

Partial Business and Regulatory Impact Assessment

Consultation on proposals to close fishing for sandeel in all Scottish waters

Introduction

The seas around Scotland have a wide variety of marine wildlife and varied habitats and support a diverse abundance of marine organisms. Sandeel form a particularly important component of the North Sea ecosystem and a link between different levels of the marine food chain¹ from plankton up to commercial fish species, seabirds, and marine mammals. As an island-based society, the sea around Scotland has always had an important role to play, offering a source of food and recreation.

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.

The Scottish Government has committed under Future Fisheries Management Strategy to work with stakeholders to deliver an ecosystem-based approach to management, including considering additional protections for spawning and juvenile congregation areas and restricting fishing activity or prohibiting fishing for species which are integral components of the marine food web, such as sandeel².

Marine protection needs to evolve to protect our marine ecosystem and manage activities that can impact on our ecosystem services which are already responding to climate change.

Taking this into account, the Scottish Government is consulting on proposals to close fishing for sandeel in all Scottish waters. The consultation, which will seek views on these proposals, is being undertaken with the purpose of bringing about wider environmental and ecosystem benefits. These include potential benefits to sandeel, seabirds, marine mammals, and other fish species.

Desired aims of the consultation

The Scottish Government wishes to consider and implement a closure of the sandeel fishery in all Scottish waters that meets as far as possible the following aims:

- a) To seek effective protection of sandeel, as a contribution to the wider marine ecosystem.
- b) To provide the opportunity for wider ecosystem benefits to a range of species, including commercial fish species, seabirds and marine mammals, that will also improve resilience to changes in the marine environment.
- c) To complement, as far as possible, existing sandeel management measures.

Rational for Government intervention

A market failure can arise when there is over-consumption of a shared natural resource and where wider environmental impacts have not been considered. Fishing for sandeel without considering the wider ecosystem impacts, and the subsequent impacts to marine stakeholders, can result in overfishing of a key prey species relative to a more efficient outcome due to the detriment of other fishery stocks and predators. The Scottish Government therefore seeks to reduce the risk of this occurring by introducing management measures for sandeels in Scottish waters. Please see the Strategic Environmental Assessment that accompanies the consultation for more information, this can be found along with other supporting documents to this consultation.

¹ [Sandeel | NatureScot](#)

² [Future fisheries: management strategy - 2020 to 2030 - gov.scot \(www.gov.scot\)](#)

The proposal is also aligned with the aims set out in Scotland's Fisheries Management Strategy 2020-2030:

'Where appropriate, restricting fishing activity and prohibiting fishing for species which are integral components of the marine food web, such as sandeels.' (FFM, page 10)

'We will work with our stakeholders to deliver an ecosystem-based approach to management, including considering additional protections for spawning and juvenile congregation areas and restricting fishing activity or prohibiting fishing for species which are integral components of the marine food web, such as sandeels.' (FFM, page 27)

Implementation of measures for sandeel in Scottish waters

Background

The Scottish Government has commitments under the UK Marine Strategy to collaborate with the other UK administrations to assess, monitor and publish a programme of measure the UK will use to support progress towards achieving Good Environmental Status. This includes descriptors for biodiversity and commercial fish^{6,7}. The Scottish Government's key regional platform for collaboration with neighbouring countries on marine biodiversity is OSPAR (the Convention for the Protection of the Marine Environment in the North-East Atlantic), where we participate as part of the UK and take action developed under this forum to protect and conserve the marine ecosystems and biodiversity. Under the Joint Fisheries Statement, a statement published in accordance with section 2 of the Fisheries Act 2020, the Scottish Government is committed to delivering sustainable management of fisheries that takes account for the protection of biodiversity and healthy functioning marine ecosystems³. The *Precautionary Objective* set out in section 1 of the Fisheries Act 2020 also establishes the need to apply the precautionary approach to fisheries management.

Given the importance of sandeel to the wider ecosystem and the subsequent benefit provided by the species in aiding long-term sustainability and resilience of the marine environment, it remains an over-arching and long-held Scottish Government position not to support fishing for sandeel in Scottish waters, which is reflected in Scotland's Future Fisheries Management Strategy. This position was emphasised in June 2021 when the Cabinet Secretary for Rural Affairs and Islands committed in Parliament to considering what management measures could be put in place to better manage the North Sea sandeel fisheries in Scottish waters.

