

Case No: 2021-0470 Date of visit: 01/11/2021

Time spent on site: 3hrs Main Inspector: [Redacted]

Site No: FS0090 Site Name: Ormsary Broodstock Unit
Business No: FB0061 Business Name: Landcatch Natural Selection Ltd

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

Water Temp (°C): 11.9 Thermometer No: Site FHI 045 completed [Redacted]

Observations: Region: ST Water type: B CoGP MA: M-44

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:

Due to site biosecurity used site thermometer.

Stock details as dated 27/10/21, movement records collected 1/11/21, remaining records checked on 09/11/21 and supplied 14/11/21.

Harvest strategy not required, land based site in tanks can easily treat and have control on the water that is taken from the sea. Broodstock site so no harvesting takes place normally from the site.

Lethargic fish were observed in tank F1 and removed for diagnostic sampling. Site manager informed me that the mortality reporting threshold had been breached the previous week. 2021 yearclass had been experiencing mortality and samples had been collected by the biologist to determine the cause, which was still unknown at the time of visit. All other year classes on site appeared to be unaffected with low mortality.

Following on from a positive QPCR result for ISA, the HPR region was sequenced. The ISA HPR type has been determined to be HPR0 (non-deleted type).

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="21"/>	Facilities stocked	<input type="text" value="12"/>	No facilities inspected	<input type="text" value="21"/>
Species	<input type="text" value="SAL"/>	<input type="text" value="SAL"/>	<input type="text" value="SAL"/>		
Age group	<input type="text" value="2019"/>	<input type="text" value="2020"/>	<input type="text" value="2021"/>		
No Fish	<input type="text" value="1,100"/>	<input type="text" value="6,100"/>	<input type="text" value="9,900"/>		
Mean Fish Wt	<input type="text" value="10.5kg"/>	<input type="text" value="7.1kg"/>	<input type="text" value="1.7kg"/>		
Next Fallow Date (Site)	<input type="text" value="none"/>		Next Input Date (Site)	<input type="text" value="April 2022"/>	
Recent (last 4 wks) disease problems?			Any escapes (since last visit)?	<input type="text" value="N"/>	
If yes, detail:	<input type="text" value="Unknown issues, samples have been collected by biologist. No results available at this time."/>				

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: T.M.S.		
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)?	<input type="checkbox"/>	T.M.S.
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"/>	N
If yes, detail (if not detailed under recent disease problems).		
April 2021 - Histology samples with some gill pathology noted of undetermined cause, possible environmental or handling.		

Records checked between: 16/10/2019 - 1/11/21

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	P1								
	Fish nos	1	2	3	1-3	4							
	Pool Group	P1	P1	P1									
	Species	SAL	SAL	SAL	SAL								
	Average weight	1kg	1.2kg	1.2kg		1.4kg							
	Sex	female	female	male		N/A							
	Water Type	SW	SW	SW		SW							
Stock Details	Stock Origin	Langass Hatchery	Langass Hatchery	Langass Hatchery	Langass Hatchery	Langass Hatchery							
	Facility No	F1	F1	F1		F3							

Case no: 2021-0470

Site No: FS0090

Method of killing: Percussive

Date of visit: 01/11/2021

Inspector(s):

Sheet Relevant: Y

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

Fish Number		F1	F2	F3						
Time sampled after death (if > 45 minutes)										
External Signs										
Behaviour	Moribund	S								
	Lethargic	S	M	M						
	Hanging vertical									
	Spiralling									
	Flashing									
Body	Loss of equilibrium									
	Dark									
	Distended abdomen									
	Anorexic			W						
Opercula	Scale Oedema									
	Shortened									
	Flared									
Haemorrhaging	Throat									
	Ventrum									
	Base of fins									
Eyes	Elsewhere									
	Exophthalmic									
	Enophthalmic (sunken)									
	Cataract									
Gills	Haemorrhagic									
	Pale									
	Zoned									
Lesions	Necrotic									
	Flank									
	Elsewhere									
Vent	Inflamed									
	Trailing faeces									
Lice Load	Estimate numbers									
Internal Signs										
Ascites	Clear									
	Bloody		M	W						
Oedema	In tissues									
Heart	Pale/anaemic									
	Granulomas									
	Deformed									
Liver	Petechial haem	W	W	W						
	Gross haem									
	Tissue breakdown	W	W							
	Enlarged									
Pyloric caeca	Colour number(s)									
	Granulomas									
	Lesions									
	Petechial haem									
Spleen	Tubules mauve									
	Lack of fat									
	Enlarged		W	W						
Gut	Granulomas									
	No food present									
	Yellow pseudo-faeces	M	M							
	External haem									
Body wall	Internal haem									
	Haemorrhaging									
	Swim bladder									
Kidney	Fluid filled									
	Swollen									
	Grey	W	W							
	Granular									
General	Liquefied									
	Parasites present									
	Anaemia									

Case no: 2021-0470

Date of visit: 01/11/2021

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

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:

F1&F2 appeared to be females in the early stages of producing eggs, F3 appeared to be male filled with milt.

