

Case No: 2022-0342 Date of visit: 17/08/2022

Time spent on site: 2hours Main Inspector: [Redacted]

Site No: FS1010 Site Name: East Tarbert Bay  
Business No: FB0169 Business Name: The Scottish Salmon Company

Case Types: 1 REP 2 SLA 3 DIA 4 [ ] 5 [ ] 6 [ ]

Water Temp (°C): 14.8 Thermometer No: T308 FHI 045 completed [ ]

Observations: Region: ST Water type: S CoGP MA: M-46

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:**

Fish were input on site for the first time in wk17. Fish were input at ~150g and were noted to be soft as well as possess reduced amount of mucus. The stock on site originates from two hatcheries: Applecross Smolt unit and Girlsta Hatchery. The fish from Girlsta are a mix of stofinfiskur and Aquagen.

During the site inspection, fish were observed to be jumpy. In addition, a freshwater treatment and transfer was occurring to reduce the biomass on site so that in the next 3 weeks a SLICE treatment can occur. The freshwater treatment was being administered by the Ronjafisk and exposure to freshwater is ~1 hour. Transfers were to Druimyeon Bay, where 5 pens from East Tarbert Bay had already been moved to.

From health surveillance conducted on site, 2 pens (1 and 7) were confirmed to have PRV. No clinical changes were observed and is currently not the primary suggested cause of increased mortality on site.

Caligus levels extremely high in Wk 29, 30 and 31. Micro jelly bloom occurred in the week of input, which agitated gills primarily. Then the arrival of Lion's mane jellyfish exacerbated gill issues on site further. Mild AGD observed in gills of fish.

Diagnostic samples taken from pen 1. Sampled fish were moribund and lethargic. In addition, signs of loss of equilibrium where beginning.

Fish sampled for VMD appeared healthy.

Case No: **2022-0342** Site No: **FS1010**  
 Date of Visit: **17/08/2022** 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	<b>12</b>	Facilities stocked	<b>6</b>	No facilities inspected	<b>12</b>
Species	<b>SAL</b>	<b>WRS</b>			
Age group	<b>2022 S0</b>	<b>2022</b>			
No Fish	<b>493,772</b>	<b>18,642</b>			
Mean Fish Wt	<b>350g</b>	<b>Wild caught/mix</b>			
Next Fallow Date (Site)	<b>Jan 2024</b>		Next Input Date (Site)	<b>Sept 2024</b>	
Recent (last 4 wks) disease problems?			<b>Y</b>	Any escapes (since last visit)?	<b>N</b>
If yes, detail:	<b>Increased mortality for past 3 weeks. PRV confirmed on site. Osmoregulatory issues and poor water quality due to micro jellies and lion's mane jellyfish. Caligus burden high on site for 4 weeks.</b>				

**Movement Records**

1. Movement records available for inspection? **Y**  
 2. Date of last inspection: **26/05/2021**  
 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? **Other (detail)**  
 If other detail: **taken off site by Billy Bowie to Barkip bio gas**  
 3. Mortality records complete and correctly entered? **Y**  
 4. Recent mortality (last 4 wks): **2022: Wk 32, 2.76%, 31839 ; Wk31, 8.12%, 102008; Wk30, 7.73%, 105355; Wk29, 2.25%, 31307**  
 5. Evidence of recent increased/atypical mortalities? **Y**  
 If yes, facility nos/no mortality per facility/no stock per facility/reason: **pen 1, 3 and 7 due to water quality and lice damage and handling events.**  
 6. Any other peaks in mortality during period checked? **Y**  
 If yes, detail: **2021: WK 38, 10.84%, 73315; WK39, 20.52%, 123726; WK40, 23.99%; 114970; Wk41, 18.05%, 65753; Wk43, 1.03%, 3139; Wk44, 6.07%, 18330; Wk45, 15.10, 42801; Wk46, 11.76%, 28317; Wk47, 3.68%, 7826; Wk48, 1.48%, 1993**  
 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: T.M.S.,  
Slice

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., Slice

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). PRV confirmed on site in two pens. Failed smolts.

