

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-3

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:

Additional Case Information:

Fish currently being treated with salmosan.

Mortality information (last 4 weeks)

21st - 27th October - 36878 - 4.66%

14th - 20th October - 25 072 - 3.07%

7th - 13th October - 2211 - 0.41%

30th sep - 6th of October - 2070 - 0.24%

Site has been experiencing issues with sea lice and complex gill issues. Grading out damaged fish to commence after treatments have been completed.

All pens showed signs of moderate to severe lice damage. However most fish appeared clear of lice, number brought down by recent round of treatments.

Mortality in week 32 in 2017 was not reported. Week was in middle of mortality event involving p.skyensis. FHI visited site and collected mortality data. Mortality events initially reported to the FHI, however one week was missing from company submission. Missing week was collected during inspection.

five fish diagnostic taken, Fish sampled for VMD appeared healthy internally, however gills were pale, showing signs of CGD.

Inspection, sampling and paperwork carried out by [REDACTED] supervised by [REDACTED]

Case No: **2019-0647** Site No: **FS1033**
 Date of Visit: **28/10/2019** Inspector(s): **[Redacted]**

Registration/Authorisation Details

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

Site Details

Total No facilities	17	Facilities stocked	15	No facilities inspected	17
Species	SAL	SAL			
Age group	18 Q4's	18 Q4's			
No Fish	285,356	469,960			
Mean Fish Wt	2.94	3.16			
Next Fallow Date (Site)	May 2020		Next Input Date (Site)	Sept/Oct 2020	

Recent (last 4 wks) disease problems? **Y** Any escapes (since last visit)? **N**
 If yes, detail: **Complex gill issues**

Movement Records

1. Movement records available for inspection? **Y**
 2. Date of last inspection: **18/10/2017**
 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)? **N**
 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? **Ensiled - on site**
 If other detail: **[Redacted]**
 3. Mortality records complete and correctly entered? **Y**
 4. Recent mortality (last 4 wks): **wk43(36878 -4.66%)wk42(25052-3.07%)wk41(3350-0.41%)wk40(2070-0.24%)**
 5. Evidence of recent increased/atypical mortalities? **Y**
 If yes, facility nos/no mortality per facility/no stock per facility/reason:
2, 4, 11, 17. Worst affected. All cages affected by plankton bloom
 6. Any other peaks in mortality during period checked? **Y**
 If yes, detail: **Large mortality at end of 2017 - gill health. Reported to FHI**
 7. Have increased (unexplained) mortalities been reported to vet or FHI? **Y**
 If yes, detail action: **Fish vet group have been out. FHI were notified of increased mortality**
 8. Have 'mortality events' been reported to FHI? If no, add MRT case and enter on mortality events sheet. **N**

1. Recent treatments (last 4 wks)?	<input type="checkbox"/>	Y
If yes, detail:	T.M.S., Salmosan	
If other, detail:		
2. Medicines records available for inspection?	<input type="checkbox"/>	Y
3. Are records complete and correctly entered?	<input type="checkbox"/>	Y
4. Are fish in a withdrawal period?	<input type="checkbox"/>	Y
5. If yes, what treatment(s)?	TMS	
If other, detail:		
6. Are medicines stored appropriately?	<input type="checkbox"/>	Y

Biosecurity Records

1. Biosecurity records available for inspection?	<input type="checkbox"/>	Y
2. Has the manner and frequency of mortality removal, recording and safe disposal been considered?	<input type="checkbox"/>	Y
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?	<input type="checkbox"/>	Y
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 <i>how</i> and <i>when</i> that will be notified to Scottish Ministers?	<input type="checkbox"/>	Y
5. Has the health status of aquaculture animals being stocked on the farm site been covered (equal or higher health status, certification if required)?	<input type="checkbox"/>	Y
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.)?	<input type="checkbox"/>	Y
7. Is documentation available regarding the measures in place to maintain the physical containment of aquaculture animals held on site?	<input type="checkbox"/>	Y
8. Have the biosecurity procedures been adequately implemented on site?	<input type="checkbox"/>	Y
If no, detail:		

Results of Surveillance

1. Has any animal health surveillance been carried out by, or on behalf of, the business?	<input type="checkbox"/>	Y
2. If yes, are results available for inspection?	<input type="checkbox"/>	Y
3. Any significant results?	<input type="checkbox"/>	Y
If yes, detail (if not detailed under recent disease problems).		

Gill damage caused by waterborne irritant. Anaemia, evidence of AGD.

