

Case No:	2021-0355	Date of visit:	23/09/2021			
Time spent on site:	6.5 hours	Main Inspector:				
Site No:	FS1288	Site Name:	Etive 6			
Business No:	FB0456	Business Name:	Dawnfresh Farming Ltd			
Case Types:	1 ESC	2 CNA	3 DIA	4	5	6
Water Temp (°C):	14.4	Thermometer No:	T172	FHI 045 completed		
Observations:	Region:	ST	Water type:	S	CoGP MA	M-36
Dead/weak/abnormally behaving fish present?	<input type="checkbox"/>	If yes, see additional information/clinical score sheet.				
Clinical signs of disease observed?	<input type="checkbox"/>	If yes, see additional information/clinical score sheet.				
Gross pathology observed?	<input type="checkbox"/>	If yes, see additional information/clinical score sheet.				
Diagnostic samples taken?	<input type="checkbox"/>					

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

**Additional Case Information:**

Remote inspection undertaken by [REDACTED], observed by [REDACTED] on 16/09/2021. Physical inspection undertaken by [REDACTED], observed by [REDACTED].

Input of fish next week. 195,000 at average weight of 200g.

Largest fish (everything over 3kg) on site being emergency harvested at the time of inspection and over the next 3-4 weeks.

Usually harvest fish at 4.5kg but having to harvest early due to pre-empting lice issues.

Reportedly a substantial lice burden. Just Leps, very few Caligus on site.

Blair Mhor processing factory has had to close down due to COVID which hindered efforts to remove fish from area.

Some evidence of gill issues consistent with a plankton bloom. Pharmaq was the company who took the samples and reported on 16/08/2021. Site staff usually take water samples and check themselves to look for plankton but have been unable to due to staff numbers. This staffing issue appears to be long term issue due to poor quality of staff joining the company.

Larger fish are experiencing a higher mortality rate.

New "Skamik 1.5" lice cleaning system used on site. The system uses brushes and jets of water to remove lice. It was used on Skye (Organic Sea Harvest) before using in Loch Etive and reports were very good. They used it on site at Etive and lice clearance was very good and mortalities were low. Following the treatment lice numbers rose sharply on site. It is thought that there was a leak in the lice collection system that allowed lice to be discharged back into the sea, however, this was not confirmed by Skamik team

Escape: Pen 8 (S8) net lifted before treating. Alphamax bath treatment was about to be used but was aborted as the fish looked distressed during the crowd. Divers called in to check for morts after the crowding and they spotted a hole in the net, this was immediately repaired using cable ties. The hole was approximately 2m x 0.5m (no shape reported), hole 2-3m below base line. Nets are about 17m deep. Net raised by 7m before the treatment. Well boat on site on Monday following remote inspection to count fish and final notification will be sent once this has been completed. Site staff looking up and down Loch looking for escaped RTR. Some RTR caught in River Awe, approximately 40 fish caught. The fishery trust senior fisheries biologist has been in contact with the company about the catches. The site staff are currently in the process of installing seal pro nets on Etive 6. All nets in Loch will be delivered to site by the end of the financial year. They will be installed as they arrive and when staff have time. About 5 years ago there were no seal problems on site but recently there have been more seals observed close to site. Two Ortec systems being used in Loch Etive, on Etive 4 and Etive 6. Been in use for approx. two years, and there was a marked reduction in seal numbers and morts caused by seals when it was first installed, but the affect has reportedly reduced over the years. Many more seals in area being observed by staff. Etive 6 is closest to Connel bridge where most seal activity is.

Increase mortality on Etive 4 and Etive 6. Mortality on other sites in the Loch has been slightly higher than average. Divers used to take fish out but dive team was out of action for 10 days due to COVID. Boat breakdowns also hindered the removal effort. Issues with getting dead fish out of the cages and off the shore base. Biggest issue was getting fish out of the cages. Divers always used. They had issues getting enough skips to shorebase to shift the fish. Billy Bowie and Gogar used to remove skips. Most of pick-ups were Billy Bowie. Low bridge that has to be passed under to get to the shorebase so Billy Bowie can only use small skips to remove waste or they won't fit under the bridge. Tide is also an issue and they can't use uplifts in strong tides. Incinerator has been removed as it kept breaking down. Hoping to get a new one soon. Mass mortality SOP submitted via email. Reportedly followed during the mortality event. Was last reviewed at end of August this year by health manager since the increase in mortality in the area. Actual procedures have not been changed, just the wording of some sections. In the future the Skamik will not be used again as it was not tried and tested. They will only use tried and tested methods to reduce lice numbers. Hoping to use a Ferguson boat in the future to remove fish directly from cages and place the removed fish onto skips on the deck of the boat. These could then be taken away by boat.