Records checked between: 26/05/2021-23/08/2022

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	F1	F2	F3	F4	F5								
Fish nos	1	2	3	4	5	6	7	8					
Pool Group													
Species	SAL	SAL	SAL	SAL	SAL	SAL	SAL	SAL					
Average weight	350g	350g	350g	350g	350g	350g	350g	350g					
Sex	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A					
Water Type	SW	SW	SW	SW	SW	SW	SW	SW					
Stock Details	Stock Origin	Applecross Hatchery (FS0500)	Applecross Hatchery (FS0500)	Applecross Hatchery (FS0500)	Applecross Hatchery (FS0500)	Applecross Hatchery (FS0500)	Applecross Hatchery (FS0500)	Applecross Hatchery (FS0500)	Applecross Hatchery (FS0500)				
	Facility No	1	1	1	1	1	2	3	8				



Case no: 2022-0342

Site No: FS1010

Method of killing: Percussive

Date of visit: 17/08/2022

Inspector(s):

Sheet Relevant: Y

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

Fish Number		1	2	3	4	5				
Time sampled after death (if > 45 minutes)										
External Signs										
Behaviour	Moribund	M	M	M	M	M				
	Lethargic	S	S	S	S					
	Hanging vertical									
	Spiralling									
	Flashing									
	Loss of equilibrium	M	M	M	M	M				
Body	Dark									
	Distended abdomen									
	Anorexic									
	Scale Oedema									
Opercula	Shortened									
	Flared									
Haemorrhaging	Throat									
	Ventrum									
	Base of fins			W		W				
	Elsewhere									
Eyes	Exophthalmic									
	Enophthalmic (sunken)									
	Cataract									
	Haemorrhagic									
Gills	Pale									
	Zoned	W	W	W	W	M				
	Necrotic									
Lesions	Flank				M					
	Elsewhere									
Vent	Inflamed			M	M	M				
	Trailing faeces									
Lice Load	Estimate numbers				1 juver	2 juv caligus				
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					W				
	Tubules mauve									
	Lack of fat					M				
Spleen	Enlarged									
	Granulomas									
Gut	No food present	S	S	S	S	S				
	Yellow pseudo-faeces	M	M	M	M	M				
	External haem									
	Internal haem									
Body wall	Haemorrhaging									
Swim bladder	Haemorrhaging									
	Fluid filled									
Kidney	Swollen									
	Grey									
	Granular									
	Liquefied									
General	Parasites present									
	Anaemia									





## Additional comments:

Fish 1: Externally, scaling was observed. Adjacent to the pectoral fin evidence of physical damage was seen. Rubbing of the snout was also evident.

Fish 2: Scaling was again seen on the fish with again some evidence of physical damage to the skin next to the pectoral fin. Internally, yellow pseudofaeces was present.

Fish 3: Scaling on the flanks. Marks of lice damage on the flanks and some mild haemorrhaging on the belly. Rubbing was seen on the snout. Swollen vent was also observed. Internally, yellow pseudofaeces was present.

Fish 4: Externally, scaling again was seen. The fish also had three lesions (one on the left side and two on the right; bacteriology sample taken of lesion as well as histology). Swollen vent was observed. Internally, yellow pseudofaeces was present.

Fish 5: Externally scaling was observed. Haemorrhaging on the belly was evident and also possessed a swollen vent. Internally, yellow pseudofaeces was present. There was a lack of fat on the pyloric caeca and very mild haemorrhaging was also observed.

Site No: FS1010
Case No: 2022-0342
Nature of non-compliance:
Action taken (FHI):
Non-compliance relevant to (delete): VirologyMolGen/Bacteriology/Histology/Parasitology



Case No: 2022-0342 Site No: FS1010

Date of visit: 17/08/2022 Inspector(s):

Point for consideration	Risk level	Satisfactory?	Requirement	Comments and advice given or action taken if necessary
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**ENHANCED SEA LICE INSPECTION CHECKLIST**

**a. Inspection of sea lice records**

1.1 Are sea lice count records available for inspection?	Medium	Y	CoGP 1.2.1, 1.2.2, Annex 6 SSI 1,2,	
1.2 Do records adequately reflect the required standard specified in the SSI <sup>1</sup> and the CoGP <sup>2</sup> ? (Counts should be weekly, record the person making the count, date of the count, number of fish sampled (should be 25), pen or facility number recorded, water temperature <sup>3</sup> , number of parasites observed and correct stages recorded <sup>4</sup> )	Low & Medium	Y		
1.3 Where weekly counts are not conducted is the reason for not conducting the count stated?	Low	Y	SSI 1,2(g)	
1.4 Is that reason considered acceptable by the Inspector? Give detail.	Low	Y		
1.5 Has the site experienced sea lice problems in the previous 4 years?		Y	Detail if necessary:	