There are several measures in place for the protection of sandeel stocks including through the network of Marine Protected Areas (MPAs). Furthermore, a sandeel closure in sandeel management area 4 has been in place since 2000 and, the UK has not allocated sandeel quota to UK vessels since 2021.

In 2021, Scottish Government officials worked closely with UK counterparts on a call for evidence⁴ to gather information to better inform our considerations on future management for sandeel. The Scottish Government is therefore committed to considering what additional measures could be introduced to better manage fishing for sandeel in Scottish waters, with the aim to benefit both North Sea sandeel stocks and the wider ecosystem, including sensitive marine species.

In May 2023, the Cabinet Secretary for Rural Affairs, Land Reform and Islands announced the Scottish Government's intention to launch the consultation on potential closure of the sandeel fishery in Scottish waters through a Government Initiated Question.

Sandeel are a key component of the ecosystem of Scotland's seas due to their role in marine foodwebs as a prey source for a range of species including seabirds, seals, cetaceans (whales, dolphins and porpoises), and predatory fish. Declines in sandeel abundance can negatively impact the survival and reproduction of ecologically important species.

³ [Joint Fisheries Statement \(JFS\) - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/100000/jfs-statement-2020.pdf)

⁴ [Call for Evidence on future management of Sandeels and Norway pout - Defra - Citizen Space](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/100000/call-for-evidence-on-future-management-of-sandeels-and-norway-pout.pdf)

Proposal for closing fishing for sandeel in Scottish waters

The Scottish Government has committed to considering what measures could be introduced to better manage fishing for sandeel in Scottish waters, with an aim to benefit both North Sea sandeel stocks, and the wider ecosystem.

The Scottish Government therefore proposes to consult on proposals to close fishing for sandeel in all Scottish waters. This proposal is informed by the potential benefits to the wider marine ecosystem that such measures could bring. These include benefits to sandeel, seabirds, marine mammals, and other fish species. The proposals would also benefit several of Scotland's MPAs for which sandeel are a protected feature and could contribute to progress with achieving Good Environmental Status for seabirds and marine mammals⁶.

These proposals have been informed by the current state of understanding of the role of sandeel in the ecosystem and the potential impacts that closing fishing for sandeel in Scottish waters could have and should be read alongside the "Review of scientific evidence on the potential effects of sandeel fisheries management on the marine environment" that was produced by the Science, Evidence, Data and Digital Portfolio, Marine Directorate, Scottish Government. This report can be found along other supporting documents to this consultation

It is anticipated that any measures would be effective year-round and, would be introduced through the implementation of a Scottish statutory instrument applicable to all vessels that would otherwise fish within UK waters.

Subject to the outcome of this consultation, the Scottish Government proposes to close fishing for sandeel in all Scottish waters from the 2024 fishing season onwards.

This proposal seeks to contribute to the following Marine Scotland Blue Economy Outcomes:

Environment: Scotland's marine ecosystems are healthy and functioning, with nature protected and activities managed using an ecosystem-based approach to ensure negative impacts on marine ecosystems are minimised and, where possible, reversed.

This proposal seeks to contribute to the following National Outcomes:

Environment: We value, enjoy, protect and enhance our environment.

Economy: We have a globally competitive, entrepreneurial, inclusive and sustainable economy

Sandeel management

Sandeel is a jointly managed stock between the UK and the EU (European Union). Under the UK/EU trade and cooperation agreement (TCA), the UK has a 2.97% share and the EU a 97.03% share of the parties' combined sandeel quota in 2023. The Total Allowable Catch (TAC) is set during the in-year consultations, followed by the ICES advice release. As a result of the negotiations this year, the TAC has been set at 194,367 tonnes⁵ which is 3% lower for areas 1r and 4⁶ (UK waters) than the ICES advice.

Under the TCA and during a transition period lasting until 30 June 2026, the UK and the EU have full mutual access to their respective exclusive economic zones (EEZs) (i.e. waters adjacent from 12 – 200 nautical miles); as well as access to specific English, Welsh and Channel Island waters in the 6-12 nautical mile area. Sandeel is an important fishery to some EU member states, in particular Denmark, who regularly fish the stock in UK waters in May and June.

EU sandeel fishery

Denmark is the largest shareholder, holding 96% of the EU quota. From 2020-22, Denmark's total quota for North Sea sandeel has been on average 128,546 tonnes, worth approximately £36 million based on latest (2020) Scottish prices. 35% of this quota has been allocated to areas almost entirely within UK, primarily Scottish, waters (sandeel areas 4 and 3r); the remaining 65% has been allocated to areas either straddling UK and EU waters, or in EU waters exclusively (sandeel areas 1r and 2r, and 6).

