Report under The Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended), Regulation 6A

2019-2024

Conservation status assessment for the habitat:

H1110 - Sandbanks which are slightly covered by sea water all the time

United Kingdom Offshore

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This report was produced by JNCC.

This document should be cited as:

JNCC. (2026). Conservation status assessment for the habitat: H1110 Sandbanks which are slightly covered by sea water all the time.

Important note - Please read

- The information in this document represents United Kingdom Offshore Report under The Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended), Regulation 6A, for the period 2019-2024.
- It is based on supporting information provided by JNCC.
- The Habitats Regulations reporting 2019-2024 Approach Document provides details on how this supporting information contributed to the UK Report and the fields that were completed for each parameter.
- Maps showing the distribution and range of the habitat are included.
- Explanatory notes (where provided) are included at the end. These provide additional audit trail information to that included within the assessments. Further underpinning explanatory notes are available in the related country reports.
- Some of the reporting fields have been left blank because either: (i) there was insufficient information to complete the field; (ii) completion of the field was not obligatory; and/or (iii) the field was not relevant to this habitat (section 11 National Site Network coverage for Annex I habitats).

Further details on the approach to the Habitats Regulations Reporting 2019-2024 are available on the [JNCC website](#).

Distribution Map	Range Map

Figure 1: United Kingdom Offshore distribution and range map for H1110 - Sandbanks which are slightly covered by sea water all the time. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority. The 10km grid square distribution map is based on available habitat records which are considered to be representative of the distribution within the current reporting period.

Range was calculated by using distribution map with the addition of the area of sloping sandy sediment habitat down to 60m and connected to a sandbank in less than 20m of water. The 60m limit is equivalent to the deepest known sandbank contour in the UK (found at Dogger Bank SAC). Mapped data of the habitat has been created by combining existing data (i.e. sandbanks already mapped within SACs) with an analysis of bathymetric depth, slope and aspect and sediment data across UK waters' and is based on current best available evidence.

Table 1: Table summarising the conservation status for H1110 - Sandbanks which are slightly covered by sea water all the time. Overall conservation status for habitat is based on assessments of range, area covered by habitat, structure and functions, and future prospects.

Overall Conservation Status (see section 10)

Unfavourable-bad (U2)

Breakdown of Overall Conservation Status

Range (see section 4)	**Favourable (FV)**
Area covered by habitat (see section 5)	**Favourable (FV)**
Structure and functions (see section 6)	**Unfavourable-bad (U2)**
Future prospects (see section 9)	**Unfavourable-bad (U2)**

List of Sections

National Level

1. General information

1.1 Country	United Kingdom Offshore
1.2 Habitat code	H1110 - Sandbanks which are slightly covered by sea water all the time

2. Maps

2.1 Year or period	2010-2018
2.2 Distribution map	Yes
2.3 Distribution map; Method used	Based mainly on extrapolation from a limited amount of data

2.4 Additional information

No additional information

Biogeographical Level

3. Biogeographical and marine regions

3.1 Biogeographical or marine region where the habitat occurs   MATL

3.2 Sources of information

See section 13 References

4. Range

4.1 Surface area (km²)	45,871
4.2 Short-term trend; Period	2013-2024
4.3 Short-term trend; Direction	Stable
4.4 Short-term trend; Magnitude	

a) Estimated minimum	
b) Estimated maximum	
c) Pre-defined range	
d) Unknown	
e) Type of estimate	
f) Rate of decrease	
4.5 Short-term trend; Method used	Based mainly on expert opinion with very limited data
4.6 Long-term trend; Period	
4.7 Long-term trend; Direction	
4.8 Long-term trend; Magnitude	
a) Minimum	
b) Maximum	
c) Rate of decrease	
4.9 Long-term trend; Method used	
4.10 Favourable Reference Range (FRR)	
a) Area (km²)	
b) Pre-defined increment	Current range is less than 2% smaller than the FRR
c) Unknown	No
d) Method used	Reference-based approach
e) Quality of information	low
4.11 Change and reason for change in surface area of range	
a) Change	Yes
b) Genuine change	No

c) Improved knowledge or more accurate data	Yes
d) Different method	No
e) No information	No
f) Other reason	No
g) Main reason	Improved knowledge/more accurate data

4.12 Additional information

Offshore range was included within the total range calculation for UK waters in 2019 and not reported separately. Mapped data of the habitat used the same methodology as 2019 and an updated sandy sediment layer.

