

Strategic Environmental Assessment of proposals to close fishing for sandeel in all Scottish waters

Post Adoption Statement

April 2024

1. Background

Scottish seas support diverse and abundant marine habitats and species. Sandeel form a particularly important component of the North Sea ecosystem and foodweb, as a key link between plankton and top predators such as commercial fish, seabirds, and marine mammals. As an island nation, Scotland's seas have an important role to play in underpinning our economic prosperity and supporting our wellbeing.

The Scottish Government has national and international commitments to protect marine biodiversity, and to take necessary measures to protect and conserve the marine ecosystem. The Scottish Government is also committed to the sustainable management of fisheries, which includes taking account of the protection of biodiversity and healthy functioning ecosystems. Managing fishing for sandeel in Scottish waters, with the aim of benefiting both sandeel stocks and the wider ecosystem, is an integral part of ensuring sustainable fisheries.

On 21 July 2023 the Scottish Government issued a public consultation seeking views on proposals to close fishing for sandeel in all Scottish waters, with the purpose of bringing about wider environmental and ecosystem benefits, which include potential benefits to sandeel, seabirds, marine mammals, and other fish species¹.

Following consideration of all responses and representations received, the Scottish Government concluded that the preferred option to close fishing for sandeel in all Scottish waters is the most appropriate approach to achieve its aims, noting that the potential environmental benefits outweigh any negative impacts.

In reaching this decision, the Scottish Government applied the precautionary principle to its decision making and ensured alignment with national and international commitments, including, but not limited to, the UK-EU TCA, Scotland's National Marine Plan, Scotland's Fisheries Management Strategy, the UK Joint Fisheries Statement, the Fisheries Act 2020 and the Marine Strategy Regulations 2010.

The Sandeel (Prohibition of fishing) (Scotland) Order 2024 came into force on 26 March 2024. The Order covers all Scottish waters and the exclusive economic zone adjacent to Scotland that extends to 200 nautical miles and applies to all vessels fishing in these waters. The Scottish Ministers made this Order in exercise of the powers conferred by section 5(1)(a) of the Sea Fish (Conservation) Act 1967.

2. The Strategic Environmental Assessment process

The Environmental Assessment (Scotland) Act 2005 (The 2005 Act) requires public bodies in Scotland to carry out a Strategic Environmental Assessment (SEA) on their plans, programmes and strategies². A SEA is a way of examining plans, programmes and strategies as they develop, to identify any significant effects they may have on the environment to ensure that environmental considerations are taken into account.

¹ [Sandeel fishing: consultation - gov.scot \(www.gov.scot\)](https://www.gov.scot/publications/consultations/2023/07/sandeel-fishing-consultation/summary/1)

² [Environmental Assessment \(Scotland\) Act 2005 \(legislation.gov.uk\)](https://www.legislation.gov.uk/ukpga/2005/11/section/1)

A SEA also aims to build in mitigation measures to avoid or minimise any potentially significant adverse effects on the environment and look for opportunities to enhance a strategy's environmental performance.

This SEA process began with the production of a combined Screening and Scoping Report which was published in May 2023, setting out the proposed approach to the SEA, including the proposed scope and level of detail. Representations received from the SEA Consultation Authorities³ at the scoping stage helped to inform the following stages of the SEA process.

The assessment stage of the SEA was progressed, and the Draft Environmental Report was published for consultation on 21 July 2023⁴ together with the following documents:

- Consultation paper on proposals to close fishing for sandeel in all Scottish waters
- Review of the Scientific Evidence
- Partial Business and Regulatory Impact Assessment
- Data Protection Impact Assessment

Following consultation, an independent analysis of all consultation responses received was carried out⁵. This formed part of the report by the Scottish Government that outlines how the views expressed informed the decision made by Scottish Government to close fishing for sandeel in all Scottish waters⁶.

This Post Adoption Statement concludes the SEA process and sets out those ways in which the findings of the Environmental Report, and the views expressed by consultees in relation to the Environmental Report have been taken into account.

