

Case No: 2020-0050 Date of visit: 18/02/2020

Time spent on site: 6.5 hours Main Inspector:

Site No: FS1296 Site Name: Colonsay
Business No: FB0119 Business Name: Mowi Scotland Ltd

Case Types: 1 ESC 2 CNA 3 4 5 6

Water Temp (°C): Thermometer No: FHI 045 completed

Observations: Region: ST Water type: S CoGP MA None

Dead/weak/abnormally behaving fish present? N/A If yes, see additional information/clinical score sheet.
Clinical signs of disease observed? N/A If yes, see additional information/clinical score sheet.
Gross pathology observed? N/A If yes, see additional information/clinical score sheet.
Diagnostic samples taken? N/A

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

Additional Case Information:

Inspection of records carried out at Croabh Haven shorebase, unable to travel over to Colonsay due to poor weather. Further inspection carried on site under case 2020-0129 in order to inspect records not available at Croabh Haven and site equipment. Movement records, waste disposal records unavailable for inspection as these are held on barge.

Last mortality removal carried out 13/02/2020 by divers, usually mortality removal is carried out daily using dead baskets, however severe weather over the past few weeks has prevented staff accessing the site regularly.

Further inspection carried on site under case 2020-0129 in order to inspect records not available at Croabh Haven and site equipment. CNA report issued under case 2020-0129 but copied to this case for reference.

Escape investigation

On 17th January, site staff observed structural damage to cage 4, positioned in the middle of the east grid. Divers attended site on the same day to inspect the cage further, a vertical hole in the net of cage 4 was discovered, approximately 1-2 metres in length, the hole was repaired by divers. The incident was reported to the fish health inspectorate on the same day confirming the loss of 73,600 fish. No recapture attempt was made due to the poor weather and fish not being visible at the surface. The remaining fish in the cage were then transferred to Cage 11, Cage 4 is now fallow.

The steel bars are connected to the stanchions via a bracket, fixed in place by a pin and nut. The design of the pin and nut assembly is such that the thread of the pin should be destroyed when the nut is fixed in place so that it is unable to unscrew. In this instance the nut appears to have come off, allowing the pin to come loose and the fixing to fail.

The cages installed on Colonsay are the Aqualine Midgard System model. All cages were removed from site at the end of the last production cycle and taken to Kyleakin for refurbishment and maintenance. This included the installation of the steel bars, previously dyneema ropes had been used. Refurbishment work was carried out by Specialist Welding on behalf of Aqualine, an Aqualine technician was present during the work being carried out. Following completion of the refurbishment the cages were transported in batches back to Colonsay where they were installed back at the site, this work was carried out by Mowi staff. Installation of the cages took place over several weeks. An Aqualine technician was on site for 1-2 days during the installation. After the first 8 cages had been installed, inspection showed that a number of the fixing pins had lifted out of position and some cases the nut was not in place. Specialist welding attended site and replaced missing nuts and tightened all fixings. All cages and nets were inspected by site staff and divers before fish were stocked. Dive inspection records are held on site barge and so were unavailable for inspection.

During the investigation there was no evidence of records being in place for the following:

- Product specification sheets giving details on the equipment used (specs taking into account the environmental conditions equipment will be subjected to on site)
- Manufacturing guidance documents for the installation of the steel bars.
- Works sign off records to show cages had been inspected as satisfactory prior to being transported to site.
- SOP or guidance document for inspection of cage equipment on site.

During the investigation, the conclusion section from an independent investigation carried out by Scale AQ (Aqualine parent company) was inspected. The complete report was not made available for inspection.

The conclusion stated that:

- Net fastening points were incorrect – net fastening between main rope and floating collar are on handrail post.
- Occasional use of under-dimensioned ropes (10-12mm) observed for attachment of main rope on other inspected cages.
- Incorrect fastening of nets means it does not retain brackets in absence of tendon system – causing handrail posts to detach from brackets.

Mowi staff and dive teams are inspecting the remaining 13 cages on site when weather allows, at time of inspection 8 cages had been inspected, with fixings being tightened. New steel plates are being made which will be installed on the current fixings, these will enclose the pin and bolt assembly to aid in holding the fixings in place.

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

Total No facilities	<input type="text" value="14"/>	Facilities stocked	<input type="text" value="13"/>	No facilities inspected	<input type="text" value="0"/>
Species	<input type="text" value="SAL"/>				
Age group	<input type="text" value="2019 Q2"/>				
No Fish	<input type="text" value="944,207"/>				
Mean Fish Wt	<input type="text" value="1.95 kg"/>				
Next Fallow Date (Site)	<input type="text" value="December 2020"/>	Next Input Date (Site)	<input type="text" value="2020 Q2"/>		

Recent (last 4 wks) disease problems? Any escapes (since last visit)?
 If yes, detail:

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, add MRT case and enter on mortality events sheet.

