

Case No:	2022-0528	Date of visit:	27/10/2022			
Time spent on site:	3 hours	Main Inspector:				
Site No:	FS0316	Site Name:	Setter Voe			
Business No:	FB0125	Business Name:	Scottish Sea Farms Ltd			
Case Types:	1 <input type="checkbox"/> ECI	2 <input type="checkbox"/> CNI	3 <input type="checkbox"/> SLI	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
Water Temp (°C):	11.2	Thermometer No:	T309	FHI 045 completed	<input type="checkbox"/>	
Observations:	Region:	SH	Water type:	S	CoGP MA	S-11
Dead/weak/abnormally behaving fish present?	<input type="checkbox"/> Y	If yes, see additional information/clinical score sheet.				
Clinical signs of disease observed?	<input type="checkbox"/> N	If yes, see additional information/clinical score sheet.				
Gross pathology observed?	<input type="checkbox"/> N	If yes, see additional information/clinical score sheet.				
Diagnostic samples taken?	<input type="checkbox"/> N					

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

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**Additional Case Information:**

Site inspection and paper work conducted by [REDACTED], observed by [REDACTED].

The site has a touch of AGD and CGD following a bloom of micro jelly fish in early October. Mortality remains low despite the environmental insult. Water temperature is decreasing and the site is hopeful that this will aid gill recovery.

From the physical inspection of the site, fish were observed to be shoaling well and responding positively to feed. A few fish in Pen 8 appeared slightly lethargic, the rest of the site displayed no clinical signs of disease and appeared healthy.

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="8"/>	Facilities stocked	<input type="text" value="7"/>	No facilities inspected	<input type="text" value="8"/>
Species	<input type="text" value="SAL"/>				
Age group	<input type="text" value="2022"/>				
No Fish	<input type="text" value="405,842"/>				
Mean Fish Wt	<input type="text" value="1.6kg"/>				
Next Fallow Date (Site)	<input type="text" value="09/2023"/>	Next Input Date (Site)	<input type="text" value="01/2024"/>		
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="CGD, AGD as a result of environmental insult"/>				

**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)?  Y  
 If yes, detail: T.M.S.  
 If other, detail:
2. Medicines records available for inspection?  Y  
 3. Are records complete and correctly entered?  Y  
 4. Are fish in a withdrawal period?  Y  
 5. If yes, what treatment(s)? T.M.S.  
 If other, detail:
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?  N  
 If yes, detail (if not detailed under recent disease problems).

Records checked between: 29/10/2020 - 27/10/2022

Case Number:	2022-0528	Site No:	FS0316	Insp:		
Date of Visit	27/10/2022	No of movements/supp./dest.			Score	
<b>Live fish movements</b>		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	3
	Number of destinations	0	3	6	10	3
<b>Exposure via water</b>	<b>Site contacts</b>	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		
<b>Management practices</b>		None	Secure	Unsecure		
Water contacts with processors	Any processing plant discharging into adjacent waters	0	1	2		1
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				
<b>Biosecurity</b>	<b>Number of sites</b>	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		1
Disinfection of equipment between sites, use of footbaths etc	Yes	0				0
	No	1				
<b>CoGP/Regulator</b>						
Practices in accordance with regulator or industry code of practice	Yes	0				0
	No	3				
Platform access to cages	Yes	0				0
	No	2				
<b>Total Rank</b>					<b>14</b>	<b>LOW</b>

Case No: **2022-0528**

Site No: **FS0316**

**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)

Top nets                      Predator net                      Seal Blinds

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)



Case No: 2022-0528

Site No: FS0316

Date of Visit: 27/10/2022

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: FS0316

Case No: 2022-0528

Nature of non-compliance:

Action taken (FHI):

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

Case No: 2022-0528

Date of visit: 27/10/2022

Site No: FS0316

Inspector: [Redacted]

Results Summary	Freq.	Date of Notification						
		Database	Insp	Phone	Insp	Writing	Insp	2 <sup>nd</sup> Insp

Report Summary			
Case Type	Date	Insp	2 <sup>nd</sup> Insp
ECl, CNI, SLI	31/10/2022		

# FISH HEALTH INSPECTORATE VISIT REPORT

## SUMMARY FOR INFORMATION OF SITE OPERATOR

<b>BUSINESS No</b>	FB0125	<b>DATE OF VISIT</b>	27/10/2022
<b>SITE No</b>	FS0316	<b>SITE NAME</b>	Setter Voe
<b>CASE No</b>	20220528	<b>INSPECTOR</b>	[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.

All epidemiological units were inspected. On this occasion no samples were taken for disease analysis. The Inspector did not observe any clinical signs associated with the listed diseases as described in the Aquatic Animal Health (Scotland) Regulations 2009.