Observed daily cage inspection record kept on barge

Whole of Loch Etive not fallowed synchronously. Etive 3, 4 and 6 being emergency harvested at the time of the inspection.

Emergency harvested conducted as the site manager is pre-empting issues from the lice.

Final escape notification has been changed since the initial notification. On the initial notification it was though that the hole observed by the divers was caused by a seal. However, the reason for the hole being created has been revised and now the dive team think the hole was caused by a down weight being dropped too quickly by an inexperienced member of staff.

Currently there are many inexperienced staff on site.



Case No: **2021-0355** Site No: **FS1288**  
 Date of Visit: **23/09/2021** 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>10</b>	Facilities stocked	<b>7</b>	No facilities inspected	<b>10</b>
Species	<b>RTR</b>	RTR			
Age group	<b>2020</b>	2019			
No Fish	<b>277,000</b>	126,000			
Mean Fish Wt	<b>1kg</b>	3.2kg			
Next Fallow Date (Site)	<b>Mar 2022</b>		Next Input Date (Site)	<b>Next week</b>	
Recent (last 4 wks) disease problems?			<b>Y</b>	Any escapes (since last visit)?	<b>Y</b>
If yes, detail:	<b>Gill issues, see additional comments</b>				

**Movement Records**

- 1. Movement records available for inspection? **Y**
- 2. Date of last inspection: **15/06/2021**
- 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? **Whole fish - Secanim, Widnes**
- If other detail: **[REDACTED]**
- 3. Mortality records complete and correctly entered? **Y**
- 4. Recent mortality (last 4 wks): **wk 37: 916 fish, wk 36: 3,972, wk 35: 517, wk 34: 2,660 fish**
- 5. Evidence of recent increased/atypical mortalities? **Y**
- If yes, facility nos/no mortality per facility/no stock per facility/reason: **[REDACTED]**

**See additional information**

- 6. Any other peaks in mortality during period checked? **Y**
- If yes, detail: **Week 33 mortality was high over the site at just over 10,000 fish dead caused by lice and treatments combined**
- 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="text"/>	N/A
If yes, detail:	<input type="text"/>	
If other, detail:	<input type="text"/>	
2. Medicines records available for inspection?	<input type="text"/>	N/A
3. Are records complete and correctly entered?	<input type="text"/>	
4. Are fish in a withdrawal period?	<input type="text"/>	N/A
5. If yes, what treatment(s)?	<input type="text"/>	
If other, detail:	<input type="text"/>	
6. Are medicines stored appropriately?	<input type="text"/>	N/A

**Biosecurity Records**

1. Biosecurity records available for inspection?	<input type="text"/>
2. Has the manner and frequency of mortality removal, recording and safe disposal been considered?	<input type="text"/>
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="text"/>
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="text"/>
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="text"/>
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="text"/>
7. Is documentation available regarding the measures in place to maintain the physical containment of aquaculture animals held on site?	<input type="text"/>
8. Have the biosecurity procedures been adequately implemented on site?	<input type="text"/>
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="text"/>	Y
2. If yes, are results available for inspection?	<input type="text"/>	Y
3. Any significant results?	<input type="text"/>	Y
If yes, detail (if not detailed under recent disease problems).	Pathology consistent with gill issues possibly	

Records checked between:	15/06/2021 - 16/09/2021
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Case no:  Site No:  Date of visit/  
Sampling:

Priority samples: VI  BA  PA  MG  HI

Time sampling starts/ends:   Inspector:  VMD No.