UK sandeel fishery

In the case of UK vessels, the stock has historically been targeted primarily by one UK vessel, although no quota has been issued to UK vessels for sandeel since 2021, and a major sandeel fishing area in the North Sea has been closed to UK and EU vessels since 2000, except for a limited monitoring fishery in some years.

Current area closure for sandeel

There is a sandeel closure in place in sandeel management area 4 (Figure 1). This area extends along most of the east coast of Scotland, as well as some of the northeast coast of England, and is exclusively within UK waters. Figure 1 also shows three Nature Conservation Marine Protected Areas (NC MPAs), which are the 'Turbot Bank', 'North west Orkney' and 'Mousa to Boddam'.

The existing closure was included in EU regulations and has been retained in UK law⁷. The closure was intended to benefit predators dependent on sandeel by avoiding a localised sandeel depletion. Seabirds were the focus of this, however all sandeel predators were considered⁸.

⁵ [European Union and the United Kingdom – sandeel fisheries consultations: written record for 2023 - gov.scot \(www.gov.scot\)](https://www.gov.scot/publications/written-record-2023-2024/documents/written-record-2023-2024-10-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000)

⁶ [Sandeel \(Ammodytes spp.\) in divisions 4.b–c, Sandeel Area 1r \(central and southern North Sea, Dogger Bank\) \(figshare.com\)](https://www.figshare.com)

⁷ [Regulation \(EU\) 2019/1241 of the European Parliament and of the Council, Part C: Closed or Restricted Areas.](https://eur-lex.europa.eu/eli/reg/2019/1241/oj)

⁸ [Microsoft Word - SGMOS-07-03 report v3 with STECF opinion.doc \(europa.eu\)](https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&plugin=1)

The closed area has been in place since 2000, following requests from the UK to the EU to establish a moratorium on fishing and advice from ICES, which stressed the importance of sandeel for a number of potential sensitive seabird colonies in the area⁹.

The current area closure, which has been retained in UK law, allows for “fisheries for scientific investigation”, this allowance has previously been used by Denmark. In recent years, Denmark have requested and received this authorisation, and have therefore fished in the area for scientific investigation only.