Records checked between: 18/10/2017- 29/10/2019

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	F6	F7	F8	F9		
Fish nos	1	2	3	4	5	1-5						
Pool Group	P1	P1	P1	P1	P1							
Species	SAL	SAL	SAL	SAL	SAL	SAL	SAL	SAL	SAL	SAL		
Average weight	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000		
Sex	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Water Type	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW		
Stock Details	Loch lochy/lochailort	Loch lochy/lochailort	Loch lochy/lochailort	Loch lochy/lochailort	Loch lochy/lochailort	Loch lochy/lochailort	Loch lochy/lochailort	Loch lochy/lochailort	Loch lochy/lochailort	Loch lochy/lochailort		
	Stock Origin	Loch lochy/lochailort	Loch lochy/lochailort	Loch lochy/lochailort	Loch lochy/lochailort	Loch lochy/lochailort	Loch lochy/lochailort	Loch lochy/lochailort	Loch lochy/lochailort	Loch lochy/lochailort		
Facility No	4	4	4	4	4	4	5	7	9	17		

Case no: 2019-0647

Site No: FS1033

Method of killing: Percussive

Date of visit: 28/10/2019

Inspector(s):

Sheet Relevant: Y

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

Fish Number		F1	F2	F3	F4	F5							
Time sampled after death (if > 45 minutes)													
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												
	Scale Oedema												
Opercula	Shortened												
	Flared												
Haemorrhaging	Throat												
	Ventrum												
	Base of fins												
	Elsewhere	S	S	S	S	S							
Eyes	Exophthalmic												
	Enophthalmic (sunken)												
	Cataract												
	Haemorrhagic												
Gills	Pale	M	M	M	M	M							
	Zoned	M	M	M	M	M							
	Necrotic												
Lesions	Flank												
	Elsewhere												
Vent	Inflamed												
	Trailing faeces												
Lice Load	Estimate numbers												
Internal Signs													
Ascites	Clear												
	Bloody					m							
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	W	W	W	W	W							
	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:

Case Number:	2019-0647	Site No:	FS1033	Insp:		
Date of Visit	28/10/2019	No of movements/supp./dest.			Score	
Live fish movements		0	1-5	6-10	>10	
Movements on (from out with GB) of susceptible species	Frequency of movements on from equivalent MS	0	5	10	14	0
	Frequency of movements on from equivalent zone or compartment including third country	0	9	18	26	0
	Number of suppliers	0	5	10	14	0
Movements off	Frequency of movements off	0	3	6	10	10
	Number of destinations	0	3	6	10	3
Exposure via water	Site contacts	0	1-5	6-10		
Water contacts with other farms (holding species susceptible to same diseases)	Farm is protected (secure water supply through disinfection or borehole)	0				
	Farm is on-line or in a coastal zone with category I farms upstream or within 1 tidal excursion	1	2	4		2
	Farm is on-line or in a coastal zone with category III farms upstream or within 1 tidal excursion	1	3	6		
	Farm is on-line or in a coastal zone with category V farms upstream or within 1 tidal excursion	1	4	8		
Management practices		None	Secure	Unsecure		
Water contacts with processors	Any processing plant discharging into adjacent waters	0	1	2		0
On farm processing within the rules of the directive	No on farm processing	0				0
	Processing own fish (re-cycling risk)	1				
	Processing fish from MS of equivalent status	2				
	Processing fish from zone or compartment of equivalent status	4				
	Processing fish from Category III farm	8				
	Processing fish from Category V farm	10				
Disposal of fish and fish by-products	Site's own waste only processed.	0				
	Common processes with other farms	3				3
	Collection point for waste from other farms	5				
Use of unpasteurised feeds	No feeding of unpasteurised feed	0				0
	Feeding unpasteurised feed	5				
Biosecurity	Number of sites	1	2 or 3	≥ 4		
Contacts with other sites	Sites operating from single shorebase	0	1	2		2
	Sites sharing staff and equipment	0	1	2		0
Disinfection of equipment between sites, use of footbaths etc	Yes	0				0
	No	1				
CoGP/Regulator						
Practices in accordance with regulator or industry code of practice	Yes	0				0
	No	3				
Platform access to cages	Yes	0				0
	No	2				
Total Rank					20	MEDIUM

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Site No: **FS1033**

Sea Lice Inspection (Seawater Sites Only)

1. Has the site experienced sea lice problems in the previous 4 years?
2. Is the CoGP Farm Management Area (or equivalent) fallowed synchronously on a single year class basis?
3. Does the site have access to a range of licenced in-feed and bath sea lice medications (including deltamethrin, azamethiphos and emamectin benzoate) as well as access to suitable biological and/or mechanical control measures, and can these be deployed in a reasonable period of time?
4. Is there a signed documented farm management agreement or statement relevant to the site and CoGP Farm Management Area (or equivalent)?
5. Are sea lice count records available for inspection? (Legal SSI, CoGP Annex 6)
6. Do records adequately reflect the required standard specified in the SSI and the CoGP? (Legal SSI, CoGP Annex 6)
7. Are sea lice (*L. salmonis*) record levels below the suggested criteria for treatment in the CoGP during the period that records are inspected? (CoGP Annex 6)
8. Have average adult female sea lice (*L. salmonis*) numbers per fish been at a level of 3 or above (prior to w/b 10/6/19) or 2 or above (from w/b 10/6/19) during the period that records are inspected?
If yes, have these been reported to the Fish Health Inspectorate? If no, FHI see comment.
9. Is *C. elongatus* infestation at a level which is considered to cause significant welfare problems? (CoGP 4.3.81, 5.3.50)
10. Have therapeutic treatments been administered or other actions taken when *L. salmonis* levels have exceeded the suggested criteria for treatment or where *C. elongatus* is considered to have welfare implications? (CoGP 4.3.82, 5.3.51)
11. Has any other action been taken (where applicable)?
12. Have therapeutic treatments or the actions taken had a significant impact upon the lice levels recorded?
13. Are treatments, where conducted, carried out in cooperation between participating farms?
14. Is there a harvesting strategy for the site, where fewer populations or part populations are held without treatment for sea lice?
15. Is there a site specific written lice management procedure with waypoints describing set actions to deal with recognised scenarios during the escalation of a sea lice infestation?
16. Do the sea lice levels observed on stocks reflect sea lice count data? If no please detail reasons.

