Reporting under the Habitat Regulations (as amended)[1]

2019-2024

Conservation status assessment for the species:

S2032 - White-beaked dolphin

(*Lagenorhynchus albirostris*)

United Kingdom

[1] Habitat Regulations (as amended):

- The Conservation of Habitats and Species Regulations 2017 (as amended), Regulation 9A
- The Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended), Regulation 6A
- Report under The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended), regulation 3ZA
- The Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended), regulation 3ZA

For further information please contact:

Joint Nature Conservation Committee. Quay House, 2 East Station Road, Fletton Quays, Peterborough, PE2 8YY. https://jncc.gov.uk

This report was produced by JNCC in collaboration with the UK Country Nature Conservation Bodies (CNCBs) and country governments.

This document should be cited as:

JNCC, Department of Agriculture, Environment and Rural Affairs, Natural England, Natural Resources Wales & NatureScot. (2026). Conservation status assessment for the species: S2032 White-beaked dolphin (*Lagenorhynchus albirostris*).

Important note - Please read

- The information in this document represents the United Kingdom Reporting under the Habitat Regulations (as amended)[1], for the period 2019-2024.
- It is based on supporting information provided by Joint Nature Conservation Committee and UK Country Nature Consevation Bodies (CNCBs), which is documented separately.
- 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.
- Map showing the distribution and range of the species is 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 species (section 12 National Site Network coverage for Annex II species).

Further details on the approach to the Habitats Regulations Reporting 2019-2024 are available on the JNCC website.

Assessment Summary: White-beaked dolphin

Distribution and Range Map

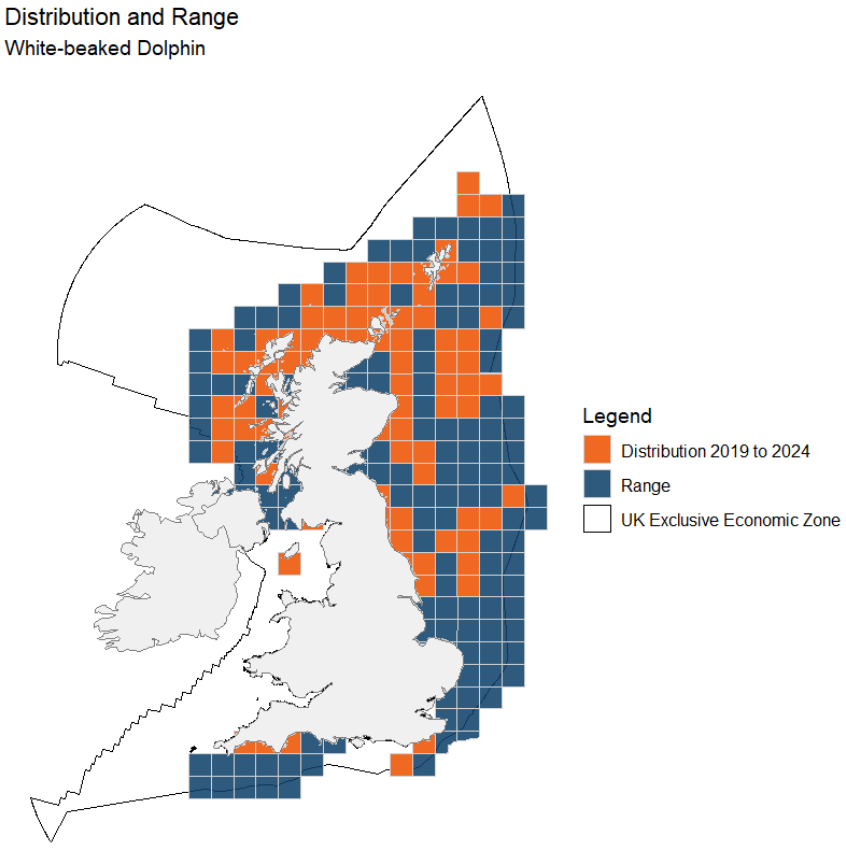

Figure 1: United Kingdom distribution and range map for S2032 - White-beaked dolphin (*Lagenorhynchus albirostris*). The 50km grid square distribution map is based on available species records within the current reporting period.

Table 1: Table summarising the conservation status for S2032 - White-beaked dolphin (*Lagenorhynchus albirostris*). Overall conservation status for species is based on assessments of range, population, habitat for the species, and future prospects.