1. Recent treatments (last 4 wks)?	
If yes, detail:	
If other, detail:	
2. Medicines records available for inspection?	
3. Are records complete and correctly entered?	
4. Are fish in a withdrawal period?	
5. If yes, what treatment(s)?	
If other, detail:	
6. Are medicines stored appropriately?	

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 <i>increased (unexplained)</i> 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 <i>how</i> and <i>when</i> 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?	
2. If yes, are results available for inspection?	
3. Any significant results?	
If yes, detail (if not detailed under recent disease problems).	

Records checked between: 07/11/2019 - 17/02/2020

Case No: 2020-0050 Site No: FS1296

Date of visit: 18/02/2020 Inspector(s): JET

Point of compliance	Risk level	Satisfactory?	Requirement	Comments and advice given or action taken if necessary
ENHANCED CONTAINMENT INSPECTION (SEAWATER)				
a. Enquiry relating to i) escape incidents and ii) contingency procedures				
1.1. Have escape incidents or events ¹ been experienced on or in the vicinity of the site since the last MSS inspection?		Y		Damage to one cage following storm 17/01/2020, estimated 73,600 fish escaped. Hole in net a result of failure in fixing, which connects steel bar between stanchions, causing structural failure in cage.
If yes answer 1.2-1.8:				
1.2. Have appropriate reports been made to Scottish Government within 24 hours of discovery?	High	Y	AAAH Regs ⁴ 31D,E	FHI notified on 17/01/2020 - MSe170120SAL1
1.3. Have these been reported to the SSPO ² and, where in existence, the local DSFB and fisheries trust?	Medium		CoGP 4.4.37, 5.4.17	See case 2020-0129
1.4. Were methods (if any) used to recover escapees? If yes give detail		N		
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			Remaining cages being inspected and maintenance being carried out. Dive checks increased, previously monthly checks and before and after specific procedures and poor weather events. Now inspecting whenever weather allows. ROV has been purchased for inspecting the cage system. Steel retaining brackets are to be installed on fixings for steel bars to keep them in place. No documents in place indicating the correct installation of fixing nuts for steel bar supports for stanchions, or SOP for how they can be inspected as correctly installed. Further details in case 2020-0129
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,	

Point of compliance	Risk level	Satisfactory?	Requirement	Comments and advice given or action taken if necessary	
2.1 With regard to each facility, net, screen and mooring at each site, a record should be maintained of:-			SSI 2,1		
			Facilities		
			Moorings		
			Nets		
a) The name of the manufacturer	Low		Y	Y	cage records outstanding - See case 2020-0129
b) Any special adaptations	Low		N/A	N/A	See case 2020-0129
c) The name of the supplier	Low		Y	Y	See case 2020-0129
d) The date of purchase	Low		Y	Y	See case 2020-0129
e) Each inspection including					
i) the name of the person conducting the inspection	Low				See case 2020-0129
ii) the date of each inspection	Medium				See case 2020-0129
iii) the place of each inspection	Low				Dive reports, and daily checksheets on barge covering inspections
iv) the outcome of each inspection	High				See case 2020-0129
f) the date and result of each repair, equipment test and antifouling treatment carried out	High				See case 2020-0129
2.2. In relation to each net a record of:					
i) The mesh size	Medium	Y	SSI, 2,2		
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		SSI, 2,3		See case 2020-0129
ii) The material used in construction	Low				See case 2020-0129
iii) Its dimensions	Low				See case 2020-0129
2.4. In relation to each mooring a record of-			SSI, 2,4		
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 ³			SSI, 2,6		
a) The type, method of and date of construction of any flood prevention or flood defence measures in place	Low				
b) The date of and results of any tests conducted on any such measures	Low				
c) The date of any incident where the site was flood	Low				
d) The water course height during any such flood incident	Low				
2.6 A record of-			SSI, 2,7		
a) The date of any severe weather event which caused damage to any facility, net or mooring	Medium		SSI, 2,11 (a)		In site diary on barge - See case 2020-0129

