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Mowi Scotland Ltd
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FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

| | | | |
|--------------------|------------|----------------------|------------|
| BUSINESS No | FB0119 | DATE OF VISIT | 30/10/2019 |
| SITE No | FS1261 | SITE NAME | Hellisay |
| INSPECTOR | <REDACTED> | CASE No | 20190610 |

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

Although the site meets the requirement of current Scottish industry best practice, the following recommendation is made due to the nature of the breaches of containment reported in 2018 and 2019.

It is recommended that a documented review of the net, pen and mooring system, including any modifications, is undertaken to ensure they are suitable for purpose, correctly installed and meet the manufacturers guidelines in accordance with the CoGP Chapter 4, points 4.9, 4.10, 4.14 and 4.20.

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

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.

The recommendations in this report should be implemented by **13 July 2021**. 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 assistance or clarification in implementing any requirement or recommendation detailed in this report.

Signed: <REDACTED>

Date: 13/01/2020

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/>

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| INSPECTOR | <REDACTED> | CASE No | 20190610 |

Escape Investigation

The site was inspected following notification of an escape of 23,970 Atlantic salmon on the 10 October 2019 and 24,752 Atlantic salmon on the 12 November 2018.

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

All epidemiological units were inspected.

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

The information required for the public record of aquaculture production businesses regarding this site was verified and where necessary updated. The following records were also inspected to ensure that the conditions of authorisation for your Aquaculture Production Business (APB) are being met:

Aquaculture animal and aquaculture animal product movement records were inspected and found to be inadequately maintained.

- Records in relation to cleaner fish movements were found to be inadequately maintained. These were updated onsite and no further action is required.

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.

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Signed: <REDACTED>

Date: 15/01/2021

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/>

Hellisay – The Site FS1261

Hellisay is an Atlantic salmon (*Salmo salar*) seawater site owned and operated by MOWI Scotland Ltd and is located off the north-east coast of the Isle of Barra in the western isles on the west coast of Scotland (NF759032) and falls within disease management area 7-c Barra. The site consists of twelve polar circle cages, each measuring 120m in circumference. The site is authorised to stock Atlantic salmon, Lump-suckers (*Cyclopterus lumpus*) and Wrasse (of the genus *Labridae*).



Since the site was registered in 2012, there have been five reported escapes (or circumstances that may have increased the risk of significant escape) at Hellisay (see table below)

| Date Reported | Species | Number of Fish Escaped | Reported Reason for escape |
|---------------|-----------------|------------------------|----------------------------|
| 11/02/2013 | Atlantic salmon | 0 | Equipment damage |
| 04/03/2013 | Atlantic salmon | 10 | Hole in net |
| 14/09/2016 | Atlantic salmon | 0 | Net under water |
| 13/11/2018 | Atlantic salmon | 27,752 | Hole in net |
| 14/10/2019 | Atlantic salmon | 23,970 | Equipment damage |

Following the escape incident notification in 2018, which was initially reported to have resulted in no loss of fish, the site was added to the Fish Health Inspectorate schedule to undergo an enhanced containment inspection. However, due to poor weather, the inspection was unable to be completed before the site was harvested out and fallow. Information in relation to that event was gathered during the enhanced containment inspection that was conducted in response to the escape notification received in 2019 (below).

2018 Escape Event -

Background

The inspectorate was notified by a company representative of MOWI Scotland Ltd on 13/11/2018 of circumstances that increased the risk of escape of fish from their Hellisay site (FS1261) (MSe121118SAL1) which occurred between the 12/11/2018 and the 18/12/2018. It was reported that on this occasion, storm damage had resulted in a tear (approximately 2m long) on the side wall of the net on cage 5 at a depth of 5m. The final notification for the escape was received on 18/12/2018 where it was estimated that 24,752 fish had escaped.

FHI Investigation

The Inspectorate conducted a site visit and an enhanced containment inspection on the 30/10/2019.

Daily check sheets containing site integrity checks are used by staff members in order to detect any damage to equipment. Documented risk assessment and standard operating procedures are also in place and all staff had undertaken the company induction program, which contains site specific training on containment, and what to do in the event of an escape.

Circumstances Leading to the Escape

It was found after the 2018 escape that the Dyneema ropes, used to maintain the structure of the pen, were breaking or losing tension during stormy weather. This allowed the sections of walkway and stanchions to move out of position on the flotation rings. This has the effect of placing a high degree of tension on the 5m water line of the nets. During the storm all pens were found to be damaged. Following this issue, the dyneema ropes were replaced with steel bars.