5. Area covered by habitat

5.1 Year or period	2010-2018
5.2 Surface area (km²)	
a) Minimum	
b) Maximum	
c) Best single value	17,128
5.3 Type of estimate	Best estimate
5.4 Surface area; Method used	Based mainly on extrapolation from a limited amount of data
5.5 Short-term trend; Period	2013-2024
5.6 Short-term trend; Direction	Stable
5.7 Short-term trend; Magnitude	
a) Estimated minimum	
b) Estimated maximum	
c) Pre-defined range	
d) Unknown	
e) Type of estimate	
f) Rate of decrease	

5.8 Short-term trend; Method used	Based mainly on extrapolation from a limited amount of data
5.9 Long-term trend; Period	
5.10 Long-term trend; Direction	
5.11 Long-term trend; Magnitude	
a) Minimum	
b) Maximum	
c) Confidence interval	
d) Rate of decrease	
5.12 Long-term trend; Method used	
5.13 Favourable Reference Area (FRA)	
a) Area (km²)	
b) Pre-defined increment	Current area is less than 2% smaller than the FRA
c) Unknown	No
d) Method used	Reference-based approach
e) Quality of information	low
5.14 Change and reason for change in surface area of range	
a) Change	Yes
b) Genuine change	No
c) Improved knowledge or more accurate data	Yes
d) Different method	No
e) No information	No
f) Other reason	No
g) Main reason	Improved knowledge/more accurate data

5.15 Additional information

The most recent value is 17128km2; improved mapping has resulted in a smaller surface area figure since 2019 where the area was 17141 km²

Expert judgement was used to determine the short-term trend. Area is a more specific parameter than range and while data is generally insufficient to establish a trend with confidence, it is thought to be stable. Area of sandbanks are determined by the presence of suitable substrate and the hydrological regime maintaining the sandbank and is, therefore, unlikely to change significantly overtime. However, anthropogenic activities may cause localised losses of area.

6. Structure and functions

6.1 Condition of habitat (km²)

Area in good condition

ai) Minimum	8,614
aii) Maximum	8,614

Area not in good condition

bi) Minimum	8,510
bii) Maximum	8,510

Area where condition is unknown

ci) Minimum	4
cii) Maximum	4
6.2 Condition of habitat; Method used	Based mainly on extrapolation from a limited amount of data
6.3 Short-term trend of habitat area in good condition; Period	2013-2024
6.4 Short-term trend of habitat area in good condition; Direction	Uncertain
6.5 Short-term trend of habitat area in good condition; Method used	Based mainly on expert opinion with very limited data

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6.6 Typical species

Has the list of typical species changed in comparison to the previous reporting period?   No

6.7 Typical species; Method used

6.8 Additional information

The area of habitat in 'good' (favourable), 'not good' (unfavourable) and unknown condition was assessed using the UK Marine Strategy 'Extent of Physical Disturbance to Benthic Habitats (BH3a)' indicator specifically calculated for the area designated as Annex I Sandbanks which are slightly covered by sea water all the time habitat area. Results showed that 49.69% of the habitat is predicted to be in unfavourable (not good) condition, 50.29% of the habitat is in favourable (good) condition and 0.02% of the habitat is in unknown condition. The structure and functions conservation status is, therefore, unfavourable-bad.

While there has been increase in the area predicted to be in 'good' condition and decrease in 'poor' condition since 2019, the trend has been classed as uncertain in the 2024 assessment. Limited data, differences in applying the BH3a methodologies in comparison to previous reporting, and low confidence in the assessment results means that there is uncertainty surrounding assessment of trends. Therefor the trend has been assessed as Uncertain. Overall, predicted area in good, not good and unknown condition was similar to that reported in the current assessment. In 2019, 48.19% of the habitat was in 'not good' condition, 51.72% was in 'good' condition, and 0.09% was unknown

7. Main pressures

7.1 Characterisation of pressures

Table 2: Pressures affecting the habitat, including timing and importance/impact ranking. Pressures are defined as factors acting currently and/or during the reporting period (2019–2024). Rankings are: High (direct/immediate influence and/or large spatial extent) and Medium (moderate direct/immediate influence, mainly indirect and/or regional extent).