#### 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 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 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 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 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:



Date: 31/10/2022

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/>

Case No:	<input type="text" value="2022-0530"/>	Date of visit:	<input type="text" value="31/10/2022"/>			
Time spent on site:	<input type="text" value="3 hours"/>	Main Inspector:	<input type="text" value=""/>			
Site No:	<input type="text" value="FS0577"/>	Site Name:	<input type="text" value="Kindrochet Fish Farm"/>			
Business No:	<input type="text" value="FB0070"/>	Business Name:	<input type="text" value="Kindrochet Fish Farm"/>			
Case Types:	1 <input type="text" value="ECI"/>	2 <input type="text" value="CNI"/>	3 <input type="text" value="VMD"/>	4 <input type="text" value=""/>	5 <input type="text" value=""/>	6 <input type="text" value=""/>
Water Temp (°C):	<input type="text" value="11.3"/>	Thermometer No:	<input type="text" value="T148"/>	FHI 045 completed	<input type="text" value=""/>	
Observations:	Region:	TA	Water type:	F	CoGP MA	
Dead/weak/abnormally behaving fish present?	<input type="text" value="N"/>	If yes, see additional information/clinical score sheet.				
Clinical signs of disease observed?	<input type="text" value="N"/>	If yes, see additional information/clinical score sheet.				
Gross pathology observed?	<input type="text" value="N"/>	If yes, see additional information/clinical score sheet.				
Diagnostic samples taken?	<input type="text" value="N"/>					

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

**Additional Case Information:**

All fish movements off site for restocking fisheries. Fish deliveries carried out by Kindrochet. Fewer people are visiting fisheries so their requirement for new stock has reduced. Fish are hand sorted prior to movement to fishery so any deformed or damaged fish are culled.

Fish stocked in 2022 from various sites - Selcoth, College Mill, Dunsop Bridge, Westmill, Trossachs Trout and Willowdene Trout. Stock input onto site around 20g. No longer hold ova, but have hatchery available for future use if required.

Clinical signs of ERM in one pond of fish observed in October (no samples taken), mortality was slightly elevated (4-5 per day). Stocked two ponds from single input, but only one affected. Prescription for use of Linacivet (oxolinic acid) in feed under cascade system and mix own medicated feed on site.

Site is not synchronously fallowed, but ponds are fallowed and limed between each input.

Total mortality for site from Nov 2021-Oct 2022 = 2,846.

Fish across site appeared in good condition, one observed with slightly damaged tail. One rainbow trout sampled for VMD appeared healthy.

Site inspection, paperwork and VMD sample conducted by [REDACTED], observed by [REDACTED] for audit.



Case No: **2022-0530** Site No: **FS0577**  
 Date of Visit: **31/10/2022** 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	45 + hatchery	Facilities stocked			13 ponds + 2 tanks	No facilities inspected		45 + hatchery
Species	RTR	TRO	TRO	RTR	RTR			
Age group	2022	2020 &	2021	2020 & older	2021			
No Fish	15,000	100	900	950	15,750			
Mean Fish Wt	25-100g	2kg	1kg	2kg	1.75kg			
Next Fallow Date (Site)	N/A - never fully fallow			Next Input Date (Site)		November 2022		
Recent (last 4 wks) disease problems?				Y	Any escapes (since last visit)?		N	
If yes, detail:	ERM in pond 11							

**Movement Records**

- 1. Movement records available for inspection?  Y
- 2. Date of last inspection: **21/10/2020**
- 3. Are records complete and correctly entered?  N
- 4. Are movement records available for dead fish and waste?  N
- 5. Are records complete and correctly entered?  N
- 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? **Other (detail)**
- If other detail: **Burial in mort pit on site, occasionally supply local estate with dead fish**
- 3. Mortality records complete and correctly entered?  Y
- 4. Recent mortality (last 4 wks): **Across site less than 10 per week**
- 5. Evidence of recent increased/atypical mortalities?  Y
- If yes, facility nos/no mortality per facility/no stock per facility/reason: **Pond 11, 4-5 per day, ERM**
- 6. Any other peaks in mortality during period checked?  Y
- If yes, detail: **PKD in one tank in 2021**
- 7. Have increased (unexplained) mortalities been reported to vet or FHI?  N/A
- If yes, detail action: **[REDACTED]**
- 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)?	<input type="checkbox"/>	Y
If yes, detail:	<input type="text"/>	
	Linacivet (oxolinic acid)	
If other, detail:	<input type="text"/>	
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)?	<input type="text"/>	
If other, detail:	Linacivet	
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) mortality</i> 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:	<input type="text"/>	

**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"/>	N
If yes, detail (if not detailed under recent disease problems).	<input type="text"/>	
Records checked between:	21/10/2020 - 31/10/2022	

Case no:  Site No:  Date of visit/  
 Sampling:

Priority samples: VI  BA  PA  MG  HI

Time sampling starts/ends:   Inspector:  VMD No.