Environmental conditions: 1  2  3  4  5

Summary samples HIST  BA  MG  VI  PA  Total Samples

**Add Fish/Pools - click**

Pool/Fish No	F1	F2	F3	F4	F5	P1						
Fish nos	1	2	3	4	5	1-5						
Pool Group	P1	P1	P1	P1	P1							
Species	RTR	RTR	RTR	RTR	RTR							
Average weight	3.0000	3.0000	1.0000	1.0000	1.0000							
Sex	N/A	N/A	N/A	N/A	N/A							
Water Type	SW	SW	SW	SW	SW							
Stock Details		Rocks Lodge	Rocks Lodge	Selcoth	Selcoth	Selcoth						
	Stock Origin											
Facility No	S9	S9	S6	S6	S6							



Case no: **2021-0355** Site No: **FS1288** Method of killing: **Percussive**  
 Date of visit: **23/09/2021** Inspector(s): **[REDACTED]** Sheet Relevant: **Y**

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

Fish Number		1	2	3	4	5				
Time sampled after death (if > 45 minutes)										
External Signs										
Behaviour	Moribund	S	S	S	S	S				
	Lethargic	M	M	M	M	M				
	Hanging vertical									
	Spiralling									
	Flashing									
	Loss of equilibrium									
Body	Dark									
	Distended abdomen									
	Anorexic			W	W	W				
	Scale Oedema									
Opercula	Shortened									
	Flared									
Haemorrhaging	Throat									
	Ventrum									
	Base of fins									
	Elsewhere									
Eyes	Exophthalmic									
	Enophthalmic (sunken)									
	Cataract	S		M						
	Haemorrhagic									
Gills	Pale									
	Zoned									
	Necrotic									
Lesions	Flank									
	Elsewhere									
Vent	Inflamed									
	Trailing faeces									
Lice Load	Estimate numbers	30	20	3	5	6				
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			M	M	M				
Spleen	Enlarged									
	Granulomas									
Gut	No food present	M	M	M	M	M				
	Yellow pseudo-faeces	S			M					
	External haem									
	Internal haem									
Body wall	Haemorrhaging									
Swim bladder	Haemorrhaging									
	Fluid filled									
Kidney	Swollen									
	Grey	W	W							
	Granular									
	Liquefied									
General	Parasites present									
	Anaemia									





Additional comments:

No heart present in F3

Case No: 2021-0355 Site No: FS1288

Date of visit: 23/09/2021 Inspector(s):

Point of compliance	Risk level	Satisfactory?	Requirement	Comments and advice given or action taken if necessary
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**ENHANCED CONTAINMENT INSPECTION (SEAWATER)**

**a. Enquiry relating to i) escape incidents and ii) contingency procedures**

1.1. Have escape incidents or events <sup>1</sup> been experienced on or in the vicinity of the site since the last MSS inspection? <b>If yes answer 1.2-1.8:</b>		Y		
1.2. Have appropriate reports been made to Scottish Government within 24 hours of discovery?	High	Y	AAAH Regs <sup>4</sup> 31D,E	
1.3. Have these been reported to the SSPO <sup>2</sup> and, where in existence, the local DSFB and fisheries trust?	Medium	Y	CoGP 4.4.37, 5.4.17	Area manager is unaware of the event being reported to SSPO. Reported to DSFB.
1.4. Were methods (if any) used to recover escapees?  If yes give detail		N		Nets were used in a previous escape on Loch Etive and the attempt to recapture fish did not go well due to health and safety issues.
1.5 Was the decision to attempt to recapture and the method employed agreed with the local DSFB and FT	Low	N/A	CoGP 4.4.38, 5.4.18	
1.6. Was permission sought from Marine Scotland prior to recapture?	Medium	N/A	CoGP 4.4.38, 5.4.18	
1.7 Were the gill nets deployed in accordance with the permission issued by Marine Scotland?	Low	N/A	CoGP 4.4.38, 5.4.18	
1.8. In light of the escape event, has appropriate action been taken to prevent and minimise the risk of further escapes?	High	Y		Hole immediately repaired by dive team. To replace existing nets with seal pro nets. This process of installing new nets has started already. Fish in damaged net will be removed and placed into a seal pro net on 20/09/2021.
1.9. Is there a site specific contingency plan in response to failures in containment, aimed at preventing escapes and recovering escaped fish?	High	Y	SSI, 2,9	