Pressure	Timing	Ranking
PC01: Extraction of minerals (e.g. rock, metal ores, gravel, sand, shell)	Ongoing and likely to be in the future	Medium (M)
PD01: Wind, wave and tidal power (including infrastructure)	Ongoing and likely to be in the future	Medium (M)

PG03: Marine fish and shellfish harvesting activities causing physical loss and disturbance of seafloor habitats	Ongoing and likely to be in the future	High (H)
PJ01: Temperature changes and extremes due to climate change	Ongoing and likely to be in the future	Medium (M)
PJ10: Change of habitat location, size, and / or quality due to climate change	Only in future	Medium (M)
PJ11: Desynchronisation of biological / ecological processes due to climate change	Only in future	Medium (M)
PJ12: Decline or extinction of related species (e.g. food source / prey, predator / parasite, symbiote, etc.) due to climate change	Only in future	Medium (M)
PJ13: Change of species distribution (natural newcomers) due to climate change	Ongoing and likely to be in the future	Medium (M)
PC06: Dumping/depositing of inert and dredged materials from terrestrial and marine extraction	Ongoing and likely to be in the future	High (H)

7.2 Sources of information

See section 13 References

7.3 Additional information

No additional information

8. Conservation measures

8.1: Status of measures

a) Are measures needed?   Yes

b) Indicate the status of measures	Measures identified and taken
8.2 Main purpose of the measures taken	Restore the structure and functions, including the status of typical species (related to 'Specific structure and functions')
8.3 Location of the measures taken	Both inside and outside National Site Network
8.4 Response to measures	Long-term results (after 2036)

8.5 List of main conservation measures

Table 3: Key conservation measures addressing current pressures and/or anticipated threats during the next two reporting periods (2025–2036). Measures are ranked by importance/impact: High (direct/immediate influence and/or large spatial extent) and Medium (moderate direct/immediate influence, mainly indirect and/or regional extent).

Conservation measure	Ranking
MC03: Adapt/manage renewable energy installation, facilities and operation (excl. hydropower and abstraction activities)	Medium (M)
MG01: Management of professional/commercial fishing, shellfish and seaweed harvesting (incl. restoration of habitats)	High (H)
MC02: Adapt/manage exploitation of energy resources	Medium (M)
MC01: Adapt/manage extraction of non-energy resources	Medium (M)

8.6 Additional information

All offshore sandbanks which are located within SACs have an objective to 'maintain' or 'restore' or 'recover' the feature to 'favourable' condition for each attribute.

There is overlap between the feature and pressures known to impact the feature and it is in 'unfavourable' condition in SACs where it is protected.

Licensable activities, such as renewable energy developments, oil and gas, CCUS and aggregate extraction: The assessment and management of impacts on SACs from plans and projects in UK waters is carried out through the implementation of the Conservation of Offshore Habitats and Species Regulations 2017 requirements throughout the consenting process. The Conservation of Offshore Marine Habitats and Species Regulations are, amongst other things, mechanisms used to implement conservation measures for offshore European sites.

Fisheries management: Measures were introduced in 2022 to protect two offshore MPAs designated for this feature from the impacts of bottom towed gear.

9. Future prospects

9.1a Future trends of parameters

ai) Range   Overall stable

bi) Area	Negative - decreasing <=1% (one percent or less) per year on average
ci) Structure and functions	Negative - slight/moderate deterioration

9.1b Future prospects of parameters

aii) Range	Good
bii) Area	Poor
cii) Structure and functions	Bad

9.2 Additional information

The future trend for range has been identified as good as best available evidence suggests the range is likely to remain stable.

The future trend of area and structure and function have been identified as negative as a result of continued windfarm developments that are predicted to impact large areas of offshore sandbanks within MPAs such as Dogger Bank as well as outside of MPAs. Fisheries management measures were implemented in two offshore MPAs designated for this feature in 2022, however the effectiveness of these measures will need to be assessed.

10. Conclusions

10.1 Range	Favourable (FV)
10.2 Area	Favourable (FV)
10.3 Specific structure and functions (incl. typical species)	Unfavourable-bad (U2)
10.4 Future prospects	Unfavourable-bad (U2)
10.5 Overall assessment of Conservation Status	Unfavourable-bad (U2)
10.6 Overall trend in Conservation Status	Stable

10.7 Change and reason for change in conservation status

This field is not reported as the period 2019-2024 marks the first instance in which conservation status has been assessed at the national level, meaning no comparisons to previous reports can be drawn.

10.7 Change and reason for change in conservation status trend

This field is not reported as the period 2019-2024 marks the first instance in which conservation status has been assessed at the national level, meaning no comparisons to previous reports can be drawn.