Containment Inspection

1. Has the site experienced equipment damage due to predators in the current or previous production cycles?
2. Are measures in place to mitigate against the predation experienced on site? (Detail below)

Otak on every pen, tensioned nets, bird nets, MML

If other, detail below:

3. Have escape incidents or events been experienced on or in the vicinity of the site since the last FHI inspection?
If Yes proceed with questions 4 – 9. If No skip to question 10
4. Have these been reported to Scottish Ministers?
5. Have these been reported to local DSFB forthwith (where they exist)? (CoGP – 4.4.37, 5.4.17)
6. Have these been reported to the SSPO and local fisheries trusts forthwith (where they exist)? (CoGP – 4.4.37, 5.4.17)
7. Were methods (if any) used to recover escapees? If yes give detail
8. If gill nets were deployed was this action agreed with local wild fish interests and was permission given by Scottish Ministers? (Legal, CoGP – 4.4.38, 5.4.18)
9. What action was taken to prevent and minimise the risk of further escapes? (Not covered in code but could be considered under satisfactory measures of the Act)
10. Is the site inspected as satisfactory with regards to containment? If no, please detail reason(s)

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Site No: FS1033

Date of Visit: 28/10/2019

Inspector: [REDACTED]

Point of Compliance

1. Is the farm under inspection located within a farm management area?

If N, no further questions require completion.

Points of Compliance for Both Farm Management Agreements and Statements

2. Has a current farm management agreement or statement (FMAg/S) been prepared?

3. Is the current FMAg/S available for inspection?

4. Does the FMAg/S identify the relevant farm management area?

5. Does the FMAg/S identify the fish farm site(s) to which it applies?

6. Does the FMAg/S identify the date of commencement of the agreement or statement?

7. Does the FMAg/S identify the date of review?

Arrangements for Fish Health Management

8. Does the FMAg/S identify the minimum health standards for the stocks to be introduced to the area or farm?

9. Does the FMAg/S identify the vaccination requirements for stocks held in the area or farm?

10. Does the FMAg/S identify the species of fish which may be stocked into the area or farm?

11. Does the FMAg/S identify the maximum stocking density of any pen on any farm in the area or the individual farm?

12. Does the FMAg/S identify the arrangements for the storage and disposal of any dead fish from any fish farm in the area or the individual farm?

Arrangements for The Management of Sea Lice

13. Does the FMAg/S identify arrangements for the sharing of data on sea lice numbers and treatments?

14. Does the FMAg/S identify the availability and the use of medicines on farms covered by the agreement of statement?

15. Does the FMAg/S identify any requirements for the sensitivity testing of available treatments for sea lice on farms in the area or individual farms?

16. Does the FMAg/S identify the circumstances under which biological controls and cleaner fish are to be used on farms in the area or individual farms?

17. Does the FMAg/S identify the arrangements for synchronous treatments on farms within the area?

Live Fish Movements

18. Does the FMAg/S identify the circumstances when live fish may be introduced or removed from the area or farm?

19. Does the FMAg/S identify the arrangements for the movement of live fish on and off sites in the area or individual farms?

Harvesting

20. Does the FMAg/S identify acceptable harvest practices on farms in the area or individual farms?

Fallowing

21. Does the FMAg/S identify the dates by which the area or individual farm will be fallow and the earliest date when a farm or area may be restocked?

22. Does the FMAg/S identify whether one or more year classes may be stocked onto sites covered by the agreement or statement?

23. Does the FMAg/S identify whether broodstock or potential broodstock are to be kept on any site covered by the agreement or statement?

Point of Compliance for Farm Management Agreements Only

24. Does the farm management agreement include arrangements for persons to become, or cease to be, parties to the agreement?