**b. Inspection of records relating to treatment and control of sea lice**

2.1 Has appropriate action been taken where: a) <i>L. salmonis</i> record levels have been above the suggested criteria for treatment? b) <i>C. elongatus</i> infestation is at a level considered to cause significant welfare problems	High	Y	CoGP Annex 6	
	High	Y	CoGP 4.3.81, 5.3.50	
2.2 Is therapeutic treatment initiated ASAP where required?	Medium	Y	CoGP 4.3.130, 5.3.84	
2.3 Where medicines have been administered there should be a record of : the name / identity of the product the date of administration the quantity (concentration and amount) administered the method of administration of the product the identification of the fish / facilities treated name of the person administering the treatment	High	Y	VMD <sup>12</sup> 19 SSI 1,3	Fish talk does not show this. Can be determined from the rota but not noted specifically. Mangers checks this daily, if medicines e.g. SLICE has been fed as the competent figures on site.
	High	Y		
	High	Y		
	High	Y		
	High	Y		
	Low	N		
the withdrawal period	Medium	Y		
2.4 If the medicine is administered by a veterinary surgeon:			VMD 18	

Point for consideration	Risk level	Satisfactory?	Requirement	Comments and advice given or action taken if necessary
the name of the veterinary surgeon	High	N/A		
name of the product	High	N/A		
batch number	High	N/A		
the date of administration	High	N/A		
amount administered	High	N/A		
identification of fish treated	High	N/A		
withdrawal period	Medium	N/A		
2.5 Have therapeutic treatments or the actions taken had a significant impact upon the lice levels recorded?	High	Y		
Inspect records to confirm. Significant impact - $\geq 50\%$ reduction in site average <i>L.salmonis</i> numbers (all stages)				
2.6 If other methods are employed on site to control sea lice and their impact is there a record of:	Low	Y	SSI, 1,4	
the nature and date of the method employed; the identification number of all facilities subjected to the method; the name of the person employing the method				
2.7 Where medicines have been acquired is there a record of:			VMD 19	
proof of purchase of the medicine concerned	Medium	Y	VMD 17	
name of the product	High	Y		
batch number	High	Y		
the date of purchase	Medium	Y		
the quantity purchased	High	Y		
the name and address of the supplier	Medium	Y		
2.8 Where medicines have been disposed is there a record of:			VMD 19	
the date of disposal	Medium	N/A		Any such medicines are sent back to biologist's office where such medicines are kept and stored for next prescriptions etc.
the quantity of product involved	Medium	N/A		
how and where it was disposed of	Medium	N/A		
2.9 Are veterinary health plans available which detail bio-security protocols, preventative measures and treatments in relation to sea lice?	Medium	Y	CoGP 4.3.129, 5.3.83	
Consider the following points over a percentage of treatments conducted on site				
2.10 Has the recommended course of treatments been completed?	Medium	Y	CoGP 4.3.134, 5.3.88	
2.11 If not, is there a recorded acceptable reason for not completing treatment?	Medium	N/A	CoGP 4.3.135, 5.3.89	
2.12 Was advice taken from the Veterinary surgeon in such circumstances?	Medium	Y	CoGP 4.3.135, 5.3.89	