Environmental conditions: 1  2  3  4  5

Summary samples HIST  BA  MG  VI  PA  Total Samples

Add Fish/Pools - click

Pool/Fish No												
Fish nos	1											
Pool Group												
Species	RTR											
Average weight	0.4000											
Sex	N/A											
Water Type	FW											
Stock Details		Selcoth Fishery										
	Stock Origin											
	Facility No	Pond 5										

10/2022

Additional Sample Information:

0

Total Tests assigned

0


Case Number:	2022-0530	Site No:	FS0577	Insp:		
Date of Visit	31/10/2022	No of movements/supp./dest.			Score	
<b>Live fish movements</b>		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	10
<b>Exposure via water</b>	<b>Site contacts</b>	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				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		0
	Farm is on-line or in a coastal zone with category V farms upstream or within 1 tidal excursion	1	4	8		0
<b>Management practices</b>		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				0
	Processing fish from MS of equivalent status	2				0
	Processing fish from zone or compartment of equivalent status	4				0
	Processing fish from Category III farm	8				0
	Processing fish from Category V farm	10				0
Disposal of fish and fish by-products	Site's own waste only processed.	0				0
	Common processes with other farms	3				0
	Collection point for waste from other farms	5				0
Use of unpasteurised feeds	No feeding of unpasteurised feed	0				0
	Feeding unpasteurised feed	5				0
<b>Biosecurity</b>	<b>Number of sites</b>	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		0
Disinfection of equipment between sites, use of footbaths etc	Yes	0				0
	No	1				0
<b>CoGP/Regulator</b>						
Practices in accordance with regulator or industry code of practice	Yes	0				0
	No	3				3
Platform access to cages	Yes	0				0
	No	2				0
<b>Total Rank</b>					<b>25</b>	<b>MEDIUM</b>

Case No: **2022-0530**

Site No: **FS0577**

**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?  N
2. Are measures in place to mitigate against the predation experienced on site? (Detail below)  Y

If other, detail below:

Site netted over top, fencing around site, grids on outlets and back channel

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



Site No: FS0577
Case No: 2022-0530
Nature of non-compliance:
Action taken (FHI):
Non-compliance relevant to (delete): VirologyMolGen/Bacteriology/Histology/Parasitology



Case No:	2022-0530	Date of visit:	31/10/2022
Site No:	FS0577	Inspector:	

Results Summary	Freq.	Date of Notification						
		Database	Insp	Phone	Insp	Writing	Insp	2 <sup>nd</sup> Insp

Report Summary			
Case Type	Date	Insp	2 <sup>nd</sup> Insp
ECI/CNI/VMD	02/11/2022		

# FISH HEALTH INSPECTORATE VISIT REPORT

## SUMMARY FOR INFORMATION OF SITE OPERATOR

<b>BUSINESS No</b>	FB0070	<b>DATE OF VISIT</b>	31/10/2022
<b>SITE No</b>	FS0577	<b>SITE NAME</b>	Kindrochet Fish Farm
<b>CASE No</b>	20220530	<b>INSPECTOR</b>	██████████

### Inspection under the Aquatic Animal Health (Scotland) Regulations 2009

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

All epidemiological units were inspected. On this occasion no samples were taken for disease analysis. The Inspector did not observe any clinical signs associated with the listed diseases as described in the Aquatic Animal Health (Scotland) Regulations 2009.

### 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 found to be inadequately 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.

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:

R04

Site numbers were not recorded in the movement records for source or destination sites for transfers of live fish. A list of site numbers for registered sites will be provided for future use. Movements of dead fish off the site were not recorded in the movement records. These will be recorded in the future.

No further action is required regarding these issues.

**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 with respect to section 5 regarding containment and escapes.

On this occasion the site was found to be satisfactory.