**b(i). Inspection of records relating to equipment, facilities and the site**

General records			CoGP: 4.4.9, 4.4.14, SSI 2,1	
2.1 With regard to each facility, net, screen and mooring at each site, a record should be maintained of:-				
		Facilities	Moorings	Nets

Point of compliance	Risk level	Satisfactory?	Requirement	Comments and advice given or action taken if necessary	
a) The name of the manufacturer	Low	Y	Y	Y	Cages manufactured and supplied by Fusion. Moorings manufactured and supplied by Gael Force. Morenot manufacture nets
b) Any special adaptations	Low	Y	Y	Y	
c) The name of the supplier	Low	Y	Y	Y	
d) The date of purchase	Low	Y	Y	Y	
e) Each inspection including					
i) the name of the person conducting the inspection	Low	Y	Y	Y	Annual ROV inspection records checked for moorings. Craig Bruce hold this info and will need to be observed during physical inspection. Dive records to be observed during physical inspection.
ii) the date of each inspection	Medium	Y	Y	Y	Dive reports observed during physical inspection.
iii) the place of each inspection	Low	Y	Y	Y	
iv) the outcome of each inspection	High	Y	Y	Y	
f) the date and result of each repair, equipment test and antifouling treatment carried out	High	Y	Y	Y	Invoices will be kept of facility repair and should be reviewed during physical inspection. Craig Bruce hold details of mooring repairs. Knox database hold details of net tests repairs etc. Nets sent to Knox at the end of each cycle.
2.2. In relation to each net a record of:					
i) The mesh size	Medium	Y	SSI, 2,2		Knox dispose of any nets and they will have details of disposal location.
ii) The code which appears on the identification tag	Medium	Y			
iii) The place of use, storage and disposal	Medium	Y			
iv) The depth of water between the bottom of the net and the seabed as measured at the mean low water spring	Low	Y			
2.3. In relation to each facility a record of:					
i) The date of construction	Low	N	SSI, 2,3		Date on certificate of conformity, but the date of construction was not recorded.
ii) The material used in construction	Low	Y			
iii) Its dimensions	Low	Y			
2.4. In relation to each mooring a record of-			SSI, 2,4		Delivery date and certification date Design not recorded but photos are available for each one
i) The date of installation	Low	Y			
ii) The design and weight of the anchors	Low	Y			
iii) The length of the mooring ropes or chains	Low	Y			
2.5. A record of any navigation markers deployed at each site at which fish are farmed	Low	Y	SSI, 2,5		
2.6 In respect of sites at which fish are farmed in inland waters <sup>3</sup>			SSI, 2,6		

Point of compliance	Risk level	Satisfactory?	Requirement	Comments and advice given or action taken if necessary
a) The type, method of and date of construction of any flood prevention or flood defence measures in place	Low	N/A		No severe weather events. Weather is recorded in the site diary.
b) The date of and results of any tests conducted on any such measures	Low	N/A		
c) The date of any incident where the site was flood	Low	N/A		
d) The water course height during any such flood incident	Low	N/A		
2.7 A record of-			SSI, 2,7	
a) The date of any severe weather event which caused damage to any facility, net or mooring	Medium	N/A	SSI, 2,11 (a)	
b) Any action taken to rectify any such damage	High	N/A	SSI, 2,11 (b)	
<b>Pen and mooring systems</b>				<p>Hydrographic data taken by an external party and recorded.</p> <p>Approx. 5 members of staff have undertaken an SVQ in Aquaculture and containment is covered in that qualification. All members of staff have signed an attestation stating that they have read and understood all the containment SOPs and RAs. However, it is suspected that the most recent escape event was due to staff inexperience. Dawnfresh has developed a containment training module and was looking into getting staff members to go through the course. However, that work at trying to begin training of staff fell by the way side when COVID-19 become an issue. The site manager will reportedly look into getting this training module started in the near future. Training module observed during the physical inspection.</p> <p>Certificate from Fusion attesting that the pens are maintained, and installed by suitably qualified personnel. Dawnfresh conduct own mooring maintenance and the inspection and maintenance is undertaken by experienced members of staff, some with over 20 years of experience.</p> <p>SOP viewed.</p>
2.8 Are there documented procedures maintained regarding the selection and installation of pens and moorings?	High	Y	CoGP 4.4.8, 4.4.13	
2.9 Can the site demonstrate evidence that the design specification of pens and moorings are suitable for purpose and correctly installed?	High	Y	CoGP 4.4.9, 4.4.14	
2.10 Do pen systems meet the manufacturers guidelines?	High	Y	CoGP 4.4.10	
2.11 Are pen systems inspected and approved by suitably qualified / experienced person(s)?	High	Y	CoGP 4.4.11	
2.12 Is there evidence of the competence of personnel involved in the design, installation and maintenance of pen and mooring systems?	High	Y	CoGP 4.4.12, 4.4.15	
2.13 Are pen and mooring components inspected with a) a documented SOP b) a documented inspection plan based on a risk assessment	High	Y	CoGP 4.4.16	
2.14 Do all nets used on site meet industry standards?	High	Y	CoGP 4.4.17	

