoculated onto appropriate media for the isolation of bacteria.

The following bacteria were isolated:

- *Pseudomonas fluorescens* (F29; Gill)
- *Pseudomonas* sp. (F2; Kidney)
- *Flavobacterium* sp. (F2; Kidney)

The level and purity of growth would not suggest these bacteria would be implicated as the primary source of morbidity. However, this would be heavily influenced by antibiotic treatment which would have reduced the numbers.

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

Flavobacterium psychrophilum

| Fish Number | Endogenous control Cp value | Cp Values | | | Reported Result (PCR) |
|-------------|-----------------------------|-----------|-------|-------|-----------------------|
| F6 | - | - | - | - | Negative |
| F18 | - | - | - | - | Negative |
| F32 | 19.11 | 32.47 | 32.21 | 32.53 | POSITIVE |
| F44 | 18.52 | 34.15 | 33.84 | 34.32 | POSITIVE |
| F57 | 18.69 | 32.80 | 33.21 | 32.65 | POSITIVE |

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 poxvirus (SGPV)

| Fish Number | Endogenous control Cp value | Cp Values | | | Reported Result (PCR) |
|-------------|-----------------------------|-----------|--|--|-----------------------|
|-------------|-----------------------------|-----------|--|--|-----------------------|

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| | | | | | |
|------------|-------|-------|-------|-------|----------|
| F6 | 19.17 | 28.18 | 28.28 | 28.29 | POSITIVE |
| F18 | 19.14 | 27.62 | 27.97 | 27.63 | POSITIVE |
| F32 | 19.11 | 25.98 | 26.00 | 25.95 | POSITIVE |
| F44 | 18.52 | 27.51 | 27.65 | 27.72 | POSITIVE |
| F57 | 18.69 | 25.44 | 25.45 | 25.37 | POSITIVE |

The samples tested negative for infectious haematopoietic necrosis virus (IHNV), infectious pancreatic necrosis virus (IPNV) and viral haemorrhagic septicemia virus (VHSV).

Parasitology: Fins from 5 fish were collected to determine the presence of *Gyrodactylus salaris* using light microscopy and molecular techniques (PCR). No *G. salaris* parasites were detected in the samples examined.

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

Ichthyobodo (Costia) sp.

| Fish Number | Endogenous control Cp value | Cp Values | | | Reported Result (PCR) |
|--------------------|------------------------------------|------------------|-------|-------|------------------------------|
| F6 | 19.17 | 24.21 | 24.25 | 24.15 | POSITIVE |
| F18 | 19.14 | 30.09 | 30.13 | 30.10 | POSITIVE |
| F32 | 19.11 | 22.08 | 21.98 | 22.06 | POSITIVE |
| F44 | 18.52 | 22.57 | 22.67 | 22.59 | POSITIVE |
| F57 | 18.69 | 30.55 | 30.12 | 30.44 | POSITIVE |

A floatoblast from *Hirosella fruticosa* (previously *Plumatella fruticosa*), a freshwater bryozoan, was observed in the esophagus of F31. This is of benign environmental origin, however, it is a known host for the myxozoan proliferative kidney disease (PKD) parasite *Tetracapsuloides bryosalmonae*.

Histology: Five whole fish were fixed in 10% neutral buffered formalin.

Histopathological examination revealed the following:

F1 - Marked presence of Costia-like parasite on the integument and gill displayed few Capriniana-like parasites.

F14 - Gill - Hyperplasia and lamellar fusion, mild and multifocal.

F26 - Marked presence of Costia-like parasite on the gill but also observed on integument.

F39 - Marked presence of Costia-like parasite on the integument. Several Capriniana-like parasites were also observed.

F52 - No abnormalities observed.

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: 05/06/2024

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/policies/fish-health-inspectorate/)

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