F1 was externally very pale. In the water it appeared to have a brown coloured discolouration to the head and to a lesser extent near the dorsal fin. Once removed from the water this was not apparent anymore. Similar discolouration was noted on a few individuals in the same tank to a lesser extent and these fish were active and did not appear to be moribund or lethargic.

Case Number:	2021-0470	Site No:	FS0090	Insp:		
Date of Visit	01/11/2021	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				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		0
Disinfection of equipment between sites, use of footbaths etc	Yes	0				0
	No	1				
CoGP/Regulator						
Practices in accordance with regulator or industry code of practice	Yes	0				0
	No	3				
Platform access to cages	Yes	0				0
	No	2				
Total Rank					18	MEDIUM

Case No: **2021-0470**

Site No: **FS0090**

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) followed 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)
- If other, detail below:
tanks outside with covers
- 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: 2021-0470

Site No: FS0090

Date of Visit: 01/11/2021

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: FS0090

Case No: 2021-0470

Nature of non-compliance:

Action taken (FHI):

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

Case No: 2021-0470 Site No: FS0090 Date of visit: 01/11/2021

Start date:	End date: (if applicable)	Size of fish:	Average weight of affected population:	Species:	Yearclass (SW SAL only):	Timescale	Mortality rate recorded(%):	Explained/unexplained:	If explained, select reason(s):
28/06/20	04/07/2020	≥750g	3kg	SAL		Weekly	1.86	Explained	Poor doer/ Runts
05/07/20	11/07/2020	≥750g	3.1kg	SAL		Weekly	2.16	Explained	Poor doer/ Runts
19/07/20	25/07/2020	≥750g	3.1 kg	SAL		Weekly	1.25	Explained	Poor doer/ Runts
26/07/20	01/08/2020	≥750g	3.2 kg	SAL		Weekly	1.08	Explained	Poor doer/ Runts
06/12/20	12/12/2020	≥750g	3.5kg	SAL		Weekly	1.54	Explained	Grilse
24/10/21	30/10/2021	≥750g	3.8 kg	SAL		Weekly	2.90	Unexplained	
31/10/21	06/11/2021	≥750g	3.9kg	SAL		Weekly	4.59	Unexplained	
07/11/21	13/11/2021	≥750g	4.1kg	SAL		Weekly	6.94	Unexplained	
21/11/21	27/11/2021	≥750g	4.2kg	SAL		Weekly	1.09	Unexplained	
28/11/21	04/12/2021	≥750g	4.3kg	SAL		Weekly	1.76	Explained	Grilse
05/12/21	11/12/2021	≥750g	4.3 kg	SAL		Weekly	1.26	Explained	Grilse

If unexplained, select observations:	Total mortality during event (if available):	Additional information (e.g. action taken by company):	Action taken by FHI (include case no where applicable):	Yearclass Year
	Click to select observations (ensure in correct cell)		Historic mortality picked up during site visit.	
			Historic mortality picked up during site visit.	
			Historic mortality picked up during site visit.	
	149		Historic mortality picked up during site visit.	
	164		Historic mortality picked up during site visit.	
Gill insult	447	Histology samples taken	Mortality picked up during site visit.	
Gill insult	682	Bacteriology and virology samples taken	Mortality picked up during site visit.	
Gill insult	979	Gill swabs and blood samples taken	Mortality picked up during site visit.	
Gill insult	139		Mortality picked up during site visit.	
Gill insult	221	Biologist notified	Mortality picked up during site visit.	
Gill insult	155	MS inspector verbally notified on 01.11.2021 during site visit	Mortality picked up during site visit.	