Management and operation

25. Is the fish farm being managed and operated in accordance with the agreement or statement?

26. What is the version no/date of issue of the FMAg/S?

Site No: FS1033

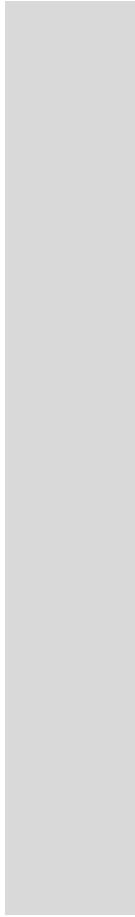
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Nature of non-compliance:

Action taken (FHI):

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





Case No: **2019-0647** Date of visit: **28/10/2019**
 Site No: **FS1033** Inspector: **[REDACTED]**

Results Summary	Freq.	Date of Notification						
		Database	Insp	Phone	Insp	Writing	Insp	2 nd Insp
AGDQ	5/5	06/11/2019	[REDACTED]	06/11/2019	[REDACTED]	18/12/2019	[REDACTED]	[REDACTED]
PNST	5/5	06/11/2019	[REDACTED]	06/11/2019	[REDACTED]	18/12/2019	[REDACTED]	[REDACTED]
SPVP	5/5	06/11/2019	[REDACTED]	06/11/2019	[REDACTED]	18/12/2019	[REDACTED]	[REDACTED]
IHNP	0/1	06/11/2019	[REDACTED]	06/11/2019	[REDACTED]	18/12/2019	[REDACTED]	[REDACTED]
IPNM	0/1	06/11/2019	[REDACTED]	06/11/2019	[REDACTED]	18/12/2019	[REDACTED]	[REDACTED]
ISAQ	0/1	06/11/2019	[REDACTED]	06/11/2019	[REDACTED]	18/12/2019	[REDACTED]	[REDACTED]
SALP	0/1	06/11/2019	[REDACTED]	06/11/2019	[REDACTED]	18/12/2019	[REDACTED]	[REDACTED]
VHSP	0/1	06/11/2019	[REDACTED]	06/11/2019	[REDACTED]	18/12/2019	[REDACTED]	[REDACTED]
BACT VSPE	5/5	15/11/2019	[REDACTED]	15/11/2019	[REDACTED]	18/12/2019	[REDACTED]	[REDACTED]
MG_PMCV	1/1	21/11/2019	[REDACTED]	22/11/2019	[REDACTED]	18/12/2019	[REDACTED]	[REDACTED]
HIST_AMGD	2/5	22/11/2019	[REDACTED]	22/11/2019	[REDACTED]	18/12/2019	[REDACTED]	[REDACTED]
HIST_CGDH	5/5	22/11/2019	[REDACTED]	22/11/2019	[REDACTED]	18/12/2019	[REDACTED]	[REDACTED]
HIST_GPAT	5/5	22/11/2019	[REDACTED]	22/11/2019	[REDACTED]	18/12/2019	[REDACTED]	[REDACTED]
HIST_HPAT	3/5	22/11/2019	[REDACTED]	22/11/2019	[REDACTED]	18/12/2019	[REDACTED]	[REDACTED]
HIST_LPAT	2/5	22/11/2019	[REDACTED]	22/11/2019	[REDACTED]	18/12/2019	[REDACTED]	[REDACTED]
HIST_CMPS	2/5	22/11/2019	[REDACTED]	22/11/2019	[REDACTED]	18/12/2019	[REDACTED]	[REDACTED]

Report Summary			
Case Type	Date	Insp	2 nd Insp
DIA	12/12/2019	[REDACTED]	[REDACTED]
ECI SLI CNI UNI VMD	17/12/2019	[REDACTED]	[REDACTED]
Case completion	11/02/2019	[REDACTED]	[REDACTED]

[REDACTED]
Mowi Scotland Ltd
Stob Ban House
Glen Nevis Business Park
Fort William
PH33 6RX
[REDACTED]

FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

BUSINESS No	FB0119	DATE OF VISIT	29/10/2019
SITE No	FS1033	SITE NAME	North Shore
INSPECTOR	[REDACTED]	CASE No	20190647

Section 1: Summary

An unannounced inspection was carried out at the above site following a report of increased mortality by the business. Five fish were removed for further examination and subsequent diagnostic sampling. All fish sampled displayed moderate to severe lice damage.

Histopathology examination revealed multifactorial gill pathology which included the presence of amoebic cells suggestive of amoebic gill disease and apoptotic cells consistent with the presence of salmon gill pox virus. Samples tested positive for both pathogens by QPCR. Mild hepatic necrosis was also noted. Mild, multifocal myoendocarditis with features consistent with cardiomyopathy syndrome (CMS) was also noted and the presence of the causative agent, piscine myocarditis virus (PMCV), confirmed by QPCR .

Vibrio sp. was isolated . However, the light mixed level of growth of the isolated *Vibrio* sp. suggests it was not implicated as a primary source of fish morbidity.

Due to gill health issues observed on site, samples were screened for *Paranucleospora theridion* (syn, *Desmozoon lepeophtherii*). Samples tested positive for the pathogen.

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

An unannounced inspection was carried out at the above site following a report of increased mortality by the business. Inspection of records on site showed mortality levels of 3.07% and 4.66% for the previous two weeks respectively. Increased mortality was attributed to gill disease

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and anaemia. At the time of inspection a Salmosan treatment was being administered for the control of sea lice. During inspection of the site, a number of cages had visibly moribund fish hanging round the edges of the net, displaying extreme lethargy and significant lice damage. Five fish were removed for further examination and subsequent diagnostic sampling.