Point of compliance	Risk level	Satisfactory?	Requirement	Comments and advice given or action taken if necessary
b) Any action taken to rectify any such damage	High		SSI, 2,11 (b)	See case 2020-0129
Pen and mooring systems				
2.7 Are there documented procedures maintained regarding the selection and installation of pens and moorings?	High	Y	CoGP 4.4.8, 4.4.13	
2.8 Can the site demonstrate evidence that the design specification of pens and moorings are suitable for purpose and correctly installed?	High		CoGP 4.4.9, 4.4.14	See case 2020-0129
2.9 Do pen systems meet the manufacturers guidelines?	High	N	CoGP 4.4.10	Scale AQ report states incorrect fastening points for ropes.
2.10 Are pen systems inspected and approved by suitably qualified / experienced person(s)?	High	Y	CoGP 4.4.11	
2.11 Is there evidence of the competence of personnel involved in the design, installation and maintenance of pen and mooring systems?	High		CoGP 4.4.12, 4.4.15	Letters of competence - Mallaig marine, morenot, (aqualine letter of competence not available) - See case 2020-0129
2.12 Are pen and mooring components inspected with a) a documented SOP b) a documented inspection plan based on a risk assessment	High		CoGP 4.4.16	See case 2020-0129
2.13 Do all nets used on site meet industry standards?	High	Y	CoGP 4.4.17	
2.14 Can the site demonstrate an awareness of the minimum fish size in relation to net size	High	Y	CoGP 4.4.19	
2.15 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		CoGP 4.4.20	See case 2020-0129
2.16 Are nets treated with a UV inhibitor?	Low	N	CoGP 4.4.21	
2.17 Are nets tested at a pre-determined frequency?	High	Y	CoGP 4.4.22	
2.18 Is the method of test procedure based upon the manufacturers advice?	High	Y	CoGP 4.4.22	
2.19 Are frequent net inspections conducted to look for damage?	High	Y	CoGP 4.4.23	
2.20 Are net inspection records maintained?	High		CoGP 4.4.23	dive reports held on barge - See case 2020-0129
2.21 Is the system by which nets are attached to the pen and weighted inspected frequently?	High	Y	CoGP 4.4.24	
2.22 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	Following escape event MSe170120SAL1, net was repaired, remaining fish in cage then harvested out. Net subsequently removed. Remaing cages being inspected with fixings being tightened. Additonal equipment (steel brackets) are to be installed on fixings.
b(ii). Inspection of records relating to training				
3.1 Are training programmes and plans relevant to the various onsite activities documented?	High	Y	CoGP 7.1.8	

Point of compliance	Risk level	Satisfactory?	Requirement	Comments and advice given or action taken if necessary
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(iii). Inspection of records relating to procedures and risk assessments				
4.1 Are procedures which could increase the risk of fish escaping considered to be carefully planned and supervised to minimise risk?	High	Y	CoGP 4.4.29, 5.4.12	
4.2 Before procedures are conducted on site, are the following in place:			CoGP 4.4.30, 5.4.13 SSI 2,7, b , SSI 2, 8, c	
a) a documented risk assessments	High	Y		
b) standard operating procedures	High	Y		
c) contingency plan	High	Y		
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/A	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:			SSI, 2,8,a	
The type and location of each net, fence and scarer deployed	Medium	Y		
- The use of lethal means by any person involved in operations on the site	Low	Y	SSI, 2,8,b	
4.8 Where predator nets are deployed is the advice of Annex 7 considered?	Low	N/A	CoGP 4.4.27	
c. Inspection of site and site equipment				
5.1 Are there any obvious containment issues on the site?	High			See case 2020-0129

Point of compliance	Risk level	Satisfactory?	Requirement	Comments and advice given or action taken if necessary
5.2 Is the net mesh size considered to be capable of containing all fish sizes present on site?	High		CoGP 4.4.18	See case 2020-0129

Point of compliance	Risk level	Satisfactory?	Requirement	Comments and advice given or action taken if necessary
5.3 Do nets carry numbered ID tags?	Low		SSI 2,2 ii	See case 2020-0129
Look at a percentage of nets on site - Does the net location meet the inventory?	Low			See case 2020-0129
5.4 Are nets stored away from direct sunlight?	Low		CoGP 4.4.21	See case 2020-0129
5.6 Are appropriate measures in place to mitigate predation on site? (Provide detail if necessary)				See case 2020-0129
5.7 Are boat operations conducted in such a manner which prevents damage to nets and pens?	High		CoGP 4.4.28	See case 2020-0129
5.8 Is there a requirement for navigation markers to be deployed?	Low		MSA ⁵ 2010 P4, S21	See case 2020-0129
5.9 If yes, has this been done in accordance with the necessary requirements?	Low		MS Marine licence	See case 2020-0129
5.10 If Yes to 5.8 is there a record of any navigation markers deployed?	Low		SSI 2,5	See case 2020-0129
d. Inspection of site specific procedures				
6.1 Are pen nets examined for holes, tears or damage prior to and during the stocking, moving or crowding of fish?	High		CoGP 4.4.31	See case 2020-0129
6.2 If helicopter transfer of fish is conducted are receiving pen(s) properly prepared:-			CoGP 4.4.32	See case 2020-0129
a) nets should be secure	High			See case 2020-0129
b) pens should be marked with buoys clearly visible from the air	High			See case 2020-0129
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		CoGP 4.4.33	See case 2020-0129
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
Additional actions	Powers			Comments and advice given or action taken if necessary
e) Collection of samples 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)			
h) Enforcement Notice. 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

