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

2019-2024

Conservation status assessment for the species:

S2029 - Long-finned pilot whale

(*Globicephala melas*)

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

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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: S2029 Long-finned pilot whale (*Globicephala melas*).

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: Long-finned pilot whale

Distribution and Range Map

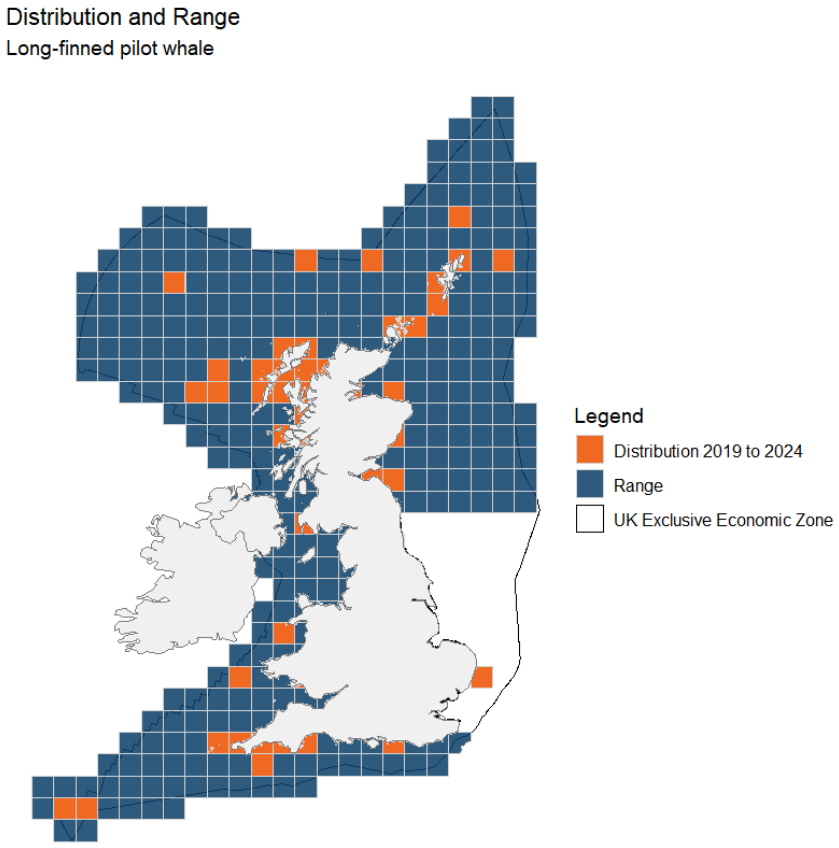

Figure 1: United Kingdom distribution and range map for S2029 - Long-finned pilot whale (*Globicephala melas*). The 50km grid square distribution map is based on available species records within the current reporting period.

Table 1: Table summarising the conservation status for S2029 - Long-finned pilot whale (*Globicephala melas*). 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)	**Unknown (XX)**
Habitat for the species (see section 7)	**Unknown (XX)**
Future prospects (see section 10)	**Unknown (XX)**

List of Sections

National Level

1. General information

1.1 Country	United Kingdom
1.2 Species code	S2029
1.3 Species scientific name	*Globicephala melas*
1.4 Alternative species scientific name	
1.5 Common name	Long-finned pilot whale
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 long-finned pilot whale 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, Cardigan Bay Marine Wildlife Centre, Natural England, Sea Trust and The Royal Society for the Protection of Birds (RSPB).

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)	784,462
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	Based mainly on expert opinion with very limited data
5.6 Long-term trend; Period	2005-2024
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	Based mainly on expert opinion with very limited data

5.10 Favourable Reference Range (FRR)

a) Area (km²)	784,462
b) Pre-defined increment	
c) Unknown	No
d) Method used	Expert opinion
e) Quality of information	high

5.11 Change and reason for change in surface area of range

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	

5.12 Additional information

The distribution is based on verified sightings of long-finned pilot whale 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, Cardigan Bay Marine Wildlife Centre, Natural England, Sea Trust and The Royal Society for the Protection of Birds (RSPB).

Due to insufficient available data, the modelling approach (Paxton et al., 2016) used for the more common or coastal species could not be applied to long-finned pilot whale. Instead, the FRR is based on interpolation of distribution data and expert opinion.