Externally, all 5 fish displayed significant haemorrhaging and loss of scales and skin around the head. The gills on all 5 fish were pale and zoned.

Internally, F4 had a significant amount of bloody ascites within the body cavity. All 5 fish showed enlarged spleens.

Samples

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

Fish number	Pool number	Facility number	Species	Stage	Origin
F1-5	P1	4	Atlantic Salmon	2 kg 18Q4's	Mixed Loch Lochy FS0150 Lochailort FS1269

Results

Bacteriology: Kidney and gill material from 5 fish were inoculated onto appropriate media for the isolation of bacteria.

The following bacteria were isolated from F1-5:

-*Vibrio sp.* (F1 Gill) (F2-5 Kidney and Gill)

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)
F1	21.74	26.26	26.40	26.34	POSITIVE
F2	21.92	23.65	23.66	23.63	POSITIVE
F3	21.93	25.83	25.85	25.96	POSITIVE
F4	22.23	26.84	26.86	26.95	POSITIVE
F5	21.28	25.87	25.87	26.00	POSITIVE

Piscine myocarditis virus (PMCV)

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
P1	17.49	18.90	18.88	18.94	POSITIVE

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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).

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	21.74	31.03	31.19	31.02	POSITIVE
F2	21.92	31.97	32.55	32.06	POSITIVE
F3	21.93	27.69	27.78	27.83	POSITIVE
F4	22.23	31.23	33.14	35.23	POSITIVE
F5	21.28	30.81	30.51	30.99	POSITIVE

Paranucleospora theridion

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	21.74	32.71	32.40	32.40	POSITIVE
F2	21.92	32.76	32.73	32.74	POSITIVE
F3	21.93	30.91	30.89	30.84	POSITIVE
F4	22.23	33.94	33.95	33.80	POSITIVE
F5	21.28	31.86	31.93	31.84	POSITIVE

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

Histopathological examination revealed the following:

Gill: Mild multifocal interlamellar hyperplasia and lamellar fusion, small area of adhesion between two gill filaments (F2, F4), occasional lacunae (F4), single lamellae displaying epithelial thickness (F5) and a few amoebic cells resembling *Neoparamoeba perurans* (F2, F4). Presence of few apoptotic cells (F2). Scattered aneurysmal dilation/telangiectasia and lamellar thrombosis noted in all fish.

Skin and Muscle: Within normal range.

Heart: Small foci of inflammatory cell infiltration and degeneration of the adjacent fibres and at the spongy and compact layer junction (F2) and F3 & F4 exhibited foci of endocardial thickness, fibre degeneration, necrosis and inflammatory cell infiltration.

Gut and pyloric caeca: Some fibrous adhesions (likely associated with vaccine administration) (F5).

Pancreas: within normal range.

R09

Liver: Mild multifocal hepatic necrosis (F2, F5) and mild diffuse hepatocyte vacuolation (F5).

Kidney: Few renal tubules with dilated lumen (F2).

Spleen: Slightly congested (F3).



Signed:

Date: 13/12/2019

Fish Health Inspector

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Marine Scotland website at www.gov.scot/Topics/marine/Fish-Shellfish/FHI/charter

[REDACTED]
Mowi Scotland Ltd
Stob Ban House
Glen Nevis Business Park
Fort William
PH33 6RX
[REDACTED]

FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

BUSINESS No	FB0119	DATE OF VISIT	29/10/2019
SITE No	FS1033	SITE NAME	North Shore
INSPECTOR	[REDACTED]	CASE No	20190647

Case completion report

Recommendations in relation to the above case were made for implementation by 19/01/2020. Following submission of the required documentation, evidence has now been provided to Marine Scotland to demonstrate that the recommendations have been implemented.

This case will now be closed. This site may be subject to further audit and recommendations in the future.

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

Signed:



Date: 11/02/2020

Fish Health Inspector

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Marine Scotland website at www.gov.scot/Topics/marine/Fish-Shellfish/FHI/charter

██████████
Mowi Scotland Ltd
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FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

BUSINESS No	FB0119	DATE OF VISIT	29/10/2019
SITE No	FS1033	SITE NAME	North Shore
INSPECTOR	██	CASE No	20190647

Inspection under the Aquatic Animal Health (Scotland) Regulations 2009

The above site was inspected, without prior notification, in accordance with the Aquatic Animal Health (Scotland) Regulations 2009, and to meet the requirements of European Community Council Directive 2006/88/EC.

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

Records

The surveillance frequency category of the site was assessed as medium. An inspection under the Aquatic Animal Health (Scotland) Regulations 2009 will be conducted every second year. The category of the site will be reassessed on a routine basis and updated as required.

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 adequately maintained.

Mortality records were inspected and found to be adequately maintained.

