

\$camon \$cotland, 21 February 2024

Mowi Caught Breaching Authorisation Conditions At Carnasserie Hatchery

- FOI disclosure reveals details of Mowi's plans for broodstock & egg supply
- Kames facility transferred to Mowi for broodstock
- Little Loch Broom to be used for broodstock for new Ardessie Hatchery

A [Freedom of Information disclosure by the Scottish Government \(1 February\)](#) reveals that Norwegian salmon giant Mowi breached authorisation conditions by stocking Carnasserie Hatchery with broodstock without authorisation (with question marks over Mowi's Ardessie salmon farms in Little Loch Broom):

DOCUMENT 09 – RE: Sites to be registered as broodstock

From: [REDACTED]@gov.scot>
Sent on: Monday, September 18, 2023 3:50:19 PM
To: [REDACTED]@gov.scot>; [REDACTED]@gov.scot>
Subject: RE: Sites to be registered as broodstock

Categories: Purple Category

Thanks for letting me know [REDACTED]
Carnasserie are already authorised to hold broodfish following a breach of their authorisation conditions earlier in the year when we discovered they had stocked the site with broodstock without authorisation. A retrospective amendment application was processed.
I'm guessing the sites [REDACTED] is referring to are: Ardessie A (FS0517) and B (FS0675)? These are still under Wester Ross Fisheries in Aquadat. I believe MOWI purchased them however, we will need [REDACTED] as the business correspondent to lodge the amendment application for the addition of broodstock at those locations.
I'll have a chat with [REDACTED] about this one, cheers.

[REDACTED]**From:** [REDACTED]@gov.scot>
Sent: Monday, September 18, 2023 4:39 PM
To: [REDACTED]@gov.scot>; [REDACTED]@gov.scot>
Subject: FW: Sites to be registered as broodstock

Hello,

This is no longer a planning matter but a registration/authorisation one. [REDACTED] was involved in discussions with Mowi at the planning stage regarding the future use of these sites for Broodstock so best a discussion is head together before contacting [REDACTED].
If you need anything from me, just let me know.

[REDACTED]

\$camon \$cotland today (21 February) filed a FOI request with the Scottish Government for information relating to any further breaches of authorisation conditions by Mowi and other salmon farming companies.

“Norwegian giant Mowi operates in wee bonnie Scotland as if they are above the law,” said Don Staniford, Director of \$camon \$cotland. “Mowi has shamefully – and fatally – ignored health and safety laws, biomass and lice limits, welfare legislation, reporting of seals killed and now it has been caught jumping the gun in stocking broodstock without authorisation. How many more cases of Mowi – and other salmon farming companies – riding roughshod over regulations are there lurking in the virus-laden waters? This case is surely the tip of a Titanic-sized iceberg.”



“Salmon farms across Scotland are slipping through the assessment net,” continued Staniford who is [the subject of a SLAPP by Mowi](#). “Instead of turning a blind eye to violations and breaches of conditions, the Scottish Government should close the net on Mowi’s disease-ridden operations. Salmon farming companies found breaching authorisation conditions and violating the terms of their operating licence should be fined and have their leases rescinded rather than being rewarded with government grants and the fast-tracking of applications. It’s time to close down this lousy industry and rip out the hundreds of salmon cages littering the Highlands and Islands. Mowi has spread like malignant cancer on the coast of Scotland.”

Contact:

Don Staniford: 07771 541826 (salmonfarmingkills@gmail.com)

Notes to Editors:

[1] Read more via: [FOI Backgrounder: Ova & Mowi Broodstock \(1 February 2024\)](#)

The [FOI disclosure from the Scottish Government \(2024-00391984\)](#) on 1 February 2024 reveals how a Mowi worker (their name is redacted) is struggling to cope with a heavy workload and asks “if there is any way I can help expedite the process”:

From: [REDACTED]@mowi.com>
Sent: Sunday, November 12, 2023 5:16 PM
To: [REDACTED]@gov.scot>; [REDACTED]@gov.scot>
Subject: RE: Carnasserie fish farm

Hello [REDACTED]

I appreciate the issue. My workload is such that I am writing emails at the weekend and evenings. Let me know if there is any way I can help expedite the process, perhaps a quick Teams meeting to talk you through the documents and answer any questions directly?

Many thanks

[REDACTED]

Mowi Scotland Limited

Mobile: [REDACTED]
Mail: [REDACTED]

Office: Mowi
Farms Office
Glen Nevis Business Park
Fort William
PH33 6RX

MOWI

Salmon is good. Mowi is Goodness



Don Staniford
@TheGAATA

...

"My workload is such that I am writing emails at the weekend and evenings" writes [name redacted] [@MowiScotlandLtd](#) [@ScotGovMarine](#)
Working weekends must be such a drag!

From: [REDACTED]@mowi.com>
Sent: Sunday, November 12, 2023 5:16 PM
To: [REDACTED]@gov.scot>; [REDACTED]@gov.scot>
Subject: RE: Carnasserie fish farm

Hello [REDACTED]

I appreciate the issue. My workload is such that I am writing emails at the weekend and evenings. Let me know if there is any way I can help expedite the process, perhaps a quick Teams meeting to talk you through the documents and answer any questions directly?

Many thanks

[REDACTED]

Mowi Scotland Limited

Mobile: [REDACTED]
Mail: [REDACTED]

Office: Mowi
Farms Office
Glen Nevis Business Park
Fort William
PH33 6RX

MOWI

Salmon is good. Mowi is Goodness

1:08 PM · Feb 17, 2024

Even working weekends, Mowi has [struggled to cope with mass mortalities in Scotland](#) – often blaming poor quality eggs for high death rates in freshwater hatcheries. Data [published by the Scottish Government’s Fish Health Inspectorate on 2 February 2024](#) reveals 3.5 million mortalities due to ‘unviable eggs’, ‘poor genetics’ and ‘hatch fail’ – including 2.4 million at [Mowi’s deadly Inchmore hatchery](#):