Overall Conservation Status (see section 11)

Unknown (XX)

Breakdown of Overall Conservation Status

Range (see section 5)	**Favourable (FV)**
Population (see section 6)	**Favourable (FV)**
Habitat for the species (see section 7)	**Unknown (XX)**
Future prospects (see section 10)	**Unknown (XX)**

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National Level

1. General information

1.1 Country	United Kingdom
1.2 Species code	S2032
1.3 Species scientific name	*Lagenorhynchus albirostris*
1.4 Alternative species scientific name	
1.5 Common name	White-beaked dolphin
Annex(es)	IV

2. Maps

2.1 Sensitive species	No
2.2 Year or period	2019-2022
2.3 Distribution map	Yes
2.4 Distribution map; Method used	Complete survey or a statistically robust estimate

2.5 Additional information

The distribution map is based on verified sightings data of white-beaked dolphin between 2019 and 2024. The sightings were collated from SCANS IV, Pelagis French surveys, NBN Atlas, European Seabirds at Sea, the Joint Cetacean Data Programme, POSEIDON project, University of Aberdeen, The Crown Estate Marine Data Exchange, Whale and Dolphin Conservation, Hebridean Whale and Dolphin Trust, ORCA, Sea Watch Foundation, Marine Discovery Penzance, Sussex Dolphin Project, Cornwall Seal Group Research Trust and Cardigan Bay Marine Wildlife Centre.

3. Information related to Annex V Species

3.1 Is the species taken in the wild / exploited?

3.2 What measures have been taken?

a) Regulations regarding access to property

b) Temporary or local prohibition on the taking of specimens in the wild and exploitation

c) Regulation of the periods and/or methods of taking specimens

d) Application of hunting and fishing rules which take account of the conservation of such populations

e) Establishment of a system of licences for taking specimens or of quotas

f) Regulation of the purchase, sale, offering for sale, keeping for sale, or transport for sale of specimens

g) Breeding in captivity of animal species as well as artificial propagation of plant species

Other measures

Other measures description

3.3: Hunting bag or quantity taken in the wild for Mammals and Acipenseridae (Fish)

a) Unit

Table 2: Quantity taken from the wild during the reporting period (see 3.3a for units). For species with defined hunting seasons, Season 1 refers to 2018/2019 (autumn 2018 to spring 2019), and Season 6 to 2023/2024. For species without hunting seasons, data are reported by calendar year: Year 1 is 2019, and Year 6 is 2024.

	Season/ year 1	Season/ year 2	Season/ year 3	Season/ year 4	Season/ year 5	Season/ year 6
b) Minimum	-	-	-	-	-	-
c) Maximum	-	-	-	-	-	-
d) Unknown	-	-	-	-	-	-

3.4: Hunting bag or quantity taken in the wild; Method used

3.5: Additional information

No additional information

Biogeographical Level

4. Biogeographical and marine regions

4.1 Biogeographical or marine region where the species occurs MATL

4.2 Sources of information

See section 14 References

5. Range

5.1 Surface area (km²)	488,645
5.2 Short-term trend; Period	2013-2024
5.3 Short-term trend; Direction	Stable
5.4 Short-term trend; Magnitude	
a) Estimated minimum	
b) Estimated maximum	
c) Pre-defined range	
d) Unknown	
e) Type of estimate	
f) Rate of decrease	
5.5 Short-term trend; Method used	Complete survey or a statistically robust estimate
5.6 Long-term trend; Period	1994-2024
5.7 Long-term trend; Direction	Stable
5.8 Long-term trend; Magnitude	
a) Minimum	

b) Maximum	
c) Rate of decrease	
5.9 Long-term trend; Method used	Complete survey or a statistically robust estimate

5.10 Favourable Reference Range (FRR)

a) Area (km²)	475,589
b) Pre-defined increment	
c) Unknown	No
d) Method used	Model-based approach
e) Quality of information	moderate

5.11 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

5.12 Additional information

The distribution is based on verified sightings data of white-beaked dolphin between 2019 and 2024. The sightings were collated from SCANS IV, Pelagis French surveys, NBN Atlas, European Seabirds at Sea, the Joint Cetacean Data Programme, POSEIDON project, University of Aberdeen, The Crown Estate Marine Data Exchange, Whale and Dolphin Conservation, Hebridean Whale and Dolphin Trust, ORCA, Sea Watch Foundation, Marine Discovery Penzance, Sussex Dolphin Project, Cornwall Seal Group Research Trust and Cardigan Bay Marine Wildlife Centre.

