

Case No:	<input type="text" value="2022-0578"/>	Date of visit:	<input type="text" value="17/11/2022"/>			
Time spent on site:	<input type="text" value="7 Hours"/>	Main Inspector:	<input type="text" value=""/>			
Site No:	<input type="text" value="FS0805"/>	Site Name:	<input type="text" value="Bagh Dail Nan Cean"/>			
Business No:	<input type="text" value="FB0119"/>	Business Name:	<input type="text" value="Mowi Scotland Ltd"/>			
Case Types:	1 <input type="text" value="DIA"/>	2 <input type="text" value="REP"/>	3 <input type="text" value=""/>	4 <input type="text" value=""/>	5 <input type="text" value=""/>	6 <input type="text" value=""/>
Water Temp (°C):	<input type="text" value="11.2"/>	Thermometer No:	<input type="text" value="Site"/>	FHI 045 completed	<input type="text" value=""/>	
Observations:	Region:	ST	Water type:	S	CoGP MA	M-40
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:

21/10 - gill treatment started and mortality started to flare up.

Stoffinfisker and Aquagen on site, both have experienced similar levels of mortality. Recent mortalities on site have been attributed to complex gill issues, Rickettsia and Moritella. Mortality is constant across the whole site, however pens 6, 9, and 3 appear to be worst affected.

Cleaner fish mortality - LUM - 182,756 - 100% main cause has been flavovirus - 86,614 mortalities recorded. <100,000 not recorded.

Wrasse mortality - 31,484 Since input across the site. Background mortality.

Additional information on lumpfish mortalities -

During the inspection it was found that the site had suffered 100% mortalities of their lumpfish since input. Of these 86,614 were recorded with cause and around 100,000 had not been recorded. This has been referred to the Animal and Plant Health Agency, as they have responsibility for welfare. As ~100,000 mortalities of lumpfish were not recorded, these were not reported to the FHI, or the company vet.

Only 3 cages inspected on site due to timing constraints.

Site thermometer used as case inspector's was unavailable.

Paperwork conducted by [REDACTED], observed by [REDACTED], Diagnostic sampling carried out by [REDACTED], supervised by [REDACTED].

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="12"/>	Facilities stocked	<input type="text" value="10"/>	No facilities inspected	<input type="text" value="3"/>
Species	<input type="text" value="SAL"/>	<input type="text" value="WRA"/>			
Age group	<input type="text" value="22 Q2"/>	<input type="text" value="Mix"/>			
No Fish	<input type="text" value="620,730"/>	<input type="text" value="68,853"/>			
Mean Fish Wt	<input type="text" value="1.755 Kg"/>	<input type="text" value="60 - 80g"/>			
Next Fallow Date (Site)	<input type="text" value="Aug 2023"/>		Next Input Date (Site)	<input type="text" value="Apr 2024"/>	
Recent (last 4 wks) disease problems?			<input type="text" value="Y"/>	Any escapes (since last visit)?	<input type="text" value="N"/>
If yes, detail:	<input type="text" value="Rickettsia, Moritella, and CGD"/>				

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:

See additional information

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)? Y

If yes, detail: Florfenicol, H2O2, 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: Florfenicol

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). _____

Records checked between: 12/11/2021 - 17/11/2022

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	F3	F4	F5	P1						
Fish nos	1	2	3	4	5	1-5						
Pool Group	P1	P1	P1	P1	P1							
Species	SAL	SAL	SAL	SAL	SAL							
Average weight	1.75kg	1.75kg	1.75kg	1.75kg	1.75kg							
Sex	N/A	N/A	N/A	N/A	N/A							
Water Type	SW	SW	SW	SW	SW							
Stock Details		Inchmore	Inchmore	Inchmore	Inchmore	Loch Lochy						
	Stock Origin											
Facility No	6	6	9	9	3							

11/2022 Additional Sample Information:

Sampled by [Redacted]