Event #	Business Name	Site Name	Date reported	Mort %	Explained reasons	Mort #s	Additional information	Action taken by FHI
MRT03758	Mowi Scotland Ltd	Inchmore	20/01/2023	10.51	Unviable Eggs	455,358		Business contacted. Poor batch of eggs, investigation ongoing. No further report anticipated, remainign alvins appear to be doing well. FHI site visit planned w/b 13/2/23.
MRT04185	Mowi Scotland Ltd	Inchmore	03/08/2023	10.54	Poor genetics	421,796	business contacted: poor batch of eggs, some not coming onto feed and even those feeding poor quality and causing mortality	FHI to monitor.
MRT02893	Mowi Scotland Ltd	Inchmore	15/03/2022	6.65	Unviable Eggs & Alvin / Hatch Fail	415,707	Mortality was caused by egg quality issues, a lot of stress hatching occurred once the eggs arrived which resulted in increased fungus pressure resulting in increased picking.	FHI to monitor
MRT04079	Mowi Scotland Ltd	Lochailort Recirculation Hatchery	06/07/2023	3.39	Unviable Eggs & Alvin	346,226	Unviable eggs and Alvin from a poor batch of aquagen stock.	Site contacted for further information, FHI to monitor.
MRT02920	Mowi Scotland Ltd	Inchmore	14/04/2022	4.04	Unviable Eggs & Alvin / Hatch Fail	295,959		Site manager contacted. Batch of eggs arrived with a high number of mortalities from Aquagen’s Hollywood site. This has been observed twice already this year and has been attributed to poor quality of eggs with added deterioration of eggs occurring also as a result of transport. Teams have been sorting through the eggs to salvage remaining hatched/viable eggs. W/b 11/04/2022 similar mortalities seen, therefore forecast high mortalities for that following week. FHI to monitor.
MRT02856	Mowi Scotland Ltd	Inchmore	17/02/2022	9.14	Unviable eggs & Alvin/ Hatch Mortalities	274,496		Spoke to site contact as business contact not available. Mortality of ova and hatch failure a result of poor quality of ova from at intake. Boxes arrived with ova stress hatching in packaged boxes. Ova were also uncharacteristically soft on arrival. Light treatment conducted to flush any fungus: 30ppm of bronopol and 35ppm of formaldehyde. The treatment has been successful and remaining alevins are doing well. FHI to monitor.
MRT02926	Mowi Scotland Ltd	Inchmore	20/04/2022	3.79	Unviable Eggs & Alvin / Hatch Morts	266,768	Update of other mortality at Inchmore: 1st feeding to 5g, 0.37%, 9445, poor performers; 5g and over, 0.33%, 2917, background mortality	Mortality below reporting level. FHI to monitor.
MRT03783	Bakkafrost Scotland	Geocrab Hatchery	30/01/2023	7.46	Ova mortality following transfer from supplier	237,012		Site contacted for further information. Ova mortality has occurred following transfer from supplier (Aquagen eggs). A flood was reported early in the new year which is thought to have compromised the water quality of the supplier. It is thought that is the cause of mortality for this event. The site are now back below report threshold.
MRT02879	Mowi Scotland Ltd	Lochailort Recirculation Hatchery	03/03/2022	6.11	Unviable eggs/alvin - Hatch mortalities	192,992	Business correspondent contacted - Bad batch of eggs that have not been hatching well. This is a problem across the board. Additional mortalities have been heavier than usual. This is expected to drop down as hatching continues	
MRT04184	Mowi Scotland Ltd	Inchmore	03/08/2023	9.39	Poor genetics	172,726	business contacted: poor quality ova, stress associated with vaccination & handling, possibly some water quality parameters not ideal. Overall thought to be acute stress event on fish that were of poor quality.	FHI to monitor.
MRT03729	Mowi Scotland Ltd	Lochailort Recirculation Hatchery	12/01/2023	9.20	Unviable eggs	137,970		Site contacted for further information. High count of egg drop outs being seen with the sites most recent Aquagen stock. Histology samples have been taken with no significant results found. Mortality appears to be occurring due to poor egg quality. FHI to monitor.

Fish Farming Expert [reported in October 2021](#):



Fish in a Mowi pen. Mowi Scotland will produce 25-30 million ova from 2024/25. Photo: Mowi.

Mowi seeks security of supply with Scottish breeding programme

Mowi Scotland is to begin its own broodstock programme to reduce its reliance on imported ova and tailor breeding goals to the specific challenges of the Scottish environment.

Gareth Moore

PUBLISHED Tuesday 05. October 2021 - 09:27 LAST UPDATED Tuesday 05. October 2021 - 09:48



Smolts chosen as potential broodstock candidates will be put to sea this month and will be brought to a planned on-land freshwater broodstock facility in the spring of 2024.

The first egg production is planned for the autumn and winter of 2024/25, to be stocked for 2025 smolt production.

Norway export ban

Mowi Scotland currently gets most of its eggs from Mowi Ireland, and others from suppliers in Scotland and Iceland. It previously sourced eggs from Norway, but a 2019 ban on exports of salmon eggs from that country has made the Scottish salmon industry aware of the need for home-grown ova.

The export ban, which is still in place, came into force due to issues identified by European Union food safety authorities regarding the certification of so-called disease-free compartments in Norway.

Although there was no actual clinical disease detected, the surveillance and monitoring procedures to demonstrate that the areas where broodstock were farmed were free of disease were not considered adequate.

25-30 million eyed eggs

If the same issue was to occur in Ireland or Iceland, farmers could face a shortage of eggs, affecting their entire value chain.

Mowi hopes to produce 25-30 million eyed eggs annually in Scotland. As well as providing security of supply, the broodstock programme should also allow Mowi to make cost savings.

Fish Farming Expert [reported in May 2022](#):



A Mowi Scotland salmon farm. The company has blamed poor performance of some fish on externally sourced eggs. Photo: Mowi.

We're ova the worst says Mowi after eggs get blame for problems

Mowi Scotland is predicting improved fish health and productivity in the second half of 2022 after its last stocks of poorly performing fish grown from externally sourced eggs have been harvested.

Gareth Moore

PUBLISHED Wednesday 11. May 2022 - 16:03 LAST UPDATED Wednesday 11. May 2022 - 16:16



Eggs from Ireland

Mowi Scotland has increased the volume of eggs it receives from Mowi Ireland and has begun work to establish [its own broodstock programme](#) to reduce its reliance on imported ova and tailor breeding goals to the specific challenges of the Scottish environment.

Smolts chosen as potential broodstock candidates were put to sea in October last year and will be brought to a planned on-land freshwater broodstock facility in the spring of 2024.

The first egg production is planned for the autumn and winter of 2024/25, to be stocked for 2025 smolt production.

The Press & Journal [reported in August 2022](#):

Fish farm giant's Scottish operations hit by egg and disease woes

by **Keith Findlay**

Updated August 24 2022, 7:21 pm

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Comment 1



Mowi Scotland employs about 1,500 people.

A ban on Norwegian egg imports and ongoing health woes hit Mowi Scotland's salmon farming profits and output in the second quarter. Operational earnings before interest and taxes (Ebit) slumped to £17.5 million in the latest period, from £25.2m previously, as "poor production on stocks grown from externally sourced eggs negatively impacted volumes and costs".

A temporary ban on imports of salmon eggs and trout ova from Norway was introduced several years ago amid fears a deadly fish virus – infectious salmon anaemia – may spread to Scotland.

The [salmon industry in Scotland](#) was forced to look elsewhere for eggs, which Mowi said had led to poor production performance.

Mowi [reported in December 2023](#):

Mowi produces first eggs from Scottish broodstock in 20 years



With approvals received for Mowi Scotland's broodstock and egg facility at Ardeslie, the first eggs have now been collected from specially selected Mowi broodstock.