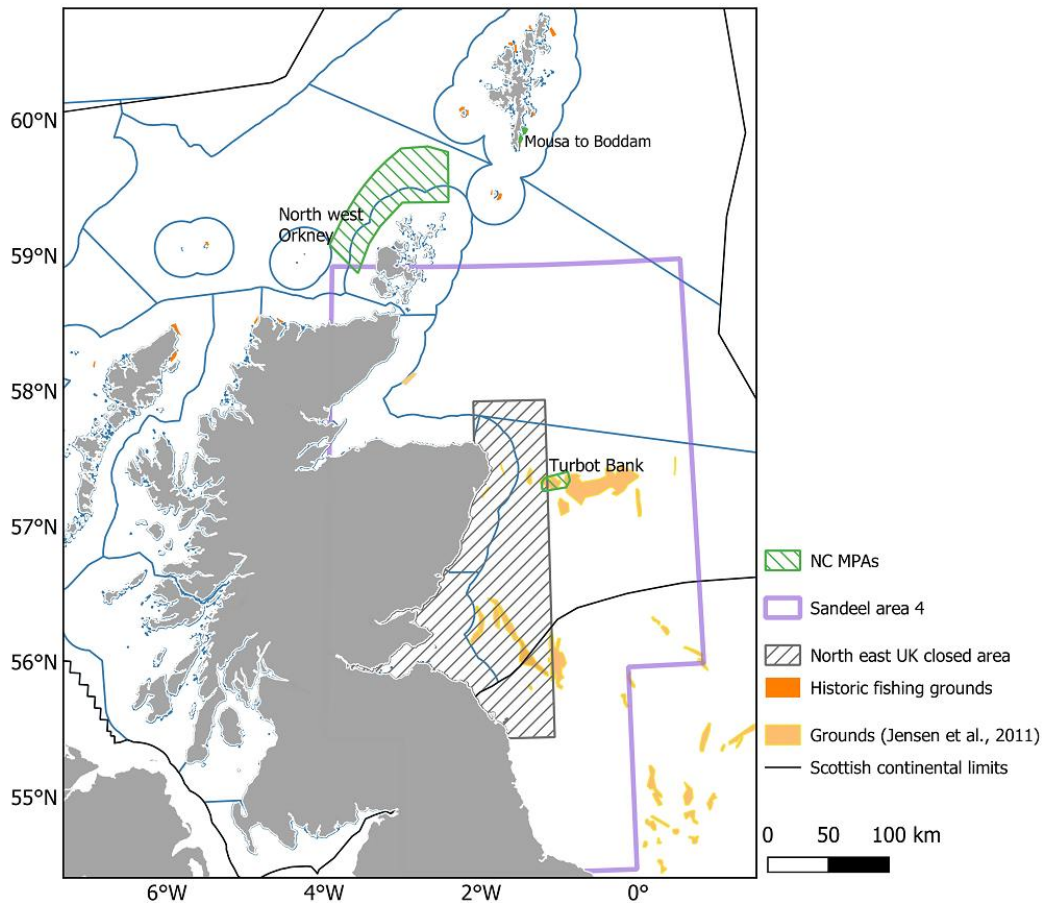


Figure 1: The existing northeast UK area closed to sandeel fisheries and the various spatial management measures for sandeel within Scottish waters. (Reproduced from a Case Study: Sandeels in Scottish Waters)

⁹ [Case Study: Sandeels in Scottish waters | Scotland's Marine Assessment 2020](#)

Consultation

Within Government

The proposed extension to all Scottish waters has been developed with input from the following teams within the Marine Directorate:

- Marine Environment (Climate & Biodiversity) Portfolio
- Science, Evidence, Data & Digital Portfolio
- Operational Delivery Portfolio
- Marine Economy & Communities Portfolio
- Corporate, Strategy & Marine Planning Portfolio

NatureScot, Scottish Environment Protection Agency and Historic Environment Scotland were also consulted through the Strategic Environmental Assessment (SEA) process.

Public consultation

A 12 week public consultation on the proposed closure will be carried out in summer 2023. There has been no other informal consultation yet on this proposal.

Options

Option 0: Do nothing

Under the “Do Nothing” option, sandeel would continue to be a jointly managed stock between the UK and the EU. EU access to Scottish waters would continue, as agreed through the UK/EU TCA. Scottish Government would continue to support sandeel quota not being allocated to Scottish vessels, as has been the practice across the UK since 2021.

Option 1: Complete closure of all Scottish waters to sandeel fishing (preferred option)

The preferred option of the Scottish Government is close fishing for sandeel in all Scottish waters for the 2024 fishing season onwards. This option would limit vessels of all nationalities from fishing for sandeel in Scottish waters and would align with the UK Government’s preferred option of closure of English Waters within the North Sea.

Option 2: Extension of the existing closure to all of sandeel management area 4 only

One alternative option for the management of the sandeel fishery is to extend the current closure to the whole of sandeel area 4. Area 4 is a main sandeel fishing ground, and in closing this whole area it could allow for improvement of the sandeel stock. This closure would be extended to all vessels.

Option 3: Seasonal closure of the sandeel fishery

This option would be for a seasonal closure of the sandeel fishery thereby only allowing fishing for part of the year.

Option 4: Voluntary closure of the sandeel fishery

This option would involve entering a voluntary agreement to stop the fishing of sandeel in Scottish waters. However, this has been considered to be a complex option that would also not be able to deliver the objectives.

Sectors and Groups Affected

The following sectors have been identified as being affected:

- **UK catching sector:** The UK catching sector has a ~3% share of the total UK and EU sandeel quota, however the UK Fisheries Administrations have not allocated sandeel quota to UK vessels since 2021. Therefore, at present, the UK catching sector will not be directly affected by the proposed extension. However, the wider environmental effects of the proposed extension may impact the UK catching sector if the closure leads to an increased abundance of other commercially fished species which prey on sandeel.
- **EU catching sector:** The EU catching sector has a ~97% share of the total UK and EU sandeel quota. The majority of sandeel fished in Scottish waters is caught by Danish and other EU vessels.
- **Processing sector:** The UK and EU processing sectors will be impacted by the proposed closure. Of the sandeel caught by non-UK vessels in Scottish waters in 2016-2020, 1.1% is landed into Scottish ports.
- **Consumers:** There could be a Scottish consumer market purchasing locally caught sandeel.

Benefits

Option 0: Do Nothing

There is not expected to be any additional benefits of continuing with the current status quo of not allocating sandeel quota to UK vessels. For Scottish businesses, both catching and onshore, the current practices would remain unchanged. There would be no environmental benefits.