[6] Total Tests assigned [4]

Case no: 2022-0578

Site No: FS0805

Method of killing: Percussive

Date of visit: 17/11/2022

Inspector(s):

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)				30	60	90				
External Signs										
Behaviour	Moribund	W	W	W	W	W				
	Lethargic									
	Hanging vertical									
	Spiralling									
	Flashing									
	Loss of equilibrium									
Body	Dark									
	Distended abdomen									
	Anorexic									
	Scale Oedema									
Opercula	Shortened					W				
	Flared									
Haemorrhaging	Throat									
	Ventrum									
	Base of fins									
	Elsewhere									
Eyes	Exophthalmic									
	Enophthalmic (sunken)									
	Cataract									
	Haemorrhagic									
Gills	Pale									
	Zoned									
	Necrotic									
Lesions	Flank				W	W				
	Elsewhere									
Vent	Inflamed									
	Trailing faeces									
Lice Load	Estimate numbers	1	0	0	0	0				
Internal Signs										
Ascites	Clear	S			S					
	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		M	M		S				
	External haem									
	Internal haem									
Body wall	Haemorrhaging									
Swim bladder	Haemorrhaging									
	Fluid filled									
Kidney	Swollen									
	Grey									
	Granular									
	Liquefied									
General	Parasites present									
	Anaemia									

Case no: **2022-0578**Date of visit: **17/11/2022**

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

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:

Gills were all very bloody due to percussive blow

Site No: FS0805

Case No: 2022-0578

Nature of non-compliance:

Action taken (FHI):

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

Case No: 2022-0578 Date of visit: 17/11/2022
 Site No: FS0805 Inspector: [Redacted]

Results Summary	Freq.	Date of Notification						
		Database	Insp	Phone	Insp	Writing	Insp	2 nd Insp
MG_AGDQ	5/5	23/11/2022		30/11/2022		30/01/2023		
MG_IHNQ	0/5	23/11/2022		30/11/2022		30/01/2023		
MG_IPN	0/5	23/11/2022		30/11/2022		30/01/2023		
MG_ISA	0/5	23/11/2022		30/11/2022		30/01/2023		
MG_PISCI	3/5	23/11/2022		30/11/2022		30/01/2023		
MG_PARA_THER_Q	5/5	23/11/2022		30/11/2022		30/01/2023		
MG_PMCV	0/5	23/11/2022		30/11/2022		30/01/2023		
MG_SAL_POX	5/5	23/11/2022		30/11/2022		30/01/2023		
MG_SAV	0/5	23/11/2022		30/11/2022		30/01/2023		
MG_VHS	0/5	23/11/2022		30/11/2022		30/01/2023		
CGDH	5/5	01/12/2022		08/12/2022		30/01/2023		
EPIT	5/5	01/12/2022		08/12/2022		30/01/2023		
ADHE	3/5	01/12/2022		08/12/2022		30/01/2023		
LPAT	4/5	01/12/2022		08/12/2022		30/01/2023		
AMGD	5/5	01/12/2022		08/12/2022		30/01/2023		
VSPE Isolate A	5/5	07/12/2022		08/12/2022		30/01/2023		
VSPE Isolate B	5/5	07/12/2022		08/12/2022		30/01/2023		

Report Summary			
Case Type	Date	Insp	2 nd Insp
DIAG, REP	30/01/2023		

AMENDED FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

BUSINESS No	FB0119	DATE OF VISIT	17/11/2022
SITE No	FS0805	SITE NAME	Bagh Dail Nan Cean
CASE No	20220578	INSPECTOR	[REDACTED]

This report replaces the fish health report R09 issued on 30/01/2023 by [REDACTED]. The previous report should be discarded. The comments on the report have been deleted.