Point of compliance	Risk level	Satisfactory?	Requirement	Comments and advice given or action taken if necessary
2.15 Can the site demonstrate an awareness of the minimum fish size in relation to net size	High	Y	CoGP 4.4.19	Net testing done by Knox  Divers in twice a week and inspections conducted daily from water surface. Diver reports. Knox also hold details of net repairs. Daily checks by site staff cover this (available on barge). Weights removed from the water an inspected at the end of each cycle  Recorded on dive records
2.16 Does the net design, quality and standard of manufacture take into account the conditions that are likely to be experienced on site and include adequate safety margins?	High	Y	CoGP 4.4.20	
2.17 Are nets treated with a UV inhibitor?	Low	Y	CoGP 4.4.21	
2.18 Are nets tested at a pre-determined frequency?	High	Y	CoGP 4.4.22	
2.19 Is the method of test procedure based upon the manufacturers advice?	High	Y	CoGP 4.4.22	
2.20 Are frequent net inspections conducted to look for damage?	High	Y	CoGP 4.4.23	
2.21 Are net inspection records maintained?	High	Y	CoGP 4.4.23	
2.22 Is the system by which nets are attached to the pen and weighted inspected frequently?	High	Y	CoGP 4.4.24	
2.23 Where damage to nets and/or associated fittings has occurred, or the potential for damage exists, has remedial action been taken?	High	Y	CoGP 4.4.25	
<b>b(ii). Inspection of records relating to training</b>				
3.1 Are training programmes and plans relevant to the various onsite activities documented?	High	Y	CoGP 7.1.8	All SOPs and RAs signed off by a member of staff when they have read through and understood each document. SVQ also covers containment in depth (course overview observed during physical inspection)
3.2 Is there a satisfactory record of all training and qualifications for each person working at the site in relation to any boat operations? (This excludes well boat operations)	High	Y	SSI 2,6,a	
3.5 With respect to any transfer of or handling of fish is there a record of all training of each person working on site in relation to containment and prevention of escape of fish, and recovery of escaped fish?	High	Y	SSI 2,7,a	
<b>b(iii). Inspection of records relating to procedures and risk assessments</b>				
4.1 Are procedures which could increase the risk of fish escaping considered to be carefully planned and supervised to minimise risk?	High	N	CoGP 4.4.29, 5.4.12	Most SOP's and risk assessment maintained in paper format and were inspected during the physical inspection. Procedures such as SOPs and RAs being signed off in place but last escape could have been caused by human error that could have possibly been averted with better supervision of inexperienced staff.



