Case No:	2022-0173	Date of visit:	31/05/2022
Time spent on site:	5h	Main Inspector:	[redacted]
Site No:	FS1118	Site Name:	Trilleachan Mor
Business No:	FB0119	Business Name:	Mowi Scotland Ltd

Case Types: 1 ECI 2 CNI 3 SLI 4 VMD 5 DIA 6

Water Temp (°C):	10.1	Thermometer No:	T173	FHI 045 completed	

Observations: Region: WI Water type: S CoGP MA: W-6

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

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

Additional Case Information:

Records only available from wk 14 2022 as this is the first cycle of fish to be grown at the site since it was taken over by Mowi. Some assessments on SLI is based on submissions made by TSSC to FHI.

Stock on site a thin down from Seaforth, historic AGD on site.

Seven day treatment of Slice administered on the 24th April to the 30th April, site records indicate withdrawal but standard treatment.

A high number of lethargic/moribund fish evident in all cages, some lice grazing damage and evidence of net abrasion noted. These fish were all high in the pens and the general population appeared in reasonable condition although they were deep in the water column. Advised that focus on moribund removal should be prioritised.

Five fish were removed for diagnostic sampling.

Case No:	2022-0173	Site No:	FS1118
Date of Visit:	31/05/2022	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	8	Facilities stocked	8	No facilities inspected	8		
Species	SAL						
Age group	2021 Q2						
No Fish	337,466						
Mean Fish Wt	3.7						
Next Fallow Date (Site)	July 2022	Next Input Date (Site)	April 2023				
Recent (last 4 wks) disease problems?	Y	Any escapes (since last visit)?	N				
If yes, detail:	AGD/moritella						

Movement Records

1. Movement records available for inspection?	Y
2. Date of last inspection:	02/04/2020
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)?	Y
If yes, is there a system in place for maintenance of transportation records?	Y

Mortality Records

1. Mortality records available for inspection?	Y
2. How are mortalities disposed of?	Ensiled - on site
If other detail:	Also whole fish to whiteshore
3. Mortality records complete and correctly entered?	Y
4. Recent mortality (last 4 wks):	wk 18 613 (0.38%) Wk19 131 (0.04%) wk 20 1052 (0.31%) wk 21 486 (0.14%) attributed to thermolicer, moritella, physical damage and seals.
5. Evidence of recent increased/atypical mortalities?	N
If yes, facility nos/no mortality per facility/no stock per facility/reason:	
6. Any other peaks in mortality during period checked?	N
If yes, detail:	
7. Have increased (unexplained) mortalities been reported to vet or FHI?	N/A
If yes, detail action:	
8. Have 'mortality events' been reported to FHI? If no, enter details on mortality events sheet.	N/A

Treatments and Medicines Records

1. Recent treatments (see comment)?	Y
If yes, detail:	TMS
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)?	TMS
If other, detail:	
6. Are medicines stored appropriately?	Y

Biosecurity Records

1. Biosecurity records available for inspection?	y
2. Has the manner and frequency of mortality removal, recording and safe disposal been considered?	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?	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 *how* and *when* that will be notified to Scottish Ministers?	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)?	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.)?	y
7. Is documentation available regarding the measures in place to maintain the physical containment of aquaculture animals held on site?	y
8. Have the biosecurity procedures been adequately implemented on site?	y
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).	Moritella
Records checked between:	4/4/2022 to 25/5/2022

Case no:	2022-0173	Site No:	FS1118	Date of visit/ Sampling:	31/05/2022	31/(							
Priority samples:	VI		BA		PA		MG		HI				
Time sampling starts/ends:	13:00:00	14:30:00	Inspector:		VMD No.	25							
Environmental conditions:	1	Indoors	2		3		4		5				
Summary samples	HIST	Y	BA	Y	MG	Y	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	6	7	8	9	10	
	Pool Group	P1	P1	P1	P1	P1							
Stock Details	Species	SAL	SAL	SAL	SAL	SAL	SAL	SAL	SAL	SAL	SAL	SAL	
	Average weight	3.5000	3.5000	3.5000	3.5000	3.5000	3.5000	3.5000	3.5000	3.5000	3.5000	3.5000	
	Sex	N/A	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	SW	
	Stock Origin	Sea forth	Sea forth	Sea forth	Sea forth	Sea forth	Sea forth	Sea forth	Sea forth	Sea forth	Sea forth	Sea forth	
	Facility No	4	6	2	2	4		3	2	6	4	5	

05/2022 Additional Sample Information:

6 Total Tests assigned 5

Case no: 2022-0173 Site No: FS1118 Method of killing: Percussive

Date of visit: 31/05/2022 Inspector(s): [redacted] 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)											
External Signs											
Behaviour	Moribund	S	S	S	S	S					
	Lethargic	S	S	S	S	S					
	Hanging vertical										
	Spiralling										
	Flashing										
	Loss of equilibrium										
Body	Dark	M	S	S	S	S					
	Distended abdomen										
	Anorexic										
	Scale Oedema										
Opercula	Shortened										
	Flared										
Haemorrhaging	Throat										
	Ventrum										
	Base of fins										
	Elsewhere	W	W	S	S	W					
Eyes	Exophthalmic										
	Enophthalmic (sunken)										
	Cataract										
	Haemorrhagic										
Gills	Pale	S	S	M	W	W					
	Zoned										
	Necrotic			S							
Lesions	Flank	W	W	M	M	W					
	Elsewhere										
Vent	Inflamed										
	Trailing faeces										
Lice Load	Estimate numbers										
Internal Signs											
Ascites	Clear										
	Bloody										
Oedema	In tissues										
Heart	Pale/anaemic	W	W	W	W	W					
	Granulomas										
	Deformed			M							
Liver	Petechial haem										
	Gross haem										
	Tissue breakdown										
	Enlarged										
	Colour number(s)	2	5	5	5	3					
	Granulomas										
	Lesions										
Pyloric caeca	Petechial haem										
	Tubules mauve	W		W							
	Lack of fat										
Spleen	Enlarged			S							
	Granulomas										
Gut	No food present										
	Yellow pseudo-faeces	S	S	S	S	S					
	External haem										
	Internal haem										
Body wall	Haemorrhaging										
Swim bladder	Haemorrhaging										
	Fluid filled										
Kidney	Swollen										
	Grey										
	Granular	M	M	M	M	M					
	Liquefied										
General	Parasites present										
	Anaemia										

Case no: 2022-0173

Date of visit: 31/05/2022

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:

Case Number:	2022-0173		Site No:	FS1118	Insp:	
Date of Visit	31/05/2022		**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	1
	Sites sharing staff and equipment	0	1	2	

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	**19**
Rank	**MEDIUM**

Case No: 2022-0173 Site No: FS1118

Sea Lice Inspection (Seawater Sites Only)

1. Has the site experienced sea lice problems in the previous 4 years?	Y
2. Is the CoGP Farm Management Area (or equivalent) fallowed synchronously on a single year class basis?	Y
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?	Y
4. Is there a signed documented farm management agreement or statement relevant to the site and CoGP Farm Management Area (or equivalent)?	Y
5. Are sea lice count records available for inspection? (Legal SSI, CoGP Annex 6)	Y
6. Do records adequately reflect the required standard specified in the SSI and the CoGP? (Legal SSI, CoGP Annex 6)	Y
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)	N
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?	Y
If yes, have these been reported to the Fish Health Inspectorate? If no, FHI see comment.	Y
9. Is *C. elongatus* infestation at a level which is considered to cause significant welfare problems? (CoGP 4.3.81, 5.3.50)	N
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)	Y
11. Has any other action been taken (where applicable)?	Y
12. Have therapeutic treatments or the actions taken had a significant impact upon the lice levels recorded?	Y
13. Are treatments, where conducted, carried out in cooperation between participating farms?	Y
14. Is there a harvesting strategy for the site, where fewer populations or part populations are held without treatment for sea lice?	Y
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?	Y
16. Do the sea lice levels observed on stocks reflect sea lice count data? If no please detail reasons.	Y

Containment Inspection

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

Tensioned nets top nets

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?	N
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)	Y

Case No: 2022-0173 Site No: FS1118

Date of Visit: 31/05/2022 Inspector: [redacted]

Point of Compliance

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

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?	y
3. Is the current FMAg/S available for inspection?	y
4. Does the FMAg/S identify the relevant farm management area?	y
5. Does the FMAg/S identify the fish farm site(s) to which it applies?	y
6. Does the FMAg/S identify the date of commencement of the agreement or statement?	y
7. Does the FMAg/S identify the date of review?	y

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?	y
9. Does the FMAg/S identify the vaccination requirements for stocks held in the area or farm?	y
10. Does the FMAg/S identify the species of fish which may be stocked into the area or farm?	y
11. Does the FMAg/S identify the maximum stocking density of any pen on any farm in the area or the individual farm?	y
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?	y

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?	y
14. Does the FMAg/S identify the availability and the use of medicines on farms covered by the agreement of statement?	y
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?	y
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?	y
17. Does the FMAg/S identify the arrangements for synchronous treatments on farms within the area?	y

Live Fish Movements

18. Does the FMAg/S identify the circumstances when live fish may be introduced or removed from the area or farm?	y
19. Does the FMAg/S identify the arrangements for the movement of live fish on and off sites in the area or individual farms?	y