Section 1: Summary

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

Histopathology examination revealed moderate to marked hyperplastic branchitis. Epitheliocystis (likely *Ca. Branchiomonas cysticola*) and amoebic gill disease (AGD) were observed. Some gill lesions could also be associated with environmental factors. Mild peritonitis (potentially associated with vaccine administration) and mild, multifocal hepatic necrosis were also observed.

All five fish tested positive for salmon gill poxvirus, *Paranucleospora theridion* and *Neoparamoeba perurans* (amoebic gill disease (AGD)). F1, F2 and F5 tested positive for *Piscirickettsia salmonis* (SRS).

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

Following three weeks of increased mortality notifications above the reporting threshold which began at 3.36% and peaked at 12.66% in the third week, a site inspection was conducted and diagnostic samples taken for analysis.

Mortality removal had occurred in the morning before visual inspection of the site occurred. During inspection of the site very few moribund fish were observed. The vast majority of fish were seen shoaling approximately 2m below the water surface. Only slow moribund fish at the water surface or just below were able to be caught.

All fish sampled were moribund. F5 had a shortened opercula and F4 and F5 had small lesions on their flank. A *Caligus* was observed on F1 but no lice were observed on F2-F5.

R09

During internal examination, F1 and F4 contained clear ascites. Yellow pseudo-faeces was present in F2, F3 and F5.

Samples

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

Fish number	Facility number	Species	Stage	Origin
1-2	6	Atlantic Salmon	1.76kg 2022 Q2	Inchmore Aquagen
3-4	9	Atlantic Salmon	1.76kg 2022 Q2	Inchmore Fanad
5	3	Atlantic Salmon	1.76kg 2022 Q2	Fanad

Results

Bacteriology: Kidney and gill material from F1-5 and lesion material from F4 were inoculated onto appropriate media for the isolation of bacteria.

No growth was observed on plates taken from kidney material. The two predominant bacterial colonies observed on plates taken from gill material of all 5 fish were both identified as *Vibrio* spp. The level and purity of the growth observed would not suggest they would be implicated in morbidity and are likely to be of environmental origin.

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

Piscirickettsia salmonis (SRS)

Fish Number	Endogenous control Cp value	Cp Values			Reported result
1	19.97	>40	>40	>40	POSITIVE
2	20.15	38.41	>40	>40	POSITIVE
3	-	-	-	-	NEGATIVE
4	-	-	-	-	NEGATIVE
5	20.35	37.16	37.1	37	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

Fish Number	Endogenous control Cp value	Cp Values			Reported result
1	21.54	26.67	26.74	26.78	POSITIVE
2	20.93	31.08	31.17	30.9	POSITIVE
3	21.53	25.12	24.81	25.1	POSITIVE
4	20.79	26.82	26.86	26.76	POSITIVE
5	20.36	27.88	27.68	27.73	POSITIVE

R09

Tissue samples tested negative for the presence of infectious haematopoietic necrosis virus (IHNV), infectious pancreatic necrosis virus (IPNV), infectious salmon anaemia virus (ISAV), viral haemorrhagic septicaemia virus (VHSV) 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).

Neoparamoeba perurans (AGD)

Fish Number	Endogenous control Cp value	Cp Values			Reported result
1	21.54	28.05	28.25	28.21	POSITIVE
2	20.93	28.83	28.9	28.82	POSITIVE
3	21.53	27.67	27.57	27.35	POSITIVE
4	20.79	27.74	27.54	27.77	POSITIVE
5	20.36	25.03	24.92	25.09	POSITIVE

Paranucleospora theridion

Fish Number	Endogenous control Cp value	Cp Values			Reported result
1	21.54	26.31	26.37	26.34	POSITIVE
2	20.93	27.08	26.8	26.96	POSITIVE
3	21.53	28.58	28.62	28.65	POSITIVE
4	20.79	25.05	25.08	25.07	POSITIVE
5	20.36	20.87	21.11	21.17	POSITIVE

Histology: Tissue samples of gill, skin and skeletal muscle, heart, pyloric caeca, 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:

Tissues from 5 Atlantic salmon were examined by light microscopy. The following histopathological changes were observed:

Gill: Filament hyperplasia and lamellar fusion moderate to marked, multifocal, filament branchitis, mild, multifocal (F1-F5) and haemorrhage and inflammatory cell infiltration (F4, F5). Presence of several amoeboid cells resembling *Neoparamoeba perurans* observed in all fish and few basophilic epithelial inclusions (likely epitheliocystis) (F1-F5). Lamellar telangiectasia with multifocal thrombosis and free blood among gill filaments (F1-F5). F1 displayed among gill filaments some structures resembling plankton.

Skin & Muscle: Mild, multifocal dermatitis (F4, F5).

Heart: Some small foci of cell infiltration (F2, F3, F5). Mild epicarditis (F2).

Gut and pyloric caeca: Peritonitis, mild (F2, F3, F5), cell sloughing (potentially associated with post-mortem artefacts) (F4, F5).

Pancreas: Within the normal range.

R09

Liver: Hepatocellular necrosis, mild, multifocal (F1, F3, F5). Some cuffing (F2), some diffuse hepatocellular vacuolation (macrovisicules) (F2).

Kidney: Renal tubules with hyaline droplets (F2, F4 & F5).

Spleen: Peritonitis, mild (F5). Some cuffing (F4, F5), slightly congested (F2).

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

Signed:



Fish Health Inspector

Date: 07/02/2023

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Marine Scotland website at <https://www.gov.scot/publications/fish-health-inspectorate-service-charter/>

Case No:	2022-0579	Date of visit:	17/11/2022			
Time spent on site:	7 hours	Main Inspector:				
Site No:	FS0629	Site Name:	Poll Na Gille			
Business No:	FB0119	Business Name:	Mowi Scotland Ltd			
Case Types:	1 DIA	2 REP	3	4	5	6
Water Temp (°C):	11.4	Thermometer No:	Site	FHI 045 completed		
Observations:	Region:	ST	Water type:	S	CoGP MA	M-40
Dead/weak/abnormally behaving fish present?	<input type="checkbox"/>	If yes, see additional information/clinical score sheet.				
Clinical signs of disease observed?	<input type="checkbox"/>	If yes, see additional information/clinical score sheet.				
Gross pathology observed?	<input type="checkbox"/>	If yes, see additional information/clinical score sheet.				
Diagnostic samples taken?	<input type="checkbox"/>					

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

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Additional Case Information:

Mortality began after a peroxide treatment (suspected AGD), reported to FHI - Wk38 (1.04% 8930 fish). Bacterial infection suspected, Rickettsia - treatment with antibiotics florfenicol, however no decrease in mortality has been observed.

Companies own health surveillance found Tenacibaculum - +ve in salmon, although no clinical sign.

Most recent slice treatment - ended 24th August 22

Lumpfish mortality since input - 155,645 - freshwater treatment in August

Wrasse Mortality since input - 9982 - background mortality

Lumpfish mortality over 75% since input in may 22:

Week of the 10th Aug 22 - 11,000

from the 1st to the 10th Aug 22 - ~46,000 - Suspected viral infection of lumpfish, flavivirus - although FW treatment was taking place.

There was an outbreak of flavivirus on site, although site manager was told this outbreak occurred in the hatchery

Lumpfish mortality by month: May 22 - 562, June - 8162, July - 15,979, August - 126067 and September - 3564.

Two salmon stocks on site - StofnFiskur and Aquagen.

Site thermometer used as inspectors was unavailable.

Paperwork completed by ■■■■■, observed by ■■■■■ Site inspection and diagnostic carried out by ■■■■■.