For the past several years, Mowi Scotland has been reliant on external egg supply since the export ban of ova from Norway restricted the supply of high-quality eggs available to Scotland. Recent approvals to produce broodstock and eggs in Scotland will help secure high-quality egg supply to the company by enabling it to select parent fish whose offspring will be most robust to the specific challenges faced locally and providing significant advances in survival and performance.

To prepare for a made-in-Scotland broodstock programme, the next generation salmon were taken in 2021 from Mowi nucleus in Ireland and raised at seawater farms in Scotland. After a few weeks held in freshwater this autumn, Mowi breeding experts began checking the salmon for readiness to spawn and the first fish were identified as ripe and stripped of their eggs last month.

John Richmond, Broodstock and Post-Smolt Development Manager, explains: "The egg stripping has gone very well this season – considering this is only a temporary solution as we move to securing quality egg supply to Mowi Scotland with a bespoke facility."



Artist rendering of new broodstock facility at Ardessie

This broodstock facility at Ardessie will use the latest recirculating aquaculture system (RAS) technology to enable use of temperature and photoperiod regimes to produce early and late season eggs, a key element of Mowi's freshwater smolt production plan.

"We envisage the new farm will produce up to 50 million eyed eggs to supply our production hatcheries. This facility should be complete in spring of 2025 in time for the next generation of broodstock," adds John.

DNA analysis was undertaken during spawning and all the male fish were ranked by the Mowi geneticists according to their breeding index. The geneticists are considering DNA markers that indicate high growth and robustness towards disease challenges, as well as flesh pigment quality.

Ben Hadfield, COO Farming Scotland, says: "Congratulations to the team in Mowi Scotland for their resilience and farming know-how that brings this all together to make it happen. This milestone is an important time for us as we secure future generations of top-quality salmon that contribute to the country's most valuable food export."

Mowi **Mowi Scotland Limited** @MowiScotlandLtd · Dec 12, 2023

Newsletter | With approvals received for Mowi Scotland's broodstock and egg facility at Ardessie, the first eggs have now been collected from specially selected Mowi broodstock.

Eggciting times 🥳 –
read full story here 📄

mowi.com/uk/blog/2023/1...



Mowi's [Q4 2023 presentation on 14 February 2024](#) outlined plans for the Norwegian salmon giant to be "100% self-sufficient for eggs":

Biological turnaround of Scotland II: 100% self-sufficient for eggs

- Another important part of Mowi Scotland's biological turnaround plan is to become self-sufficient in eggs
- Groundwork commenced for a brand new bespoke broodstock and egg facility at Ardessie, Northern Scotland
- Ensures Mowi Scotland will be 100% self-sufficient with ova (eggs) → better SW growth and survival rates
- Construction period: 2024-2025



Ardessie, Scotland. Groundwork has commenced



Ardessie, Scotland. Illustration

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MOWI

Mowi's [Q4 2023 report published on 14 February 2024](#) included:

“Another important part of Mowi Scotland's biological turnaround plan is to become self-sufficient for eggs. After receiving the final permit, Mowi Scotland has started the groundwork for a new bespoke broodstock and egg facility at Ardessie in Northern Scotland. When complete in 2025, it will provide a secure supply for 100% of Mowi Scotland's egg requirements.”

The [FOI disclosure from the Scottish Government \(2024-00391984\) on 1 February 2024](#) reveals that in 2021 Mowi identified sites at Inverpolly, Isle Ewe and Torridon as potential broodstock sites:

Aquaculture Animal Health

Inverpolly - E206589.8, N915973.10

Isle Ewe - E186289, N885444

Torridon - E182343, N855906

‘Pre-application advice’ to Mowi [issued by the Scottish Government in December 2021](#) included:

Broodstock sites should be isolated from production farms in their own disease management area, as detailed in A Code of Good Practice for Scottish Finfish Aquaculture and A Code of Practice to Avoid and Minimise the Impact of Infectious Salmon Anaemia (ISA) and outlined below. Further information on the establishment and designation of [disease management areas](#) is also available on our website.

Chapter 1, Section 1.2 of [A Code of Good Practice for Scottish Finfish Aquaculture](#) (CoGP) states - "New pen or marine-linked land-based broodstock sites established after 2010 should be located more than two tidal excursions away from any production farms. If, through an appropriate risk assessment (which gives due consideration to relevant hydrodynamic information), it can be shown that the risk of spread of pathogens is satisfactorily low, and all farmers within the Farm Management Area agree, the establishment of such a site within two tidal excursions may be acceptable."

Section 2 of [A Code of Practice to Avoid and Minimise the Impact of Infectious Salmon Anaemia \(ISA\)](#) states – "Live fish may be moved into a SW broodstock farm from another SW farm, but the broodstock farm must be situated at least 5 km or one tidal excursion (whichever is the greatest) from another farm, harvesting station or processing plant. Broodfish must not leave the site for on-growing elsewhere. Movements of live broodfish to freshwater (FW) sites are allowed."

From the coordinates provided there are currently no active sites at the Inverpolly location (E206589.8, N915973.10) and this would therefore reactivate the 10a Enard Bay DMA and comply with the CoGP requirement. Both of the other locations contain active fish farm production sites. The Isle Ewe location (E186289, N885444) in DMA 10c – Ewe, which contains one active site (FS1084) operated by Mowi and the Torridon location (E182343, N855906) is that of Mowi's existing Torridon site (FS0234) in DMA 11a – Torridon also includes several Scottish Salmon Company sites within this DMA.

Exactly what is proposed in terms of facilities and stocking age/regime at the given locations has not yet been provided and further details would be required in order to provide specific advice.

Generally, the risks associated with holding broodstock arise from the extended periods of stocking without fallow which can bridge different inputs of fish resulting in multi-year class sites or areas increasing the risk of disease occurrence and spread, and parasite infestation. It should also be noted that the CoGP has a presumption against seawater to seawater transfers, particularly those between farm management areas to minimise risk of disease spread.

A [‘Teams Meeting’ \(names redacted\) in May 2023](#) provided advice on marine pen sites “to be used alongside the proposed land based broodstock site at Ardessie”:

Meeting on 3/5/23 via TEAMS

Attendees: [REDACTED]

- [REDACTED – NOT IN SCOPE]
- [REDACTED – NOT IN SCOPE]
- [REDACTED – NOT IN SCOPE]
- Advice was also provided on the marine pen sites to be used alongside the proposed land based broodstock site at Ardessie. A separate information note was sent following the meeting outlining the guidance provided.

A [letter from Marine Scotland Science in February 2023](#) explained that “authorisation details for the seawater pen site holding broodfish will need to be updated to include the growth stage of broodstock”:

The two existing pen sites (Ardessie A and Ardessie B) in Little Loch Broom are currently the only sites in disease management area 10d. The charts provided suggest that the Ardessie A seawater pen site will be stocked with the maturing brood fish, however confirmation of which site will be stocked with broodfish is requested. Authorisation details for the seawater pen site holding broodfish will need to be updated to include the growth stage of broodstock.