UK waters represent the southern range limit for this species (Williamson et al. 2023), therefore white-beaked dolphin is restricted to northern waters of the UK EEZ, the North

Sea and an isolated population found in the western Channel. Over recent years, white-beaked dolphin have been reported in the eastern Channel and the northern Irish sea though these areless common. However, the range has been extended to include these areas.

The FRR was based on an analysis of effort-related survey spanning 1994-2010 compiled for the Joint Cetacean Protocol (JCP) undertaken by Paxton et al. (2016). The estimated range was based on a modelled prediction of white-beaked dolphin distribution during August 2010 and adapted based on additional sightings data and expert knowledge (see Paxton et al., 2016 for further detail).

Since the 2019 Habitats Directive Article 17 assessments, the FRR has changed due to the removal of the EEZ extension into offshore waters west of Scotland. This area has been removed due to lack of data for all species, and subsequent impact on confidence in assessments. This does not represent genuine change in FRR.

6. Population

6.1 Year or period	2022

6.2 Population size (in reporting unit)

a) Unit	number of individuals
b) Minimum	29,484
c) Maximum	75,536
d) Best single value	47,192
6.3 Type of estimate	95% confidence interval
6.4 Quality of extrapolation to reporting unit	high

6.5 Additional population size (using population unit other than reporting unit)

a) Unit	
b) Minimum	
c) Maximum	
d) Best single value	
e) Type of estimate	

6.6 Population size; Method used	Complete survey or a statistically robust estimate
6.7 Short-term trend; Period	2016-2022
6.8 Short-term trend; Direction	Increasing
6.9 Short-term trend; Magnitude	
a) Estimated minimum	
b) Estimated maximum	
c) Pre-defined range	Increasing 13 - 25%
d) Unknown	No
e) Type of estimate	95% confidence interval
f) Rate of decrease	
6.10 Short-term trend; Method used	Complete survey or a statistically robust estimate
6.11 Long-term trend; Period	2005-2022
6.12 Long-term trend; Direction	Increasing
6.13 Long-term trend; Magnitude	
a) Minimum	
b) Maximum	
c) Confidence interval	
d) Rate of decrease	
6.14 Long-term trend; Method used	Complete survey or a statistically robust estimate

6.15 Favourable Reference Population (FRP)

ai) Population size	21,256
aii) Unit	number of individuals
b) Pre-defined increment	

c) Unknown	No
d) Method used	Model-based approach
e) Quality of information	high

6.16 Change and reason for change in population size

a) Change	Yes
b) Genuine change	Yes
c) Improved knowledge or more accurate data	No
d) Different method	No
e) No information	No
f) Other reason	No
g) Main reason	Genuine change

6.17 Additional information

The abundance of white-beaked dolphins within the UK EEZ has continued to increase since 2005 (Hammond et al., 2021; Gilles, et al., 2023). This follows the same pattern of increase for the wider SCANS survey. The abundance of white-beaked dolphin has increased in the NE Atlantic based on the latest SCANS survey in 2022 in comparison to previous surveys in 2015 and 2005 (Gilles et al. 2023). In previous abundance estimates the confidence intervals overlap considerably indicating that there is no significant difference between these estimates.

The wider context for white-beaked dolphin population in the NE Atlantic depends on the outputs from NASS 2024 survey in the NAMMCO region once published.

The FRV for population (21256 CV: 0.293 CI: 12117-37287) was calculated based on estimates from SCANS II in 2005 (Hammond, et al., 2021) and CODA in 2007 (Hammond, et al., 2009), supplemented with density estimates from neighbouring regions to fill data gaps within the UK EEZ and limit extrapolation where possible; ObSERVE in Irish waters (Rogan, e al., 2018), and NASS and T-NASS (Pike, et al., 2019a; Pike, et al., 2019b) and NILS (Leonard and Øien, 2020a; Leonard and Øien, 2020b) surveys in the NAMMCO region.

Since the 2019 Habitats Directive Article 17 assessments, the FRV has changed due to the removal of the EEZ extension into offshore waters west of Scotland. This area has

been removed due to lack of data for all species, and subsequent impact on confidence in assessments. This does not represent genuine change in FRV.

As short-term trend in population has been determined as increasing, the pre-defined range field has been used to indicate a magnitude. However, population estimates have been calculated from large-scale surveys at approximately decadal intervals, and the confidence intervals associated with population estimates are wide. Thus, confidence in the magnitude is low.

