Scottish Environment Protection Agency
Buidheann Dìon Àrainneachd na h-Alba

Finlay Carson MSP
Convener
Rural Affairs and Islands Committee,
The Scottish Parliament
Holyrood
Edinburgh
EH99 1SP

6 February 2026

By email: rural.committee@Parliament.Scot

Dear Convener,

Rural Affairs and Islands Committee follow-up inquiry into salmon farming in Scotland
25 February evidence session

Thank you for your invitation to SEPA to provide evidence to the Committee in concluding your follow-up inquiry into salmon farming in Scotland. I am pleased to provide the attached progress update in advance of the session scheduled for 25 February 2026.

This includes:

- Information and data management – Scotland's Aquaculture Website refresh; pollution release inventory; environmental performance assessment scheme; and permit changes.
- Science and innovation – DNA-based monitoring; and new research.
- Regulation of discharges – emamectin benzoate.
- Regulation of sea lice - including environmental monitoring.
- Consenting - new integrated authorisation framework; regulation between 3 and 12 nautical miles; and coordinated consenting.

Cont./

Finlay Carson MSP
Convenor
The Scottish Parliament

6 February 2026

I trust that the committee find this is informative and comprehensive. Please let us know if there are other matters on which the Committee would find a written progress update helpful for the purposes of concluding your inquiry.

I am grateful to the Committee Clerk for engaging with colleagues about the invitation for SEPA to give evidence at the session. To confirm, we are limited in what we can say to the Committee at this time about our role in the regulation of interactions between sea lice from marine fish farms and wild salmon and sea trout. This is because this is the subject of ongoing legal proceedings, including appeals to the Scottish Ministers lodged by marine fish farm operators against licence variation notices issued by us as part of the implementation of the sea lice regulatory framework.

I appreciate that you may wish to consider that limitation with Committee members and thank you for your understanding on this. Should it be helpful to have a further discussion, please let us know and we would be happy to meet at your earliest convenience.

Yours sincerely,

Nicole Paterson
Chief Executive Officer

Scottish Environment Protection Agency
Buidheann Dìon Àrainneachd na h-Alba

For the future of our environment

Written evidence: Rural and Islands Committee follow-up inquiry on salmon farming in Scotland

February 2026

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1. Information and data management

1.1 Scotland's Aquaculture Website refresh

SEPA launched a new, modernised version of Scotland's Aquaculture Website at the start of August 2025. The changes we made ensure that the website has secure infrastructure and is easier and more intuitive to navigate. It now features fully integrated sea lice data and improved access to information for users via interactive maps and datasets.

As a condition of their permits, all marine fish farm operators are required to report their use of anti-sea lice medicines, antimicrobials (including antibiotics) and the anti-parasitic, hydrogen peroxide to us on a quarterly basis. Since 2024, all reported usage information has been published on Scotland's Aquaculture Website.

We are currently working Scottish Government colleagues to incorporate new and clearer signposting on Scotland's Aquaculture Website to the information available on farmed fish mortalities.

1.2 Scottish Pollutant Release Inventory

In September 2025, we released the 2024 figures for pollutant emissions from SEPA-regulated industrial facilities, including emissions to water from marine fish farms. The latter include emissions of anti-sea lice medicines, organic carbon, nitrogen, copper and zinc. The information is also available on Scotland's Environment Web.

The information is part of the Scottish Pollutant Release Inventory (SPRI), a Pollutant Release and Transfer Register (PRTR) that's primary purpose is making publicly available officially reported annual releases of specified pollutants to air and water.

1.3 Environmental performance assessment scheme development

We are working towards publishing our new environmental performance assessment scheme (EPAS) ratings during 2027, dependent on the necessary new digital systems being in place to record compliance information.

Under EPAS, regulated sites, including marine fish farms, will be rated as "good", "improvements required" or "unacceptable". Sites rated as "unacceptable" with no plan in place to resolve compliance issues will be published on a "priority site" list.

We consulted on our proposals for the new scheme between March and June 2025. Following our review of consultation responses, we published our feedback on the responses received in October 2025.

In 2026, we will start to apply our updated major non-compliance criteria, which will help inform EPAS ratings. The major non-compliance criteria under EPAS for marine fish farms are published on our website.

Information on fish farm operators' compliance with their permits' seabed environmental monitoring requirements continues to be available on Scotland's Aquaculture Website.