Point of compliance	Risk level	Satisfactory?	Requirement	Comments and advice given or action taken if necessary
4.2 Before procedures are conducted on site, are the following in place: a) a documented risk assessments b) standard operating procedures c) contingency plan	High High High	Y Y Y	CoGP 4.4.30, 5.4.13 SSI 2,7, b , SSI 2, 8, c	All large boats have prop guard fitted. Smaller boats are not fitted with a propeller guard and a risk assessment has been conducted detailing why.  ADD on each pen. No seals shot on site  Seal pro nets are installed on some nets and there are 7 new nets ready to be installed on site
4.3 In relation to any boat operations at each site at which fish are farmed is there a record of -The type and size of each boat used for operations on the site	Low	Y	SSI 2,6,b	
- The type and size of any propeller guard fitted to each boat used on the site	Low	N	SSI 2,6,c	
4.4 Does the site suffer from regular or heavy predation?		Y		
4.5 Are there records of site specific risk assessments ascertaining the risk of predator attack?	Medium	Y	CoGP 4.4.26	
4.6 Are there risk assessments undertaken on a pre-determined frequency?	Low	Y	CoGP 4.4.26	
4.7 A record of any anti-predator measures undertaken at each site at which fish are farmed including: The type and location of each net, fence and scarer deployed	Medium	Y	SSI, 2,8,a	
- The use of lethal means by any person involved in operations on the site	Low	N	SSI, 2,8,b	
4.8 Where predator nets are deployed is the advice of Annex 7 considered?	Low	Y	CoGP 4.4.27	
<b>c. Inspection of site and site equipment</b>				
5.1 Are there any obvious containment issues on the site?	High	N		
5.2 Is the net mesh size considered to be capable of containing all fish sizes present on site?	High	Y	CoGP 4.4.18	

Point of compliance	Risk level	Satisfactory?	Requirement	Comments and advice given or action taken if necessary
5.3 Do nets carry numbered ID tags? Look at a percentage of nets on site - Does the net location meet the inventory?	Low	Y	SSI 2,2 ii	Three cage number tags selected at random from the net inventory record. All tags matched the cage number allocated.
5.4 Are nets stored away from direct sunlight?	Low	Y		
5.6 Are appropriate measures in place to mitigate predation on site? (Provide detail if necessary)	Low	Y	CoGP 4.4.21	Seal pro nets installed on site and reportedly adequately weighted
5.7 Are boat operations conducted in such a manner which prevents damage to nets and pens?	High	Y	CoGP 4.4.28	
5.8 Is there a requirement for navigation markers to be deployed?	Low	Y	MSA <sup>5</sup> 2010 P4, S21	
5.9 If yes, has this been done in accordance with the necessary requirements?	Low	Y	MS Marine licence	
5.10 If Yes to 5.8 is there a record of any navigation markers deployed?	Low	Y	SSI 2,5	
<b>d. Inspection of site specific procedures</b>				
6.1 Are pen nets examined for holes, tears or damage prior to and during the stocking, moving or crowding of fish?	High	Y	CoGP 4.4.31	Divers on site regularly. Site does have an ROV that can be used on site.
6.2 If helicopter transfer of fish is conducted are receiving pen(s) properly prepared:-			CoGP 4.4.32	
a) nets should be secure	High	N/A		
b) pens should be marked with buoys clearly visible from the air	High	N/A		
c) radio contact between farm staff and helicopter crew should be maintained or where this is not possible, pens receiving fish should be manned	High	N/A	CoGP 4.4.33	
Consideration should be given to all other site procedures being undertaken during the visit with respect to containment and the risk of fish farm escapes				



Point of compliance	Risk level	Satisfactory?	Requirement	Comments and advice given or action taken if necessary
<b>Additional actions</b>	<b>Powers</b>			<b>Comments and advice given or action taken if necessary</b>
<b>e) 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 5 (3) (a)			
<b>h) 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 An 'escape event' can be defined as any circumstances on or in the vicinity of a fish farm which are believed to have caused an escape, or which may have given rise to a significant risk of an escape of fish.

2 FHI interpretation – Informing the SSPO is only a requirement where the site belongs to an Authorised Production Business which is signed up to the CoGP.

3 being waters which do not form part of the sea or any creek, bay or estuary or of any river as far as far as the tide flows

4 The Aquatic Animal Health (Scotland) Regulations 2009 (as amended)

5 The Marine Scotland Act 2010



# FISH HEALTH INSPECTORATE VISIT REPORT

## SUMMARY FOR INFORMATION OF SITE OPERATOR

<b>BUSINESS No</b>	FB0456	<b>DATE OF VISIT</b>	23/09/2021
<b>SITE No</b>	FS1288	<b>SITE NAME</b>	Etive 6
<b>CASE No</b>	20210355	<b>INSPECTOR</b>	[REDACTED]

### Section 1: Summary

The site was primarily visited for an enhanced containment inspection and escape investigation once an initial notification was received by the fish health inspectorate from the business regarding a possible escape at the site.

During the physical inspection of the site, moribund fish were observed and five were removed for diagnostic sampling.