Case No: **2022-0579** Site No: **FS0629**
 Date of Visit: **17/11/2022** Inspector(s): **[REDACTED]**

Registration/Authorisation Details

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

Site Details (include cleaner fish for all sections)

Total No facilities	12	Facilities stocked	12	No facilities inspected	2
Species	SAL LUM	WRA			
Age group	22 Q2	2021	Mix		
No Fish	697,425	7,679	52,981		
Mean Fish Wt	1.35kg	45 g	Mix		
Next Fallow Date (Site)	Summer 2023		Next Input Date (Site)	Spring 2024	
Recent (last 4 wks) disease problems?			Y	Any escapes (since last visit)?	N
If yes, detail:	AGD, Rickettsia.				

Movement Records

1. Movement records available for inspection? **Y**
 2. Date of last inspection: **08/06/2022**
 3. Are records complete and correctly entered? **Y**
 4. Are movement records available for dead fish and waste? **Y**
 5. Are records complete and correctly entered? **Y**
 6. Are health certificates for introductions (outwith GB) available? **N/A**

Transport Records

1. Are any movements carried out by (or on behalf) of the business (not using a STB)? **[REDACTED]**
 If yes, is there a system in place for maintenance of transportation records? **[REDACTED]**

Mortality Records

1. Mortality records available for inspection? **Y**
 2. How are mortalities disposed of? **Whole fish - Dundas Chemicals**
 If other detail: **[REDACTED]**
 3. Mortality records complete and correctly entered? **Y**
 4. Recent mortality (last 4 wks): **Wk42 - 0.34% (2872 fish), Wk43 - 1.73% (14,548 fish), Wk44 - 3.61% (29,908 fish) and Wk45 - 8.4% (67,035 fish)**
 5. Evidence of recent increased/atypical mortalities? **Y**
 If yes, facility nos/no mortality per facility/no stock per facility/reason: **[REDACTED]**

Pen 6 worst on site
 6. Any other peaks in mortality during period checked? **Y**
 If yes, detail: **WK38 - 1.04% - Peroxide treatment**
 7. Have increased (unexplained) mortalities been reported to vet or FHI? **Y**
 If yes, detail action: **See additional comments on clearfish mortality**
 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: Florfenicol, H2O2, T.M.S., Slice

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)? Florfenicol, 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).

Records checked between: 08/06/2022 - 17/11/2022

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	F3	F4	F5	P1						
Fish nos	1	2	3	4	5	1-5						
Pool Group	P1	P1	P1	P1	P1							
Species	SAL	SAL	SAL	SAL	SAL	SAL						
Average weight	1.3kg	1.3kg	1.3kg	1.3kg	1.3kg	1.3kg						
Sex	N/A	N/A	N/A	N/A	N/A	N/A						
Water Type	SW	SW	SW	SW	SW	SW						
Stock Details		Inchmore	Inchmore	Inchmore	Inchmore	Inchmore						
	Stock Origin											
Facility No	6	6	6	2	2							

11/2022

Additional Sample Information:

--

6

Total Tests assigned

5

Case no: 2022-0579

Site No: FS0629

Method of killing: Percussive

Date of visit: 17/11/2022

Inspector(s):

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)				20	40	60				
External Signs										
Behaviour	Moribund	M	M	M	M	M				
	Lethargic	M	M	M	M	M				
	Hanging vertical									
	Spiralling									
	Flashing									
	Loss of equilibrium									
Body	Dark									
	Distended abdomen									
	Anorexic									
	Scale Oedema									
Opercula	Shortened	M								
	Flared									
Haemorrhaging	Throat									
	Ventrum									
	Base of fins									
	Elsewhere									
Eyes	Exophthalmic									
	Enophthalmic (sunken)									
	Cataract									
	Haemorrhagic									
Gills	Pale									
	Zoned									
	Necrotic									
Lesions	Flank					W				
	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)	5	5	4	4	4				
	Granulomas									
	Lesions									
Pyloric caeca	Petechial haem									
	Tubules mauve									
	Lack of fat									
Spleen	Enlarged	M	M	M	M	M				
	Granulomas									
Gut	No food present									
	Yellow pseudo-faeces	S		S						
	External haem									
	Internal haem									
Body wall	Haemorrhaging									
Swim bladder	Haemorrhaging									
	Fluid filled									
Kidney	Swollen									
	Grey									
	Granular									
	Liquefied									
General	Parasites present									
	Anaemia									

