

Case No: 2024-0096 Date of visit: 26/03/2024

Time spent on site: 5h Main Inspector: [Redacted]

Site No: FS0646 Site Name: Soay

Business No: FB0119 Business Name: Mowi Scotland Ltd

Case Types: 1 ECI 2 CNI 3 SLI 4 REP 5 [] 6 []

Water Temp (°C): 8 Thermometer No: T173 FHI 045 completed N/A

Observations: Region: WI Water type: S CoGP MA W-7

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: [Redacted]

Additional Case Information:

Peaks in salmon mortality 2023 wk 24 2942 (0.85%), wk 25 2881 (0.91%), wk 26 3988 (1.49%) , wk 27 7535 (3.47%), wk 28 1450 (1.41%) mainly attributed to CMS but some moritella. Wk 50 3463 (0.80%), wk 51 3376 (0.78%), wk 52 3587 (0.85%) these were recorded as seal predation and without diagnosis.

Salmon mortalities in 2024 have been persistently elevated, a fw treatment loss occurred in week 2 (13305 (3.17%), with physical damage and seal predation the main cause of mortality until week 6 with 16256 recorded. Week 6 16594 (4.25%) was recorded in the main as fw treatment loss but gill infection (AGD) and physical damage also noted. Week 7 8921 (2.38%) were partly due to the treatment losses in week 6 but mainly attributed to bacterial infection (Moritella) which is recorded predominantly as the cause of mortality through to week 12 with 44723 recorded.

Salmon morts for the last five weeks: wk 12 7718 (2.45%), wk 11 8347 (2.58%), wk 10 12667 (3.77%), wk 9 16003 (4.54%) wk 8 12799 (3.50%).

Lumpfish mortalities for the last four weeks: 17867 no diagnosis.

Wrasse peaks in mortality, 2022: Wk 33 8994 (12.32%), wk 34 (8332 (11.78%)

Lumpfish peaks in mortality 2023: wk 14 2599 (3.78%), wk 15 2996 (4.53%), wk 16 2900 (4.59%), wk 17 2582 (4.28%).

Fish were transferred from Hellisay in October due to water quality issues (jellyfish and gill health)

A number of moribunds and lethargic were observed, clinical signs included lesions and fin erosion, five were removed for diagnostic sampling.

Mort, sea lice and treatment records inspected remotely on the 21/3/2024 remaining records inspected on the 26/3/2024.

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="16"/>	Facilities stocked	<input type="text" value="10"/>	No facilities inspected	<input type="text" value="16"/>
Species	<input type="text" value="SAL LUM"/>				
Age group	<input type="text" value="2023Q2"/>	<input type="text" value="mixed"/>			
No Fish	<input type="text" value="306,717"/>	<input type="text" value="102,381"/>			
Mean Fish Wt	<input type="text" value="1.89kg"/>	<input type="text" value="N/A"/>			
Next Fallow Date (Site)	<input type="text" value="July 2024"/>		Next Input Date (Site)	<input type="text" value="October 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="Tenacibaculum and Moritella"/>				

Movement Records

1. Movement records available for inspection?

2. Date of last inspection:

3. Are records complete and correctly entered?

4. Are movement records available for dead fish and waste?

5. Are records complete and correctly entered?

6. Are health certificates for introductions (outwith GB) available?

Transport Records

1. Are any movements carried out by (or on behalf) of the business (not using a STB)?

If yes, is there a system in place for maintenance of transportation records?

Mortality Records

1. Mortality records available for inspection?

2. How are mortalities disposed of?

If other detail:

3. Mortality records complete and correctly entered?

4. Recent mortality (last 4 wks):

5. Evidence of recent increased/atypical mortalities?

If yes, facility nos/no mortality per facility/no stock per facility/reason:

6. Any other peaks in mortality during period checked?

If yes, detail:

7. Have increased (unexplained) mortalities been reported to vet or FHI?

If yes, detail action:

8. Have 'mortality events' been reported to FHI? If no, enter details on mortality events sheet.

Treatments and Medicines Records

1. Recent treatments (see comment)?	<input type="checkbox"/>	Y
If yes, detail:	Florfenicol and TMS	
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)?	Florfenicol and 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 <i>increased (unexplained)</i> 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).	Tenebaculum, Moritella, AGD,	