Option 1: Complete closure of all Scottish waters to sandeel fishing (preferred option)

The extension of the current closure to all waters, is associated with a number of potential benefits to the sandeel stock and the wider marine ecosystem.

The sandeel areas that would be directly impacted by the closure in Scottish waters are situated within the ICES areas of IVa, IVb and IVc, as shown below in Figures 2 and 3.

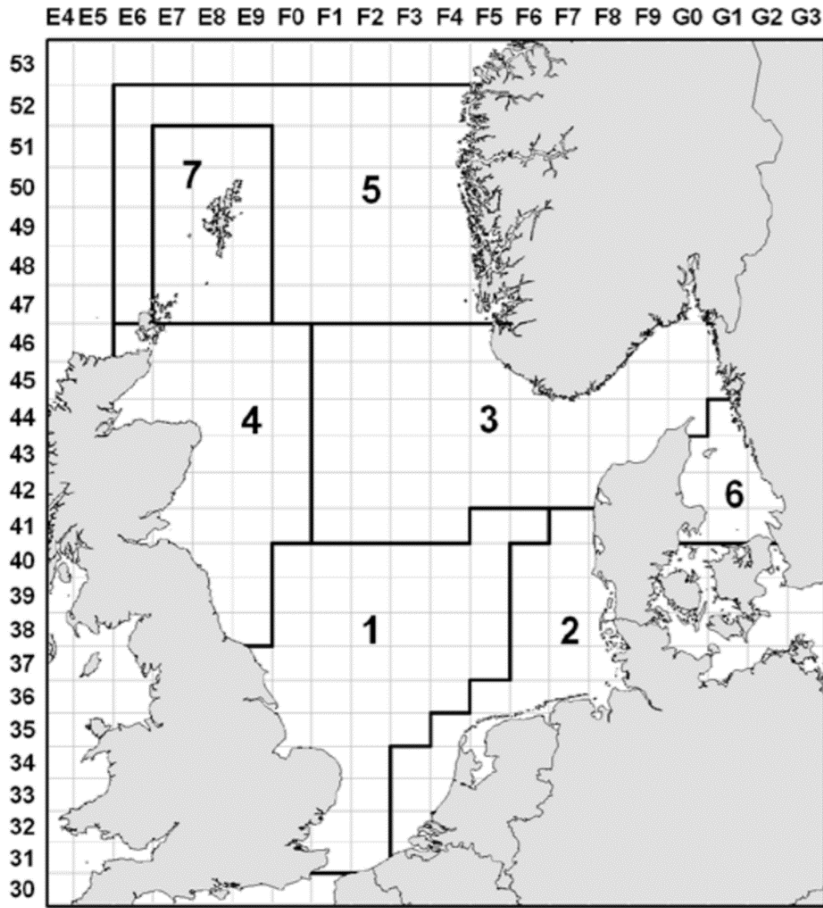


Figure 2: Map of sandeel areas in the North Sea and Skagerrak

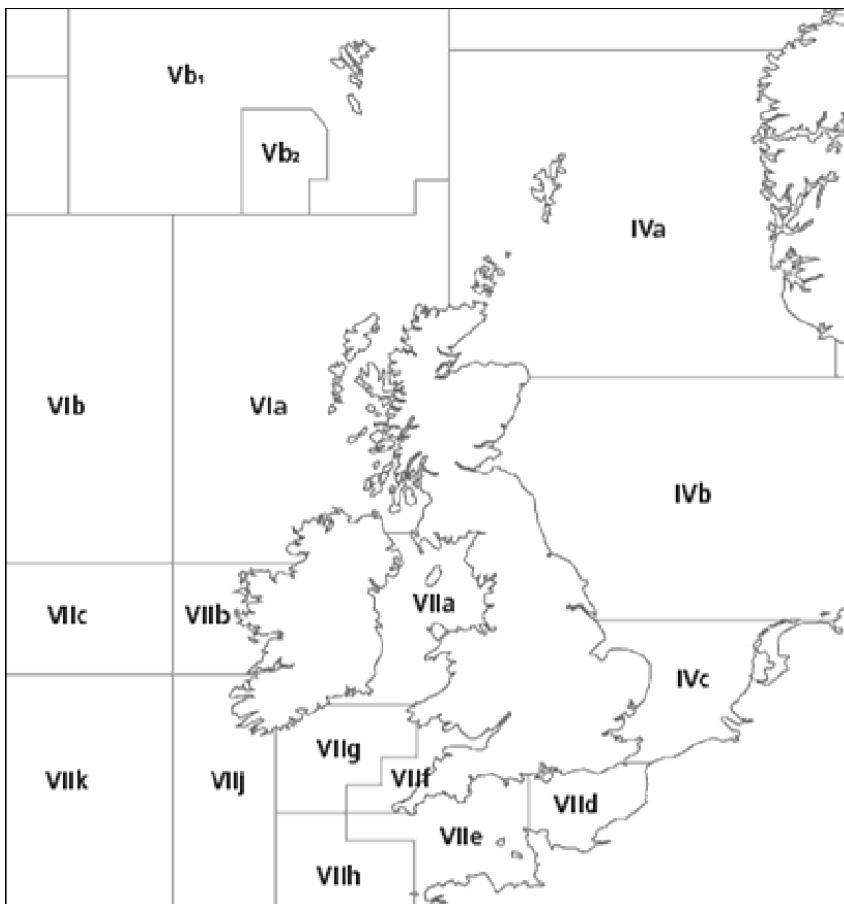


Figure 3: A Map of ICES rectangles around UK EEZ

The following section considers the benefits of the preferred option only: complete closure of the Scottish sandeel fishery.

- **Sandeel:** The extended closure would cover all of the sandeel fishing grounds in Scottish waters of sandeel area 4. Restricting sandeel fishing in Scottish waters therefore may benefit the health of the stock, which may lead to an increase in abundance.
- **Seabirds, whitefish species and marine mammals:** Sandeel is a key prey species for some seabird species (e.g., as kittiwakes, guillemots, puffins, and gannets), whitefish species (cod, whiting, haddock) and marine mammals (grey and harbour seals, harbour porpoises)¹⁰ which are present in the area that would be included in this closure. Restricting sandeel fishing will also reduce bycatches of whiting and mackerel, as these bycatches are currently taken in the sandeel fishery and counted against the sandeel quota.
- **Marine Protected Areas:** The extension to all Scottish waters would mean that the closure would cover all MPAs in Scottish waters, including those in which seabirds and marine mammals are a protected feature. This also includes MPAs designated due to the importance of sandeel populations (e.g., Mousa to Boddam, North West Orkney and Turbot Bank).
- **Good Environmental Status:** As of October 2019, the UK has not achieved Good Environmental Status (GES) for breeding seabirds and for harbour seals in the North Sea. Better management of sandeel fisheries in Scottish waters could contribute to achieving GES for these receptors.¹¹

Option 2: Extension of the existing closure to all of sandeel management area 4 only

The option of extending the existing closure to all of sandeel area 4 is not expected to bring the same benefits as a complete closure. There could be a reduction in pressure on the sandeel stock, however this could be offset by displacement into other areas.