Point for consideration	Risk level	Satisfactory?	Requirement	Comments and advice given or action taken if necessary
2.13 Are there clear written instructions regarding medicine use, available to those responsible for treatment administration?	Medium	Y	CoGP 4.3.133, 5.3.87	
2.14 Does the site have treatment discharge consents relevant to sea lice?		Y	Detail if necessary:	
<b>c. Inspection of records relating to farm management groups and farm management agreements or statements</b>				
3.1 Is there a nominated farmer acting as coordinator and point of contact for this farm or area inclusive of this farm?	Low	Y	SSI 1,5,b CoGP 4.3.75, 5.3.44	FMS and SLAP
3.2 Is there a written undertaking that the farm will observe the provisions of the NTS <sup>6</sup> ?	Low	Y	CoGP 4.3.76, 5.3.45	
3.3 Has an area group been formed within the area containing the site?	Medium	Y	CoGP 4.3.77, 5.3.46	
3.4 Does the remit of the area group have appropriate veterinary involvement? Consider: -agreed basis for monitoring sea lice -coordinated monitoring and treatment -co-operation between participating farms  This may require follow up investigation conducted off site to determine	Medium	Y	CoGP 4.3.77, 5.3.46 SSI 1,5, c	
3.5 Are records available of any decisions made by the FMG in relation to the prevention, control and reduction of parasites?	Low	Y	SSI 1, 5, c	
3.6 Where treatments have been administered is this done in accordance with principles to maximise the effectiveness of treatments, promote the minimal use of medicines consistent with the maintenance of high standards of fish welfare and help preserve their efficacy?  For example, the principles of ISLM include: Resistance monitoring – reporting suspected adverse drug event (SADE) to the VMD. The steps to determine if resistance is considered a reason for a suspected lack of efficacy (e.g. Bio-assay tests and results, seeking veterinary advice) Appropriate discharge consent in place Use of authorized medicines with veterinary instruction and advice as necessary Monitoring lice numbers Using an array of treatments where possible Treating all stocks on site at the same time Avoiding the simultaneous use of different active ingredients Avoiding consecutive treatments of the same active ingredient, and certainly not on the same cohort of lice	Medium	Y	4.3.82, 5.3.51	

Point for consideration	Risk level	Satisfactory?	Requirement	Comments and advice given or action taken if necessary	
Routine removal of moribund fish and regular removal of mortalities.					
3.7 Are weekly monitoring results communicated to other farmers within the defined area?	High	Y	CoGP 4.3.78, 5.3.47	Gigha sites only sites in the defined area and collaborate daily.	
3.8 Is this done 'as soon as reasonably possible where lice numbers exceed the suggested criteria for treatment?	High	Y	CoGP 4.3.79, 5.3.48		
3.9 Is sea lice data and other information relevant to the management of sea lice provided to the SSPO?	Low	Y	CoGP 4.3.80, 5.3.49		
3.10 Are annual review meetings held by FMA groups to evaluate site performance against set criteria?	High	Y	CoGP 4.3.83, 5.3.52		
3.11 Is there a signed documented farm management agreement or farm management statement relevant to the site and CoGP Farm Management Area (or equivalent)?		Y	AFSA <sup>13</sup> 4A	Same APB within the FMA	
3.12 Are up to date copies of FMS available from other APB operating within the same FMA?	Medium	Y	Detail if necessary: CoGP 4.3.88, 5.3.57		
3.13 Are significant changes to FMS notified to other companies within the FMA?	Medium	Y	CoGP 4.3.89, 5.3.58		
3.14 Is there co-operation between APB's operating within the FMA in the development and implementation of FMAg?	Medium	N/A	CoGP 4.3.90, 5.3.59		
3.15 Are copies of FMS or FMAg available for inspection?	Medium	Y	AFSA 4B		
3.16 Does the FMS or FMAg take into account the relevant aspects regarding a sea lice control strategy?	Medium	Y	CoGP 4.3.91, 5.3.60		
3.17 If the FMA has been redefined , is there documented evidence to demonstrate that the risks to health within and outwith the area is not increased by the proposal?	High <sup>10</sup>	N/A	CoGP 4.3.92, 5.3.61		Not redefined
3.18 Is the CoGP Farm Management Area (or equivalent) fallowed synchronously on a single year class basis?	High	Y	CoGP 4.3.100		
3.19 If answered no to 3.18, then is there a documented risk assessment which meets the requirements of CoGP point 4.3.101?	High	N/A	CoGP 4.3.101		
<b>d. Inspection of records relating to training and procedures</b>					
4.1 Is there a training programme or plan in place relevant to sea lice control for the site?	High	Y	CoGP 7.1.8		
4.2 Are training records available for relevant staff in relation to:			CoGP 4.1.6, 5.1.6 SSI, 1,1		
parasite identification	High	Y	CoGP 4.3.84-86, 5.3.53-55		
counting parasites (procedures for)	High	Y			
recording counts	High	Y			
biology and life cycle of parasites	Low	Y			
symptoms of parasite infection in fish	Low	Y			