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

Signed:



Date: 2/11/2022

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/>

Case No:	<input type="text" value="2022-0532"/>	Date of visit:	<input type="text" value="26/10/2022"/>			
Time spent on site:	<input type="text" value="2hrs"/>	Main Inspector:	<input type="text" value=""/>			
Site No:	<input type="text" value="FS0430"/>	Site Name:	<input type="text" value="Nevis A"/>			
Business No:	<input type="text" value="FB0125"/>	Business Name:	<input type="text" value="Scottish Sea Farms Ltd"/>			
Case Types:	1 <input type="text" value="REP"/>	2 <input type="text" value="DIA"/>	3 <input type="text" value=""/>	4 <input type="text" value=""/>	5 <input type="text" value=""/>	6 <input type="text" value=""/>
Water Temp (°C):	<input type="text" value="13.1"/>	Thermometer No:	<input type="text" value="T152"/>	FHI 045 completed	<input type="text" value=""/>	
Observations:	Region:	HI	Water type:	S	CoGP MA	M-23
Dead/weak/abnormally behaving fish present?	<input type="text" value="Y"/>	If yes, see additional information/clinical score sheet.				
Clinical signs of disease observed?	<input type="text" value="Y"/>	If yes, see additional information/clinical score sheet.				
Gross pathology observed?	<input type="text" value="Y"/>	If yes, see additional information/clinical score sheet.				
Diagnostic samples taken?	<input type="text" value="Y"/>					

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

**Additional Case Information:**

The site has been affected by the swarm of the hydrozoan *Muggiaea Atlantica* which has occurred throughout west coast Mainland Scotland through to W. Shetland from end of August causing progressive gill inflammation, this combined with seasonal AGD resulted in CGD with associated high mortality.

Lumpfish came on from Bantry Marine Station, wrasse on site are wildcaught in Orkney.

Mortality events since last inspection:

Wk39 22: 27,017 (6.89%)

Wk38: 19,385 (4.7%)

Wk37: 4,649 (1.1%)

Wk34 21: 75 (1.5%)

Wk31: 957 (1.3%)

Wk30: 1,022 (1.1%)

2021 mortalities attributed to handling events during final harvesting of the site. 2022 mortalities all attributed to poor gill health. Dead fish and waste are usually incinerated on site, however, due to the large volumes generated during the mortality events, mortalities were transported to Mallaig where they were uplifted by [REDACTED] and taken to Ayr for disposal.

The last treatment of the cycle was a peroxide bath completed between 6-9th October 22.

Staff have been harvesting the site which was fallow on 31/10/2022.

Bad weather warning on day of inspection. Site was visited and 5 moribunds were removed from 2 cages for diagnostic sampling. Due to high swell and high winds, only these 2 cages were inspected as unsafe to remain on site. Fish in these 2 cages were lethargic with several moribunds observed in each. Fish removed for sampling had high lice burdens and fish were observed jumping in both cages.

Case sheet was updated and diagnostic report was re-issued on 21/11/2022 due to an update to a correction in the stock origin from the business. A statement was missing from the re-issued report, so a further report was issued on 23/11/2022.



Case No: **2022-0532** Site No: **FS0430**  
 Date of Visit: **26/10/2022** Inspector(s): **[REDACTED]**

**Registration/Authorisation Details**

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

**Site Details (include cleaner fish for all sections)**

Total No facilities	12	Facilities stocked	5	No facilities inspected	2
Species	SAL	LUM	WRA		
Age group	2021 Q4	2021	Wildcaught		
No Fish	38,728	30,979	9,943		
Mean Fish Wt	3kg	120g	95g		
Next Fallow Date (Site)	Nov 22	Next Input Date (Site)	Oct 23		
Recent (last 4 wks) disease problems?		Y	Any escapes (since last visit)?		N
If yes, detail:	AGD & CGD				

**Movement Records**

1. Movement records available for inspection? **Y**  
 2. Date of last inspection: **09/06/2021**  
 3. Are records complete and correctly entered? **Y**  
 4. Are movement records available for dead fish and waste? **Y**  
 5. Are records complete and correctly entered? **Y**  
 6. Are health certificates for introductions (outwith GB) available? **N/A**

**Transport Records**

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

**Mortality Records**

1. Mortality records available for inspection? **Y**  
 2. How are mortalities disposed of? **Incinerated - on site**  
 If other detail: **[REDACTED]**  
 3. Mortality records complete and correctly entered? **Y**  
 4. Recent mortality (last 4 wks): **Wk43: 19,480 (15.42%), Wk42: 83,900 (26.56%), Wk41: 28,576 (8.3%), Wk40: 20,473 (5.61%)**  
 5. Evidence of recent increased/atypical mortalities? **Y**  
 If yes, facility nos/no mortality per facility/no stock per facility/reason: **Poor gill health across the site resulting in increased mortalities.**  
 6. Any other peaks in mortality during period checked? **Y**  
 If yes, detail: **See additional information.**  
 7. Have increased (unexplained) mortalities been reported to vet or FHI? **N/A**  
 If yes, detail action: **[REDACTED]**  
 8. Have 'mortality events' been reported to FHI? If no, enter details on mortality events sheet. **Y**

**Treatments and Medicines Records**

- 1. Recent treatments (see comment)?  Y  
 If yes, detail:
- 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?  N
- 5. If yes, what treatment(s)?
- If other, detail:
- 6. Are medicines stored appropriately?  Y