Records checked between:	1/6/2022 to 26/3/2024
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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							
Fish nos	1	2	3	4	5							
Pool Group	P1	P1	P1	P1	P1							
Species	SAL	SAL	SAL	SAL	SAL							
Average weight	1.5KG	3KG	1.5KG	1.5KG	3KG							
Sex	N/A	N/A	N/A	N/A	N/A							
Water Type	SW	SW	SW	SW	SW							
Stock Details		Hellisay	Hellisay	Hellisay	Hellisay							
	Stock Origin											
Facility No	10	10	10	14	14							

03/2024 Additional Sample Information:

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Total Tests assigned

Case no: 2024-0096

Site No: FS0646

Method of killing: Percussive

Date of visit: 26/03/2024

Inspector(s):

Sheet Relevant: N

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	M	S	M	M	M							
	Lethargic												
	Hanging vertical												
	Spiralling												
	Flashing												
Body	Loss of equilibrium												
	Dark		S										
	Distended abdomen												
	Anorexic												
Opercula	Scale Oedema												
	Shortened												
Haemorrhaging	Flared												
	Throat												
	Ventrum												
	Base of fins	W	M	M	W	M							
	Elsewhere												
Eyes	Exophthalmic												
	Enophthalmic (sunken)												
	Cataract												
	Haemorrhagic												
Gills	Pale		S										
	Zoned					W							
	Necrotic												
Lesions	Flank		S			S							
	Elsewhere												
Vent	Inflamed		W		W								
	Trailing faeces												
Lice Load	Estimate numbers	0	1	0	0	0							
Internal Signs													
Ascites	Clear												
	Bloody				W								
Oedema	In tissues												
Heart	Pale/anaemic												
	Granulomas												
	Deformed	M	M	S	M	M							
Liver	Petechial haem												
	Gross haem												
	Tissue breakdown												
	Enlarged												
	Colour number(s)	6	5	4	5	5							
	Granulomas		W										
	Lesions												
Pyloric caeca	Petechial haem												
	Tubules mauve		S		S								
	Lack of fat												
Spleen	Enlarged	S	W			S							
	Granulomas	M				S							
Gut	No food present												
	Yellow pseudo-faeces												
	External haem												
	Internal haem												
Body wall	Haemorrhaging												
Swim bladder	Haemorrhaging	W	S		S	W							
	Fluid filled												
Kidney	Swollen												
	Grey	W	W	W	W	W							
	Granular	W	W	W	W	W							
	Liquefied												
General	Parasites present												
	Anaemia												

Additional comments:

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Case Number:	2024-0096	Site No:	FS0646	Insp:		
Date of Visit	26/03/2024	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		1
	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				0
	Common processes with other farms	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		0
	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					14	
Rank					LOW	

Case No:

Site No:

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)
-
-
- 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)

Case No: 2024-0096

Site No: FS0646

Date of Visit: 26/03/2024

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?



Case No:	2024-0096	Date of visit:	26/03/2024
Site No:	FS0646	Inspector:	

Results Summary	Freq.	Date of Notification						
		Database	Insp	Phone	Insp	Writing	Insp	2 nd Insp
AGD (Neoparamoeba perurans) (PCR) - AGDQ	0/5	03/04/2024		03/04/2024		24/04/2024		
IHN (PCR) - IHNP	0/5	03/04/2024		03/04/2024		24/04/2024		
ISA (real time qPCR - heart & kidney) - ISAQ	1/5	02/04/2024		02/04/2024		24/04/2024		
Paranucleospora theridion (PCR) - PNST	4/5	03/04/2024		03/04/2024		24/04/2024		
Salmon gill poxvirus (PCR) - SPVP	5/5	03/04/2024		03/04/2024		24/04/2024		
VHS (PCR) - VHSP	0/5	03/04/2024		03/04/2024		24/04/2024		
IPN (PCR) - IPNM	5/5	03/04/2024		03/04/2024		24/04/2024		
Salmonid alphavirus (SAV) (PCR) - SALP	0/5	03/04/2024		03/04/2024		24/04/2024		
Piscine myocarditis virus (CMS) (PCR) - PMVP	0/5	03/04/2024		03/04/2024		24/04/2024		
Gill pathology - GPAT	4/4	15/04/2024		15/04/2024		24/04/2024		
Heart pathology - HPAT	5/5	15/04/2024		17/04/2024		24/04/2024		
Liver pathology - LPAT	3/5	15/04/2024		17/04/2024		24/04/2024		
Kidney pathology - KPAT	4/4	15/04/2024		17/04/2024		24/04/2024		
Spleen pathology - SPAT	5/5	15/04/2024		17/04/2024		24/04/2024		
ISA sequencing result HPR0	1/1	04/04/2024		17/04/2024		24/04/2024		
IPN sequencing result, IPNV A2 virulence motif ITPAD	2/2	15/04/2024		17/04/2024		24/04/2024		
Yersinia ruckeri (ERM) - YRUK	5/5	16/04/2024		17/04/2024		24/04/2024		
Aliivibrio wodanis - ALIW	2/5	16/04/2024		17/04/2024		24/04/2024		
Vibrio species (culture) - VSPE	2/5	16/04/2024		17/04/2024		24/04/2024		
Adhesions - ADHE	2/5	17/4/24		17/04/2024		24/04/2024		