Section 18(3) of the 2005 Act sets out the information that should be included in the Post Adoption Statement. This can be summarised as:

- How the environmental considerations have been integrated into the plan, programme, or strategy (see Section 3 below);
- How the Environmental Report has been taken into account (see Section 4 below);
- How the opinions of consultees have been taken into account (see Section 5 below);
- The reasons for choosing the plan, programme or strategy as adopted, in light of the other reasonable alternatives considered (see Section 6 below); and
- The measures to be taken to monitor the significant environmental effects of the implementation of the plan, programme or strategy (see Section 7 below).

³ The statutory SEA Consultation Authorities include Scottish Environment Protection Agency (SEPA), NatureScot and Historic Scotland (HS),

⁴ [Sandeel fishing: consultation - gov.scot \(www.gov.scot\)](https://www.gov.scot)

⁵ [Sandeel fishing - proposed closure: consultation analysis - gov.scot \(www.gov.scot\)](https://www.gov.scot)

⁶ [Sandeel fishing - proposed closure - consultation analysis: Scottish Government response - gov.scot \(www.gov.scot\)](https://www.gov.scot)

3. Integration of environmental considerations

This section explains how key environmental considerations were identified and how these were taken into account in the decision to close fishing for sandeel in all Scottish waters.

The proposals to close fishing for sandeel in all Scottish waters were made with the purpose of delivering wider environmental benefits to species including sandeel, seabirds, predatory fish, and marine mammals. Environmental considerations were therefore integral to the development of this plan.

During the development of proposals to close fishing for sandeel in all Scottish waters, the Scottish Government drew on responses provided to the Call for Evidence on the future management of Sandeel and Norway pout⁷. In addition, all available scientific evidence on the potential effects of sandeel fisheries management on the marine environment was reviewed in the Review of Scientific Evidence⁸ which accompanied the consultation. This included information on the drivers of sandeel distribution and abundance, the importance of sandeel to other fish species, seabirds and marine mammals, and the potential effects of sandeel fisheries management measures upon these species.

The Scottish Government also considered the progress the proposals could make towards meeting Scotland's statutory environmental targets. This included commitments under the UK Marine Strategy to support progress towards achieving Good Environmental Status for descriptors for biodiversity and commercial fish⁹, and Scotland's commitments under the Joint Fisheries Statement and the Fisheries Act 2020 to deliver sustainable management of fisheries that takes account of the protection of biodiversity and healthy functioning marine ecosystems¹⁰. The proposals also support the aims of Marine Protected Areas (MPAs) in which sandeel are a protected feature¹¹.

The preparation of the Screening and Scoping Report and environmental baseline for the SEA ensured that environmental considerations were taken into account in the proposals to close fishing for sandeel in Scottish waters. Subsequent consultation with the SEA Consultation Authorities assisted in confirming key environmental topics for further consideration in the assessment stage. Views on the Environmental Report were sought during the consultation and were used to inform the decision to close fishing for sandeel in all Scottish waters.

4. How the Environmental Report was taken into account

The Environmental Report details the key environmental impacts of the proposals to close sandeel fishing in all Scottish waters. The key findings can be summarised as follows:

⁷ [Call for Evidence on future management of Sandeels and Norway pout - Defra - Citizen Space](#)

⁸ [Sandeel fishing consultation: review of scientific evidence - gov.scot \(www.gov.scot\)](#)

⁹ [updated UK Marine Strategy Part Two \(publishing.service.gov.uk\)](#)

¹⁰ [Joint Fisheries Statement \(JFS\) - GOV.UK \(www.gov.uk\)](#)

¹¹ [Scotland's Marine Protected Area network | NatureScot](#)