10.8 Additional information

Conclusions for range, area, structure and function, future prospects, and overall trend were included within the UK assessment and not reported separately for offshore in 2019, however, it is likely that there are no differences in results in comparison to 2019.

Conclusions on Range and Area were Favourable due to stable trends and because the Area is approximately equal to the Favourable Reference Values.

Conclusions on Structure and Function utilised limited evidence and expert judgement to determine an Unfavourable-Bad condition. Approximately 50% of this feature is in not-good condition. SAC feature assessments similarly reflect this feature in Unfavourable condition.

The overall trend is Stable due to the trend for Area and Range being stable and the trend for Structure and Function being Uncertain.

11. UK National Site Network (pSCIs, SCIs, SACs) coverage for Annex I habitat types

11.1 Surface area of the habitat type inside the pSCIs, SCIs and SACs network (km²)

a) Minimum	
b) Maximum	
c) Best single value	16,573
11.2 Type of estimate	Best estimate
11.3 Habitat area inside the network; Method used	Based mainly on extrapolation from a limited amount of data

11.4 Short-term trend of habitat area within the network; Direction	Stable
11.5 Short-term trend of habitat area within the network; Method used	Based mainly on extrapolation from a limited amount of data
11.6 Short-term trend of habitat area in good condition within the network; Direction	Uncertain
11.7 Short-term trend of habitat area in good condition within the network; Method used	Based mainly on extrapolation from a limited amount of data

11.8 Additional information

The known area of this feature was intersected with SACs that contain qualifying marine habitats (designated grades A-C). Monitoring is in the initial stages and time series data is limited to assess condition within the site network. All sites are in Unfavourable condition.

12. Complementary information

12.1 Justification of percentage thresholds for trends

No justification information

12.2 Other relevant information

No other relevant information

13. References

Biogeographical and marine regions

3.2 Sources of information

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Main pressures

7.2 Sources of information

No sources of information

14. Explanatory Notes

Field label	Note
2.3: Distribution map; Method used	The distribution map represents areas of known occurrence of the habitat in 10km grid squares up to 2024.
4.1: Surface area	Range was calculated using mapped data of the habitat in addition to the area of sloping sandy sediment habitat down to 60 m and connected to a sandbank in less than 20 m of water. The 60 m limit is equivalent to the deepest known sandbank contour (found at Dogger Bank SAC). Mapped data of the habitat used the same methodology as 2019 and an updated sandy sediment layer, resulting in a different output to that of Area.
4.10: Favourable Reference Range (FRR)	Range is not restricted or notably fragmented. In the 2019 UK level assessment, the estimated Range was set as the FRR. Therefore, following the Operator Approach, <2% smaller than the FRR has been selected as the Favourable Reference Range.
4.11: Change and reason for change in surface area of range	Offshore range was included within the range calculation for UK waters in 2019 and not reported separately. The mapping of this feature has been improved and updated since the last reporting round with an updated sandy sediment layer. The range of offshore sandbanks in offshore UK waters covers 45,871km2
4.3: Short-term trend; Direction	As this feature is defined by topography and substrate type, its range is determined by geological and/or hydrodynamic processes depending on the type of sandbank (http://jncc.defra.gov.uk/page-1452). The nature of these processes means that the geographic range of this feature is likely to have remained the same in recent geological times. Although the surface area of this feature may have declined due to the presence of infrastructure and abrasion, there is no evidence that has significantly affected the geographic spread of this feature. Therefore, the short-term trend is thought to be stable.
5.13: Favourable Reference Area (FRA)	There is no reason to believe that the current area of the feature is below that required to maintain viability, so the