**Biosecurity Records**

- 1. Biosecurity records available for inspection?
- 2. Has the manner and frequency of mortality removal, recording and safe disposal been considered?
- 3. Has the manner and period in which the APB will notify Scottish Ministers or veterinary professional of any *increased (unexplained)* mortality at the site been included?
- 4. Has the action that will be taken in the event that the presence or suspicion of the presence of a listed disease is detected been included and *how* and *when* that will be notified to Scottish Ministers?
- 5. Has the health status of aquaculture animals being stocked on the farm site been covered (equal or higher health status, certification if required)?
- 6. Have the husbandry and biosecurity measures implemented between each epidemiological unit to minimise transmission of disease been covered (movement of staff, visitors, equipment, live or dead fish etc.)?
- 7. Is documentation available regarding the measures in place to maintain the physical containment of aquaculture animals held on site?
- 8. Have the biosecurity procedures been adequately implemented on site?
- If no, detail:

**Results of Surveillance**

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

Records checked between:

Case no:  Site No:  Date of visit/  
Sampling:

Priority samples: VI  BA  PA  MG  HI

Time sampling starts/ends:   Inspector:  VMD No.

Environmental conditions: 1  2  3  4  5

Summary samples HIST  BA  MG  VI  PA  Total Samples

**Add Fish/Pools - click**

	Pool/Fish No	F1	F2	F3	F4	F5	P1						
	Fish nos	1	2	3	4	5	1-5						
	Pool Group	P1	P1	P1	P1	P1							
	Species	SAL	SAL	SAL	SAL	SAL	SAL						
	Average weight												
	Sex	N/A	N/A	N/A	N/A	N/A	N/A						
	Water Type	SW	SW	SW	SW	SW	SW						
Stock Details	Stock Origin	Barcaldine Smolt Unit FS1328	Barcaldine Smolt Unit FS1328	Barcaldine Smolt Unit FS1328	Barcaldine Smolt Unit FS1328	Barcaldine Smolt Unit FS1328							
	Facility No	3	3	10	10	10							



Case no: 2022-0532

Site No: FS0430

Method of killing:

Date of visit: 26/10/2022

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)	45	60	65	70	75				
<b>External Signs</b>									
Behaviour	Moribund	S	S	S	S	S			
	Lethargic								
	Hanging vertical								
	Spiralling								
	Flashing								
	Loss of equilibrium								
Body	Dark								
	Distended abdomen								
	Anorexic			M					
	Scale Oedema								
Opercula	Shortened	W			M				
	Flared								
Haemorrhaging	Throat								
	Ventrum	W	W	W	M	W			
	Base of fins		W	W	W				
	Elsewhere				M				
Eyes	Exophthalmic		M			W			
	Enophthalmic (sunken)								
	Cataract								
	Haemorrhagic								
Gills	Pale		M	M	S	S			
	Zoned	W							
	Necrotic								
Lesions	Flank								
	Elsewhere	M	M	W	S				
Vent	Inflamed			W	W	S			
	Trailing faeces								
Lice Load	Estimate numbers	16	14	25	29	35			
<b>Internal Signs</b>									
Ascites	Clear								
	Bloody			S	S	S			
Oedema	In tissues								
Heart	Pale/anaemic								
	Granulomas								
	Deformed								
Liver	Petechial haem	W							
	Gross haem								
	Tissue breakdown								
	Enlarged	W	W		W	W			
	Colour number(s)	3	6	2	2	2			
	Granulomas								
	Lesions								
Pyloric caeca	Petechial haem								
	Tubules mauve								
	Lack of fat			M					
Spleen	Enlarged								
	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	M	M	S	S	S			
	Granular								
	Liquefied	M	M	S	S	S			
General	Parasites present								
	Anaemia								



Additional comments:

Site No: FS0430

Case No: 2022-0532

Nature of non-compliance:

Action taken (FHI):

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





Case No: **2022-0532** Date of visit: **26/10/2022**  
 Site No: **FS0430** Inspector: **[REDACTED]**