Histopathology examination revealed mild multifactorial proliferative branchitis. Two individuals displayed evidences of cachexia and nephrocalcinosis.

Two isolates of *Vibrio* spp. and one *Pseudomonas* sp. were identified. The level and purity would not suggest they would be primary pathogens overall, however, the *Vibrio* spp. would pose a risk to health in fish 4 and 5.

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

### Section 2: Case Detail

#### Observations

The site was primarily visited for an enhanced containment inspection and escape investigation once an initial notification was received by the fish health inspectorate from the business regarding a possible escape at the site on 04/09/2021 (incident number: MSe040921RTR1). A video had also emerged online which had been filmed by a third party using a drone above the site. The video appeared to show large numbers of mortalities being disposed of on site.

During the remote inspection, it was reported that the staff were aware of gill issues following samples being taken by a third-party veterinary company. The issues experienced were consistent with a plankton bloom, although the site staff had not reported observing any macroscopic bloom. Plankton sampling had ceased on site due to staff shortages. Lice numbers on site in some cages were also reported to be rising. Harvest was being accelerated on site due to mortality numbers and the area manager pre-empting issues caused by high numbers of lice. The staff have been treating for lice using the 'Hydrolicer' and the 'SkaMik 1.5'.

During the physical inspection of the site, several moribund fish were observed across the site. Of the moribund fish, 5 were removed for diagnostic sampling purposes. All fish removed were R09

moribund and lethargic. Fish 3-5 appeared anorexic, while fish 1 and 3 both had cataracts. All fish carried lice, fish 1 and 2 carried 30 and 20 lice (respectively) whilst fish 3, 4 and 5 carried 3, 5 and 6 lice (respectively). All lice were of the species *Lepeophtheirus salmonis*. Internally, fish 3-5 had a lack of fat associated with the pyloric caeca and fish 1 and 4 had yellow pseudo-faeces in the gut. All fish had no food present in the gut.

### Samples

Samples were collected from 5 fish according to the table below:

Fish number	Pool number	Facility number	Species	Stage	Origin
1 and 2	1	S9	Rainbow trout ( <i>Oncorhynchus mykiss</i> )	Grower ~3kg	Rocks Lodge
3 - 5	1	S6	Rainbow trout ( <i>Oncorhynchus mykiss</i> )	Grower ~1kg	Selcoth Fisheries

### Results

**Bacteriology:** Kidney and gill material from fish 1 – 5 was inoculated onto appropriate media for the isolation of bacteria.

*Vibrio* spp. (two isolates from gill material of fish 1 – 5)

*Pseudomonas* sp. (from kidney material of fish 1 – 5)

Two isolates of *Vibro* spp. were identified on plates taken from gill material of 5/5 fish. The level and purity would not suggest they would be implicated as the primary source of morbidity, however, the level observed from fish 4 and 5 suggests a risk to the health of these individuals. *Pseudomonas* sp. was identified on plates taken from kidney material of 5/5 fish. The level and purity of growth would not suggest these would be implicated as the primary source of morbidity.

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

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

**Histology:** Tissue samples of gill, skin and skeletal muscle, heart, pyloric caeca, pancreas, hind gut, liver, spleen and kidney were taken from fish 1 – 5. The tissue samples were fixed in 10% neutral buffered formalin.

Tissues from 5 Atlantic salmon were examined by light microscopy. The following histopathological changes were observed:

**Gill:** Mild multifocal hyperplasia and lamellar fusion, some lacunae observed on the hyperplastic plaques (F2). F2 also displayed inflammatory cell infiltration at the centre of two gill filaments and a pustule-like structure on one of the hyperplastic plaques and some vascular disturbance. Some aneurysmal dilation (F1). Some fish displayed some autolysis artefacts (F1, F3, F5).

R09

Skin & Muscle: Two small focal areas of inflammatory cell infiltration of skeletal red muscle.

Heart: Degeneration and inflammatory cell infiltration of few individual fibres observed in the atrium chamber of F1.

Gut and pyloric caeca: Absence of abdominal adipose tissue observed in F3 and F5. Some cell sloughing (F5) (potentially associated with post-mortem artefacts).

Pancreas: Within normal range.