Report Summary			
Case Type	Date	Insp	2 nd Insp
ECI,CNI,SLI,REP	03/04/2024		
DIA	24/04/2024		

FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

BUSINESS No	FB0119	DATE OF VISIT	26/03/2024
SITE No	FS0646	SITE NAME	Soay
CASE No	20240096	INSPECTOR	

Section 1: Summary

The above site was inspected following reports of increased mortalities. On inspection of the stock, a number of moribund fish were observed in each pen, five were removed for further examination and subsequent diagnostic sampling.

Histopathological examination revealed mild proliferative branchitis and two fish displayed ulcerative skin. Two fish displayed a bacterial infection. Mild to moderate, multifocal myocarditis which could be related with common salmon cardiac disease or bacterial infection was also observed. Hepatocellular necrosis was also observed.

Samples were screened for infectious salmon anaemia virus (ISAV) by QPCR as part of the surveillance program for the control of listed diseases. The samples tested positive for infectious salmon anaemia virus (ISAV) by QPCR (Cp levels 35-36) and the sequence data confirmed the presence of ISAV HPR0, the non-pathogenic form of the virus. In relation to the ISAV HPR0 result obtained, along with the observations made on site, no further statutory action is required to be taken in this case, ISAV HPR0 not being a disease listed in The Aquatic Animal Health (Scotland) Regulations 2009.

Gill samples tested by qPCR were positive for the gill related pathogens: *Paranucleospora theridion* and salmon gill poxvirus (SGPV). Samples of heart and kidney tested by qPCR were positive for infectious pancreatic necrosis virus (IPNV).

Yersinia ruckeri was identified, as a primary fish pathogen and would be implicated in morbidity. *Aliivibrio wodanis* was identified from lesion material, the level of growth would suggest it may be implicated as the primary cause of the lesion but not in overall morbidity. *Vibrio* sp. was identified but would not be implicated in 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

The site was inspected following report of elevated mortality occurring on site, in the four weeks prior to the inspection, 44,735 salmon mortalities were recorded, mainly attributed to *Moritella viscosa*. On inspection of the stock, a number of moribund salmon were observed in each pen, five were removed for further examination and subsequent diagnostic sampling.

All fish sampled were moribund with haemorrhaging on the base of the fins, the body of F2 was dark in appearance and also had pale gills, the gills of F5 were slightly zoned in appearance. Lesions were evident on the flank of F2 and F5 and the vents of F2 and F4 were inflamed.

R09

Internally, F4 had bloody ascites, the hearts of all fish were deformed and granulomas were observed on the liver of F3. The pyloric caeca of F2 and 4 were mauve in appearance. Splenomegaly was evident in F1, F2 and F5 with granulomas also present on F1. Haemorrhaging was present on the swim bladders of F1, F2, F4 and F5 and the kidney of all fish were grey and granular.

Samples

Samples were collected from F1-F5 fish according to the table below:

Fish number	Facility number	Species	Stage	Origin
F1-F3	10	Atlantic salmon	1.8 kg 2023 Q2	Hellisay
F4 and F5	14	Atlantic salmon	1.8 kg 2023 Q2	Hellisay

Results

Bacteriology: Kidney material from F1-F5 and lesion material from F2 and F5 were inoculated onto appropriate media for the isolation of bacteria.

The following bacteria were isolated :

- *Yersinia ruckeri* (kidney F1-F5)

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

- *Aliivibrio wodanis* (lesion F2 and F5)
- *Vibrio* sp. (kidney F3 and 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).

Infectious salmon anaemia virus (ISAV)

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	-	-	-	-	Negative
F2	-	-	-	-	Negative
F3	-	-	-	-	Negative
F4	-	-	-	-	Negative
F5	15.15	35.58	35.19	35.68	POSITIVE

Sequencing analysis confirmed ISAV, HPR0 (non-deleted type).