Results Summary	Freq.	Date of Notification						
		Database	Insp	Phone	Insp	Writing	Insp	2 <sup>nd</sup> Insp
MG_VHS	0/5	01/11/2022		01/11/2022		01/11/2022		
MG_IHN	0/5	01/11/2022		01/11/2022		01/11/2022		
MG_ISA	0/5	01/11/2022		01/11/2022		01/11/2022		
MG_SAL_POX	4/5	01/11/2022		01/11/2022		01/11/2022		
MG_AGDQ	4/5	01/11/2022		01/11/2022		01/11/2022		
MG_PARA_THER_Q	5/5	01/11/2022		01/11/2022		01/11/2022		
MG_PMCV	0/5	02/11/2022		02/11/2022		02/11/2022		
MG_SAV	0/5	02/11/2022		02/11/2022		02/11/2022		
MG_IPN	0/5	02/11/2022		02/11/2022		02/11/2022		
ASAL	3/5	14/11/2022		14/11/2022		14/11/2022		
EPIT	1/5	14/11/2022		14/11/2022		14/11/2022		
GPAT	5/5	14/11/2022		14/11/2022		14/11/2022		
CGDH	5/5	14/11/2022		14/11/2022		14/11/2022		
LPAT	3/5	14/11/2022		14/11/2022		14/11/2022		
SPAT	3/5	14/11/2022		14/11/2022		14/11/2022		
KPAT	3/5	14/11/2022		14/11/2022		14/11/2022		
PMCH	5/5	14/11/2022		14/11/2022		14/11/2022		

Report Summary			
Case Type	Date	Insp	2 <sup>nd</sup> Insp
DIA, REP	18/11/2022		
Amended report	21/11/2022		
Amended report	23/11/2022		

# FISH HEALTH INSPECTORATE VISIT REPORT

## SUMMARY FOR INFORMATION OF SITE OPERATOR

<b>BUSINESS No</b>	FB0125	<b>DATE OF VISIT</b>	26/10/2022
<b>SITE No</b>	FS0430	<b>SITE NAME</b>	Nevis A
<b>CASE No</b>	20220532	<b>INSPECTOR</b>	██████████

This report replaces the fish health reports R09 issued on 18/11/2022 and the 21/11/2022 by ██████████. The previous reports should be discarded.

### Section 1: Summary

The site was inspected due to recent mortality reports above the reporting threshold, all attributed to gill issues. Five fish were selected for diagnostic sampling.

Histopathology examination revealed multifocal, mild, branchitis associated with complex gill issues. Epitheliocystis (likely *Brachiomonas* sp.) was observed. Very mild myocarditis and hepatic necrosis, mild necrotizing nephritis and splenitis were also observed.

*Paranucleospora theridion*, *Neoparamoeba perurans* (AGD) and salmon gill poxvirus were detected by qPCR.

*Aeromonas salmonicida* was identified. The level and purity would not suggest it is acting as a primary pathogen overall, however in fish 3 it is likely to be implicated as the primary source of 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

Nevis A was inspected due to recent, consecutive mortality reports above the reporting criteria, all attributed to gill issues and which resulted in the loss of 229,484 fish in a 7-week period. At the time of inspection, the site was stocked with 38,728 Q4 Atlantic salmon at an average weight of 3kg originating from the Barcaldine Smolt Unit. These were stocked alongside farmed lumpfish at an average weight of ~120g and wild caught wrasse at an average weight of ~95g. Due to weather conditions at the time of inspection, only 2 of the 5 cages stocked were able to be inspected. Mortalities were observed in both and the general population was very lethargic with some physical damage noted on some fish. Five moribund fish were removed from cages 3 and 10 for diagnostic sampling.

All five fish were moribund. Externally, F3 was anorexic and the operculum on F1 and F4 were shortened. Haemorrhaging was observed on the ventrum of all five fish and at the base of the fins on F2-4. Exophthalmia was observed on F2 and F5.

R09

The gills were zoned in F1 and pale in F2-5. Lesions were noted on F1-4 and the vents were inflamed in F3-5. The lice load was high on each fish, ranging from ~14-35 of varying life stages.

Internally, bloody ascites was observed in F3-5. The liver of F1 displayed petechial haemorrhaging and was enlarged in F1, 2, 4 and 5. A lack of fat was noted on the pyloric caeca of F3 and yellow pseudo-faeces were found in the guts of all five fish. The kidney in all five fish was grey in colour and appeared liquefied to some extent.

### Samples

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

Fish number	Facility number	Species	Stage	Origin
F1-F5	3	Atlantic salmon	2021 Q4; 3kg	Barcaldine Smolt Unit FS1328

### Results

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

The following bacterium was isolated:

- *Aeromonas salmonicida* (Gill: 3/5 fish & Kidney: 2/5 fish)

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

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

#### Salmon gillpox virus (SGPV)

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	19.89	34.86	34.27	34.09	POSITIVE
F2	-	-	-	-	Negative
F3	19.25	38.87	35.58	37.71	POSITIVE
F4	19.45	28.68	28.75	28.59	POSITIVE
F5	19.75	29.49	29.65	29.46	POSITIVE

The samples tested negative for infectious haematopoietic necrosis virus (IHNV), infectious pancreatic necrosis virus (IPNV), infectious salmon anaemia virus (ISAV), 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).