Mortality levels had exceeded the reporting criteria since the last inspection and had not been reported to the Fish Health Inspectorate. I would like to remind you of the industry agreement in relation to mortality reporting as detailed in A Code of Good Practice for Scottish Finfish Aquaculture.

R25

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

The biosecurity measures plan for the site was inspected and found to be adequately maintained and implemented.

Inspection under the Animals and Animal Products (Examination for Residues and Maximum Residue Limits) (England and Scotland) Regulations 2015

Medicine records were inspected and found to be adequately maintained.

Samples were taken to be analysed for veterinary residues.

Inspection under the Aquaculture and Fisheries (Scotland) Act 2007

The site was also inspected in accordance with the Aquaculture and Fisheries (Scotland) Act 2007, as amended, with respect to section 3 regarding parasites (sea lice), section 4A regarding fish farm management agreements and statements and section 5 regarding containment and escapes.

On this occasion the site was found to be satisfactory with regards containment and escapes.

On this occasion there were issues in relation to levels of sea lice damage observed on stock.

Sea lice records provided as part of inspection did not match sea lice records previously submitted to FHI. Documentation must be provided to explain discrepancies in sea lice data sets.

The site has been recommended for an enhanced inspection and this will be conducted in due course.

The farm management agreement/statement was inspected and found to be inadequately maintained. Please see the attached annex detailing the points that must be addressed

Please ensure that these points have been addressed by **19/01/20** Records or documentation demonstrating that these points have been addressed should be sent to the Fish Health Inspectorate (contact details below). The site may be subject to further inspection or enforcement action should the appropriate action regarding the above points not be taken within the time period stipulated.

Please contact myself or the duty inspector should you require any assistance or clarification in implementing any requirement or recommendation detailed in this report.

Signed:



Date: 19/12/2019

Fish Health Inspector

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Marine Scotland website at www.gov.scot/Topics/marine/Fish-Shellfish/FHI/charter

R25

Annex - The Aquaculture and Fisheries (Scotland) Act 2007

Section 4A of the Aquaculture and Fisheries (Scotland) Act 2007, as amended, introduces the requirement for a person carrying out the business of fish farming within a farm management area⁽¹⁾ to;

(a) be party to a farm management agreement, or prepare and maintain a farm management statement, in relation to the fish farm, and

(b) ensure that the fish farm is managed and operated in accordance with the agreement or statement.

To ensure compliance with the Aquaculture and Fisheries (Scotland) Act 2007, as amended, the following points must be addressed in the farm management agreement/statement

- The statement or agreement must identify the farm management area to which the agreement or statement applies.
- The statement or agreement must identify the fish farm sites to which the agreement or statement applies.
- The statement or agreement must identifying the date of commencement
- The statement or agreement must identify the date of review (farm management agreements or statements must be reviewed at least every two years).
- In the case of a farm management agreement, arrangements for persons to become, or cease to be, parties to the agreement.

The statement or agreement must include arrangements for;

- The management of parasites⁽²⁾
This must include arrangements for the synchronisation of treatments; the availability of and use of medicines; requirements for sensitivity testing; the sharing of data and information on sea lice numbers and treatments and the use of biological controls and cleaner fish.
- Fallowing of the farms after harvesting
This must include the dates for fallowing of the area, the earliest date of restocking, identify whether one or more year classes may be stocked onto sites covered by the agreement & identify whether broodstock or potential broodstock are to be kept on any site covered by the agreement.

⁽¹⁾ Farm management area means an area specified as such in the Code of Good Practice for Scottish Finfish Aquaculture

⁽²⁾ Parasites as defined in The Aquaculture and Fisheries (Scotland) Act 2007 which means *Caligus elongatus* and *Lepeophtherius salmonis*