6.18 Age structure, mortality and reproduction deviation	Unknown

7. Habitat for the species

7.1 Sufficiency of area and quality of occupied habitat (for long-term survival)

a) Is area of occupied habitat sufficient?	Unknown
b) Is quality of occupied habitat sufficient?	Unknown
c) If No or Unknown, is there a sufficiently large area of unoccupied habitat of suitable quality?	Unknown

7.2 Sufficiency of area and quality of occupied habitat; Method used

a) Sufficiency of area of occupied habitat; Method used	Based mainly on expert opinion with very limited data
b) Sufficiency of quality of occupied habitat; Method used	Based mainly on expert opinion with very limited data

7.3 Short-term trend; Period

7.4 Short-term trend; Direction	Unknown
7.5 Short-term trend; Method used	Based mainly on expert opinion with very limited data

7.6 Long-term trend; Period

7.7 Long-term trend; Direction	Unknown
7.8 Long-term trend; Method used	Based mainly on expert opinion with very limited data

7.9 Additional information

Direct evidence of cetacean habitat quality is limited as presently, a comprehensive understanding of the key elements important to the species is undetermined. In some cases, conclusions for species range and population could be indicative of habitat quality by proxy, however confidence in assessment outputs would be low.

8. Main pressures

8.1 Characterisation of pressures

Table 3: Pressures affecting the species, 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
PC07: Geotechnical surveying	Ongoing and likely to be in the future	Medium (M)
PF12: Residential, commercial and industrial activities and structures generating noise, light, heat or other forms of pollution	Ongoing and likely to be in the future	Medium (M)
PG01: Marine fish and shellfish harvesting causing reduction of species/prey populations and disturbance of species (professional)	Ongoing and likely to be in the future	Medium (M)
PG13: Bycatch and incidental killing (due to fishing and hunting activities)	Ongoing and likely to be in the future	Medium (M)
PK02: Mixed source marine water pollution (marine and coastal)	Ongoing and likely to be in the future	Medium (M)
PJ13: Change of species distribution (natural newcomers) due to climate change	Ongoing and likely to be in the future	Medium (M)
PJ12: Decline or extinction of related species (e.g. food source / prey, predator / parasite, symbiote, etc.) due to climate change	Ongoing and likely to be in the future	Medium (M)

PX02: Threats and pressures from outside the Member State	Ongoing and likely to be in the future	Medium (M)

8.2 Sources of information

See section 14 References

8.3 Additional information

PC07: Regional pressure in the North Sea and the Irish Sea.

PJ13: Pressure PJ13 is the closest appropriate pressure but is being used to consider all changes in species distribution, including range contractions (i.e., not only natural newcomers).

PX02: Relating to continued whaling of this species outside of UK waters which may be having an impact on populations.

9. Conservation measures

9.1: Status of measures

a) Are measures needed?	Yes
b) Indicate the status of measures	Measures identified and taken
9.2 Main purpose of the measures taken	Maintain the current range, population and/or habitat for the species
9.3 Location of the measures taken	Both inside and outside National Site Network
9.4 Response to measures	Medium-term results (within the next two reporting periods, 2025–2036)

9.5 List of main conservation measures

Table 4: 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
MC02: Adapt/manage exploitation of energy resources	High (H)

MC03: Adapt/manage renewable energy installation, facilities and operation (excl. hydropower and abstraction activities)	High (H)
MG01: Management of professional/commercial fishing, shellfish and seaweed harvesting (incl. restoration of habitats)	High (H)
MG05: Reduce bycatch and incidental killing of non-target species	High (H)
MK01: Reduce impact of mixed source pollution	High (H)
MG04: Control/eradication of illegal killing, fishing and harvesting of wild plants, fungi and anmals	High (H)
MH01: Reduce impact of military installations and activities	High (H)