Details of the proposed future use of the Ardessie B site (or whichever site will not hold the broodfish) should also be provided. Where live fish are to be moved into a seawater broodstock site from another seawater site, the broodstock site should be at least two tidal excursions from other production sites (section 1.19 A Code of Good Practice for Scottish Finfish Aquaculture). Should one site be operated for production whilst the other holds broodstock further considerations may be required with regard to stocking and fallowing periods to reduce the risk of disease spread.

“Elite eggs are stocks in one of our hatcheries at Lochailort or Inchmore....the fish are then stocked into one of our freshwater loch sites until they reach the smolt stage at which point they will transfer to sea,” [outlined a Mowi report in December 2022](#). “The broodstock candidates will then continue to be grown on in one of the seawater farms alongside the normal production fish.”



The [FOI disclosure from the Scottish Government \(2024-00391984\) on 1 February 2024](#) detailed discussions on transferring the ownership of Carnasserie Hatchery from Kames to Mowi:

From: [REDACTED]@mowi.com>
Sent: Tuesday, October 3, 2023 8:15 AM
To: [REDACTED]@gov.scot>
Subject: Carnasserie fish farm

Hello [REDACTED]

My colleague [REDACTED] was in touch a few weeks ago to discuss registering the Carnasserie site for Atlantic Salmon broodstock production.

Since then I have been trying to get in touch with Kames fish farming so they can transfer the site registration back to Mowi.

They eventually got back to me to suggest that the site remain registered with Kames but that they would transfer the use from Trout to Salmon. The reason they propose this is that it is our intent to transfer the site back to Kames in 2025 or possibly earlier.

I am not sure this will be acceptable however as it will be Mowi stocks on the site and the site will be staffed by Mowi personnel.

Can you let me know please if this will be an acceptable approach so I can feedback to Kames how we need to progress this matter.

Thanks

[REDACTED]

Mowi Scotland Limited

From: [REDACTED]@gov.scot>
Sent: Tuesday, October 3, 2023 9:02 AM
To: [REDACTED]@mowi.com>
Cc: [REDACTED]@gov.scot>
Subject: RE: Carnasserie fish farm

Hi [REDACTED]

Thanks for getting in touch. The decision to have Mowi Scotland Ltd directly authorised to operate the Carnasserie Hatchery site or to be operating it on behalf of Kames Fish Farming would be a decision for the companies to make, although it would be better if the company which was operating the site was directly authorised to do so, under the Aquatic Animal Health (Scotland) Regulations 2009. Although it will involve additional administrative work to transfer the site to Mowi Scotland Ltd and then potentially back to KFF in a couple of years, this would not be overly burdensome.

The complication would come where all fish health communication from the FHI regarding the site would be directed to the KFF Business Correspondent rather than the Mowi Scotland Ltd one. The transfer of these communications to Mowi Scotland Ltd would rely on any communication agreement which is in place between the two companies. Also, any regulatory enforcement activity would be taken against the business which is authorised to operate at the site, along with the staff involved on site. This may not be an acceptable situation for Mowi Scotland Ltd and may help determine your decision.

From: [REDACTED]@mowi.com>
Sent: Monday, October 16, 2023 10:07:00 am
To: [REDACTED]@gov.scot>
Cc: [REDACTED]@Kames.co.uk>
Subject: RE: Carnasserie fish farm

Hello [REDACTED]

Find attached the completed forms to change the use of Carnasserie Hatchery from trout broodstock to salmon broodstock, the biosecurity plan and VHWP and a site location plan.
Please let me know if you require any further information.

Many thanks

[REDACTED]

Mowi Scotland Limited

Mobile: [REDACTED]
Mail: [REDACTED]@mowi.com

Office: Mowi
Farms Office
Glen Nevis Business Park
Fort William
PH33 6RX

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From: [REDACTED]
Sent: Friday, November 10, 2023 3:04 PM
To: [REDACTED]>; [REDACTED]>
Subject: RE: Carnasserie fish farm

Hi [REDACTED]

My apologies, my workload has been extremely high over the last few weeks, having been out in the field last week, all this week and was in at the Lab today. I am now going out into the field as the on-call inspector next week, so will be unable to look at this until I return on Thursday.

If [REDACTED] has any available time this week, [REDACTED] may be able to review the application, however, [REDACTED] workload is also very high just now.

Thank you for your patience,

From: [REDACTED]@Kames.co.uk
Sent: Wednesday, October 4, 2023 9:11 AM
To: MS FishHealth <MS.FishHealth@gov.scot>
Cc: [REDACTED]@gov.scot>; [REDACTED]@Kames.co.uk>; [REDACTED]@mowi.com>
Subject: FS0757 Carnasserie Mill - Transfer APB to MOWI

Good morning [REDACTED]

Further to your correspondence with [REDACTED], MOWI will be operating the Carnasserie Mill Hatchery stocking with salmon over the next couple of years with a plan to return it to Kames for trout production in c2026.

I attach a signed transfer form to authorise the transfer from Kames to MOWI so that operational responsibility will be with MOWI for the duration of this period, following which MOWI will transfer it back to Kames.

Should you need anything further from us in regard to this please let me know.

Kind regards

[REDACTED]Kames Fish Farming Limited

Tel: [REDACTED] [REDACTED]
kames.co.uk | @kames

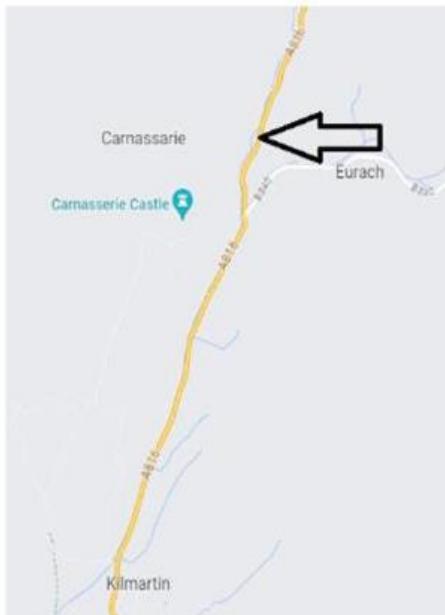


KAMES FISH FARMING LIMITED

Kilmelford, by Oban, Argyll, PA34 4XA | kames.co.uk | @kamesfishfarm



Carnasserie Hatchery Location



For detailed site plan refer to Biosecurity Measures Plan



The [FOI disclosure from the Scottish Government \(2024-00391984\) on 1 February 2024](#) detailed discussions on Mowi sites to be registered as broodstock with Mowi not able to guarantee single year class stocking and synchronous fallowing between both Ardessie A and Ardessie B (and reference to Mowi's Ardnish "site change" and the Dawnfresh Loch Etive "sites change"):

From: [REDACTED]@mowi.com>
Sent: Tuesday, December 5, 2023 2:03 PM
To: [REDACTED]@gov.scot>; MacIntyre, Stephen <Stephen.MacIntyre@mowi.com>
Cc: [REDACTED]@mowi.com>
Subject: RE: Sites to be registered as broodstock

Dear [REDACTED],

Sorry for not responding to your previous email, I thought I did. I discussed with [REDACTED] and to clarify we can not guarantee single year class stocking and synchronous fallow between both Ardessie A and Ardessie B at this time. Therefore, while sites will be stocked with single year class and fallow each year, the area will not at least for next couple of years. From the discussion with [REDACTED], it appears it is safer to apply for broodstock licenses instead of potential broodstock. I will send to you all the required documentation ASAP.