Case no: 2022-0579

Date of visit: 17/11/2022

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

Fish Number																				
Time sampled after death (if > 45 minutes)																				
External Signs																				
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	Granular																			
	Liquefied																			
General	Parasites present																			
	Anaemia																			

Additional comments:

Site No: FS0629

Case No: 2022-0579

Nature of non-compliance:

Action taken (FHI):

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

Case No: **2022-0579** Date of visit: **17/11/2022**
 Site No: **FS0629** Inspector: **[REDACTED]**

Results Summary	Freq.	Date of Notification						
		Database	Insp	Phone	Insp	Writing	Insp	2 nd Insp
MG_AGD	5/5	23/11/2022		30/11/2022		30/01/2023		
MG_IHN	0/5	23/11/2022		30/11/2022		30/01/2023		
MG_IPN	0/5	23/11/2022		30/11/2022		30/01/2023		
MG_ISA	0/5	23/11/2022		30/11/2022		30/01/2023		
MG_PARA_THER	5/5	23/11/2022		30/11/2022		30/01/2023		
MG_PMCV	0/5	23/11/2022		30/11/2022		30/01/2023		
MG_SAL_POX	5/5	23/11/2022		30/11/2022		30/01/2023		
MG_SAV	0/5	23/11/2022		30/11/2022		30/01/2023		
MG_VHS	0/5	23/11/2022		30/11/2022		30/01/2023		
MG_PISCI	2/5	23/11/2022		30/11/2022		30/01/2023		
EPIT	5/5	06/12/2022		08/12/2022		30/01/2023		
Adhesions	4/5	06/12/2022		08/12/2022		30/01/2023		
AMGD	5/5	06/12/2022		08/12/2022		30/01/2023		
LPAT	4/5	06/12/2022		08/12/2022		30/01/2023		
NSIG	3/5	02/12/2022		08/12/2022		30/01/2023		
GPAT	5/5	06/12/2022		08/12/2022		30/01/2023		

Report Summary			
Case Type	Date	Insp	2 nd Insp
DIAG	30/01/2023		
REP	30/01/2023		

FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

BUSINESS No	FB0119	DATE OF VISIT	17/11/2022
SITE No	FS0629	SITE NAME	Poll Na Gille
CASE No	20220579	INSPECTOR	[REDACTED]

Section 1: Summary

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

Histopathology examination revealed mild, multifocal hyperplastic branchitis along with epitheliocystis (likely *Ca. Branchiomonas cysticola*) and amoebic gill disease (AGD). Mild peritonitis potentially associated with vaccine administration and mild, multifocal hepatic necrosis were also observed.

All five fish tested positive using qPCR for Salmon gill poxvirus, *Paranucleospora theridion* and *Neoparamoeba perurans* (amoebic gill disease (AGD)). F1 and F2 tested positive for *Piscirickettsia salmonis* (SRS).

No significant bacterial growth was observed on plates taken from kidney material of all five 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

Following three weeks of increased mortality notifications above the reporting threshold which began at 1.73% and peaked at 8.4% in the third week, a site inspection was conducted and diagnostic samples taken for analysis.

Mortality removal had occurred in the morning before visual inspection of the site occurred. During inspection of the site very few moribund fish were observed. Only slow moribund fish at the water surface or just below were able to be caught.

All fish sampled were moribund and lethargic. F1 had a shortened opercula and F5 had a small lesion on its' flank. No lice were observed on any of the sampled fish.

During internal examination, all five fish had enlarged spleens and yellow pseudo-faeces was present in F1 and F3.