Case No:	2021-0470	Date of visit:	01/11/2021
Site No:	FS0090	Inspector:	

Results Summary	Freq.	Date of Notification						
		Database	Insp	Phone	Insp	Writing	Insp	2 nd Insp
MG-ISA	1/1	08/11/2021		08/11/2021		03/12/2021		
MG-IPN	1/1	08/11/2021		09/11/2021		03/12/2021		
MG-VHS	0/1	08/11/2021		09/11/2021		03/12/2021		
MG-IHN	0/1	08/11/2021		09/11/2021		03/12/2021		
MG-SAV	0/1	08/11/2021		09/11/2021		03/12/2021		
CGDH	3/3	29/10/2021				03/12/2021		
GPAT	3/3	29/10/2021				03/12/2021		
EPIT	3/3	29/10/2021				03/12/2021		
LPAT	2/3	29/10/2021				03/12/2021		
AMGD	3/3	29/10/2021				03/12/2021		
ISA - IHC	0/1	29/10/2021		10/11/2021		03/12/2021		

Report Summary	Date	Insp	2 nd Insp
Case Type			
ECI, CNI, SLI. VMD	18/01/2022		
DIA	03/12/2021		

FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

BUSINESS No	FB0061	DATE OF VISIT	01/11/2021
SITE No	FS0090	SITE NAME	Ormsary Broodstock Unit
CASE No	20210470	INSPECTOR	██████████

Section 1: Summary

During a routine inspection lethargic fish were observed on site and removed for diagnostic sampling. Increased unexplained mortality in one year class (2021) was being investigated at the time of the visit.

Histopathological examination revealed marked vascular disturbance potentially associated with water bourn insult. Mild, multifactorial, non-specific proliferative branchitis was also noted. Pathology was also consistent presence of epitheliocystis (likely *Candidatus Branchiomonas cysticola*) and amoebic gill disease (AGD). Mild multifocal hepatic necrosis (F1 & F3) and haemorrhage were observed in F3.

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 and the sequence data confirmed the presence of ISAV HPR0, the non-pathogenic form of the virus. Additionally, an ISAV immunochemistry (IHC) assay which targets the pathogenic form of the virus (ISA-deleted nucleoprotein) was performed and was found to be negative. 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.

Samples also tested positive for Infectious pancreatic necrosis virus (IPNV) by QPCR.

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 inspection lethargic fish were observed on site and removed for diagnostic sampling. The site was stocked with 3 year classes of Atlantic salmon broodstock at the time of the visit. Increased mortality had been observed in the population that went to sea in 2021, the previous week. Mortality of 195 fish or 1.93% was observed on site in the week beginning 22 October 2021. The following week, week beginning 29 October 2021, 513 fish or 5.93% were reported to the Fish Health Inspectorate.

F1 was displaying moribund and lethargic behaviour prior to being removed from the tank, while F2 and F3 were lethargic. Externally, F1 showed pale discolouration with brown patches visible while R09

the fish was in the water at the anterior and posterior dorsal surface. F3, appeared to be slightly anorexic. Internally, all three fish showed signs of maturation, with some petechial haemorrhaging evident on the liver and some liver breakdown observed in F1 & F2. Bloody ascites was observed in the body cavity of F2 and F3, and the spleen appeared somewhat enlarged in both individuals. Yellow pseudo-faeces were observed in F1 & F2 and the kidney appeared to have a slightly grey sheen in both individuals.

Samples

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

Fish number	Pool number	Facility number	Species	Stage	Origin
F1-F3	P1	F1	Atlantic salmon (<i>Salmo salar</i>)	1.7kg, 2021	Langass Hatchery

Results

Bacteriology: Kidney and gill material from F1-F3 was inoculated onto appropriate media for the isolation of bacteria.

No significant bacteria were isolated.

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 pancreatic necrosis virus (IPNV)

Pool Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
P1	19.69	34.72	35.59	36.26	POSITIVE

Infectious salmon anaemia virus (ISAV)

Pool Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
P1	19.69	38.3	38.55	39.47	POSITIVE

Sequencing confirmed 100% identity of ISA HPR0.

An ISAV immunochemistry (IHC) assay which targets the pathogenic form of the virus (ISA-deleted nucleoprotein) was performed and was found to be negative.

The samples tested negative for infectious haematopoietic necrosis virus (IHNV), salmonid alphavirus (SAV) and viral haemorrhagic septicaemia virus (VHSV).