Fish 1-5 A



F1A



F2 A



F3 A



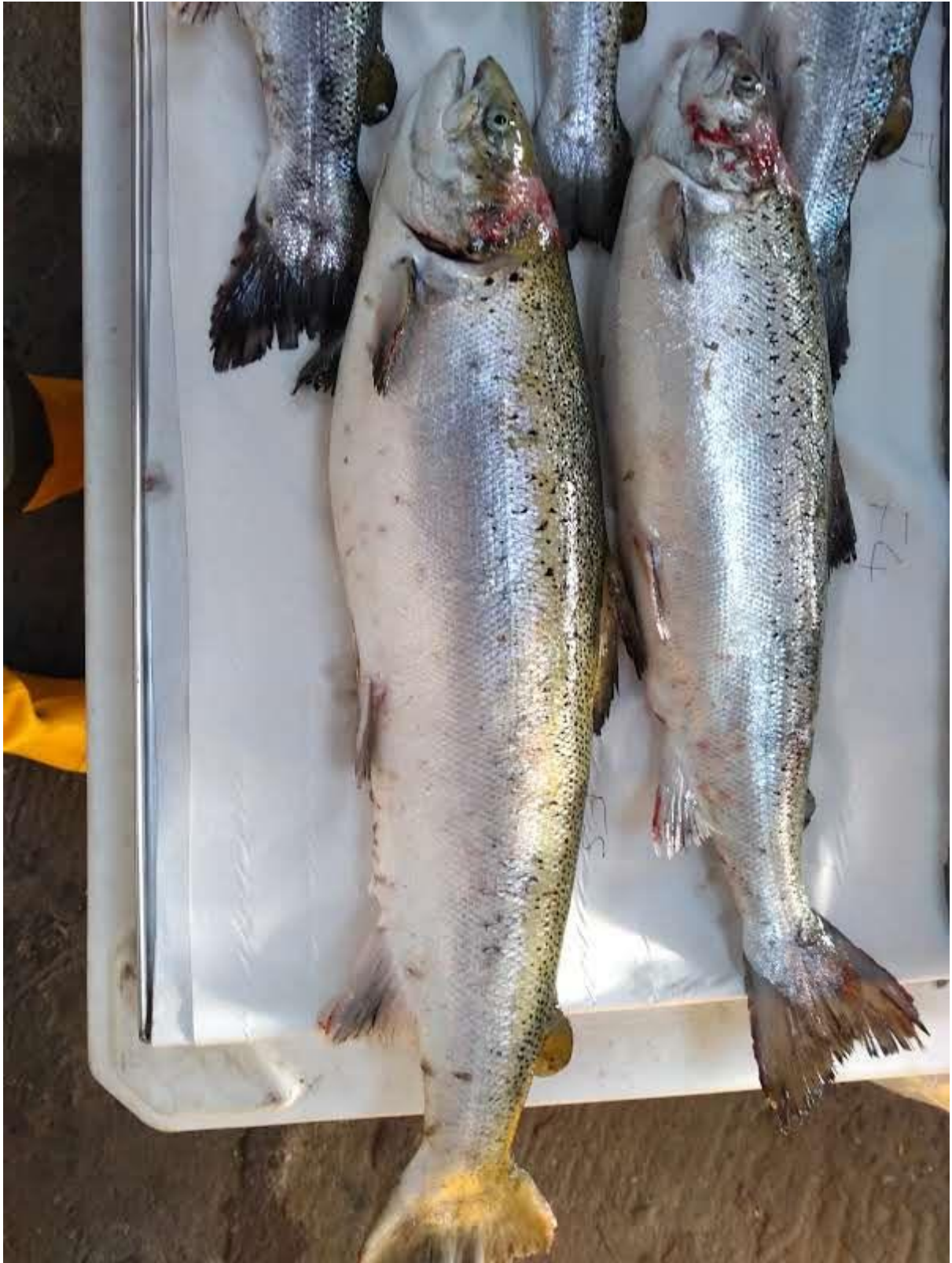
F3 B



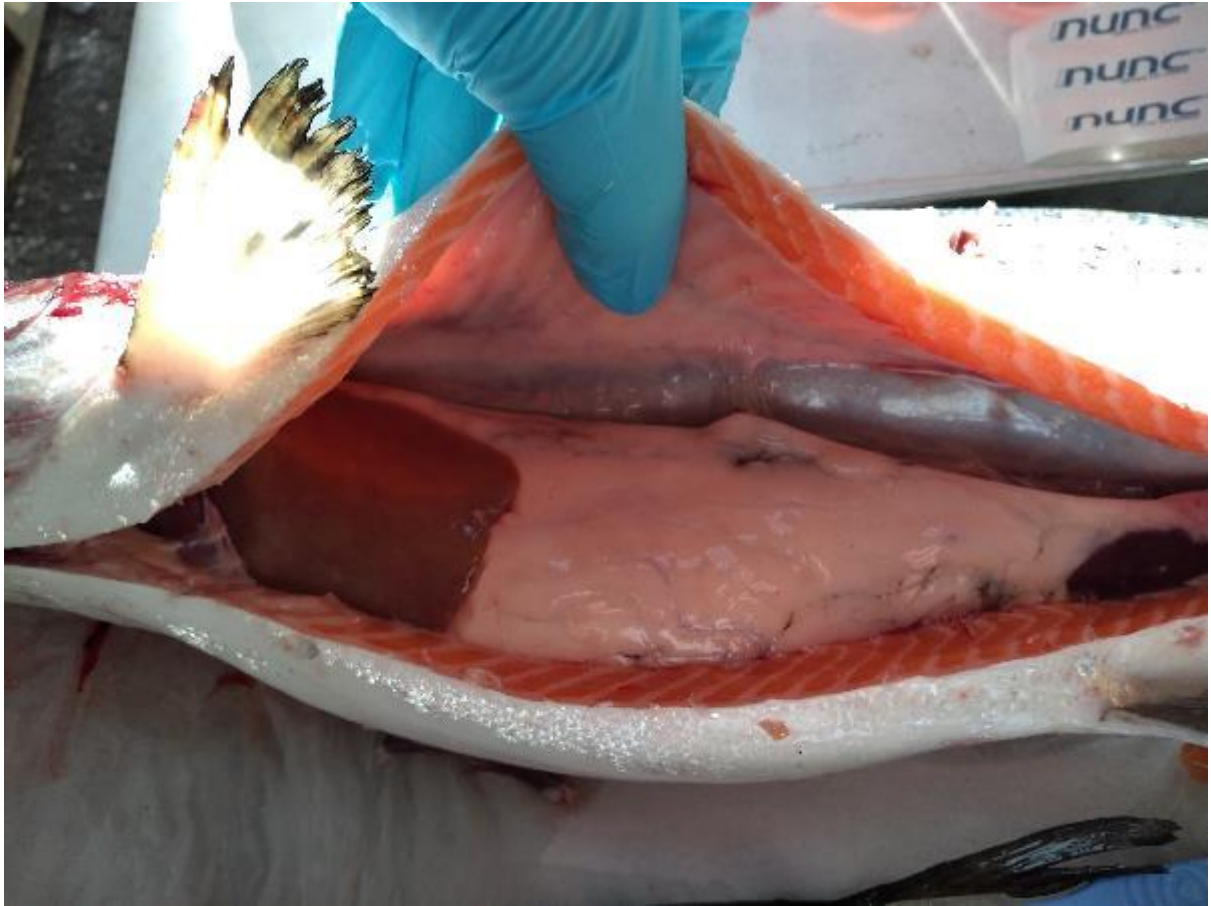