	feature is considered to be at its favourable reference area. In the 2019 UK level assessment, the estimated Area was set as the FRA. Therefore, following the Operator Approach, <2% smaller than the FRA has been selected as the Favourable Reference Area.
5.14: Change and reason for change in surface area	Improved mapping has resulted in a smaller surface area figure of 17,128 km2 since 2019 where the area was 17141 km²
5.4: Surface area; Method used	This map has been created by combining existing data (i.e. sandbanks already mapped within SACs) with an analysis of bathymetric depth, slope and aspect and sediment data across UK waters and is based on current best available evidence.
5.6: Short-term trend; Direction	The short-term trend of offshore sandbanks which are slightly covered by seawater at all times was included within the total UK trend in 2019 and not reported separately. Expert judgement was used to determine the overall short-term trend at the offshore UK-level. Area of sandbanks are determined by the presence of suitable substrate and the hydrological regime maintaining the sandbank and is, therefore, unlikely to change significantly overtime. Anthropogenic activities may have caused localised losses of area, however there is no evidence this has significantly affected the area of this feature. Therefore, the short-term trend is thought to be stable
6.2: Condition of habitat; Method used	Methodology - The indicator Disturbance to Benthic Habitats: Fisheries with mobile bottom-contacting gears (BH3a; Matear et al., 2023) was used to assess the area of the UK offshore (beyond 12nm) Annex I Sandbank. The indicator spatially combines different levels of fishing intensity pressure and habitat sensitivity data to estimate the distribution and degree of seafloor disturbance across the UK. Sensitivity of species and habitats to specific pressures is categorised as a combination of their ability to tolerate or withstand a given pressure (resistance), and their ability to recover structure and function (resilience). Potential disturbance estimates were calculated from aggregated 2016 to 2020 fishing pressure data (ICES,

2021). BH3a layers were intersected with Habitats Regulations feature layers for the offshore UK.

Disturbance categories were calculated for the aggregated pressure assessment periods (2016 - 2020). The disturbance categories are grouped as followed for summary; Zero: No reported VMS data or 0 SAR values; Low: Categories 1-4; Moderate: Categories 5-7; High: Categories 8 and 9; and Unassessed Disturbance: Areas where SAR values greater than 0 were reported but disturbance could not be assessed due to an absence of sensitivity information. Disturbance categories Zero and Low (0-4) are used to report Section 6.1a 'area in good condition' and disturbance categories Moderate and High (5-9) are used to report 6.1b 'area in not good condition'.

Caveats - For a full list of caveats associated with fishing pressure data provided by ICES, please refer to ICES (2021). Key caveats to consider when interpreting indicator results in this report are as follows:

• Fishing pressure was assumed to be homogeneous in distribution throughout each ICES c-square. This assumption can result in an overestimate of the extent of fishing pressure and an underestimate of intensity of fishing pressure within a c-square. It should be noted, this assumption is due to the restrictions on national fishing datasets that contributed to the ICES data call.

• Conversely, distribution and / or intensity of fishing pressure may be underestimated due to no VMS data for vessels less than 12m in length. Such vessels predominantly operate in coastal areas.

• There is a maximum interval of two hours between VMS pings; such a time gap creates uncertainty between interpolated vessel tracks and actual vessel position between VMS records.

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| | Habitat data for the BH3a indicator was obtained from an OSPAR scale combined habitat map produced by JNCC (Castle et al., 2021). Consequently, there may be discrepancies with the habitat information used for the BH3a indicator, and the ranges and extent of Habitats Regulations feature layers.

Additionally, in instances where pressure data intersected areas without sensitivity information, due to a lack of EUNIS habitat data or sensitivity assessment for the habitat in the QSR 2023 assessment, outputs were classified as 'Unassessed Disturbance' (unknown condition). |
|---|---|
| 7.1: Characterisation of pressures | For offshore sandbanks, the pressures and threats have remained the same since 2019, however extraction of minerals has increased, and the threats identified from offshore renewables and two climate change codes have now become ongoing pressures. The OSPAR thematic assessment of benthic habitats (OSPAR, 2023a) highlights that benthic habitats are impacted by activities operating and/or interacting with the biotic and abiotic components of the seafloor. Key pressures include shipping, fish and shellfish harvesting, extraction of minerals, tourism and leisure, renewable energy, submarine cables, oil and gas, agriculture, aquaculture and climate change causing physical disturbance, physical loss, and alterations to biological communities. Sandbanks are exposed to marine pollution from oil and gas operations and spillages and release from shipping. Pollution is, therefore, covered under the relevant pressure/threat codes.

Due to the increasing impacts from offshore wind, oil and gas, CCUS and cabling activities (most notably introducing hard substrata to the seabed via protective materials such as rock dump), this will continue to affect the benthic features of offshore MPAs, specifically the attributes extent and distribution as well as structure and function, and move these sites further away from achieving their conservation objectives. PC06: it is currently difficult to ascertain the full scale of impact for this pressure, however it is known to |

occur during construction, operation, maintenance and decommissioning of industries such as oil and gas. Rock dump results in a permanent physical change from one seabed type to another and repeated rock dumping may result in significant cumulative long-term localised changes to the communities associated with Annex I Sandbanks, therefore it is considered a High pressure as in 2019 (JNCC, 2022. Pidduck et al, 2017). Other pressures associated with oil and gas, CCUS and cabling activities are not considered High or Medium based on the methodology used for assessment. These pressures are still present and detrimental to habitats and are therefore marked as low due to limited spatial area affected (in comparison to the entire Annex I feature) or difficulties in measuring spatial scale of the pressure.