- Sandeel provide an important prey species for several species of seabirds. The positive benefits to seabird productivity and populations of a sandeel fishery closure are difficult to quantify due to the complexity of wider environmental factors that impact upon sandeel availability and seabird demography. However, despite these uncertainties, maximising abundance and availability of sandeel stocks as prey for seabirds in Scotland remains a key mechanism by which resilience in seabird populations might be achieved.
- Sandeel are a key prey species for many marine mammal species in Scottish waters, comprising a large proportion of the diet of seals and some cetaceans. As with seabirds, the extent of benefits are difficult to predict due to the complexity of environmental factors, however an increase in sandeel abundance is likely to be beneficial to several populations of marine mammals given their dependence on sandeel as a prey source.
- The proposed closure may promote sandeel resilience to climate change by limiting variation in Spawning Stock Biomass (SSB) that might affect recruitment and ensuring that sufficient large, early spawning individuals are present in the population.
- The closure may provide benefits to predatory fish through increased prey availability. Predatory fish are often generalist feeders, however some fish species such as whiting, haddock, cod, plaice, lesser weever and grey gurnard have shown higher body condition indices or growth in years of high sandeel abundance.
- The closure may provide benefits to whiting and mackerel, which are caught as bycatches in the sandeel fishery.
- The increased protection that will result from the closure of the sandeel fishery will benefit MPAs that have sandeel as a protected feature, as well as wider conservation areas that are in place for species that rely on sandeel as a source of prey. These include Special Areas of Conservation (SACs) for grey and harbour seal, Special Protection Areas (SPAs) for seabird species, and MPAs for black guillemot and minke whale.
- The implementation of the measures may result in the potential displacement of sandeel fishing activity and its associated pressures outside the boundary of Scottish waters. Effects of displacement are difficult to predict due to the transboundary nature of any displacement and the highly mobile nature of many species of seabird, marine mammal and fish.
- No significant adverse environmental effects were identified in the Environmental Report and therefore no mitigation or monitoring measures were proposed by the SEA.

On the basis of these findings, which draws on the wider evidence base, and with the aim of facilitating the wider environmental benefits outlined in the Environmental Report, the Scottish Government consulted on proposals to close fishing for sandeel in all Scottish waters.

5. How the opinions expressed on the Environmental Report were taken into account

The Environmental Report was published for consultation alongside the consultation paper, the Review of Scientific Evidence, the partial Business and Regulatory Impact

Assessment, and the Data Protection Impact Assessment. Views were invited on the following questions:

- Question 1: Do you support the preferred option to close fishing for sandeel in all Scottish waters?
- Question 2: If your answer is no to question 1, do you have any views on alternative or complementary measures that could be considered in the longer-term for the protection of sandeel in Scottish waters?
- Question 3: Is there any further evidence that should be considered in terms of the potential benefits or value of the preferred option that could be considered?
- Question 4: Is there any further evidence that should be considered to demonstrate any impact on island communities?
- Question 5: Do you have any comments on the assumptions made in the partial Business and Regulatory Impact Assessment (BRIA) concerning the costs and benefits of the option?
- Question 6: Do you have any comments on the SEA Environmental Report?

A total of 494 responses were received, with 90% submitted by individuals. In addition, 9,815 campaign emails associated with the RSPB were received in response to the consultation. An Analysis of Consultation Responses has been published⁵, along with the Scottish Government's response to the consultation analysis⁶.

This section details how these opinions were taken into account when coming to the decision to close fishing for sandeel in all Scottish waters.

5.1 Support for closing fishing for sandeel in Scottish waters over the alternatives identified

While there was overwhelming support for the preferred option to close fishing for sandeel in Scottish waters, of those that responded to the question on the Environmental Report, several agreed with the assessment that none of the identified reasonable alternatives were likely to result in additional benefits compared to the preferred option. This was acknowledged in the analysis of responses, and formed a part of wider considerations in coming to the decision to proceed with the preferred option to close sandeel fishing in all Scottish waters.

5.2 Interpretation of evidence in the report regarding the potential benefits of the proposals presented

Several respondents had views about how the environmental report interpreted the unpredictability of the available evidence regarding the potential benefits that could arise as a result of the proposed closure. Some respondents felt that the language was not stated strongly enough and that greater benefits would be provided than the environment report suggested.

In contrast, a small number of respondents commented that the proposals, as well as any alternative or complementary measures, had the potential for limited benefits. These respondents highlighted the uncertainty around the evidence base and that

the current management practices in place are already sufficient to protect the ecosystem and that any additional benefits were unlikely.

We acknowledged that the evidence base demonstrating the effect of the sandeel fishery on sandeel abundance is not definitive and that the subsequent benefits to the marine environment, or specific components of the marine environment are uncertain. It should be acknowledged, however, that this uncertainty is not due to a lack of information or data but is due to the degree of variability in the system, compounded by multiple interacting large scale environmental processes (e.g., climate change) affecting the various components of the foodweb. This complexity and variability means that predictions of the benefits of closing fishing for sandeel on the wider marine environment will have a high degree of uncertainty (e.g., uncertainty in the effect of fisheries management on sandeel abundance and uncertainty of the effect of sandeel abundance on availability to top predators). However, our assessment is therefore that the precautionary approach adopted from our scientific evidence base which takes account of this unpredictability remains valid and therefore updates to the Environmental Report are not required. This aligns with the views of consultation respondents who also expressed their support for the preferred option.