Harvesting

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

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?	y
22. Does the FMAg/S identify whether one or more year classes may be stocked onto sites covered by the agreement or statement?	y
23. Does the FMAg/S identify whether broodstock or potential broodstock are to be kept on any site covered by the agreement or statement?	y

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?	N/A

Management and operation

25. Is the fish farm being managed and operated in accordance with the agreement or statement?	Y
26. What is the version no/date of issue of the FMAg/S?	Apr-22

Case No: 2022-0173 Date of visit: 31/05/2022

Site No: FS1118 Inspector:

Results Summary	Freq.	Date of Notification						
		Database	Insp	Phone	Insp	Writing	Insp	2nd Insp
MG AGD	0/5	07/06/2022		14/06/2022		04/08/2022		
MG IHN	0/3	07/06/2022		14/06/2022		04/08/2022		
MG IPN	3/3	07/06/2022		14/06/2022		04/08/2022		
MG ISA	0/3	07/06/2022		14/06/2022		04/08/2022		
MG PARA THER	3/5	07/06/2022		14/06/2022		04/08/2022		
MG PMCV	2/3	07/06/2022		14/06/2022		04/08/2022		
MG SAL POX	0/5	07/06/2022		14/06/2022		04/08/2022		
MG SAV	0/3	07/06/2022		14/06/2022		04/08/2022		
MG VHS	0/3	07/06/2022		14/06/2022		04/08/2022		
BA VSPE	5/5	20/06/2022		20/06/2022		04/08/2022		
COST	2/5	13/07/2022		14/07/2022		04/08/2022		
LPAT	3/5	13/07/2022		14/07/2022		04/08/2022		
HPAT	5/5	13/07/2022		14/07/2022		04/08/2022		
CMPS	2/5	13/07/2022		14/07/2022		04/08/2022		
IHNV	0/2	13/07/2022		14/07/2022		04/08/2022		
IPNV	1/2	13/07/2022		14/07/2022		04/08/2022		
ISAV	0/2	13/07/2022		14/07/2022		04/08/2022		
VHSV	0/2	13/07/2022		14/07/2022		04/08/2022		
SAVV	0/2	13/07/2022		14/07/2022		04/08/2022		
SULC	1/5	13/07/2022		14/07/2022		04/08/2022		

Report Summary			
Case Type	Date	Insp	2nd Insp
ECI,CNI,SLI,VMD	23/06/2022		
DIA	04/08/2022		

FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

BUSINESS NO	FB0119	**DATE OF VISIT**	31/05/2022
SITE NO	FS1118	**SITE NAME**	Trilleachan Mor
CASE NO	20220173	**INSPECTOR**	[redacted]

Section 1: Summary

During a routine site inspection five moribund and lethargic fish were removed for further examination and subsequent diagnostic sampling.

Histopathology examination revealed pathology consistent with cardiomyopathy syndrome (CMS) (confirmed by qPCR in F1 and F3), mild ulcerative dermatitis, mild hepatic necrosis and nephritis. Gills displayed several Costia-like (*Ichthyobodo* sp.) parasites.

Gill samples from F1, F2 and F5 tested positive for *Paranucleospora theridion* by qPCR. Samples of heart and kidney tested positive for Infectious pancreatic necrosis virus (IPNV) in F1, F3 and F4 by qPCR.

Due to a failure of the endogenous control, no virology results were available for F2 and F5 by qPCR, tissue samples were therefore screened for specific pathogens(as detailed in the virology section below) by cell culture, IPNv was isolated from F5.

Three separate *Vibrio* sp. were identified (isolates A, B and C) on plates taken from kidney, lesion and gill material, whilst the level of growth on plates taken from lesion material was significant the purity would not suggest that any of the isolates be implicated as the primary source of the lesions or morbidity.

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

During a routine site inspection a high number of lethargic and moribund fish were observed in all cages. Fish had been recently input to the site from Seaforth which had issues with *Pasteurella skyensis* earlier in the cycle and more recently gill health challenges. Five fish were removed from the pens for further examination and subsequent diagnostic sampling.

All fish sampled were lethargic and moribund with a darkened body. Some haemorrhaging was evident on the flanks of all fish with lesions also present to varying degrees. The gills of all fish were pale and appeared necrotic in F3.

Marine Laboratory, 375 Victoria Road, Aberdeen, AB11 9DB
Tel – 0131 244 3498 Fax – 0131 244 0944 Email – ms.fishhealth@gov.scot
Website - www.gov.scot/Topics/marine/science

Internally all fish displayed pale hearts but the heart was also deformed in a F3. The pyloric caeca of F1 and F3 appeared mauve in colour, splenomegaly was evident in F3. All fish had granular kidneys with yellow pseudo faeces present within the hind gut.