1.4 Permit and enforcement information

In early 2025, we completed the transfer of the authorisations for active marine fish farms onto a new, standardised permit template.

The new permits consist of a standardised set of outcome-focused and enforceable conditions, which embed site-specific requirements via, for example, differences in numeric limits for fish biomass or medicine usage; or the grid references that specify the authorised location.

The consistency provided by this standardisation around a common set of simple, enforceable conditions, including for enhanced monitoring of the biological quality of the seabed around farms:

a) Assists us in identifying any patterns of non-compliance and taking action, where necessary, to drive improvements in compliance across the sector.
b) Assists fish farm operators by making it easier to understand compliance requirements and manage compliance across their multiple different farms.
c) Improves visibility of compliance requirements for members of the public.

We are continuing to build and improve our digital public register service as part of our digital transformation. Our aim is for everyone to be able to easily access our regulatory documents and data online. Currently, we are focused on progressively making copies of all authorisations available online. In due course, we will add:

a) Regulatory notices issued as part of enforcement action; and
b) Monetary penalties that we have imposed on non-compliant operators.

This will improve visibility of our enforcement actions.

For the coming year, we are planning:

a) A campaign to drive improvements in fish farm operator compliance with permit data reporting requirements, such as for data submission deadlines. This will include the use of our powers to issue monetary penalties for non-compliances if appropriate.
b) Commence audits of the laboratories responsible for analysing seabed samples for fish farm operators to ensure the analyses, and the resulting data that must reported to us by the operator, meet the scientific quality now required as a condition of all marine fish farm permits under our quality assurance scheme.

2. Science and innovation

2.1 Accelerated analysis of seabed samples - DNA

This Spring, we are planning to introduce a fully updated DNA-based monitoring method for assessing the effects of marine fish farm discharges on seabed biological quality.

The updated method, which we have been evaluating for several months, will be able to be used by fish farm operators and us to monitor the effects of farm discharges on the seabed around many more farms than is possible at present with the current DNA-based method: The latter can only be used if the seabed is a muddy type whereas the updated method will be able to be used in a much wider range of seabed types.

A major benefit of the DNA-based monitoring methods is that they dramatically accelerate analysis of seabed samples.

Background to DNA-based monitoring

We first introduced a DNA-based monitoring method for assessing the effects of fish farm discharges (particularly organic solids) on seabed biological quality in February 2023.

Both the initial method and the updated method that we plan to introduce this Spring were developed with the support of the Sustainable Aquaculture Innovation Centre and salmon producers, with the scientific research led by scientists from the University of the Highlands and Islands' Scottish Association of Marine Science, supported by the Institute for Biodiversity and Freshwater Conservation (also part of the University of the Highlands and Islands), and the University of Kaiserslautern, Germany.

2.2 Understanding of effects on seabed health

We are supporting a major new research project aimed at developing methods for improving understanding of, and assessing, the effects of marine fish farm discharges on hard (rocky) seabed types and on protected marine habitats.

To help drive innovation in this area, we became a challenge sponsor under the Scottish Government's CivTech 11 Innovation Programme.

The 15-week accelerator phase of the programme started in January, with the company, Ocean Intelligence, having being chosen, after a competitive selection process, to develop its plans for a substrateindependent environmental monitoring system that enables sustainable fish farm management in sensitive and hard (rocky) marine habitats.

We will be working closely with Ocean Intelligence and NatureScot during the accelerator phase to produce a minimal viable product. The outcome of the accelerator phase will determine if further development investment goes ahead.

Assessments of the impact of discharges from fish farms on the biological quality of the seabed, including the DNA-based assessments outlined in Section 2.1 above, normally involve collecting samples of seabed sediments using grabs deployed from the surface. However, this method is not possible if the seabed is rocky and not appropriate for protected marine habitats because it can damage those habitats.

3. Environment – discharges

3.1 Emamectin benzoate – new environmental standard

We have work planned to ensure that, by June 2028, all permits for active fish farms will be appropriately updated to reflect the new environmental standard for emamectin benzoate recommended by the UK Technical Advisory Group on the Water Framework Directive.

This timetable was set by the Scottish Government following public consultation, and is set out in Ministerial directions to us.

Due to our adoption from 2017 onwards of interim environmental standards for emamectin benzoate for use in assessing new applications to discharge the medicine (see below), around 7 % of active farms are already authorised in line with the new environmental standard.