Option 3: Seasonal closure of the sandeel fishery

A seasonal closure has the potential to reduce the pressure on the sandeel stock, but there are environmental concerns that the seasonal nature of the fishery could change over time.

Option 4: Voluntary closure of the sandeel fishery

The benefits of a voluntary approach could span from low to high, dependant on industry buy-in.

¹⁰ [doi:10.1016/j.icesjms.2006.05.009](https://doi.org/10.1016/j.icesjms.2006.05.009) (silverchair.com)

¹¹ [Marine Strategy Part One: UK updated assessment and Good Environmental Status](https://publishing.service.gov.uk) (publishing.service.gov.uk)

Costs

Option 0: Do Nothing

Continuing the status quo of not allocating quota to Scottish vessels would result in no change in regards EU vessels fishing for sandeel in Scottish waters. Therefore, this option is associated with potential detrimental impact on the sandeel stock and consequently on predatory fish, seabirds and marine mammals.

Also, if the UK Government decided to closure the sandeel fishery in English waters in the North Sea, there could be potential displacement into Scottish waters to the further detriment of the Scottish sandeel stock.

Option 1: Complete closure of all Scottish waters to sandeel fishing (preferred option)

The main costs associated with the preferred option are the costs to businesses (catching and processing) of a sandeel closure. As the position of Scottish Government is equivalent to that of the UK Government, the below cost analysis uses the same data and the same approach as the Defra De Minimum Assessment¹² for consistency and comparability.

Table 1: Estimated cost to business of Option 1 (preferred option)

	Annual cost to business of preferred option (£million)	Net Present Cost (10 year appraisal period) (£million)
1) Direct impact to Scottish catching sector	0	0
2) Direct cost to all catching sector	3.8	32.8
3) Indirect cost to Scottish onshore businesses	0.5	4.6

Source: Marine Management Organisation data split for English and Scottish waters

Source: [UK sea fisheries annual statistics report 2021](#)

The below section outlines the expected costs to the three main groups of businesses outlined above. Costs are evaluated against Option 0: Do nothing.