Best Regards

[REDACTED]
[REDACTED]

Mowi Scotland Limited

Mobile: +[REDACTED]
DDI: +[REDACTED]
Mail: [REDACTED]@mowi.com

Office: Mowi
Farms Office
Stob Ban House
Glen Nevis Business Park
Fort William
PH33 6RX

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Salmon is good. Mowi is Goodness

From: [REDACTED]@mowi.com>
Sent: Tuesday, December 12, 2023 2:51 PM
To: [REDACTED]@gov.scot>
Cc: [REDACTED]@mowi.com>
Subject: Sites to be registered as broodstock

Hi [REDACTED], thanks for this update. We have a few other APB changes ongoing which [REDACTED] has been providing help and assistance with and I know these are ongoing. For our own planning purposes looking ahead, it would be very helpful if you could offer any updates on progress with the Dawnfresh_Loch Etive sites change and the Mowi_Ardnish site change. These are still in the determination period but if there are any additional information requests, we would be happy to further advise as needed. Thank you and best wishes for the festive period.

From: [REDACTED]@gov.scot>
Sent: Tuesday, December 5, 2023 1:54 PM
To: [REDACTED]@mowi.com>
Cc: [REDACTED]@mowi.com>
Subject: RE: Sites to be registered as broodstock

ALERT: This message originated outside of Mowi's network. **BE CAUTIOUS** before clicking any link or attachment.

Hi [REDACTED]

The document you attached is really only a disinfectant guide. The BMP or VHWP for each site should include the below information as a minimum:

- The manner and frequency of mortality removal, recording and safe disposal.
- The manner and period in which the APB will notify Scottish Ministers or veterinary professionals of any increased and unexplained mortalities.
- The action that will be taken in the event that the presence or suspicion of the presence of a listed disease is detected, and how and when that will be notified to Scottish Ministers.
- The health status of aquaculture animals being stocked on the farm site (equal or higher health status, certification if required).
- The husbandry and biosecurity measures implemented between each epidemiological unit to minimise the transmission of disease (movement of staff, visitors, equipment, live or dead fish etc).
- The measures in place to maintain the physical containment of aquaculture animals held on site.

It is also useful to include information regarding:

- any pre-transfer checks that will be done (external visual examination or sampling for histology, PCR etc).
- the proposed stocking and fallow dates for each site
- any vaccinations that will be given to stock

Only once I have this information can I begin to make an assessment of risk. Please note, everyone will be out of the office on Friday for our xmas lunch.

From: [REDACTED]@mowi.com>
Sent: Tuesday, October 17, 2023 10:38 AM
To: [REDACTED]@gov.scot>
Cc: [REDACTED]@mowi.com>; [REDACTED]@gov.scot>
Subject: RE: Sites to be registered as broodstock

Hi [REDACTED],

Please find below and attached documentation for the change in Ardessie A and B.

Ardessie A & Ardessie B

- Authorisation amendment application completed by Wester Ross Fisheries Ltd: [see attached](#)
- Updated site biosecurity measures plans (BMP), for each site, relevant to the revised operation of the sites: [see attached](#), both sites will be operated in the same way. In addition, we have a vaccine strategy in place to protect our fish from main pathogens and pre-transfer health check including screening for most viral and bacterial pathogens.
- Details of production plans for each site which explain intended operation, stocking and fallowing strategies:

The sites will be stocked in November of each year and fish selected for broodstock to be transferred to our freshwater broodstock facilities in mid-October the following year. Fish not selected either during grading or selection will be harvested. A fallow of both sites will be done for a minimum of 28 days before stocking again each year.

- Details of anticipated timeframe for the changes: The change will be effective from 15th November 2023 as a population of potential broodstock for next year will be moved to Ardessie. In 2023, fish on site are used for our first broodstock population with selected potential broodstock sent to Carnasserie hatchery where they become broodstock.

From: [REDACTED]@mowi.com>
Sent: Monday, September 18, 2023 4:27 PM
To: [REDACTED]@gov.scot>
Subject: Sites to be registered as broodstock

Dear [REDACTED]

As you know we will from now on use both sites In Ardessie (10d – Little Loch Broom) for broodstock starting in October. Can you please confirm to me what needs to be done to register these sites ASAP.

In addition, we will move broodstock to Carnasserie for stripping (in mid-Nov). Therefore we also need to register the site as broodstock.

Best Regards

[REDACTED]

Mowi Scotland Limited

The [FOI disclosure from the Scottish Government \(2024-00391984\) on 1 February 2024](#) included further discussion on the authorisation of Mowi's broodstock site at Ardessie – including reference to the provisions of the Code of Practice to Avoid and Minimise the Impact of Infectious Salmon Anaemia:

From: [REDACTED]@gov.scot>
Sent: Tuesday, May 9, 2023 11:40 AM
To: [REDACTED]@mowi.com>
Cc:[REDACTED]@gov.scot; [REDACTED]@gov.scot; [REDACTED]@gov.scot
Subject: Authorisation of broodstock sites

ALERT: This message originated outside of Mowi's network. **BE CAUTIOUS** before clicking any link or attachment.

Hi [REDACTED]

I have summarised the information discussed at the meeting last week regarding the proposed broodstock operations at Ardessie.

To ensure the operation of a broodstock site does not lead to an unacceptable risk of spreading disease it should follow Scottish industry best practice, detailed within A Code of Good Practice for Scottish Finfish Aquaculture (CoGP) and Chapter 1 in particular. The provisions of A Code of Practice to Avoid and Minimise the Impact of Infectious Salmon Anaemia (ISA) should also be considered.

In relation to the proposal at Ardessie; there are currently two marine pen production sites in Little Loch Broom, both are included in disease management area (DMA) 10d – Little Loch Broom. These are the only active sites in the DMA. The manner in which these sites will continue to be operated following the proposed establishment of the land based broodstock facility should be considered as it may impact the ongoing use of the sites. Synchronous stocking and fallowing periods between marine pen sites should be in place to reduce the risk of disease spread.