Medium and High ranked pressures include:

PC01: Aggregate extraction has increased in the Greater North Sea and remained stable in the Celtic Seas (OSPAR, 2023b). Trends reported until 2030 are uncertain, however expert judgement used best available evidence to suggest there is an increasing aggregate extraction pressure in offshore sandbanks (OSPAR, 2023b).

PD01: There has been a large increase in offshore renewable energy since 2010. The ranking of this pressure is considered medium due to its sensitivity to physical loss and physical disturbance and the spatial overlap of >10% identified from human activity layers. An increase in renewable energy is predicted until 2030 with further areas leased for development in the Southern North Sea, Northern North Sea, Eastern Channel and Irish Sea (OSPAR, 2023b).

PG03: Fishing activity has increased in the Celtic Seas and Greater North Sea. The ranking of this pressure is considered high due to its sensitivity to physical loss and physical disturbance and the spatial overlap of >25%

(unfavourable-inadequate threshold) identified from human activity layers. There has been an increase in areas protected from physical disturbance from fishing gear, however further evidence is required to assess the effectiveness of measures and the general trend until 2030 is uncertain (OSPAR, 2023b). There has been an increase in areas protected from physical disturbance from fishing gear, however further evidence is required to assess the effectiveness of measures.

Fishing pressures resulting in the removal of target and non-target species refer to any damage, loss or removal of species defined as a designated feature, or species integral to the integrity of a designated feature (for example key structural or influential species). As details of key structural and influential species for offshore sandbanks are yet to be fully defined, they are assessed more completely within the surface and subsurface abrasion pressures meaning PG01 is covered by this pressure/threat code.

PJ10, PJ11, PJ12: Climate change and ocean acidification cause direct and indirect pressures which can significantly alter the environmental conditions (e.g. decreases in pH, increases in sea surface temperature) necessary for benthic ecosystem processes and functions (OSPAR, 2023a). Calcifying organisms are thought to be vulnerable to ocean acidification under climate change, with some models predicting up to 13% of cold water coral reefs being in low-aragonite areas (Hoppit & Schmidt 2022, Moore & Smale 2020). Climatic models predict there will be changes to area of suitable habitat in the future depending on the climatic scenario (Moore & Smale, 2020). Other studies suggest ecosystem-level responses could remain stable over long periods of time, depending on the species involved (Moore & Smale, 2020). While confidence in evidence has increased from low to medium, there are still knowledge gaps meaning we are unable to fully assess the scale of benthic species and community responses in relation to climate change for broadscale habitats (Moore &

Smale, 2020).

PJ01, PJ13: The timing of these pressures are now considered ongoing now and in the future due to evidence to suggest temperature changes and extremes and changes in species distributions due to climate change is already occurring. Confidence in available evidence has increased from low to medium (Moore & Smale, 2020). Benthic habitats are predicted to face increased temperatures and frequency of heatwaves under climatic projections in the future. Offshore circalittoral sediments are thought to face a strong effect of increased temperatures in the future (QSR, 2023a). Benthic invertebrates and macroalgal species distributions and range shifts of local species, with some increase in warm-water affinity species especially in the South-West.

7.3: Additional information	The following steps were taken to identify ongoing pressures of the highest importance in the offshore: - The human activities and associated pressures to which the habitat's communities were highly and moderately sensitive were identified (JNCC, 2022. Tillin et al 2010). - These human activities/pressures were matched to the Habitats Regulations pressures list using the JNCC Pressures-Activities Database (JNCC, 2022). - Spatial overlap between the habitat and human activities was identified using the UK offshore benthic monitoring options risk assessment results (JNCC,2017). This overlap was sense checked against the most recent habitat extent and human activities layers. - Pressures were marked as high importance (H) when a high or moderate sensitivity was identified AND there was an overlap of >25% with the habitat - Pressures were marked as medium importance (M) when a high or moderate sensitivity was identified AND there was

a 10-25% overlap with the habitat

- Expert judgement used the best available information to determine if future impacts identified in the previous reporting cycle had transitioned into ongoing impacts or past impacts in the current reporting cycle. No pressures were determined to be acting in the past only.