Point for consideration	Risk level	Satisfactory?	Requirement	Comments and advice given or action taken if necessary
<p><b>4.3 Have staff been trained in the administration of treatments?</b></p> <p>N.B. there is no legal requirement to maintain a record of this</p> <p>Where records exist regarding SOPs and site procedures these should be inspected to confirm suitability</p>	High	Y	CoGP 4.1.6, 5.1.6 CoGP 4.3.84, 5.3.53	
<b>e. Inspection of site and site stock</b>				
<p><b>5.1 Are medicines used, stored and disposed of safely?</b></p> <p><b>5.2 Do the sea lice levels observed on stocks reflect sea lice count data?</b></p> <p>Refer to section e) of guidance notes</p> <p><b>5.3 Does the site appear satisfactory in terms of fish welfare relating to sea lice infestation?</b></p>	Medium High High	Y Y Y	VMD schedule 5	
<b>f. Inspection of farm count procedures</b>				
<p><b>6.1 Are pens and fish sampled at random?</b></p> <p><b>6.2 Have the personnel conducting counts had appropriate training in lice recognition and recording?</b></p> <p>(Cross reference to training records – Section d)</p> <p><b>6.3 Can such personnel demonstrate post training competence?</b></p> <p><b>6.4 Do the sample sizes and methods of sampling match the CoGP suggested protocol (detailed iii – vii)?</b></p> <p>N.B. Other strategies are acceptable if considered adequate in the control and reduction of sea lice</p> <p><b>6.5 Is identification and recording of sea lice count information including species and stages observed to be correct?</b></p> <p>Minimum recording requirements within the CoGP and NTS are: for <i>Caligus elongatus</i> all identifiable stages and for <i>Lepeophtheirus salmonis</i> chalimus, mobiles and adult females (with or without egg strings)<sup>11</sup></p> <p><b>6.6 Is the transfer of data from field counts to records observed to be satisfactory?</b></p>	Low High High Medium High Medium	Y Y Y Y Y Y	CoGP Annex 6, 4.3.84-86, 5.3.53-55  CoGP 4.3.85, 5.3.54  Annex 6  Annex 6	
<b>g. Inspection of treatment administration procedures</b>				
<p><b>7.1 Are treatments considered to be administered in an appropriate competent manner?</b></p> <p>Consider appropriate use of tarpaulins; completion of medication per prescription, correct concentrations, mixing and administrations, appropriate product used</p>	High	N/A		No medicinal treatments were observed on site. On the day of the site inspection, a freshwater treatment was observed.
<p><b>7.2 Is accurate information provided to the attending veterinary surgeon for dosage calculation?</b></p>	High	N/A	CoGP 4.3.131, 5.3.85	

Point for consideration	Risk level	Satisfactory?	Requirement	Comments and advice given or action taken if necessary
7.3 Are the fish under consideration being given any other medication, or are they in a withdrawal period for any other medication?		N/A		
7.4 If so, has the prescribing veterinary surgeon been informed of this?	Medium	N/A	CoGP 4.3.132, 5.3.86	
7.5 Are clear instructions for medication, dosage and administration communicated to the staff responsible for treatment?	High	N/A	CoGP 4.3.133, 5.3.87	

Additional actions	Powers	Comments and advice given or action taken if necessary
<b>h. FHI sea lice counts</b> If necessary conduct a sea lice count in accordance with the protocol of the CoGP. Indicate where this procedure has been done and make a record of results within the comments box	Power granted under the Act – section 3 (2) (a)	
<b>i. Collection of samples</b> If necessary collect samples. Indicate if samples have been taken and detail what those samples are and the purpose of their collection	Power granted under the Act – section 3 (3) (a)	
<b>j. Enforcement Notice.</b> If an enforcement notice has been issued then maintain a copy / duplicate and record detail  Guidance on completing the Enforcement Notice	Power granted under the Act – Section 6 (2)	