Background to emamectin benzoate standards

Since March 2023, we have only granted applications to discharge emamectin benzoate as part of a proposed fish farm development if we are satisfied that the new environmental standard (272 ng/kg of dry weight sediment) will not be compromised.

In October 2017, we adopted an initial interim environmental standard for assessing applications for discharges of emamectin benzoate that might affect a protected seabed habitat or species. In November 2018, we extended the use of interim environmental standards to the assessment of all applications to discharge emamectin benzoate. We updated our interim standards subsequently based on scientific evidence emerging from the development of the new environmental standard.

All the interim standards we applied between October 2017 and March 2023 in determining applications were precautionary and tighter than the new environmental standard. Permits issued under these previous interim environmental standards have now been varied onto the new environmental standard.

We publish:

a) The results of seabed monitoring of emamectin benzoate residues and the applicable environmental standard for each farm on Scotland's Aquaculture Website; and
b) A visual analysis of emamectin benzoate use and the results of seabed monitoring surveys on Scotland's Environment Web.

3.2 Emamectin benzoate – enhanced seabed monitoring

Emamectin benzoate enters the water environment in fish excreta and any uneaten medicated feed and is deposited on the seafloor.

At present, most permits require monitoring of emamectin benzoate concentrations at a single point on the seabed at 150 m from the pens in the direction of the main bed current.

From June 2028, we plan to require all operators to carry out enhanced seabed monitoring. This change is planned to be made at the same time as the new environmental standard for emamectin benzoate (see Section 3.1 above) is applied to all farms. The enhanced monitoring will significantly improve understanding of the distribution of emamectin benzoate on the seabed around marine fish farms and, hence, assessments of compliance with permitted seabed mixing zone limits.

Enhanced monitoring requires the collection and analysis of seabed samples from multiple locations and distances around the farm. This allows us to assess the area of the seabed affected by emamectin benzoate discharges and compare this with the permitted mixing zone for the farm concerned.

In the meantime, if seabed monitoring at 150 m indicates that environmental standards for emamectin benzoate are not met at that distance and there is no evidence that more emamectin benzoate has been used than is permitted, in most cases, we will be likely to vary the farms' permits to change their single point monitoring requirement to a requirement for enhanced monitoring from their next monitoring survey onwards. If the enhanced monitoring shows that the applicable emamectin benzoate standard is not being met, we will take appropriate action to bring the farms back into compliance.

4. Environment – sea lice

4.1 Appeals against sea lice variation notices

At the end of 2024 through early 2025, we issued 260 variation notices to bring existing, authorised marine fish farms under the sea lice regulatory framework for protecting wild salmon and sea trout.

The variation notices were all appealed. The Scottish Government's Division for Planning and Environmental Appeals (DPEA) is considering the appeals on behalf of the Scottish Ministers.

A preliminary hearing was held over 2 days in December 2025. A video recording of the hearing is available on YouTube. The hearing heard arguments on legal/procedural matters only.

The Reporters appointed to consider this matter have not yet published their findings from the preliminary hearing; or announced dates for further hearings. At the latter, we expect to lead evidence in relation to the likelihood of significant adverse impact on the water environment arising from interactions between sea lice from fish farms and wild salmon and sea trout.

The DPEA has identified a lead case file (i.e., the case file for one of the 260 individual appeals) for the appeals. The latest published documents and updates on the appeal process can be found in this file. The documents available include:

a) the grounds of appeal lodged on behalf of each fish farm operator who challenged our approach to implementing the sea lice regulatory framework; and
b) our written statements in response to the appeals dated 30th May 2025 and 17th September 2025 in defence of our approach to implementing the framework.

Due to the ongoing legal proceedings, we ask the Committee to note that we will be unable to answer any questions from members that would require us to discuss:

a) any of the matters that are within the scope of the appeals, including evidence that we expect to lead at the further hearings;
b) the potential outcomes of the appeals and the implications for our implementation of the sea lice regulatory framework.

Because the matters being considered in the context of the appeals are wide ranging, in practice, this means that we will be very limited in what we can discuss with the Committee as regards the implementation of the sea lice regulatory framework. The sections below provide such update as we can provide.

4.2 Sea lice and new fish farm development proposals

From February 2024, all applications to us for new fish farm developments that could affect the exposure of wild salmon to sea lice in any identified wild salmon protection zone have been subject to:

a) An assessment of the risk posed to wild salmon; and, if granting the application,
b) conditions that we consider necessary or expedient for the protection of the water environment under the sea lice regulatory framework.