The following steps were taken to identify future pressures of the highest importance:

- Expert judgement used the best available information and trends identified in the Quality Status Report (2023) to predict the main human activities (pressures) that are thought to have a future impact on the feature within the next two reporting cycles. Habitat sensitivity and spatial overlap were considered as they were for ongoing pressures with predicted future overlap considered where available.

Caveats - Human activities data - The monitoring options UK benthic habitats risk assessment and offshore MPA risk assessment (JNCC, 2017) were completed in 2016 and so use habitat and human activity data updated in that year. - The UK risk assessment gave results for sublittoral sediments (0m-70m in UK waters, which were thought to be broadly representative of the offshore sandbank area. The MPA risk assessment gave results for Annex I sandbanks within MPAs. - An assessment of the cumulative impacts of the reported high and medium importance pressures (Section 7) as well as low importance pressures has not been undertaken. See 2019 offshore H1110 report for more details on methodology - It currently not possible to quantify the loss of extent from rock dump and pressure is derived from expert judgement. - The details of the proposed windfarms have not yet been confirmed. The evidence used in relation to climate change has medium confidence (Moore & Smale, 2020).

8.1: Status of measures	There is overlap between 'Sandbanks which are slightly covered by sea water all the time' features and pressures known to impact this feature.

This feature is known to be in 'unfavourable' condition in offshore MPAs where it is protected, with objectives for all attributes ranging from 'maintain' to 'restore' (see 8.2).

Licensable activities, such as renewable energy developments, oil and gas, CCUS and aggregate extraction: The assessment and management of impacts from plans and projects in UK waters is carried out through the implementation of the Conservation of Offshore Habitats and Species Regulations 2017 requirements throughout the consenting process. The Conservation of Offshore Marine Habitats and Species Regulations 2017 are, amongst other things, mechanisms used to implement conservation measures for offshore European sites.

Fisheries management: Measures were introduced in 2022 to protect two offshore MPAs designated for this feature from the impacts of bottom towed gear. |
| 8.2: Main purpose of the measures taken | Conservation measures can help SACs to achieve their conservation objectives.

Offshore sandbanks are protected by five SACs, two of which are jointly managed by JNCC and Natural England. The objectives for all attributes relating to this habitat, in offshore SACs, is to 'maintain', 'restore' or 'recover' to 'favourable' condition with the exception of Bassurelle Sandbanks SAC, which has a 'maintain' objective for Extent and Distribution. |
| 8.3: Location of the measures taken | The Conservation of Offshore Marine Habitats and Species Regulations are, amongst other things, mechanisms used to implement conservation measures for offshore European sites. If Annex I features are identified during surveys outside of European sites, they may be given consideration in terms of the mitigation hierarchy. |

8.4: Response to the measures	MarESA (Marine Evidence based Sensitivity Assessment) indicates that the habitat is sensitive to the pressures caused by renewables energy projects and fishing including 'physical change to another seabed type'. The assessment suggests that the habitat has high sensitivity and very low resilience to the pressure 'physical change to another seabed type'. Sensitivity to surface and subsurface abrasion ('abrasion/disturbance of the surface of the substratum or seabed' and 'penetration or disturbance of the substratum subsurface') ranges from low to medium with resilience ranging from medium to high. MB0102 sensitivity matrix has L-H for sensitivity to the fishing pressures abrasion and physical loss for sandbank constituent sediments. MB0102 resilience scores are, therefore, high to very low which ranges from full recovery within 2 years to negligible or prolonged recovery; at least 25 years to recover structure and function (Tillin et al., 2010).
8.5: List of main conservation measures	MG01: Ranked as high. Fisheries management measures are in place in two offshore MPAs with Annex I 'Sandbanks which are slightly covered by sea water all the time'. The gear restrictions can remove or significantly reduce the pressure deriving from this type of activity. MC03: Ranked as medium. With regard to renewable energy installation, facilities and operation licensable activities have to submit an impact assessment to assess potential impacts of proposed development and identify mitigation measures where applicable. Activities are assessed but not necessarily restricted. MC01: Adapt/manage extraction of non-energy resources and MC02: Adapt/manage exploitation of energy resources have been included as medium conservation measures due to their importance in protecting habitats. Industry is required to report these activities and limit impact. While some of the pressures associated with these activities are ranked as low based on the methodology used to assess pressures, measures are in place and required to protect

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habitats.