Samples

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

Fish number	Facility number	Species	Stage	Origin
1 & 5	4	Atlantic salmon	3.5kg 2021 Q2	Seaforth
2	6	Atlantic salmon	3.5kg 2021 Q2	Seaforth
3 & 4	2	Atlantic salmon	3.5kg 2021 Q2	Seaforth

Bacteriology: Kidney, gill and lesion material from F1 to F5 were inoculated onto appropriate media for the isolation of bacteria.

The following bacteria were isolated from fish F1 to F5:

- *Vibrio* sp. (isolate A) from;
  - kidney of F1, F3 and F4;
  - lesion of F1- F5;

- *Vibrio* sp. (isolate B) from;
  - kidney F1, F3 and F5;
  - gill F2, F3 and F5;
  - lesion F1-F5;

- *Vibrio* sp. (isolate B) from:
  - Kidney F1 and F4;
  - Lesion of F1-F5.

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

Piscine myocarditis virus

Fish Number	**Endogenous control Cp value**	**Cp Values**			**Reported Result (PCR)**
F1	18.49	16.35	16.39	16.44	POSITIVE
F2	-	-	-	-	NO RESULT
F3	18.23	24.17	24.27	24.20	POSITIVE
F4	-	-	-	-	NEGATIVE
F5	-	-	-	-	NO RESULT

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Website - www.gov.scot/Topics/marine/science

Infectious pancreatic necrosis virus

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	18.49	28.73	28.86	28.68	POSITIVE
F2	-	-	-	-	NO RESULT
F3	18.23	34.14	34.52	34.72	POSITIVE
F4	15.08	34.92	35.23	34.57	POSITIVE
F5	-	-	-	-	NO RESULT

Due to a failure of the endogenous control tissue samples from F2 and F5 were screened for the pathogens specified below by cell culture. The following pathogen was identified:

- IPNv F5

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

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	22.11	32.28	32.32	32.16	POSITIVE
F2	22.19	37.7	36.61	36.69	POSITIVE
F3	-	-	-	-	NEGATIVE
F4	-	-	-	-	NEGATIVE
F5	21.93	34.89	34.84	34.98	POSITIVE

The samples tested negative for *Neoparamoeba perurans* (AGD).

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

Histopathological examination revealed the following:

Gill: Some minor interlamellar hyperplasia (F1), several lamellae displayed lamellar thrombi and epithelial thickness (F3, F5). F5 also exhibited some gill filament bluntness and cell infiltration. Several Costia-like cells free among lamellae and attached to the lamellar epithelium (F1-F2). One basophilic epithelial inclusion (likely epitheliocystis) (F5). Few aneurysmal dilation/telang iectasia noted in one individual (F4);

Skin & Muscle: Several individual white fibres displaying features of degeneration and some cellular inflammatory infiltration (F3, F5). F4 lesion: absence of epidermal layer, some oedematous dermis and the outer layer displayed presence of rod-shaped Gram-negative bacteria and some inflammatory cellular infiltration;
Heart: F1 & F5 displayed moderate to marked myocardial mononuclear inflammatory cell infiltration (endocarditis) and marked myocardial degeneration and necrosis in the ventricle and atrium

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chamber. F1 also exhibited a massive clot in the atrium chamber. A small area of inflammatory cellular infiltration was noted in the compact layer of F2 and F5. Mild pericarditis (F3, F4);

Gut and pyloric caeca: Some to moderate fibrous adhesions (likely associated with vaccine administration) (F1). F4 displayed some cell sloughing potentially associated with post-mortem artefact);

Pancreas: Within normal range;

Liver: Mild multifocal hepatic necrosis (F5), mainly at the edge of the liver tissue, some vessels displayed mild fibrosis, mild diffuse hepatocellular vacuolation (macrovisicules) (F1, F3);

Kidney: Reduced haematopoietic tissue and some inflammatory cell infiltration (F4);

Spleen: Small area of infiltration of mononuclear cells (F3), some cuffing (F3) and some evidence of erythrophagocytosis (F5). Slight congested (F2, F4, F5).

Signed: [redacted] Date: 04/08/2022

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/

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FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

BUSINESS NO	FB0119	**DATE OF VISIT**	31/05/2022
SITE NO	FS1118	**SITE NAME**	Trilleachan Mor
CASE NO	20220173	**INSPECTOR**	[redacted]

Inspection under the Aquatic Animal Health (Scotland) Regulations 2009

The above site was inspected, in accordance with the Aquatic Animal Health (Scotland) Regulations 2009.

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.

Records in relation to aquaculture animals transported by the business were inspected and found to be adequately maintained.

Mortality records were inspected and found to be adequately maintained.

No mortality levels exceeding the reporting criteria have been recorded since the last inspection.

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.

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.

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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 to parasites, fish farm management agreements and statements, containment and escapes.

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

Signed: [redacted] Date: 23/06/2022

Fish Health Inspector

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