Salmon gill poxvirus (SGPV)

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	21.94	26.04	26.08	26.04	POSITIVE

R09

F2	25.58	35.49	35.16	35.53	POSITIVE
F3	20.96	28.17	28.05	28.03	POSITIVE
F4	21.93	29.71	29.82	29.86	POSITIVE
F5	21.83	27.59	27.37	27.40	POSITIVE

Infectious pancreatic necrosis virus (IPNV)

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	15.37	30.74	30.70	30.89	POSITIVE
F2	15.01	33.87	33.71	34.00	POSITIVE
F3	14.67	18.27	18.24	18.07	POSITIVE
F4	15.70	32.37	32.34	32.41	POSITIVE
F5	14.80	17.14	16.93	17.15	POSITIVE

Sequencing analysis of samples from F3 and F5 showed consistency with IPNV A2, virulence motif PTA indicating a persistent virulence, typically high morbidity ($\leq 90\%$) and in general little to no mortality (less than 10%)

The samples tested negative for infectious haematopoietic necrosis virus (IHNV), salmonid alphavirus (SAV), 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).

Paranucleospora theridion

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	-	-	-	-	Negative
F2	25.58	36.91	36.98	36.53	POSITIVE
F3	20.96	28.99	28.89	28.87	POSITIVE
F4	21.93	30.13	30.16	30.53	POSITIVE
F5	21.83	34.24	34.03	35.00	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 F1-5. The tissue samples were fixed in 10% neutral buffered formalin.

Histopathological examination revealed the following:

Gill: Lamellar hyperplasia and fusion, mild, multifocal with inflammatory cell infiltrate and foci of cellular necrosis and haemorrhage (F2, F5). F1 and F3 displayed very mild lamellar epithelial hyperplasia. F2 displayed one structure resembling plankton among gill filaments.

Skin & Muscle: Lesion: Absence of the epidermis and mixed Gram-negative bacteria at the dermal outer layer and within dermis, haemorrhagic myositis with mild inflammatory influx (F3, F4).

R09

Heart: Ranging from mild to moderate, multifocal myocarditis (F1, F3, F4) and F4 displayed few rod-shaped Gram-negative bacilli. Mild epicarditis (F1-F5) and F4 displayed few rod-shaped Gram-negative bacilli. F3 also displayed some nest of basophilic nuclei.

Gut and pyloric caeca: Peritonitis, mild (F2, F5).

Pancreas: Within the normal range.

Liver: Hepatocellular necrosis, mild, multifocal (F4, F5). Mild cuffing (F1, F4).

Kidney: Interstitial necrosis, mild, multifocal (F1, F3, F4 & F5). F3 and F4 also displayed few rod-shaped Gram-negative bacilli associated with some inflammation.

Spleen: Necrosis, mild (F2, F4). Capsulitis (F1). Slightly congested F3. F3 and F4 also displayed few rod-shaped bacilli associated with some inflammation. F5 displayed cuffing, mild.

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: 24/04/2024

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Scottish Government website at [Fish Health Inspectorate Service Charter - gov.scot \(www.gov.scot\)](https://www.gov.scot/policies/fish-health-inspectorate/)

FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

BUSINESS No	FB0119	DATE OF VISIT	26/03/2024
SITE No	FS0646	SITE NAME	Soay
CASE No	20240096	INSPECTOR	██████████

Inspection under the Aquatic Animal Health (Scotland) Regulations 2009

The above site was inspected following reports of increased mortalities.

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 low. An inspection under the Aquatic Animal Health (Scotland) Regulations 2009 will be conducted every third 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 found to be inadequately maintained.

Mortality records were inspected and found to be adequately maintained.

Mortality levels had exceeded the reporting criteria since the last inspection and had been reported to the Fish Health Inspectorate as required.

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

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

The following points were raised with the site representative during the inspection:

- In the movement records the development stage section was recorded incorrectly, amendments were made at the time so no further action is required.

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.

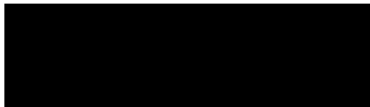
Inspection under the Aquaculture and Fisheries (Scotland) Act 2007

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 and containment and escapes.

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: 03/04/2024

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F1-5



F1



F2



F3



F4



F5



F1



F2



F3



F4



F5



F1



F2



F3



F4



F5