From March 2025, we added consideration of interactions between sea lice from proposed fish farm developments and wild sea trout, as well as salmon.

We consider the proposed location for each fish farm development as part of our assessment of the contribution of fish farm developments to the likely exposure of wild salmon and sea trout to sea lice infections.

As lead regulator, we seek to ensure appropriate coordination with other bodies in relation to fish farm development proposals. To do so, we:

a) Consult NatureScot if we determine that a proposed development is likely to have a significant adverse effect on a protected conservation interest in a designated site.
b) Consult with the local district salmon fishery board (DSFB), if there is one, or, if not, Marine Directorate.

c) Provide advice, including on the conclusions of our risk assessments, to the relevant local planning authority.

4.3 Sea lice and environmental monitoring

In the Summer of 2025, we commissioned Fisheries Management Scotland to coordinate the delivery by its members of an initial programme of monitoring of sea lice on sea trout at a small number of locations.

We are in the process of procuring a further targeted programme of environmental monitoring for 2026, co-funded by the Scottish Government.

From 26th November 2024 to 28th February 2025, we consulted on changes to SEPA charges for marine fish farm operators to enable us to recover the costs of monitoring to investigate the interaction between sea lice from marine fish farms and wild salmon and sea trout. The consultation proposed changes to SEPA's charging scheme and Environmental Assessment Scheme. The consultation paper and the consultation digest, which describes the feedback we received and our consideration of the each of the points raised, are available on our website. SEPA's Environmental Regulation (Scotland) Charging Scheme 2025, which came into force on 1st November 2025, incorporates the changes to the charges.

As a result of Judicial Review proceedings raised in the Court of Session against SEPA by Salmon Scotland Limited in October 2025, we are not in a position:

a) to invoice fish farm operators to recover the costs of, and so proceed with, the roll out of the full national monitoring programme that we had been planning for 2026; or
b) to provide any further information to the Committee at this time on any matters relating to these proceedings.

During 2026, we will continue work aimed at enabling the roll-out of a full, national monitoring programme for sea lice as soon as possible.

In the meantime, the targeted programmes will help inform and refine our assessments of fish farm development proposals and expand understanding of baseline conditions.

Our understanding is that operators of fish farms whose planning permissions are subject to environmental management plans (EMPs) for sea lice should also continue to carry on such environmental monitoring as is required by their EMPs. As set out in its recent letter to local authority aquaculture planners, the Scottish Government will continue to work with us and planning authorities during 2026 to help manage the intended transition away from monitoring under EMPs as soon as possible.

4.4 Representation to Environmental Standards Scotland

In March 2024, a representation was made to Environmental Standards Scotland (ESS) by Wildfish & Coastal Communities Network requesting that ESS investigate the sufficiency of the sea lice regulatory framework to protect wild salmon (ESS reference number IESS.24.019).

As the handling of the representation is a matter for ESS, we are not currently in a position to offer the Committee any update.

5. Consenting

5.1 New integrated authorisation framework

From 1st November 2025, water activities, including those involving marine fish farms, are regulated by us under the Environmental Authorisations (Scotland) Regulations 2018 ("EASR") rather than the Water Environment (Controlled Activities) (Scotland) Regulations 2011, which have been revoked.

EASR provides an integrated authorisation framework, bringing together all the regulatory authorisation arrangements for our four main regulatory areas (water, waste, radioactive substances and industrial activities) into an integrated structure under a single standardised procedure.

EASR also:

a) Provides broader regulatory notice provisions, strengthening our enforcement powers.
b) A power to require applicants to carry out pre-application engagement with the local community. This builds on the good practice previously carried out by fish farm developers on a voluntary basis, and now required, as part of our pre-application process for marine fish farm developments.

5.2 Regulation between 3 and 12 nautical miles

In September 2025, the Scottish Government consulted on its proposal that we should be responsible for regulating fish farm developments anywhere in the Scottish marine area.

Regulations amending EASR to this effect were laid in Parliament on 5th February 2026.

Under EASR, we were already responsible for regulating fish farm developments affecting coastal waters and estuaries. Coastal waters are inshore waters extending seaward 3 nautical

miles from the baseline from which territorial waters is measured. The Scottish marine area extends 12 nautical miles seaward from the territorial waters baseline.

