

Case No: Date of visit:

Time spent on site: Main Inspector:

Site No: Site Name:

Business No: Business Name:

Case Types: 1 2 3 4 5 6

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

Observations: Region: WI Water type: S CoGP MA: W-4

Dead/weak/abnormally behaving fish present?	<input type="text" value="Y"/>	If yes, see additional information/clinical score sheet.
Clinical signs of disease observed?	<input type="text" value="Y"/>	If yes, see additional information/clinical score sheet.
Gross pathology observed?	<input type="text" value="Y"/>	If yes, see additional information/clinical score sheet.
Diagnostic samples taken?	<input type="text" value="Y"/>	

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

Additional Case Information:

Site inspected in order to conduct a further round of diagnostic sampling following increased, further mortality at the site since the date of last inspection, which was 31/07/2023.

Gravir has been harvesting the site out since the start of August this year, during the physical inspection of the site, only one pen remained stocked with 6,000 fish. Due to the size of the pens (120m) only a small number of fish were observed during the inspection, two fish were captured and removed for diagnostic sampling. Of the fish observed during the inspection, clinical signs of disease were observed. Fish appeared extremely lethargic and moribund, some fish presented with a loss of equilibrium in their swimming behaviour and other were observed as being anorexic.

Recent health checks conducted by the companies vet revealed positive results for furunculosis and AGD, which is consistent with the diagnostic findings achieved during the last FHI diagnostic.

No treatments have taken place since the last date of inspection.

Case No: 2023-0463 Site No: FS0242

Date of Visit: 03/10/2023

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)

Table with 4 columns: Field, Value, Facilities stocked, Next Input Date. Rows include Total No facilities (12), Species (SAL), Age group (2022 S0), No Fish (6,000), Mean Fish Wt (2.5kg), Next Fallow Date (Site) (04/10/2023), Recent (last 4 wks) disease problems? (Y), and If yes, detail: (Areomonas salmonicida, AGD, PGD).

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: Whole fish by Whiteshore cockle's, excess mortality has been r
3. Mortality records complete and correctly entered?
4. Recent mortality (last 4 wks): Wk 39 (881, 1.86%), Wk38 10.65%).
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 *increase* 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 determined 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)?

6. Have the husbandry and biosecurity measures implemented between each epidemiological unit to minimise transmission (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?

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).

Records checked between:

31/07/2023 - 01/08/2023

Inspector(s): [Redacted]

N
N

1	No facilities inspected	12
te (Site)	08/24	
Any escapes (since last visit)?		N

		Y
	31/07/2023	
		Y
		Y
		Y
		N/A

[Redacted]

[Redacted] Y

Other (detail)

removed and ensiled on the Bakkaness.

[Redacted] Y

(3024, 2.32%), Wk37 (24,516, 9.21%), Wk36 (34,281,

[Redacted]

[Redacted] N

[Redacted]

[Redacted] N/A

[Redacted]

[Redacted] N/A

[Redacted]

[Redacted] Y

	<input type="checkbox"/>	N
	<input type="checkbox"/>	
	<input type="checkbox"/>	Y
	<input type="checkbox"/>	Y
	<input type="checkbox"/>	N
	<input type="checkbox"/>	
	<input type="checkbox"/>	Y
	<input type="checkbox"/>	
	<input type="checkbox"/>	
...d (<i>unexplained</i>) mortality at the site been	<input type="checkbox"/>	
...ected been included and <i>how</i> and <i>when</i>	<input type="checkbox"/>	
...tatus, certification if required)?	<input type="checkbox"/>	
...ission of disease been covered	<input type="checkbox"/>	
...imals held on site?	<input type="checkbox"/>	
	<input type="checkbox"/>	
	<input type="checkbox"/>	Y
	<input type="checkbox"/>	Y
	<input type="checkbox"/>	Y
See additional info		
03/10/2023		

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	F1	F2									
	Fish nos	1	2									
	Pool Group											
Stock Details	Species	SAL	SAL									
	Average weight	2.5kg	2.5kg									
	Sex	N/A	N/A									
	Water Type	SW	SW									
	Stock Origin	Applecross (FS0500)	Applecross (FS0500)									
	Facility No	4	4									

Additional comments:

Swollen PC in F2.

Site No: FS0242

Case No: 2023-0463

Nature of non-compliance:

Action taken (FHI):

Non-compliance relevant to (delete): VirologyMolGen/Bacteriology/Histology/Parasitology





FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

BUSINESS No	FB0169	DATE OF VISIT	03/10/2023
SITE No	FS0242	SITE NAME	Gravir
CASE No	20230463	INSPECTOR	[REDACTED]

Section 1: Summary

The above site was inspected following reports of increased mortality by the farm operator. During the inspection of the site, two fish were removed for diagnostic sampling.