One respondent highlighted the importance of sandeel to cetacean species and argued that the closure would benefit various cetaceans in addition to supporting population recovery. We note the references provided by this respondent. We intend to publish a second draft of the Evidence Paper in due course, which will incorporate these references.

5.3 The need for a fisheries management approach that recognises the connection between ecological considerations and the financial viability of the fishing resource

Two distinct responses recommended that the Scottish Government thoroughly assess the potential adverse effects on the ecosystem resulting from the proposal to close fishing for sandeel in Scottish waters. They expressed ecological concerns regarding the proposed closure of fishing for sandeel in Scottish waters. They warned of potential shifts in fishing efforts to other species, emphasising the delicate balance within the ecosystem and the resulting biodiversity loss, particularly affecting 0-group sandeel and seabird populations. The organisations stressed the necessity for a holistic fisheries management approach, considering the complex interactions in the marine ecosystem and ensuring the long-term sustainability of sandeel populations and dependent species.

Regarding the concerns on a potential shift in fishing efforts to other species, it should be acknowledged that for the majority of stocks Total Allowable Catches (TAC) are set during annual international negotiations and any fishing should not exceed these pre-agreed levels.

Acknowledging that sandeel forms a significant component of the diet of several species of commercially important fish including Atlantic cod, haddock, whiting and

saithe (for more details see the Environmental Report¹²), it is expected that any increase in sandeel stocks as a result of the closure could bring benefits to wider fish stocks.

6. Reasonable alternatives

The 2005 Act requires that the Scottish Government identify, describe and evaluate the likely significant effects on the environment of any reasonable alternatives to the plan or programme, taking into account its objectives and geographical scope.

The reasonable alternatives considered in the draft Environmental Report were:

- Extension of the existing closure to all of Sandeel Area 4 only
- Seasonal closure of the sandeel fishery
- Voluntary closure of the sandeel fishery
- No action taken

The potential environmental effects associated with the four reasonable alternatives were identified and set out in detail in the Environment Report. The SEA assessed that none of the identified reasonable alternatives were likely to result in additional benefits compared to the proposed closure of all Scottish waters, and each carries additional risk when compared to the proposed closure. Several respondents agreed with this assessment in their consultation response.

Consideration of reasonable alternatives in the draft Environmental Report showed that several scenarios could result in some of the benefits of full closure being realised, but that the proposed full closure was the most likely scenario to bring about long-term benefits across the themes of Flora, Fauna and Biodiversity and Water Quality, Resources and Ecological Status. Consideration of alternatives also showed that taking no action poses a risk of adverse environmental effects through the potential for increased fishing effort in Scottish waters as a result of the closure of English waters of the North Sea. Several respondents agreed with this assessment in their consultation response.

Through the consultation process and the responses to the consultation, alternatives were considered as follows:

6.1 Additional alternatives proposed in response to the consultation

Many respondents supporting the proposals did not offer views on alternative or complementary measures, with some suggesting that alternatives were incompatible with the goal of increasing sandeel stock resilience. Those that did, suggested alternative options such as zero-TACs and the Norwegian model (including real-time monitoring and adaptive management) of sandeel stock management. We considered these responses, however since setting a zero-TAC would only be possible subject to agreement in annual negotiations; and since the Norwegian model would only result in partial restrictions of fishing therefore such alternative

¹² [Strategic Environmental Assessment of proposals to close fishing for sandeel in all Scottish waters: Environmental Report \(www.gov.scot\)](http://www.gov.scot)

approaches would not be sufficient in moving towards achieving the envisaged ecosystem benefits that a full closure could bring.

In response to the consultation, one organisation suggested that to ensure the proposed measure effectively attains its objectives, it should be integrated into a holistic approach to forage fish management across all UK waters, via extended cooperation with other devolved administrations. The Scottish Government has engaged with the UK Government on the outcome of their consultation and welcomes the decision to close all of Area 4 in English waters, which will provide complementary benefits to the closure of all Scottish waters for fishing of sandeel.