If the authorisation to operate at the Ardessie marine pen sites is/are to be amended to hold the life stage broodstock and create a new broodstock site, this should follow the requirement of Chapter 1, point 1.2 of the CoGP.

If the marine pen sites are to hold production fish which may be selected for transfer to freshwater facilities as potential broodstock, the production strategy should not increase the

risk of disease spread. This is interpreted as continuing to fallow sites and production areas on a single year class basis.

[REDACTED]From: [REDACTED]@gov.scot>

Sent: 15 February 2023 11:55

To: [REDACTED]@gov.scot>

Subject: Ardesie broodstock

Hi [REDACTED],

For awareness – Mowi have submitted an application for a landbased broodstock site at Ardesie. This will be a freshwater site, where broodstock will be transferred from the existing marine pen site/s at Ardesie prior to stripping and then eggs exported to other hatcheries from this site. I tried to request further information about the marine pen sites through this process but couldn't. Nothing to do for now, but you may see this through authorisation – the pen site holding broodstock should add this growth stage to their authorisation. And then there are considerations in the cogp for broodstock sites to be separate from other production sites if the continue to use the other Ardesie pen site as a normal production site. Speak to [REDACTED] or give me a shout if you see this through authorisation.

[REDACTED]

Senior Fish Health Inspector / Aquaculture Planning

Marine Scotland - Science

Scottish Government | Marine Laboratory | 375 Victoria Road | Aberdeen AB11 9DB

E:[REDACTED]W: <https://www.gov.scot/marine-and-fisheries/>

[REDACTED]From: [REDACTED]>

Sent: Tuesday, October 10, 2023 6:21 PM

To: [REDACTED]>; [REDACTED]>

Cc: [REDACTED]>; [REDACTED]>

Subject: Re: Sites to be registered as broodstock

Hi [REDACTED]

Sorry I was meaning to send the application however I need to have it signed by our MD at Mowi who is also a Director of Wester Ross. Important to mention that we are not moving broodstock per say but potential broodstock which will be selected and then moved to our freshwater facilities and then becoming broodstock. The remaining of the population, not selected as broodstock, are to be harvested. Can you please confirm whether we still need to apply to a change. I have the form ready to go and to be signed on Monday when our MD is back from annual leave.

Future potential broodstock will be transferred in mid November from one of our SW site.

Best Regards,

[REDACTED]

[REDACTED]

Mowi Scotland Limited

Mobile: [REDACTED]

[REDACTED]

Office: Mowi

Farms Office

Stob Ban House

Glen Nevis Business Park

From: [REDACTED]e@gov.scot>
Sent: Wednesday, October 11, 2023 9:41 AM
To: [REDACTED]@mowi.com>; [REDACTED]@gov.scot>
Cc: [REDACTED]@mowi.com>; [REDACTED]@wrs.co.uk>
Subject: RE: Sites to be registered as broodstock

Morning [REDACTED],

If the sites and area continue to be fallowed on a single year class basis with the production cycle only be periodically extended prior to fallowing, the fish may not be considered broodstock until they have moved to the freshwater environment prior to stripping. In this scenario they would be considered potential broodstock. This situation is currently in place at other production sites operated by other APB's which continue to fallow on a single year class basis but have broodstock selected from the production population for stripping.

Can you confirm the production plans for the Ardessie sites? Will the sites and production area still fallow synchronously on a single yearclass basis?

From: [REDACTED]>
Sent: Tuesday, October 10, 2023 10:54:31 AM
To: [REDACTED]>; [REDACTED]>
Cc: [REDACTED]>; [REDACTED]>
Subject: RE: Sites to be registered as broodstock

ALERT: This message originated outside of Mowi's network. **BE CAUTIOUS** before clicking any link or attachment.

Morning [REDACTED],

Just a reminder that you have yet to submit the below outlined applications for the proposed changes to your sites.

I would like to take this as an opportunity to let you know that myself and [REDACTED] will be off for the next two weeks while we take annual leave, returning on Monday 30th October. Broodstock should not be moved onto the Ardessie sites prior to Wester Ross Fisheries receiving the outcome of the application (if successful).

As [REDACTED] has mentioned previously, I should also remind you that although we will try to facilitate the changes to meet a desired timeframe, the regulations allow up to 90 days to determine APB authorisations from the point at which we have received all required paperwork.

An [application to the Scottish Government by Wester Ross Fisheries \(owned by Mowi\) relating to Ardessie dated 16 October 2023](#) included: "In 2023, selected broodstock will be moved in mid-October (total of 2000 fish max) to Carnasserie hatchery while we are building our new

broodstock facilities where next cohort will be transferred in 2024”:



APPLICATION TO AMEND AN AUTHORISATION OR REGISTRATION UNDER THE AQUATIC ANIMAL HEALTH (SCOTLAND) REGULATIONS 2009 AND TO NOTIFY CHANGES TO AN AQUATIC ANIMAL HOLDING SITE.

Please read the accompanying guidance notes before completing this form.
(Read our [privacy notice](#) to find out what we do with your information.)

Business name	Wester Ross Fisheries Ltd
Authorisation / Registration number	FB0447

1. Amendment or change of details

Please tick the type of amendment required:	
Amendment to business details (e.g. business name, address)	<input type="checkbox"/>
Change of business ownership	<input type="checkbox"/>
Amendment of conditions of authorisation	<input checked="" type="checkbox"/>

Both Ardessie A (FS0517) and Ardessie B (FS0675) will be used for potential broodstock only, to be selected and transferred to a freshwater site. In 2023, selected broodstock will be moved in mid-October (total of 2000 fish max) to Carnasserie hatchery while we are building our new broodstock facilities where next cohort will be transferred in 2024. We will have only one year class stocked in Ardessie (both A and B) and fish will be monitored and managed according to the CoGP.

Another [application to the Scottish Government by Mowi dated 16 October 2023](#) proposed to change the use of Carnasserie Hatchery for holding rainbow trout broodstock to Atlantic salmon broodstock from 31 October 2023 (in addition to transferring the name of the business from Kames to Mowi):

**APPLICATION TO AMEND AN AUTHORISATION OR REGISTRATION UNDER
THE AQUATIC ANIMAL HEALTH (SCOTLAND) REGULATIONS 2009 AND TO NOTIFY
CHANGES TO AN AQUATIC ANIMAL HOLDING SITE.**

Please read the accompanying guidance notes before completing this form.
(Read our [privacy notice](#) to find out what we do with your information.)