Liver: Few deposit of melanin pigment within the main vessels (F5).

Kidney: Increase number of melanomacrophage aggregates noted in F3 and F5. F4 and mainly F5 displayed several mineral deposits (nephrocalcinosis). Renal tubes displayed hyaline droplets on the lining epithelium (F2-F5).

Spleen: Slightly congested (F4 & F5).

Signed:



Date: 12/11/2021

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

<b>BUSINESS No</b>	FB0456	<b>DATE OF VISIT</b>	23/09/2021
<b>SITE No</b>	FS1288	<b>SITE NAME</b>	Etive 6
<b>CASE No</b>	20210355	<b>INSPECTOR</b>	██████████

An enhanced inspection to ascertain the risk of escape from the fish farm was conducted in accordance with the Aquaculture and Fisheries (Scotland) Act 2007.

The visit consisted of an inspection of facilities, records and the provision of advice.

### **a) Inspection of i) escape incidents and ii) contingency procedures**

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

### **b)i) Inspection of records relating to equipment, facilities and the site**

During the inspection it was noted that the date of the construction of the facilities had not been recorded.

**It is recommended that in accordance with The Fish Farming Businesses (Record Keeping) (Scotland) Order 2008, schedule 2 part 3 (i), in relation to each facility a record of the date of construction must be maintained.**

### **b)ii) Inspection of records relating to training**

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

### **b)iii) Inspection of records relating to procedures and risk assessments**

The following recommendations are made:

**It is recommended that in accordance with The Fish Farming Businesses (Record Keeping) (Scotland) Order 2008, schedule 2 part 6 (c), in relation to any boat operations a record of the type and size of any propeller guard fitted to each boat used for operations on site must be maintained.**

**It is recommended that in accordance with the CoGP (Chapter 4, point 4.29) a documented review of procedures which could increase the risk of fish escaping from pens should be conducted. This review should detail the provision of the required supervision of new or inexperienced staff to ensure the procedures are followed.**

**It is recommended that a documented review of the standard operating procedure for raising and lowering of nets and net weighting systems is conducted. All staff on site should be trained at undertaking this procedure and a record must be maintained of all staff who have been trained and considered as competent (in accordance with 'The Fish Farming Businesses (Record Keeping) (Scotland) Order 2008', schedule 2, part 7 a).**

**c) Inspection of site and site equipment**

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

**d) Inspection of site specific procedures**

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

**Further Action**

The recommendations in this report should be implemented by 16<sup>th</sup> February 2022. Documentation should be provided as evidence that the recommendations have been implemented. Enforcement action may result if the recommendations are not implemented in the necessary time frame. Records should be sent to Marine Scotland Science's Fish Health Inspectorate (FHI) (contact details are provided below).

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

Signed:



Date: 16/11/2021

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)

# FISH HEALTH INSPECTORATE VISIT REPORT

## SUMMARY FOR INFORMATION OF SITE OPERATOR

<b>BUSINESS No</b>	FB0456	<b>DATE OF VISIT</b>	23/09/2021
<b>SITE No</b>	FS1288	<b>SITE NAME</b>	Etive 6
<b>CASE No</b>	20210355	<b>INSPECTOR</b>	[REDACTED]

### Escape Investigation

The site was inspected following notification of an escape of 52 rainbow trout on 04/09/2021. (Marine Scotland escape incident number MSe040921RTR1)

An enhanced containment inspection was conducted and a report will be issued separately.

All epidemiological units were inspected.

Samples were taken for diagnostic purposes. A separate report will be issued detailing the results of these tests.

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.

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

Signed:



Date: 06/10/2021

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

<b>BUSINESS No</b>	FB0456	<b>DATE OF VISIT</b>	23/09/2021
<b>SITE No</b>	FS1288	<b>SITE NAME</b>	Etive 6
<b>CASE No</b>	20210355	<b>INSPECTOR</b>	[REDACTED]

#### Case completion report

Recommendations in relation to the above case were made for implementation by 16/2/2022. Following submission of the required documentation, evidence has now been provided to Marine Scotland to demonstrate that the recommendations have been implemented.

This case will now be closed. This site may be subject to further audit and recommendations in the future.

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

Signed: p.p. [REDACTED]

Date: 09/02/2022

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/>