1) Scottish catching sector:

As quota is currently unallocated to Scottish vessels and this would be the expected status quo going forward, the cost to the Scottish sandeel catching sector for Option 1 is zero.

However, table 2 below shows landings of sandeel into Scotland by UK vessels in 2018-2020.

¹² [Sandeels DMA final.pdf \(defra.gov.uk\)](#)

Table 2: Sandeel landings into Scotland by UK vessels, 2017 to 2021

	2015	2016	2017	2018	2019	2020	2021
Tonnage ('000s)	-	-	-	0.6	1.1	2.9	-
Value (£ million)	-	-	-	0.1	0.3	0.8	-

Source: Table 2.2c, [UK sea fisheries annual statistics report 2021](#).

2) EU vessels catching sandeel in Scottish waters

The second group who will be impacted by a complete sandeel fishery closure is made up of mainly non-UK vessels who fish for sandeel in Scottish waters and land in any port (UK or elsewhere). This group will face the largest cost as they are the main catchers of sandeel in Scottish waters. The vessels are primarily Danish, or simply EU vessels where the home country is not specified in the data.

From 2015-2019, vessels catching sandeel from Scottish waters caught on average 17,900 tonnes of sandeel each year, worth £3.8 million in 2021 prices¹³. The net present cost of Option 1 is therefore estimated at £32.8 million, assuming the closure starts in 2024, with a 10-year appraisal period discounted at 3.5%.

However, it should be noted that the above estimation is based on revenue and not profit, and therefore will be an overestimation of business impact. There is also no assessment of the potential for non-UK vessels to move their fishing to other waters and therefore offset the loss of a Scottish waters closure.

The data used for this estimation was produced by MMO using an assumption of vessel catches split by English and Scottish waters, based on ICES rectangles.¹⁴

3) Non-UK catching sector landing sandeel into Scottish ports

The third group of businesses affected will be non-UK vessels which land their catch into Scotland. Whilst in 2021-22 there was no sandeel landings into Scottish ports, in the years prior to that all UK landings were into Scottish ports.

From 2017-2021, non-UK vessels landed on average 2,341 tonnes of sandeel into Scottish ports per year, at an average annual value of £0.5 million. The net present value of the closure to onshore processors is therefore estimated at £4.6 million, assuming the closure starts in 2024, with a 10-year appraisal period discounted at 3.5%.

Other costs

1) Scottish onshore processors

The onshore processing sector is expected to be impacted by the loss of sandeel, a key input into fish meal. Data published by the MMO shows that from 2017-2021 there was an

¹³ Based on 2015-2019 landings data produced by the Marine Management Organisation (MMO).

¹⁴ Apportioning activity area is based on the published '[ICES Statistical Rectangle Factors](#)' methodology.

average of 3,258 tonnes of sandeel landed each year into UK ports; it is understood that these ports are all located in Scotland.

Table 3: Tonnage and value of sandeel landed into UK ports, all vessel nationalities, 2017-2021

	Tonnage (000's tonnes)	Value (£000's)
2017	4,700	0.8
2018	4,200	0.8
2019	1,800	0.5
2020	5,600	1.5
2021	0	0

Source: Table 2.2c and Table 2.3, [UK sea fisheries annual statistics report 2021](#).

2) Compliance operations

There is expected to be minimal additional compliance costs to Marine Scotland, as monitoring of a sandeel closure will be absorbed by regular compliance operations.

3) Familiarisation costs to fishers and other stakeholders

The cost to the fishing sector of familiarisation to the new regulation is expected to be negligible and so has not been calculated.

Option 2: Extension of the existing closure to all of sandeel management area 4 only

Displacement of sandeel fishing into new fishing grounds is a potential risk of a partial closure in only one area. Such displacement could create detrimental environmental effects

Option 3: Seasonal closure of the sandeel fishery

A seasonal closure could still allow for fishing of sandeel, and there is an environmental risk that the season could change with environmental and biological drivers.

Option 4: Voluntary closure of the sandeel fishery

As with the benefits, the expected costs could range from low to high dependant on the level of voluntary agreement reached. Scottish Government considers the risk of high environmental costs associated with this option as being high and therefore this is not the preferred option. This option would also entail additional management costs of agreeing an annual voluntary arrangement.