F4 A



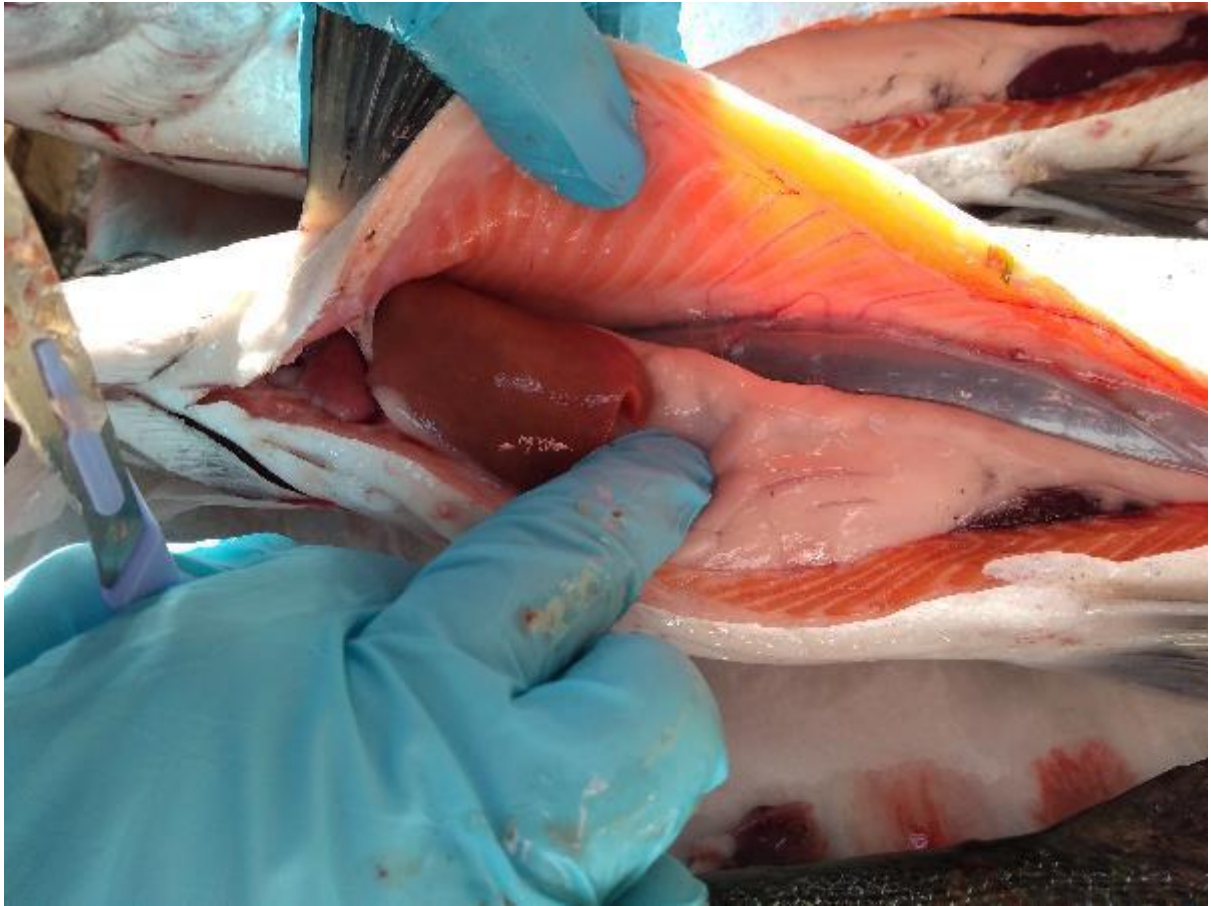
F5 A



F5 B



F1 B



F2 B



F3 C



F4 B



F5 C