9.6 Additional information

This species is not an Annex II species and therefore the designation of SACs is not required, as stipulated in the Habitats Regulations. However, as a European Protected Species, protection is provided throughout UK waters and it is an offence to kill, injure or disturb. The UK remains committed to the conservation of marine mammals in UK waters and the implementation of measures to mitigate the impact of pressures and conservation measures have been undertaken in the UK and adjacent waters as part of the requirements of the Habitats Regulations. Such measures include monitoring bycatch, monitoring strandings data to monitor current and identify emerging pressures, application of appropriate management measures, and noise monitoring and mitigation with regards to offshore industry. This is reflected in the list of conservation measures under field 9.5. The UK also supports a range of international agreements and conventions on the conservation of marine mammals and the marine environment. For example: The Convention on Migratory Species; the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR). A UK Cetacean Conservation Strategy is currently in development, due for publication shortly. The strategy is intended to support decision making and identify actions necessary to maintain or improve the conservation status of cetaceans in UK waters. Defra and devolved administrations fund national strandings schemes for cetaceans which aim to: collate, analyse and report data for all cetacean strandings around the coast of the UK; determine the causes of death (both natural and anthropogenic) in stranded cetaceans, including bycatch and physical trauma and; undertake surveillance on the incidence of disease in stranded cetaceans in order to identify any substantial new threats to their conservation status.

10. Future prospects

10.1a Future trends of parameters

ai) Range	Unknown
bi) Population	Unknown
ci) Habitat for the species	Unknown

10.1b Future prospects of parameters

aii) Range	Unknown
bii) Population	Unknown
cii) Habitat for the species	Unknown

10.2 Additional information

Uncertainty of the prospective impact of climate change on the range and distribution of this species in UK waters is driving the 'Unknown' outcomes for Future Prospects (Williamson et al., 2021).

11. Conclusions

11.1 Range	Favourable (FV)
11.2 Population	Favourable (FV)
11.3 Habitat for the species	Unknown (XX)
11.4 Future prospects	Unknown (XX)
11.5 Overall assessment of Conservation Status	Unknown (XX)
11.6 Overall trend in Conservation Status	Stable

11.7 Change and reason for change in conservation status

a) Change	No
b) Genuine change	
c) Improved knowledge or more accurate data	
d) Different method	

e) No information	
f) Other reason	
g) Main reason	

11.7 Change and reason for change in conservation status trend

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

11.8 Additional information

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 larger than the Favourable Reference Range.

Conclusion on Population reached because: (i) the short-term trend direction in Population size is increasing; and (ii) the best estimate for population size is greater than the Favourable Reference Population.

Conclusion on Habitat for the species reached because: (i) it is unknown whether the area of habitat is sufficiently large; (ii) it is unknown if habitat quality is sufficient for the long-term survival of the species; and (iii) the short-term trend in area and quality of habitat is unknown.

Conclusion on Future prospects reached because: (i) the Future prospects for Range are Unknown; (ii) the Future prospects for Population are Unknown; and (iii) the Future prospects for Habitat for the species are Unknown.

Overall assessment of Conservation Status is Unknown because all conclusions are Unknown.

Overall trend in Conservation Status is based on the combination of the short-term trends for Range - stable, Population - increasing, and Habitat for the species - unknown.

Evidence suggests trends in distribution are becoming apparent for this species likley driven by climate change, which is contributing to some uncertainty in conclusions for future prospects for this species.

12. UK National Site Network (pSCIs, SCIs, SACs) coverage for Annex II species

12.1 Population size inside the pSCIs, SCIs and SACs network

a) Unit	
b) Minimum	
c) Maximum	
d) Best single value	
12.2 Type of estimate	
12.3 Population size inside the network; Method used	
12.4 Short-term trend of population size within the network; Direction	
12.5 Short-term trend of population size within the network; Method used	
12.6 Short-term trend of habitat for the species inside the pSCIs, SCIs and SACs network; Direction	
12.7 Short-term trend of habitat for the species inside the pSCIs, SCIs and SACs network; Method used	