Regulatory and EU Alignment Impacts

Intra-UK and international trade

The preferred option is not expected to affect intra-UK or international trade.

EU Alignment

The closure of an area to protect sandeel in ICES divisions 4a and 4b was included in EU regulations and has been retained in UK law.

Scottish Firms Impact Test

As stated above, businesses with an interest in the proposal will be invited to submit their views via the public consultation.

Scottish firms are expected to be minimally impacted and as outlined in the options section, the estimated costs are assumed to be an overestimation.

Competition Assessment

The closure will be for all Scottish businesses.

Consumer Assessment

Currently, of the total tonnage of sandeel caught in UK waters a very minimal amount is landed into Scottish ports. It's not expected that sandeel caught in non-UK waters will be landed into Scotland.

The consultation should seek to answer if there are any consequences to consumers of a closure of fishing for sandeel in all Scottish waters, and sandeels are not landed into Scotland.

Test Run of Business Forms

No new business forms will be introduced because of the proposed extension.

Digital Impact Test

The proposed extension will not be applicable in a digital/online context.

Legal Aid Impact Test

It is not anticipated that the proposed extension will have an impact on the legal aid fund.

Enforcement, Sanctions and Monitoring

Marine Scotland Compliance are responsible for the enforcement of fishing regulations and monitoring activity within Scottish waters using a risk-based approach. As with the existing closed area, monitoring of the extended closed area will be included in these routine activities.

Implementation and Delivery Plan

It is anticipated that a public consultation on the extension of the existing closure in sandeel to all Scottish waters will be published in July 2023, and run for the standard 12 week period. Based on this indicative timeline, we anticipate that the extension of the closed area will, if adopted, be introduced in the first quarter of 2024.

Any measure would be introduced through the implementation of a licence condition applicable to all vessels fishing within UK waters.

Summary and Recommendation

Option 1 is the preferred option as it is expected to be able to deliver the environmental objectives of the Scottish Government with regards to sandeel.

Summary costs and benefits table

Option	Total benefit per annum: - economic, environmental, social	Total cost per annum: - economic, environmental, social - policy and administrative
0 Do nothing	- No benefit as quota is already unallocated to Scottish sector	- Sandeel stock will continue to be depleted
1 Complete closure of all Scottish waters to sandeel fishing (preferred option)	- Potential for improvement to sandeel stocks with ensuing potential benefits to seabirds, whitefish species and marine mammals. Removes potential for displacement of activity to other Scottish waters.	<ul style="list-style-type: none"> - Direct cost to EU fishing industry of fishing restriction (primarily Danish or other EU vessels) - Indirect cost to processing sector with lower landings of sandeels - Direct cost to Scottish Government Compliance of an additional regulation to monitor (minimal)
2 Extension of the existing closure to all of sandeel management area 4 only	- Potential but uncertain improvement of sandeel stock with ensuing potential benefits to marine mammals and seabirds	<ul style="list-style-type: none"> - Direct cost to fishing industry of fishing restriction, lower than option 1. - Indirect cost to processing sector with lower landings of sandeels, lower than option 1. - Direct cost to Scottish Government Compliance of an additional regulation to monitor (minimal), lower than option 1.
3 Seasonal closure of the sandeel fishery	- Uncertain improvement of sandeel stock with uncertainty regarding ensuing benefits to marine mammals and seabirds	<ul style="list-style-type: none"> - Direct cost to fishing industry of fishing restriction, lower than option 1. - Indirect cost to processing sector with lower landings of sandeels, lower than option 1. - Direct cost to Scottish Government Compliance of an additional regulation to monitor (minimal), lower than option 1.
4 Voluntary closure of the sandeel fishery	- Potential but uncertain improvement of sandeel stock with ensuing potential benefits to marine mammals and seabirds	<ul style="list-style-type: none"> - Management costs of maintaining voluntary closure agreement - Direct cost to fishing industry of fishing restriction, uncertain level - Indirect cost to processing sector with lower landings of sandeels, uncertain level

Declaration and Publication

I have read the Business and Regulatory Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options. I am satisfied that business impact has been assessed with the support of businesses in Scotland.

Signed:

A handwritten signature in black ink, appearing to read 'Mairi Gougeon', written in a cursive style.

Date: 19 July 2023

Minister's name: Mairi Gougeon

Minister's title: Cabinet Secretary for Rural Affairs, Land Reform and Islands

Scottish Government Contact point: sandeelconsultation@gov.scot



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