Histopathology examination revealed moderate, multifocal, hyperplastic branchitis. F2 also displayed features resembling *Aeromonas salmonicida* (furunculosis). Hepatocellular necrosis and necrotising nephritis also observed. One fish also displayed areas of light HE stain in the compactum stratum.

Aeromonas salmonicida was identified on plates taken from kidney material from both fish tested, the level and purity of growth would suggest that this bacterium is present as a primary pathogen. From our antimicrobial sensitivity testing there is no evidence of resistance to AML, FFC, SXT or OT.

Serratia liquefaciens was identified on plates taken from kidney material of fish 1 and gill material of 2/2 fish. The level and purity of growth would suggest this bacterium may also be implicated in morbidity in this fish.

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 2: Case Detail

Observations

The site was previously inspected on 31/07/2023 and diagnostic samples were taken, please refer to the previous report for results.

The site was reinspected due to continued high levels of reported mortality since the date of last inspection. At the time of inspection, Garvir were nearing the end of their harvest, approximately 6,000 fish were left onsite from one pen which was due to be harvested the following day. Due to the low biomass, only a few fish were observed within this pen. Of the visible stock which was observed, fish appeared lethargic and moribund. Two fish were captured and removed for diagnostic sampling. The stock had previously been diagnosed with Furunculosis and have had ongoing, persistent issues with gill health which had been exacerbated by an environmental insult earlier in the year.

Both fish sampled presented as lethargic and moribund prior to removal for sampling. Externally, F2 had shortened opercula and haemorrhaging was observed at the ventrum. The Gills of both fish were pale. Internally, F2 had bloody ascites within the body cavity, the heart was pale and anaemic

and some tissue breakdown was observed on the liver. Petechial haemorrhaging was observed on the pyloric caeca, the spleen was enlarged and the swim bladder was fluid filled in F2. Both fish had yellow pseudo-faeces present within the gut.

Samples

Samples were collected from 2 fish according to the table below:

Fish number	Facility number	Species	Stage	Origin
F1	4	Atlantic Salmon	2022 S0 2.5kg	Applecross (FS0500)
F2	4	Atlantic Salmon	2022 S0 2.5kg	Applecross (FS0500)

Results

Bacteriology: Kidney and gill material from two fish was inoculated onto appropriate media for the isolation of bacteria.

The following bacteria were isolated:

- *Areomonas salmonicida* : F1 & F2 (Kidney)
- *Serratia liquefaciens* : F1 (Kidney), F1 & F2 (Gill)

From the tests conducted, we do not have evidence of resistance to amoxicillin, oxytetracycline, sulphamethoxazole/trimethoprim or florfenicol.

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

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

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

Paranucleospora theridion

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	19.36	29.88	29.78	29.95	POSITIVE
F2	18.99	26.64	26.43	26.65	POSITIVE

Neoparamoeba perurans (AGD)

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	19.36	32.94	32.17	32.62	POSITIVE
F2	18.99	33.23	-	-	Negative

Histology: Tissue samples of gill, skin and skeletal muscle, heart, pyloric caeca, pancreas, hind gut, liver, spleen and kidney were taken from 2 fish. The tissue samples were fixed in 10% neutral buffered formalin.

Histopathological examination revealed the following:

Gill: Filament branchitis, moderate, multifocal (F1, F2), mainly observed at the filament tips. F2 also displayed tiny areas of necrosis. Free blood among gill filaments (F1 & F2).

Skin & Muscle: Degeneration of the white skeletal musculature, mild, multifocal (F2).

Heart: Marked eipcarditis and Gram-negative bacterial aggregates observed on the atrium chamber wall (F2). Areas of light H&E stain observed in the compact layer (F2).

Gut and pyloric caeca: Peritonitis, mild (F2).

Pancreas: Within the normal range.

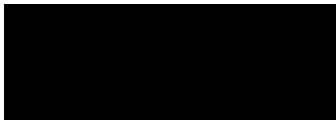
Liver: Hepatocellular necrosis, mild, multifocal (F1 & F2). Moderate, capsulitis (F2), some cuffing (F1). Mild, multifocal, hepatocellular vacuolation (macrovesicles) (F2).

Kidney: Foci of interstitial cell (haemopoietic) granuloma-like structures with few rod-shaped Gram negative bacetria (F1) and areas of interstitial cell (haemopoietic) necrosis (F2), mild, multifocal.

Spleen: Necrotising splenitis with Gram-negative rod-shaped bacteria, multifocal, mild (F3), few aggregates of Gram-negative rod-shaped bacteria in F2, F3, F4. F5 exhibited cuffing (F4).

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

Signed:



Date: 03/10/2023

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/resources/consultations-petitions/Publications/2022/03/Fish_Health_Inspectorate_Service_Charter.pdf)

AFH-2023-0463