12.8 Additional information

No additional information

13. Complementary information

13.1 Justification of percentage thresholds for trends

No justification information

13.2 Trans-boundary assessment

No trans-boundary assessment information

13.2 Other relevant information

No other relevant information

14. References

Biogeographical and marine regions

4.2 Sources of information

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Main pressures

8.2 Sources of information

No sources of information

15. Explanatory Notes

Field label	Note
8.1: Characterisation of pressures	PJ12 Decline or extinction of related species (e.g. food source / prey, predator / parasite, symbiot, etc.) due to climate change. There is no current evidence for the effects of climate change on white-beaked dolphins. However, the effects of climate change on prey availability is likely to be mediated through variation in prey resource initially. Previous studies have highlighted that white-beaked dolphins may have a varied diet (Fall and Skern-Mauritzen, 2014; Jansen et al, 2010; Jansen, 2013) and are able to change distributions in repsonse to changes in prey distribution (Malinauskaite et al., 2022; Pike et al., 2022). They may therefore adapt to new food sources, potentially reducing the impact of this threat. However, recent stable isotope analysis has higlighted that white-beaked dolphins showed low dietary plasticity, indicating limited ability to adapt to changes in prey avaialability (Plint et al., 2023). Further, a high overlap in diet preferences with short-beaked common dolphin was found (Plint et al., 2023). With suggestions that short-beaked common dolphin distributions are moving north (Williamson et al., 2021), and will overlap more with the distribution of white-beaked dolphin this may exacerbate the impact of this pressure.
8.1: Characterisation of pressures	PC07 Geotechnical surveying. The primary impact of this pressure is disturbance which is indirect with evidence of recovery/return once the pressure is removed. There is also a lesser risk of injury if in close proximity, which may indirectly lead to impairment and or mortality (Mann et al., 2010). White-beaked dolphins were the most frequently encountered species recorded during visual and/or acoustic observation between 1994 and 2010 in UK waters by Stone (2015) indicating relatively high exposure to seismic noise. A study in Iceland indicated white-beaked dolphins have noise sensitivity thresholds comparable to harbour porpoise and are therefore potentially vulnerable to high frequency activity (Nachtigall et al., 2008). Seismic and other

	geotechnical surveys have an immediate influence on white-beaked dolphins, causing disturbance. The species shows strong avoidance of seismic activity (Stone, 2015, Stone et al., 2017) with significant increases in fast swimming (Stone, 2003), orientation variation, and displaying strong lateral spatial avoidance (Stone and Tasker, 2006). Studies in Iceland have also demonstrated that more white-beaked dolphin whistles were detected during periods of reduced marine traffic (overnight and during Covid-19 pandemic), suggesting avoidance responses to vesssel noise (Reverberi, 2023). This may indirectly influence survival and/or fecundity. Close proximity to noise created by geotechnical activity also has potential to cause injury, although evidence for the impact and level of risk is limited. This is also mitigated through guidance on operations such as soft start and on board marine mammal observers. Pressure is likely to be regionally significant during operations and will be higher in the North Sea and Celtic and Irish Seas.
8.1: Characterisation of pressures	PF12 Industrial or commercial activities and structures generating noise, light, heat or other forms of pollution. Cetaceans rely on echolocation for navigation, foraging and communication, making them sensitive to noise in the marine environment (Middel and Verones, 2017). Although various individual sources of disturbance have been identified as potential pressures in the pre-defined EU list, such as noise from shipping vessels or renewable energy devices, these pressures independently have not been identified as Medium or High risk to white-beaked dolphins in UK waters. The cumulative effect of such disturbances however, has the potential to increase energy expenditure through avoidance and decreased foraging. Furthermore, excessive anthropogenic noise may have the potential for auditory masking and reduced communication between individuals (Merchant et al., 2014). Studies in Iceland have also demonstrated that more white-beaked dolphin whistles were detected during periods of reduced marine traffic (overnight and during Covid-19 pandemic), suggesting avoidance responses to vesssel noise (Reverberi, 2023).

	However, there is currently a scarcity of evidence on the impact of anthropogenic noise on white-beaked dolphins.
8.1: Characterisation of pressures	PG01 Marine fish and shellfish harvesting (professional, recreational) causing reduction of species/prey populations and disturbance of species. Starvation was reported in 13% of animals examined through the through the UK Cetacean Stranding Investigation Programme (10 of 79 adults) between 2001-2017 (UK Cetacean Stranding Investigation Programme (CSIP) annual reports http://ukstrandings.org/csip-reports), although only one of 25 examined adult animals (4%) was thought to have died due to starvation between 2018 and 2022 (Deaville, 2021). White-beaked dolphins have a varied diet (Fall and Skern-Mauritzen, 2014) and are known to feed on at least 25 different fish species, many of which are commercially targeted by fisheries (e.g. whiting and cod) (Jansen et al, 2010; Jansen, 2013). However, recent stable isotope analysis has higlighted that white-beaked dolphins showed low dietary plasticity, indicating limited ability to adapt to changes in prey avaialability (Plint et al., 2023). Further, a high overlap in diet preferences with short-beaked common dolphin was found (Plint et al., 2023) and with suggestions that short-beaked common dolphin distributions are moving north (Williamson et al., 2021), overlapping more with the distribution of white-beaked dolphin the issue of prey depletion may be exacerbated. It should be noted that prey depletion can occur due to both natural and anthropogenic causes. No direct link has been established between commercial fishing practices and the cases of cetacean starvation recorded from the UK CSIP.
8.1: Characterisation of pressures	PG13 Bycatch and incidental killing (due to fishing and hunting activities). Bycatch in pelagic trawl nets in the North Sea has historically been noted as a risk for white-beaked dolphins (Morizur et al., 1999). Between 2000-2017, 3% (2 of 79 animals examined) of mortality investigated by the UK CSIP was caused by bycatch and there are two records (2011 - 2017) of white-beaked dolphin bycatch through the UK bycatch observer monitoring programme, one in pelagic