The extension of our regulatory role to marine fish farm developments anywhere in the Scottish marine area ensures consistency in fish farm regulation, avoids unnecessary duplication of expertise in different regulators, and keeps the regulatory landscape as simple as possible for fish farm developers.

To date, there are no marine fish farms authorised to operate in the 3 to 12 nautical mile zone of territorial waters.

5.3 Coordinated consenting progress

To help improve the efficiency, effectiveness and transparency of marine fish farm consenting, the Scottish Government established a Consenting Task Group in 2022. We are supporting this initiative along with other regulators of marine fish farms.

Currently, we are helping develop, pilot and refine an integrated consenting process. Under this, the different consents required will be processed in a coordinated fashion at the same time by the different regulators with input from the relevant advisory bodies. This synchronous and coordinated processing aims to:
Help identify any issues likely to be a barrier to a development early in the process, avoiding unnecessary work on unsuitable developments.

- Provide a simpler and easier process for interested members of the public to follow and engage in.
- Reduce time taken for a developer to obtain the necessary authorisations for a marine fish farm.
- Avoid unnecessary duplicate effort by the different regulators and advisors

The pre-application part of the new approach is currently being piloted on eleven marine fish farm development proposals in the Highland Council and Shetland Islands Council areas. Four other development proposals have been through the pilot pre-application

process, three of which are now starting to move into the application stage, and one is at the consenting stage.

To support the process, a dedicated SEPA case officer liaises closely with planning authorities and other public bodies. This facilitates the necessary good communication for joint working and efficient delivery.

In 2026, we are aiming to:

- Refine and further streamline the pre-application process based on the learning from the pilots.
- Extend the use of the new pre-application process into other planning authority areas.
- Begin piloting a new coordinated application stage, work on which began in 2025.

Background - coordinated consenting

Opportunities for improved coordination between regulators include:

- Pre-application advice to developers.
- Processing of applications, including coordination of public consultation on applications.
- Communication of post-authorisation information, including easy access to the different authorisations and to performance monitoring data.

Marine fish farm developers may require several consents prior to proceeding with a marine fish farm development:

- Planning permission from the relevant planning authority (local council or national park authority).
- An authorisation from SEPA.
- An aquaculture production business authorisation from Fish Health Inspectorate, part of the Scottish Government's Marine Directorate, acting on behalf of the Scottish Ministers.
- If required, a marine licence from Marine Directorate' Licencing Operations Team acting on behalf of Scottish Ministers.

A regulator may also provide advice (as a statutory consultee or otherwise) to another regulator on marine fish farm developments. As part of the development management procedure, the planning authority must consult SEPA and the Scottish Ministers (Marine Directorate).

The following bodies may also provide advice (as statutory consultees or otherwise) to the appropriate regulator or regulators on marine fish farm development proposals. The planning authority must consult the relevant district salmon fishery board and, depending on the proposal, may be required to consult NatureScot.

- NatureScot
- Northern Lighthouse Board
- Maritime and Coastguard Agency
- The relevant district salmon fishery boards
- Historic Environment Scotland

5.4 Digital solution to support coordinated consenting

We have been awarded funding under the Scottish Government's Public Sector Reform Invest to Save Fund for discovery and prototyping exercises to identify a digital solution for supporting coordinated regulation of marine fish farms.

The initiative is designed to complement, and ultimately support implementation of, the new coordinated, multi-regulator consenting system being developed by the Scottish Government's Consenting Task Group (See section 5.3 above).

We have commissioned a specialist consultancy, to undertake the project, which is due to report by the end of the financial year.

6. Previous evidence to the Committee

For detailed information about our responsibilities and approach to regulating marine fish farms, please see the written evidence we provided to the Committee in June 2024:

SEPA written evidence – 6 June 2024 - This document provides SEPA's detailed written evidence, including background to SEPA's regulatory role, enhancements to the aquaculture regulatory framework since 2019, and progress in delivering recommendations arising from earlier parliamentary inquiries.

SEPA evidence session follow up response – 19 June 2024 - Additional information requested by Committee members during the 19 June evidence session, including data on medicine use (emamectin benzoate), clarification of SEPA's responsibilities in relation to wild salmon, and reference to recent sector correspondence.

If you would like this document in an accessible format, such as large print, audio recording or braille, please contact SEPA by emailing equalities@sepa.org.uk