- [1] Scottish Statutory Instrument – The Fish Farming Businesses (Record Keeping) (Scotland) Order 2008
- [2] A Code of Good Practice for Scottish Finfish Aquaculture
- [3] Water temperature to be measured at the half way point of the depth of the facility containing the fish, or as close to as possible. For SW cage sites one reading per count may be
- [4] Recording requirements:- for C. elongatus – all identifiable stages and for L. salmonis - mobiles and adult females (with or without egg strings)
- [5] Area refers to management area as specified within Part 3 of the industry CoGP or as redefined appropriately
- [6] For reference Annex 6 of the CoGP provides the detail of the NTS
- [7] FMA = Farm Management Area
- [8] FMS = Farm Management Statement
- [9] FMAg = Farm Management Agreement
- [10] No further action may be required when answering no to this point and yes to 3.18
- [11] Legal recording requirements within the SSI stipulate – for Caligus elongatus: mobiles; and for Lepeophtheirus salmonis: non-gravid mobiles and gravid females.



Point for consideration	Risk level	Satisfactory?	Requirement	Comments and advice given or action taken if necessary
[12] VMD - The Veterinary Medicines Regulations 2013 (SI 2013 No 2033)				
[13] AFSA - Aquaculture and Fisheries (Scotland) Act 2007 (as amended)				

Case No: **2022-0342** Date of visit: **17/08/2022**  
 Site No: **FS1010** Inspector: **[REDACTED]**

Results Summary	Freq.	Date of Notification						
		Database	Insp	Phone	Insp	Writing	Insp	2 <sup>nd</sup> Insp
VSPE	3/5	30/08/2022		01/09/2022		02/09/2022		
VSPE	2/5	30/08/2022		01/09/2022		02/09/2022		
AERO	1/5	30/08/2022		01/09/2022		02/09/2022		
MG_AGDQ	5/5	30/08/2022		23/08/2022		02/09/2022		
MG_VHS	0/5	30/08/2022		23/08/2022		02/09/2022		
MG_IHN	0/5	30/08/2022		23/08/2022		02/09/2022		
MG_IPN	5/5	30/08/2022		23/08/2022		02/09/2022		
MG_ISA	0/5	30/08/2022		23/08/2022		02/09/2022		
MG_PARA_THER_Q	4/5	30/08/2022		23/08/2022		02/09/2022		
MG_PMCV	0/5	30/08/2022		23/08/2022		02/09/2022		
MG_PRV	5/5	30/08/2022		23/08/2022		02/09/2022		
MG_SAL_POX	5/5	30/08/2022		23/08/2022		02/09/2022		
MG_SAV	0/5	30/08/2022		23/08/2022		02/09/2022		
AMGD	2/5	31/08/2022		01/09/2022		02/09/2022		
ADHE	5/5	31/08/2022		01/09/2022		02/09/2022		
GPAT	4/5	31/08/2022		01/09/2022		02/09/2022		
SPAT	4/5	31/08/2022		01/09/2022		02/09/2022		
HPAT	3/5	31/08/2022		01/09/2022		02/09/2022		

Report Summary			
Case Type	Date	Insp	2 <sup>nd</sup> Insp
SLA	25/08/2022		
DIAG, REP	02/09/2022		

# FISH HEALTH INSPECTORATE VISIT REPORT

## SUMMARY FOR INFORMATION OF SITE OPERATOR

<b>BUSINESS No</b>	FB0169	<b>DATE OF VISIT</b>	17/08/2022
<b>SITE No</b>	FS1010	<b>SITE NAME</b>	East Tarbert Bay
<b>CASE No</b>	20220342	<b>INSPECTOR</b>	██████████

### Section 1: Summary

The above site was inspected following reports of increased mortality by the farm operator. During the physical inspection of all pens, five fish were removed for diagnostic sampling.

Histopathology examination revealed pathology consistent with mild amoebic gill disease (AGD) in all fish (confirmed by qPCR) and bacterial ulcerative dermatitis in F4. In addition, very mild myocardial myositis, splenitis, nephritis and moderate peritonitis was observed. Lastly, some of the lesions may have been the cause of osmoregulatory imbalance.