	gear and one in a demersal set net. No stranded animals were determined as bycatch related between 2018 and 2022 (Deaville 2019:2024). Given the direct impact of bycatch, but with limited evidence of significant impact, the pressure is ranked as medium.
8.1: Characterisation of pressures	PK02 Mixed source marine water pollution (marine and coastal). The general impact of contaminants on cetaceans is well documented, including impacts on the immune system and reproduction (Jepson et al, 2016). The concentration is highly dependent on the age, sex, reproductive state and nutritional condition of the animals in addition to the intake via the food web. There is limited information on the severity of chemical pollutants found in white-beaked dolphins, however one study found that perfluorinated organochemicals (PFOCs) levels in white-beaked dolphins were amongst the highest in sampled marine mammal species stranded along the North Sea coast (Van De Vijver et al., 2003). Another study found concentrations of PCBs which exceeded toxic thresholds in 2 of 3 white-beaked dolphins sampled; one of these samples contained 155 different PCBs, the highest number found (jointly with Risso's; Megson et al., 2022).
8.1: Characterisation of pressures	PJ13 Change of species distribution (natural newcomers) due to climate change. There is limited evidence of this impact from around the UK but studies in Iceland have demonstrated a northward shift in this species due to environmental change and changes in the distribution/ availability of prey (Malinauskaite et al., 2022; Pike et al., 2020).
8.1: Characterisation of pressures	PI04 Plant and animal disease, pathogens and pests. Necropsies of stranded animals highlights consistent evidence of parasitic infestation and infection from pathogens, with cause of death attributed to bacterial or parasitic infections in 24% of necropsied animals between (Deaville 2019:2024; Brownlow et al., 2019; Scottish Marine Animal Stranding Scheme, 2022).
8.1: Characterisation of pressures	PX02 Threats and pressures from outside the Member State. Related to the continued take of this species in

	neighbouring waters. White-beaked dolphins are hunted without quota in the Faroe Islands and Greenland although catch data is limited and are combined with Atlantic white-sided dolphin catch data (Simmonds et al., 2021), thus it is difficult to determine the extent of this pressure on white-beaked dolphin specifically. Numbers may be significant with over 400 white-sided/white-beaked dolphins recorded in some years over the past decade (http://www.whaling.fo/en/regulated/450-years-of-statistics/catches).
9.5: List of main conservation measures	MG05 Reduce bycatch and incidental killing of non-target species.The UK is implementing the EU Technical Conservation Measures Regulation transposed into UK regulations which lays down measures concerning incidental catches of vulnerable species in fisheries, and more generally the bycatch obligations within the Habitats Regulations. Since 2004, a dedicated bycatch monitoring programme has been in place, with both dedicated and non-dedicated onboard observers collecting data on bycatch numbers. These data inform implementation and potential effectiveness of measures such as pingers. There is a requirement for all fishing vessels over 12m using gill nets or entanglement nets to use pingers under the criteria laid out in the regulation. Inshore Vessel Monitoring System (iVMS) devices are being implemented for under-12 metre fishing vessels, allowing data on latitude, longitude, course and speed to be recorded and help improve the management and sustainability of the marine environment. Legislation to make iVMS mandatory on under-12 metre vessels is expected to come into effect in 2024 in England. In Scotland, consultation on the introduction mandatory electronic tracking for under-12 metre vessels was carried out in late 2023. Legislation requiring iVMS for under-12 metre vessels operating in Welsh waters has been in place since 2022. Since February 2022 it has been mandatory for under-10 metre fishing vessels in English and Welsh waters to create and submit a catch record for every fishing trip through the Catch Recording Application (Catch App or Record your Catch). Data is collected on vessel, trip, gear, area fished and catch and can be used to inform on fishing