6.2 Views on how the reasonable alternatives were considered

One respondent provided comments on each of the alternatives proposed. This response disagreed with the rejection of the alternatives 'no action taken' and 'extension of existing closure to all of sandeel management area 4 only' in the Environmental Report due to what they saw as limited benefits of the proposed closure. Our assessment is that the precautionary approach adopted from our scientific evidence base which takes account of the unpredictability in the system is valid, as discussed in Section 5.

This respondent also felt that the Environmental Report did not provide enough detail on what the alternative 'seasonal closure of the sandeel fishery' would entail. Seasonal closures can be an effective means of management in instances when releasing fishing pressure over a defined portion of the year protects an important period ecologically either for the fished species or their wider ecosystem (for example, to protect the breeding season). This was not determined to be an appropriate measure in this instance, as it was assessed that closing the fishery on a seasonal basis could result in moderate detrimental effects should the timing of sandeel availability to the fishery shift to outside the current fishing season, allowing sandeel to still be targeted outside the closure period. Therefore, it was determined that a seasonal closure would not be an optimal solution for the purposes of this closure.

Similarly, this respondent felt that the Environmental Report did not provide enough detail on the option 'voluntary closure of the sandeel fishery'. The voluntary closure proposed as an alternative would involve agreements between parties that jointly manage the sandeel stock in Scottish waters, which could be set as part of the annual international negotiations. It was considered that this could bring about the same benefits as the preferred option, but would require ongoing management costs. In addition, due to the reliance of the continuation of this measure being agreed during annual negotiations, this was not determined to be as strong a guarantee of a long-term closure and this alternative was therefore rejected.

7. Monitoring

Section 19 of the 2005 Act requires the Responsible Authority to monitor significant environmental effects arising as a result of the implementation of the plan, programme or strategy. The purpose of the monitoring is to identify any unforeseen

adverse effects at an early stage and to enable appropriate remedial action to be taken.

No significant adverse environmental effects were identified in the Environmental Report and therefore no mitigation or monitoring measures were proposed by the SEA (Section 4).

There are several existing monitoring and research programmes in place that can add to the evidence base in relation to potential impacts of closing fishing for sandeel in all Scottish waters. These include:

- The abundance and distribution of marine mammals from, for example, the Small Cetaceans in European Atlantic Waters (SCANS) surveys and information made available through the Special Committee on Seals (SCOS) reports on population estimates and trends.
- The abundance and distribution of seabirds, for example, from the UK Seabird Monitoring Programme monitoring of breeding seabird species at coastal and inland colonies across the UK.
- Local colony effects on seabirds through colony surveys, such as the Isle of May Long-Term Study (IMLOTS) which monitors the biology of five species of seabirds breeding on the Isle of May.
- The abundance of predatory fish species from information on the overall state of fish stocks made available through ICES annually.
- The status of Priority Marine Features in Scotland's MPA network, as set out in Scotland's MPA Monitoring Strategy¹³.

8. Conclusion

Following consideration of all responses and representations received, the Scottish Government has concluded that the preferred option to close fishing for sandeel in all Scottish waters is the most appropriate approach to achieve its aims, noting that the potential environmental benefits outweigh any negative impacts.

In reaching this decision, the Scottish Government has applied the precautionary principle to its decision making and ensured alignment with national and international commitments, including, but not limited to, the UK-EU TCA, Scotland's National Marine Plan, Scotland's Fisheries Management Strategy, the UK Joint Fisheries Statement, the Fisheries Act 2020 and the Marine Strategy Regulations 2010.

The decision has been made to not publish an updated Environmental Report as all comments received have been incorporated into this post-adoption statement as well as the Scottish Government response¹⁴.

¹³ [MPA monitoring strategy - Marine environment - gov.scot \(www.gov.scot\)](https://www.gov.scot/publications/mpa-monitoring-strategy-marine-environment/pages/12.aspx)

¹⁴ [Sandeel fishing - proposed closure - consultation analysis: Scottish Government response - gov.scot \(www.gov.scot\)](https://www.gov.scot/publications/sandeel-fishing-proposed-closure-consultation-analysis/pages/12.aspx)



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