Business name	Mowi Scotland
Authorisation / Registration number	FB0119

1. Amendment or change of details

Please tick the type of amendment required:

Amendment to business details (e.g. business name, address)	<input type="checkbox"/>
Change of business ownership	<input type="checkbox"/>
Amendment of conditions of authorisation	<input type="checkbox"/>
Changes to site details (e.g. site name, species held, site grid reference)	<input checked="" type="checkbox"/>
Changes in status of business or sites (e.g. inactivation, de-registration)	<input type="checkbox"/>
Transfer of aquaculture site(s) to or from this business	<input checked="" type="checkbox"/>

2. Detail

Please provide details of the reason for applying / notifying an amendment to your authorisation, authorisation conditions or change to your registration

Mowi propose to change the use of Carnassarie Hatchery (FS0757) for holding Rainbow Trout broodstock to Atlantic Salmon broodstock.

Name of business that sites will be transferred from	Kames Fish Farming Ltd
Authorisation / Registration number	FB0134
Name of business that sites will be transferred to	Mowi Scotland Ltd
Authorisation / Registration number	FB0119

For change of site status:

A = Active
I = Inactive
D = Deregistered

Site name(s)	Site number(s)	Date status changed	Status changed to (✓)		
			A	I	D
Carnasserie Hatchery	FS0757	31/10/23	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

REGULATION 8(5) AND REGULATION 12(6) OF THE AQUATIC ANIMAL HEALTH (SCOTLAND) REGULATIONS 2009 MAKE IT AN OFFENCE FOR A PERSON TO PROVIDE INFORMATION OR MAKE A STATEMENT IN AN APPLICATION THAT IS FALSE, AND WHICH THAT PERSON KNOWS OR SUSPECTS IS FALSE.

I declare that the information I have supplied is accurate to the best of my knowledge.			
Signature:	[Redacted]	Date:	16/10/23
Name:		Position held:	[Redacted]

A document titled – [Carnasserie Biosecurity Measures Plan](#) – includes:



Carnasserie Biosecurity Measures Plan

The primary objectives of the Biosecurity Measures Plan (BMP) are to reduce the risks of transmitting pathogens and pathogenic materials onto and off the site, and to maintain the highest standards of fish husbandry in accordance with written procedures, to maximise stock survival and performance.

The BMP is a written control procedure to which all members of staff must comply and ensure the compliance of others, staff and visitors. The procedures are reviewed regularly to ensure they continue to address the main areas of risk.

In case of an emergency, please contact:

Site Manager	[REDACTED]	[REDACTED]
Development Manager	[REDACTED]	[REDACTED]
Veterinary Surgeon	[REDACTED]	[REDACTED]
Marine Scotland FHI duty inspector	Duty inspector	01312443498 ms.fishhealth@gov.scot

A fence surrounds the site on the three sides with the Kilmartin Burn completing the boundary. Personnel and visitor access to the site is through a small shed located at the northern boundary. Vehicle access is through a gate in the same location. The following topics are included in the BMP, and should be guaranteed and safe-guarded at all times:

Water supply and effluent discharge

- Water is abstracted from the Kilmartin Burn which runs beside the site. The current abstraction license is 16.5l/sec (1,425.6m³/day) from 1st of June until the 30th of September and 38.5l/sec (3326.4m³/day) from the 1st of October to the 31st of March. The abstraction license also has additional requirements to ensure a certain minimal level of residual flow at all times and a greater level of residual flow when the flow above the intake has reached a certain level.

Stocks

- The site is used to house broodstock fish prior to spawning. The broodstock population will be screened for any notifiable diseases at the broodstock seawater site. If any issue is detected the fish will not transfer into Carnasserie. Broodstock will only be sourced from sites of the same or higher health status as the GB health zone. The broodstock stocked to Carnasserie will also have spent their entire life history within Scottish salmon farms. The broodstock are stocked in the 17 fish tanks at between 30 and 50kg/m³.
- The fish are checked regularly to assess readiness for spawning. If the fish is deemed to be ready to spawn then a sample of the ovarian fluid or milt is taken from the fish and sent for PCR analysis the day prior to the stripping operation.
- During the stripping operation fish are removed from the tanks and euthanised with a lethal dose of anaesthetic. The eggs will be removed and the carcass of each of the parent fish will be checked by a veterinarian or fish health manager. If any issue is suspected the eggs from that fish will be immediately discarded.
- Unfertilised eggs will then be shipped to the hatchery. Once the PCR testing results are available, any eggs from parent fish where IPN has been detected will be discarded. The remaining eggs will then be fertilised and laid down in the hatchery.
- Once all the broodstock fish have spawned and the carcasses ensiled and removed from site all equipment used for handling these fish is disposed and the tanks are cleaned and disinfected (refer to fallow period disinfection SOP). The effluent pipes are then scoured using a high pressure water jetting and

Commented [A1]: Will any tissue sampling and diagnostic testing be done during this examination?

Commented [A2R1]: Not routinely on every fish. We will sample the ovarian fluid and milt of every fish.

Commented [A3]: Explain what would be regarded as an issue to instruct disposal of eggs.

Commented [A4R3]: We will discard eggs that are IPN positive. What we decide to screen for may change depending on the prevalent issues and we may set a CT value below which we discard eggs and above which we will continue to lay the eggs down.

Commented [A5]: Provide details of disinfectant active ingredient, concentration and contact time or reference an SOP which contains these details.

Commented [A6R5]: Edited

then also disinfected and the site fallowed for a minimum of 9 months prior to restocking.

- All movements of live animals onto and off site must be recorded within 24 hours of being moved. The movement records book as supplied by Marine Directorate FHI will be used for this purpose.
- Fish transport lorries and tanks must be disinfected before arrival to the site, and separate disinfection records must be maintained for lorries (refer to Lorry Disinfection Procedure)

Commented [A7]: Disinfectant active ingredient, concentration and contact time or reference SOP

Commented [A8R7]: Edited

- Routine daily stock inspection is carried out by trained husbandry staff. A member of the Health Team will visit the site routinely and produce a report which will be stored on site and up-loaded into the health database. These reports can be made available to the FHI upon request.
- If unusual behaviour or unusually high mortalities are noticed, the Health Team should be contacted to investigate. Any relevant person (defined as the owner of or person attending to the animals, any person accompanying them during transport, any veterinarian or other professional involved in providing a service to those animals and any person with an occupational relationship to those animals) will notify a veterinarian immediately if they suspect that increased mortality has occurred or is occurring in the animals.
- If any person knows or suspects that a listed disease is present in aquatic animals, this must be immediately reported to Marine Scotland FHI duty inspector by telephone followed in writing (contact details at the top of this document).
- Mortality removal will be carried out daily.
- Mortality removal should be carried out using disposable gloves.

- Separate bins, clearly labelled are available for mortality collection.
- The mortalities are taken to an ensilor on site immediately after collection and the bin thoroughly cleaned and disinfected with 1% solution of Virkon for 10 minutes before being used again. Ensiled waste will be uplifted by registered waste carrier.
- A risk assessment must be completed prior to any movement of fish, into the site, or to another site. Only on the outcome of a favourable risk assessment should fish be moved. Stock will only be moved to a site authorised to hold Atlantic Salmon ova.