Company Response

Following this escape, only temporary repairs could be made to the cages and fish were removed from the site. As well as this, a review of the equipment on site was undertaken by the company. During the review it was agreed by the cage manufacturer that there was a design fault with the dyneema ropes. These were removed and replaced with steel bars in March/April 2019, prior to restocking the site

The site staff conduct and record routine checks of the pens, with extra focus on the 5m ropes, intermediate ropes, winch ropes and checking for any deformities in the steel bar structure.

2019 Escape Event -

Background

The inspectorate was notified by MOWI on the 14/10/2019 that on the 10/10/2019 an escape of Atlantic salmon from their Hellisay site (FS1261) (MSe101019SAL1) had occurred. It was initially unknown how many fish had escaped.

Following a storm event, a daily inspection of the site revealed that the 5m ropes/chains and the tension pin were slack, and that the mortality uplift rig was loose. Divers arrived on site the following day and discovered a large 5-6m split up the seam of the net on cage 8, at the base of the 5m line on the net. Site staff attributed the damage to the storm event that occurred in the days prior which resulted in the 5m ropes/chains becoming loose and placing strain on the net, in combination with a faulty seam on the refurbished net. The hole was repaired by divers at the time of discovery. The final notification for the escape was received on 14/11/2019 and it was estimated that 23,970 fish had escaped.

FHI Investigation

The Inspectorate conducted a site visit and an enhanced containment inspection on the 30/10/2019.

Daily check sheets containing site integrity checks are used by staff members in order to detect any damage to equipment. Documented risk assessment and standard operating procedures are also in place and all staff had undertaken the company induction program, which contains site specific training on containment, and what to do in the event of an escape.

Due to inclement weather, only cage 1 could be accessed for inspection, as it is located at the most sheltered point on the site. A visual inspection from the boat was completed for all other cages on the site, including cage 8. It was concluded from this visual inspection and from equipment records inspected at the shorebase, that the equipment and net on cage 8 was of the same standard as cage 1.

Circumstances Leading to the Escape

The net located on the affected cage (8), was originally sourced from MOWI's Colonsay site (FS1296) located East of Rhuba Garbh on the Isle of Colonsay. Upon receipt, the net was dispatched to Net Services (Scotland) Ltd on 04/02/2019 for assessment and any necessary refurbishment work. The net (ID: MND3610) was stress tested and several holes of varying size (1-3 mesh wide up to >10 mesh wide) were repaired. 7 metres of loose rope were re-lashed and 1 broken handle was also repaired. The service card that was issued after the refurbishment works were completed, attests that the net met industry standards and that the attestation was valid until 15/05/2020.

8 months later on 10/10/2019, the large 5-6m hole that led to the escape of 23,970 fish, is suspected to have been caused as a result of a faulty seam on the recently refurbished net. Furthermore, two days later after the larger 5-6m vertical hole was discovered by divers, a second hole in the netting of cage 8 was discovered on the 12/10/2019, measuring "1mx1m at 5m. Patched." Both holes were repaired at the time of discovery and the incident that lasted 2 days, was reported to the FHI on 14/10/2019.

Company Response

In response to the escape, the company harvested out the fish from the affected cage. Additionally, the net was removed from the site and there is no intention to use it on this site, or any other site in the future. Divers are conducting site checks weekly.

Summary

Escape events occurring in both 2018 and 2019 both resulted in a large loss of fish from the Hellisay site. Both incidents were reported to have been a result of large holes/tears in the nets following storm events.

Aqualine acknowledged a design fault with the dyneema ropes from the 2018 incident and these were since removed and replaced with steel bars.

The net that was located on cage 8 where a 5-6m hole along a vertical seam was found in the 2019 escape incident, had previously been refurbished by Net Services (Scotland) Ltd in February 2019 (after use on MOWI's Colonsay site (FS1296)). The accompanying attestation confirmed that the net met industry standards at the time of inspection, prior to its deployment on Hellisay. The large hole, which is suspected to have resulted from a faulty seam, led to the escape of 23,970 fish, none of which have been recovered.

FHI Recommendations

Although the site meets the requirement of current Scottish industry best practice, the following recommendation is made due to the nature of the breaches of containment reported in 2018 and 2019:

It is recommended that a documented review of the net, pen and mooring system, including any modifications, is undertaken to ensure they are suitable for purpose, correctly installed and meet the manufacturers guidelines in accordance with the CoGP Chapter 4, points 4.9, 4.10, 4.14 and 4.20.