Conservation measures linked to the high and medium pressures/threats (Section 7) but ranked as low:

MJ01: Implement climate change mitigation measures:

The Climate Change Act 2008 is the basis for the UK's approach to tackling and responding to climate change. The measure is ranked as low as it is unknown how this will impact marine habitats in the next two reporting periods.

9.2: Additional information	9.1a) The Future prospects are good because the future trend for range is thought to be stable and the range conclusion is favourable. Future prospects were combined for the whole of the UK and not reported separately for the offshore in 2019.
	9.1b) The future prospects are poor because the future trend for area is thought to be negative and the area conclusion is favourable. Future prospects were combined for the whole of the UK and not reported separately for the offshore in 2019. The future trend has been identified as negative as a result of windfarm developments that are predicted to increase the area of offshore sandbanks impacted and because fisheries management measures have been put in place too recently to assess effectiveness.
	9.1c) The future prospects are bad because the trend for structure and functions is thought to be negative and the structure and functions conclusion is unfavourable-bad. Future prospects were combined for the whole of the UK and not reported separately for the offshore in 2019. The future trend has been identified as negative as a result of further windfarm developments that are predicted to impact large areas of offshore sandbanks and measures have been put in place too recently to assess effectiveness.
	At time of assessment, a public consultation is underway proposing closure of the MPAs in England to bottom towed

	gear. If enacted, this will affect the remaining English offshore MPAs designated for Sandbanks (North-Norfolk Sandbank and Saturn Reef; Haisborough, Hammond and Winterton; and Bassurelle Sandbank).
10.1: Range	Conclusion on Range reached because: (i) the short-term trend direction in Range surface area is stable and (ii) the current Range surface area is approximately equal to the Favourable Reference Range.
10.2: Area	Conclusion on Area covered by habitat reached because: (i) the short-term trend direction in Area is stable; (ii) the current Area is approximately equal to the Favourable Reference Area.
10.3: Specific structure and functions	Conclusion on Structure and functions reached because habitat condition data indicates that more than 25% of the habitat is in unfavourable (not good) condition and the short-term trend is uncertain.
10.4: Future prospects	Conclusion on Future prospects reached because: (i) the Future prospects for Range are good; (ii) the Future prospects for Area covered by habitat are poor; and (iii) the Future prospects for Structure and functions are bad.
10.5: Overall assessment of Conservation Status	Overall assessment of Conservation Status is Unfavourable-bad because one or more of the conclusions is Unfavourable-bad.
10.6: Overall trend in Conservation Status	Overall trend in Conservation Status is based on the combination of the short-term trends for Range - stable, Area covered by habitat - stable, and Structure and functions - uncertain.
6.1: Condition of habitat	This parameter has been assessed through the use of the BH3a indicator (See 6.2). At time of assessment, all MPAs are classed as Unfavourable The Condition of Benthic Habitat Communities BH2b indicator (Wijnhoven et al, 2023; Duncombe-Smith et al 2024) was used to supplement offshore assessment of sandbanks. The BH2b indicator is based on the Margalef diversity index (i.e., number of species corrected for their abundance) which is calculated at sample level and

compared against reference values to obtain a Relative Margalef diversity index (DM') to assess the state of benthic habitats (median value from multiple samples). Relative Margalef diversity ranges from 0 to 1, with higher values associated to higher diversity (where DM' value are greater than 1, these are considered as DM' = 1). BH2b results use broad-scale benthic habitat type classifications based on the North Atlantic definitions (MSFD definitions).

Margalef diversity was shown to be one of the best performing benthic indices when assessing pressures in the Southern North Sea and can be regarded as a generally applicable multi-pressure index with relatively high sensitivity and precision (van Loon et al., 2018).

Reference values for Margalef diversity (Dref) are determined from samples in location of low reported fishing pressure and are habitat and area specific (where possible). Dref is estimated by taking the 75, 95 or 99 percentile value of Margalef diversity (DM), grouping samples by broad-scale habitat, 'Assessment Unit' (OSPAR assessment units in the Greater North Sea). Where assessment unit and broad-scale habitat specific reference values can't be calculated averages reference values are taken from combinations of assessment unit, depth zone, and sediment type to give a reference value. Reference values in the Greater North Sea were calculated as part of the BH2b QSR 2023 assessment.

Sample results were grouped across broad-scale habitats to give final results by feature. The representation of different broad-scale habitats sampled within these feature polygons might influence the aggregated results. England's offshore sandbanks were classed as Low Diversity. There is low confidence in these results as data were collected between 2009-2015.