	activity by gear type and species. Furthermore, the UK Marine Wildlife Bycatch Mitigation Initiative (published August 2022) aims to improve our understanding of bycatch and entanglement of sensitive marine species through monitoring and scientific research, identify 'hotspot" or high-risk areas/gear types/fisheries in which to focus monitoring and mitigation, and develop and implement effective measures to minimise bycatch/entanglement. Currently work is progressing towards development of a bycatch risk framework across all PET species to apply all available evidence and support targeted monitoring.
9.5: List of main conservation measures	MK01 Reduce impact of mixed source pollution. The impact of chemical pollution on white-beaked dolphin remains an issue (Jepson et al, 2016), however, establishing measures beyond the historic ban on PCB use, has not been achieved to date. Further information is required to understand where exposure is occurring to be able to identify appropriate measures.
9.5: List of main conservation measures	MH01 Reduce impact of military installations and activities. To reduce the risk of noise impact on marine mammals, the UK Ministry of Defence (MOD) has a Statement of Intent with UK Statutory Nature Conservation Bodies concerning conduct in relation to marine disturbance. The MOD has developed a real-time alert procedure for naval training operations. This enables localised information on cetacean sightings to be incorporated into the training schedule and for operations to be relocated if necessary.
9.5: List of main conservation measures	MG04 Control/eradication of illegal killing, fishing and harvesting: The Habitats Directive is transposed into UK law under the Habitat Regulations (HR) for England and Wales (as amended) and the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended), which make it an offence to kill, injure, capture or disturb European marine protected species. Similar legislation exists for Scottish and Northern Irish inshore waters.
9.5: List of main conservation measures	MC02 Adapt/manage exploitation of energy resources: Guidance for the protection of marine European Protected Species from deliberate injury, killing and disturbance has

	been drafted (JNCC 2010a; Marine Scotland, 2014). Marine Industries generate a variety of noise through activities such as geophysical surveys (e.g. seismic surveys (JNCC 2017)), construction (e.g. pile driving (JNCC 2010b)) and decommissioning (e.g. use of explosives (2010c)). As part of the licencing procedures, developers and operators are required to utilise JNCC guidelines to minimise the risk of injury to cetaceans when undertaking such activities (JNCC, 2010b, 2010c; 2017; 2023; 2025; JNCC, Natural England & Cefas, 2025). The guidelines advise on conducting marine mammal observations prior to and during the activity and, where suitable, utilising procedures such as soft start (gradual introduction of the sound) to reduce and avoid direct harm to animals. A review of the marine mammal observer data demonstrated the effectiveness of soft start approach (Stone et al, 2017).
9.5: List of main conservation measures	MC03 Adapt/manage renewable energy installation, facilities and operation (excl. hydropower and abstraction activities). Guidance for the protection of marine European Protected Species from deliberate injury, killing and disturbance has been drafted (JNCC 2010a; Marine Scotland, 2014). Marine Industries generate a variety of noise through activities such as geophysical surveys (e.g. seismic surveys (JNCC 2017)), construction (e.g. pile driving (JNCC 2010b)) and decommissioning (e.g. use of explosives (2010c)). As part of the licencing procedures, developers and operators are required to utilise JNCC guidelines to minimise the risk of injury to cetaceans when undertaking such activities (JNCC, 2010b, 2010c; 2017; 2023; 2025; JNCC, Natural England & Cefas, 2025). The guidelines advise on conducting marine mammal observations prior to and during the activity and, where suitable, utilising procedures such as soft start (gradual introduction of the sound) to reduce and avoid direct harm to animals. A review of the marine mammal observer data demonstrated the effectiveness of soft start approach (Stone et al., 2017).

9.5: List of main conservation measures	MG01 Management of professional/commercial fishing, shellfish and seaweed harvesting (incl. restoration of habitats). Fisheries Management Plans (FMPs) are currently being developed across all administrations for fisheries with perceived threats or pressures to the marine environment. FMPs are required under the Fisheries Act 2020 which provides the framework for management fisheries outside the EU Common Fisheries Policy. The Joint Fisheries Statement (agreeing the delivery of the 8 objectives of the Fisheries Act 2020) sets out plans for 43 FMPs. Publication of FMPs started last year and is expected to continue for 2-3 years. Some are being jointly developed, others by a single authority for its own waters. 6 FMPs have now been published.