Commented [A9]: Detail if this is on site and how ensiled waste is disposed of.

Commented [A10R9]: Edited

Commented [A11]: Disinfectant active ingredient, concentration and contact time or reference SOP

Commented [A12R11]: Edited

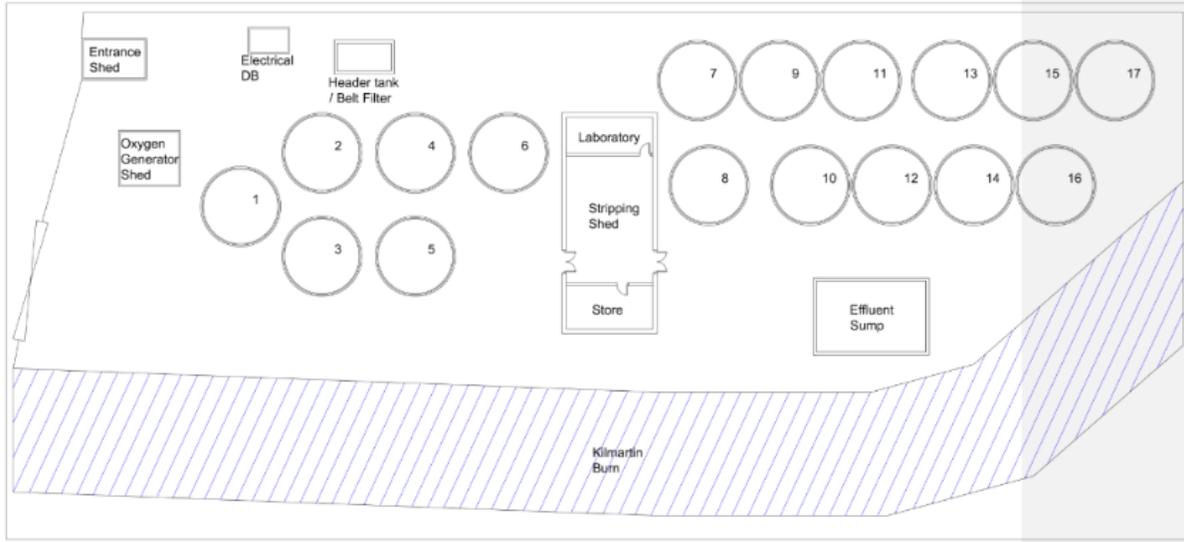
Commented [A13]: Include detail that stock should only be moved to a site that is authorised to hold that species and development stage.

- Mortality storage procedures are designed to prevent leakages and access by scavenging animals.
- Mortalities must never be left uncovered and unattended.

Emergency procedures during clinical cases of diseases or high mortality periods

- Dedicated mortality storage and disposal capability will be implemented on site.
- Mortality will be reported daily to the Area Manager.

Site Layout



A [Veterinary Health and Welfare Plan for Carnasserie Hatchery dated 4 October 2023](#) details how the ‘elite eggs’ were imported from Mowi Ireland to Inchmore hatchery in January 2021 before ongrowing in Loch Garry, transfer to Mowi’s Torridon salmon farm where there was high mortality throughout the autumn months of 2022 due to CMS and gill issues before further transfers in December 2022 and April 2023 to Ardessie and then the final transfer to Carnasserie in October 2023:

<u>Veterinary Health and Welfare Plan</u>	
DOL Ref LOG 1691 v6	
Objective – to maximize fish welfare and health through optimum farm stockmanship, reduction of disease risk and decreased mec	
This VHWP follows the format and recommendations of the VHWP Guidelines, GUI - 373 on DOL, and this document should be re	
VHWP.	
Complete the VHWP as appropriate to your farm. A new VHWP must be started for each cycle. A formal VHWP review must take	
cycle. It is the responsibility of the Site Manager to initiate the review (contact the relevant Health Manager or Veterinarian) at the e	
The VHWP must be updated on a constant basis with respect to the guidance notes and the general principal of constantly improvi	
and improvements relevant to this must be entered under the relevant headings below.	
All communications relevant to VHWP matters should be retained in a folder with the VHWP document for inspection at any time.	
This VHWP has been produced by the Site Manager in collaboration with the Mowi Scotland Vet (via the VWHP Guidelines GUI 37	
The VHWP must be "LIVE" at all times!	
[REDACTED]	
	Name/Date
Site Name	Carnasserie

Date VHWP drawn up	04/10/2023
Dates(s) of stock input and year class	2021-22 Smolt Input / 2023-24 spawning
Date (s) of fish delivery	31/10/23-1/11/23

Summary of VHWP Review:-

Stock and site history

1. This generation of broodstock were stocked as elite eggs received from Mowi Ireland into Inchmore Hatchery in January 2021. 1 incubation (3.2%) and from first feeding to parr output (2.4%). The fish were transferred to Loch Garry up until smolt output in Nov. The smolts were transferred to Torridon sea water production farm. Mortality was high at Torridon throughout the autumn months (21.6% total from smolt input to onward transfer). Some fish were harvested from this population and the remainder were then transferred to Carnasserie in December 2022 and April 2023. Maturing fish will be selected from this population and transferred to Carnasserie at the end of October 2023.
2. Carnasserie has previously been used by Kames Fish Farming to stock rainbow trout broodstock. The site was followed in February 2023. Diffusers and monitoring probes were removed by Kames for use elsewhere. Mowi replaced the oxygen monitoring and dosing system. The tank shade nets were all removed and replaced with new nets. All ancillary equipment being used by Kames was either removed or thoroughly cleaned, degreased and disinfected. All drain lines have been scoured using a drain cleaning pressure washer and inlet pipework to the tanks was all removed below the valves and new pipework installed. A new oxygen generator and injector has been installed. The stripping shed has been cleaned and re-painted both internally and externally.
3. No artificial lighting or temperature control will be applied to the fish tanks. The broodstock will experience the normal ambient photoperiod and water temperature will stimulate full maturation and spawning.

Transfer to tanks

1. Fish will be gently anaesthetised in the lorry tanks. Staff will then enter the lorry tanks in waders or a dry suit to gently lift the fish and support both the tail and head. The fish will then be slid down a piping system that will be constructed to carry the fish from the lorry tank. The water will be pumped into this pipeline to flush the fish into the tanks. A maximum of 85 fish will be stocked in each tank (<50kg/m³).

Mortality was low throughout the period from November 2021 (total mortality 1.4%), in 2022 due to CMS and gill issues. Fish were transferred to Ardeslie A in October 2023.

From January 2023. The in-tank oxygen system with an entirely new system. The old system was removed or disposed. The tanks have been left to soak in disinfectant. The new system has also been installed. The

photoperiod. The decreasing

from the water making sure to transfer fish from lorry tank to the fish tanks. Water