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

Histopathological examination by light microscopy of 3 Atlantic salmon revealed the following:

Gill: Mild multifocal hyperplasia and lamellar fusion, mainly observed at the base of the gill filament (F1). Foci of cellular necrosis also observed on the hyperplastic plaques (F1). Some adhesions of

R09

the adjacent lamellae also noted in all fish. Rare amoeboid cells resembling *Neoparamoeba perurans* observed in F1; F1 and F3 exhibited basophilic epithelial inclusions (likely epitheliocystis). All fish displayed displacement of the chloride cells and prominent goblet cells. Lamellae exhibited marked, diffuse, vascular disturbance, several aneurismal dilations and thrombi observed in all fish.

Skin & Muscle: Within normal range.

Heart: Two thrombi observed in the atrium chamber (F2).

Gut and pyloric caeca: Within normal range.

Pancreas: Within normal range.

Liver: Multiple small foci of hepatic cell necrosis (F1 & F3). F3 also displayed a focally extensive haemorrhage.

Kidney: Foci of absence of haematopoietic tissue (F2) and increased numbers of melanomacrophages aggregates (F3).

Spleen: Within normal range.

Signed:



Date: 03/12/2021

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/>

FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

BUSINESS No	FB0061	DATE OF VISIT	01/11/2021
SITE No	FS0090	SITE NAME	Ormsary Broodstock Unit
CASE No	20210470	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.

All epidemiological units were inspected.

Samples were taken for diagnostic purposes. A separate report has been 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.

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

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.

R25

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

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

Medicine records were inspected and found to be adequately maintained.

Samples were taken to be analysed for veterinary residues.

Inspection under the Aquaculture and Fisheries (Scotland) Act 2007

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

On this occasion the site was found to be satisfactory with regards 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:



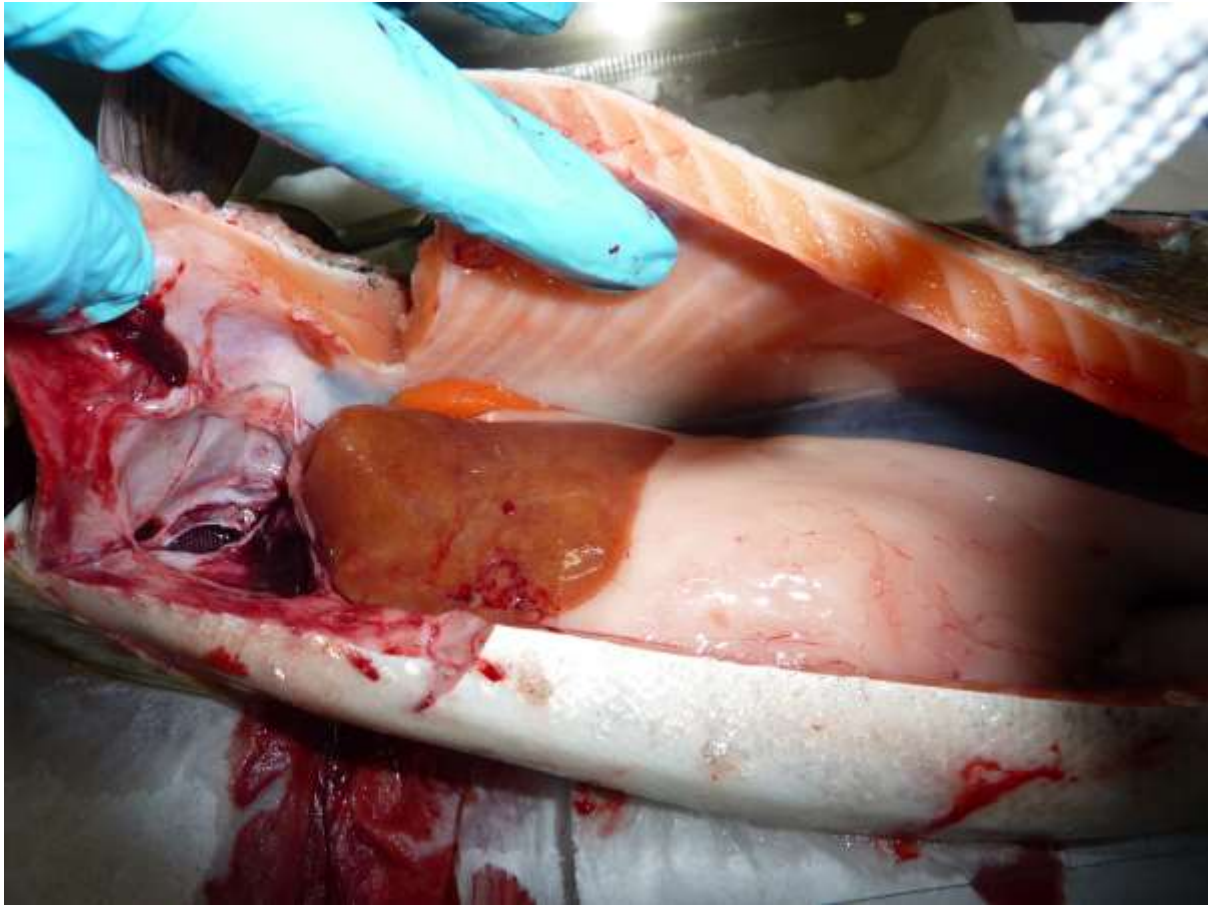
Date: 18/01/2022

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/>

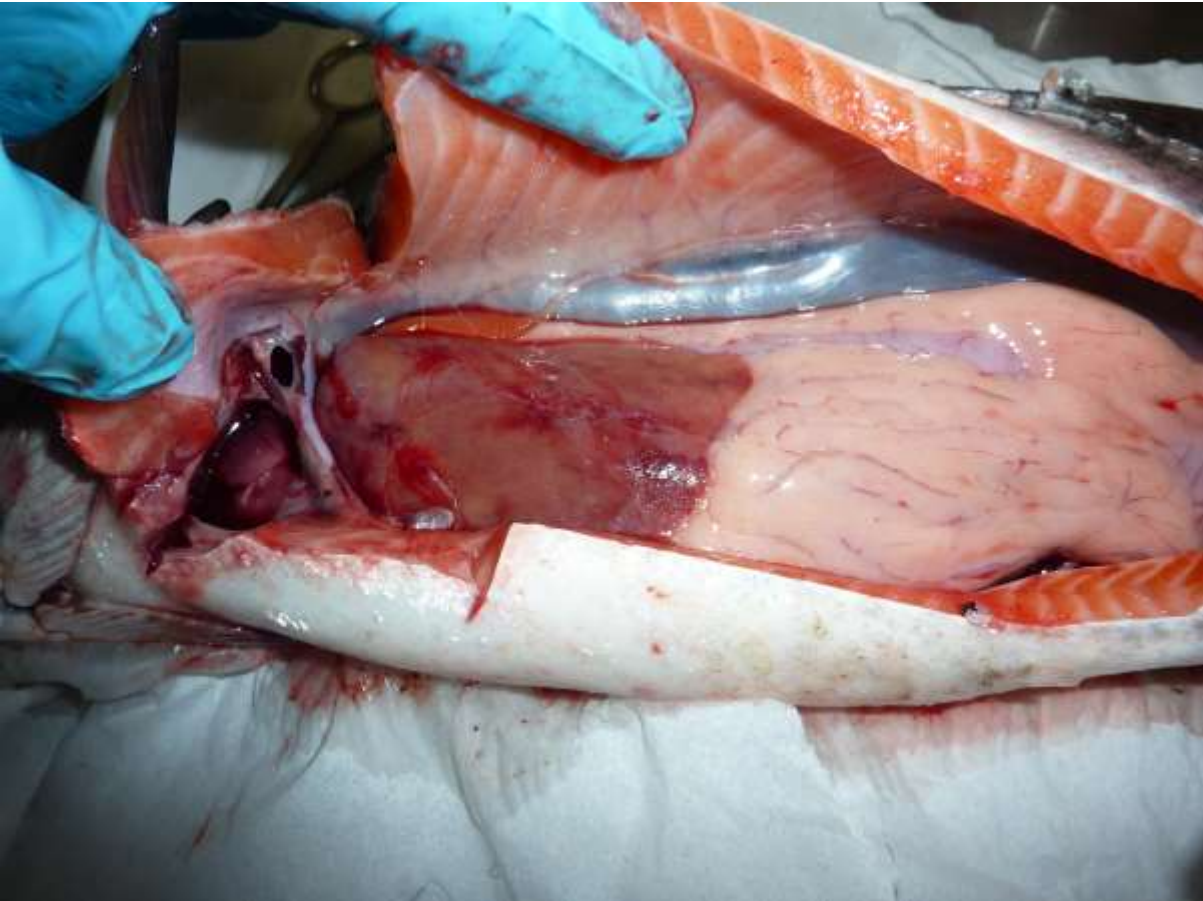
F1





F2





F3