R09

Samples

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

Fish number	Facility number	Species	Stage	Origin
1-3	6	Atlantic Salmon	1.3kg 2022 Q2	Aquagen
4-5	2	Atlantic Salmon	1.3kg 2022 Q2	Stoffinfisker

Results

Bacteriology: Kidney and gill material from F1-5 and lesion material from F5 were inoculated onto appropriate media for the isolation of bacteria. There was no significant bacterial growth.

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

Piscirickettsia salmonis (SRS)

Fish Number	Endogenous control Cp value	Cp Values			Reported result
1	18.9	39.51	41.27	39.03	POSITIVE
2	18.6	41.76	38.8	40.79	POSITIVE
3	-	-	-	-	NEGATIVE
4	-	-	-	-	NEGATIVE
5	-	-	-	-	NEGATIVE

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

Fish Number	Endogenous control Cp value	Cp Values			Reported result
1	19.47	27.5	27.76	27.69	POSITIVE
2	19.42	28.06	27.76	27.66	POSITIVE
3	19.34	30.71	30.71	30.46	POSITIVE
4	18.96	31.51	31.27	31.41	POSITIVE
5	19.34	25.76	25.73	25.75	POSITIVE

Tissue samples were tested and were negative for the presence of infectious haematopoietic necrosis virus (IHNV), infectious pancreatic necrosis virus (IPNV), infectious salmon anaemia virus (ISAV), viral haemorrhagic septicaemia virus (VHSV) and piscine myocarditis virus (PMCV) by qPCR.

R09

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
1	19.47	28.28	28.28	28.35	POSITIVE
2	19.42	26.9	26.75	26.91	POSITIVE
3	19.34	25.84	25.95	25.92	POSITIVE
4	18.96	25.42	25.44	25.54	POSITIVE
5	19.34	26.31	26.33	26.46	POSITIVE

Paranucleospora theridion

Fish Number	Endogenous control Cp value	Cp Values			Reported result
1	19.47	26.26	26.77	26.18	POSITIVE
2	19.42	25.21	25.66	25.32	POSITIVE
3	19.34	27.39	27.33	27.64	POSITIVE
4	18.96	22.9	22.86	22.47	POSITIVE
5	19.34	21.75	22.11	21.95	POSITIVE

Histology: Tissue samples of gill, skin and skeletal muscle, heart, pyloric caeca, 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: Filament hyperplasia and lamellar fusion moderate to marked, multifocal, filament branchitis, mild, multifocal (F4-F5). Presence of several amoeboid cells resembling *Neoparamoeba perurans* observed in all fish and few basophilic epithelial inclusions (likely epitheliocystis) (F1-F5). F2 also displayed some lamellar necrosis. Lamellar telangiectasia with multifocal thrombosis and free blood among gill filaments (F1-F5).

Skin & Muscle: Mild, multifocal dermatitis and myositis (F5).

Heart: Very mild, multifocal myocarditis (F5). Mild epicarditis (F2).

Gut and pyloric caeca: Peritonitis, mild (potentially associated with vaccine administration) (F2, F4, F5). F4 hindgut displayed haemorrhage.

Pancreas: Within the normal range.

Liver: Hepatocellular necrosis, mild, multifocal (F1, F2, F3, F5).

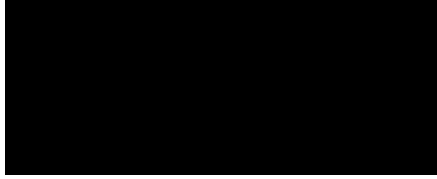
Kidney: interstitial cell (haemopoietic) necrosis mild, multifocal (F2). Renal tubules with hyaline droplets (F2, F3).

Spleen: Splenic necrosis, mild, multifocal (F5).

R09

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

Signed:



Date: 26/01/2023

Fish Health Inspector

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Marine Scotland website at <https://www.gov.scot/publications/fish-health-inspectorate-service-charter/>