*Neoparamoeba perurans* (AGD)

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	19.89	30.19	30.22	30.18	POSITIVE
F2	-	-	-	-	Negative
F3	19.25	28.25	28.08	28.07	POSITIVE
F4	19.45	27.60	27.68	27.60	POSITIVE
F5	19.75	28.27	27.98	28.12	POSITIVE

*Paranucleospora theridion*

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	19.89	32.24	32.08	32.51	POSITIVE
F2	19.83	33.07	32.94	33.58	POSITIVE
F3	19.25	25.41	25.24	25.34	POSITIVE
F4	19.45	28.94	28.93	28.95	POSITIVE
F5	19.75	27.64	27.67	27.65	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: F4 exhibited small foci of hyperplasia and lamellar fusion. F2 also displayed some lamellar clubbing and some bluntness of gill filament tips. Several basophilic epithelial inclusions (likely epitheliocystis) observed in F4. Lamellar telangiectasia with multifocal thrombosis and some lamellar congestion in all fish. F3 displayed a small area of mixed bacteria. F3-F5 reading hindered by some autolysis artefacts.

Skin & Muscle: Within the normal range.

Heart: Minimal, multifocal myocarditis (F1, F2, F4). Few thrombi on the compact layer vessels (ventricle chamber) (F5). Mild epicarditis (F3).

Gut and pyloric caeca: Some cell sloughing (likely associated with post-mortem artefact) (F3 & F4).

Pancreas: Within the normal range.

Liver: Hepatocellular necrosis and haemorrhage, mild multifocal (F1), foci of healing tissue (F2), hepatocellular vacuolation (macrovisicules) (F4). Capsulitis, mild (F3)

Kidney: Interstitial cell (haematopoietic) necrosis mild to moderate, multifocal and some inflammatory circulating cells (F3-F5).

Spleen: Foci of cellular necrosis, mild to moderate, multifocal (F1-F3), minor cuffing (F1, F2), slightly congested.

R09



Signed:

Date: 23/11/2022

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/>

R09



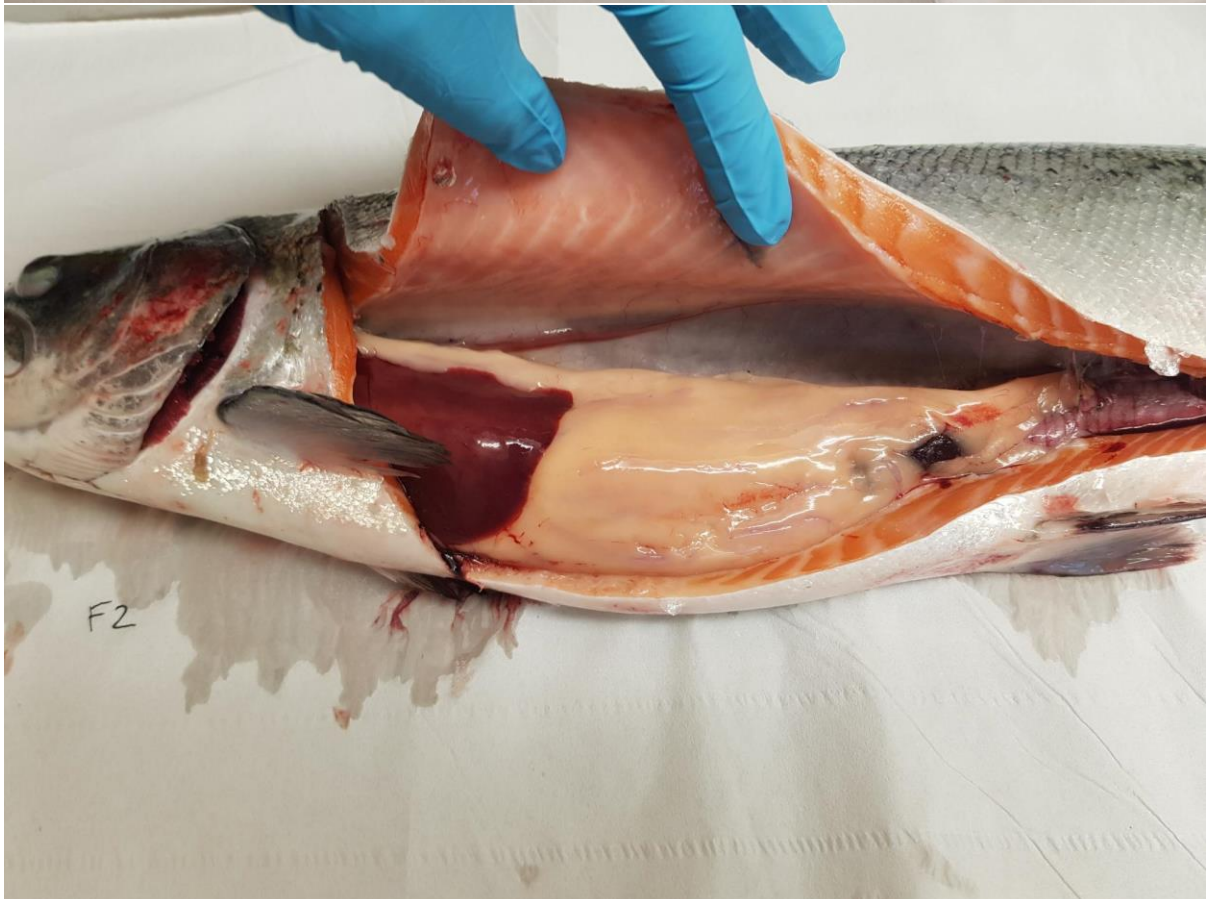
F1 -







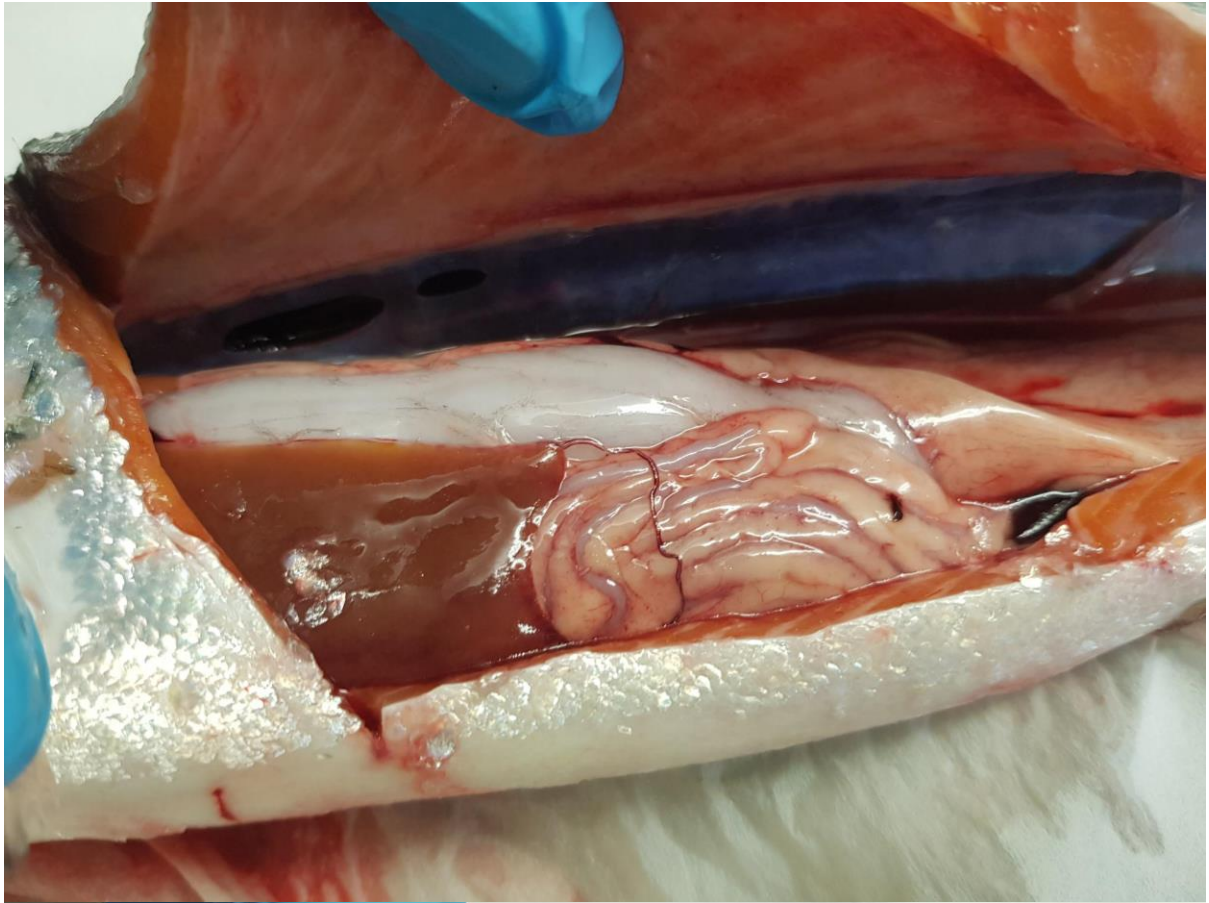
F2 -





F3 -







F4 -







F5 -