An *Aeromonas* sp. was identified in heavy, almost pure growth on plates taken from lesion material in F4. The level of purity of growth would suggest that it would be implicated as the source of the lesion in this case. This *Aeromonas* sp. was also observed at a very low level on the plate taken from kidney material of F1. Two *Vibrio* sp. isolates were identified on plates from kidney material of F1, F3 and F5. The level and purity of the growth on the plates would not suggest that these *Vibrio* spp. would be implicated as the primary source of overall morbidity in the population. However, the level of growth on F5 was significant.

Four fish tested positive for *Paranucleospora theridion* by qPCR. In addition, all fish sampled tested positive for salmon gill pox virus, piscine reovirus and infectious pancreatic necrosis 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

Following 3 weeks of notifications of increased mortality above the reporting threshold, a site inspection was conducted. On input to site in week 17, fish were noted to be soft as well as observed to have a reduced mucus layer. Caligus levels on site had been high in the 3 weeks prior to inspection, and jumpy/restless fish were observed upon site inspection. Freshwater transfers were also being conducted on the day of inspection, where fish were being split from East Tarbert Bay to Druimyeon Bay. The freshwater treatment was being administered on the Ronjafisk, where fish were exposed to freshwater for 1 hour. Two pens had not yet been treated on the day of the R09

inspection and lethargic and moribund fish were observed. Caligus levels on site, following an inspection of lice counting procedures, were found to be low and minimal adult caligus were observed.

All sampled fish were lethargic and moribund. Scaling was observed in the majority of the fish on site. Gills on all fish were zoned. Internally, yellow pseudo faeces was present in the hind gut of all fish sampled.

### Samples

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

Fish number	Facility number	Species	Stage	Origin
1-5	1	Atlantic Salmon	350g 2022 S0	Applecross Hatchery (FS0500)

### Results

**Bacteriology:** Kidney and gill material from F1 to F5 and lesion material from F4 were inoculated onto appropriate media for the isolation of bacteria.

The following bacteria were isolated:

- Two *Vibrio* sp. from kidney material in:
  - F1 (Isolate A)
  - F3 (Isolate A and B)
  - F5 (Isolate A and B)
- *Aeromonas* sp. from;
  - Lesion of F5

Kidney of F1

**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

Fish Number	Endogenous control value	Cp	Cp Values			Reported Result (PCR)
F1	16.99		31.53	31.86	31.8	POSITIVE
F2	17.76		33.89	35.06	34.78	POSITIVE
F3	17.95		34.59	34.34	34.17	POSITIVE
F4	18.08		37.98	35.9	35.79	POSITIVE
F5	17.51		34.73	34.68	35.81	POSITIVE

R09

### Salmon gill pox virus

Fish Number	Endogenous control value	Cp	Cp Values			Reported Result (PCR)
F1	19.94		23.75	23.74	23.88	POSITIVE
F2	19.22		29.51	29.44	29.63	POSITIVE
F3	18.75		23.11	23.34	23.07	POSITIVE
F4	18.84		21.56	21.54	21.62	POSITIVE
F5	18.58		22.83	22.89	22.86	POSITIVE

### Piscine reovirus

Fish Number	Endogenous control value	Cp	Cp Values			Reported Result (PCR)
F1	16.74		28.31	28.28	28	POSITIVE
F2	18.04		29.59	29.7	29.64	POSITIVE
F3	17.54		27.11	27.36	27.09	POSITIVE
F4	17.61		26.58	26.58	26.55	POSITIVE
F5	17.16		29.17	29.48	29.57	POSITIVE

The samples tested negative for infectious haematopoietic necrosis virus (IHNV), infectious salmon anaemia virus (ISAV), salmonid alphavirus (SAV) and 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 value	Cp	Cp Values			Reported Result (PCR)
F1	19.94		29.72	29.93	29.72	POSITIVE
F2	19.22		30.23	30.5	30.33	POSITIVE
F3	18.75		28.55	28.66	29.03	POSITIVE
F4	18.84		27.97	27.99	27.99	POSITIVE
F5	18.58		29.12	29.02	28.94	POSITIVE

### Paranucleospora theridion

Fish Number	Endogenous control value	Cp	Cp Values			Reported Result (PCR)
F1	-		-	-	-	NEGATIVE
F2	19.22		29.46	29.77	29.83	POSITIVE
F3	18.75		33.28	33.64	33.87	POSITIVE
F4	18.84		29.58	29.62	29.57	POSITIVE
F5	18.58		29.35	29.43	29.66	POSITIVE

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

Histopathological examination revealed the following:

Gill: Mild, multifocal interlamellar hyperplasia (F1, F2, F5). Occasional to some amoeboid cells resembling *Neoparamoeba perurans* (F2, F3). Some aneurysmal dilation/telangiectasia (F1, F3) and lamellar congestion potentially associated with the euthanasia method (F3, F5).

Skin and Muscle: Lesion F4: partial absence of the epidermis and dermis. Mild inflammatory cell infiltrate and mixed Gram-negative bacteria in the outer layer, necrosis and some inflammatory cell infiltrate observed in skeletal muscle close to the hypodermis.

Heart: Very minimal inflammatory cell infiltrate in the ventricle (F1, F2). F2 some epicarditis. Several small thrombi in the ventricle (F3). F1: No atrium in section.

Gut and pyloric caeca: Fibrous adhesions (likely associated with vaccine administration) observed in all fish. Some cellular sloughing potentially associated with autolysis artefacts (all fish).

Pancreas: Fibrous adhesions surrounding the pancreas acinar tissue (all fish).

Liver: Some foci of hepatocellular vacuolation (macroviscules) (F5).

Kidney: Some renal tubular dilation (F3), some glomeruli displayed features of degeneration and some inflammatory cell infiltrate observed in the interstitial tissue (F3).

Spleen: Inflammatory cell infiltrate, multifocal, mild and some interstitial cell (white pulp) hyperplasia multifocal, mild (F1, F3-F5). Capsulitis (F1).



Signed:

Date: 02/09/2022

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/>

# FISH HEALTH INSPECTORATE VISIT REPORT

## SUMMARY FOR INFORMATION OF SITE OPERATOR

<b>BUSINESS No</b>	FB0169	<b>DATE OF VISIT</b>	17/08/2022
<b>SITE No</b>	FS1010	<b>SITE NAME</b>	East Tarbert Bay
<b>CASE No</b>	20220342	<b>INSPECTOR</b>	██████████

### ENHANCED SEA LICE INSPECTION

An enhanced sea lice inspection to ascertain the levels of sea lice and for assessing the measures in place for the prevention, control and reduction of sea lice was conducted in accordance with the Aquaculture and Fisheries (Scotland) Act 2007.

The visit consisted of an inspection of records with regards to sea lice, site procedures with regards to sea lice and the provision of advice.

#### **a) Inspection of sea lice records**

The site meets the requirement of current Scottish industry best practice. There were no recommendations made and no further action is required.

#### **b) Inspection of records relating to treatment and control of sea lice**

The site meets the requirement of current Scottish industry best practice. There were no recommendations made and no further action is required.

#### **c) Inspection of records relating to farm management groups and area management agreements.**

The site meets the requirement of current Scottish industry best practice. No recommendations made and no further action is required.

#### **d) Inspection of records relating to training and procedures**

The site meets the requirement of current Scottish industry best practice. There were no recommendations made or further action required.

#### **e) Inspection of site and site stock**

The site meets the requirement of current Scottish industry best practice. No recommendations made or further action required.

**f) Inspection of farm count procedures**

An inspection of site staff conducting and recording a sea lice count was carried out. This met the requirements of The Fish Farming Business (Record Keeping) (Scotland) Order 2008 and A Code of Good Practice for Scottish Finfish Aquaculture. No further recommendations or further action required.

**g) Inspection of treatment administration procedures**

An inspection of treatment administration procedures was not carried out. No further action required.

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



Signed:

Date: 29/08/2022

Fish Health Inspector

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



Photos:



Figure 1 Picture of all five sampled fish.



Figure 2 Closer view of external observations of fish 1, 2, 3. Scaling is evident on all the fish. Evidence of physical damage on pectoral fins on fish 2 and fish 3.



Figure 3 Closer view of external observations on fish 4 and 5. Fish 4 exhibits lesions on the belly/flank on fish 4. Extra bacteriology and histology samples taken from lesion.



Figure 4 Internal view of fish 2.



Figure 5 Internal view of fish 3.



Figure 6 Internal view of fish 4.



*Figure 7 Internal view of fish 5.*