Long-finned pilot whales are a predominantly offshore species. In the UK, they are most observed off northern Scotland and south-west England. Sightings in the central and southern North Sea are rare. Due to lower effort in the offshore area, the distribution map is biased towards areas of high coverage and is not representative of the offshore distribution. Some recorded sightings are also considered to be anomalies and not a true part of the species range based on expert knowledge, such as pilot whales recorded in the shallow southern North Sea. The distribution of long-finned pilot whales has not changed significantly since SCANS II in 2005 and CODA survey in 2007.

6. Population

6.1 Year or period	2022

6.2 Population size (in reporting unit)

a) Unit	number of individuals
b) Minimum	2,415
c) Maximum	18,313
d) Best single value	6,652
6.3 Type of estimate	95% confidence interval
6.4 Quality of extrapolation to reporting unit	moderate

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	
6.8 Short-term trend; Direction	Unknown
6.9 Short-term trend; Magnitude	
a) Estimated minimum	
b) Estimated maximum	
c) Pre-defined range	
d) Unknown	
e) Type of estimate	
f) Rate of decrease	
6.10 Short-term trend; Method used	Insufficient or no data available
6.11 Long-term trend; Period	
6.12 Long-term trend; Direction	Unknown
6.13 Long-term trend; Magnitude	
a) Minimum	
b) Maximum	
c) Confidence interval	
d) Rate of decrease	
6.14 Long-term trend; Method used	Insufficient or no data available

6.15 Favourable Reference Population (FRP)

ai) Population size	8,516
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	
c) Improved knowledge or more accurate data	
d) Different method	
e) No information	Yes
f) Other reason	
g) Main reason	Other reasons

6.17 Additional information

The population estimate for 2022 is based primarily on density estimates from the SCANS IV survey. However, there is a gap in the 2022 SCANS survey effort in offshore waters west of Scotland, a high-density region for this species which accounted for 80% of the UK population during SCANS III (Gilles et al., 2013; Hammond et al., 2021). The population estimate provided here has therefore been corrected using the % of the UK population sighted in the missing block during SCANS III. Such significant extrapolation lowers confidence in the estimate and conclusions.

In terms of the wider context for Long-finned pilot whale population in the NE Atlantic; ObSERVE programme in Irish waters found a decline in abundance between 2015 and 2022 (Giralt Paradell, et al. 2024). Long-finned pilot whale is found in deep water habitats across the NE Atlantic. Findings from NASS 2024 survey in the NAMMCO region will provide more context for the northern areas of their range, once published.

The FRV (8516 CV: 0.333 CI: 4513-16070) for population 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), 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.

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.

Though the range has remained stable, due to the key habitat for this species was not surveyed as part of SCANS IV in 2022, it is not possible to determine the habitat for the species.

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
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)
Mixed source marine water pollution (marine and coastal)	Ongoing and likely to be in the future	Medium (M)
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	High (H)
Threats and pressures from outside the Member State	Ongoing and likely to be in the future	Medium (M)
Change of species distribution (natural newcomers) due to climate change	Only in future	Medium (M)
Geotechnical surveying	Ongoing and likely to be in the future	Medium (M)

8.2 Sources of information

See section 14 References

8.3 Additional information

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

PJ13: Based on few studies but predicted to continue and will could result in changing foodweb dynamics and ecosystem stability. 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).

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

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
Reduce impact of mixed source pollution	High (H)
Reduce impact of military installations and activities	High (H)
Control/eradication of illegal killing, fishing and harvesting of wild plants, fungi and anmals	High (H)
Adapt/manage exploitation of energy resources	High (H)
Adapt/manage renewable energy installation, facilities and operation (excl. hydropower and abstraction 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	Overall stable
bi) Population	Unknown
ci) Habitat for the species	Unknown

10.1b Future prospects of parameters

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

10.2 Additional information

No additional information

11. Conclusions

11.1 Range	Favourable (FV)
11.2 Population	Unknown (XX)
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	Unknown

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	No
b) Genuine change	
c) Improved knowledge or more accurate data	
d) Different method	
e) No information	

f) Other reason

g) Main reason

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 equivalent to the Favourable Reference Range.

Conclusion on Population reached because: (i) the short-term trend direction in Population size is unknown; and (ii) the best estimate for population size is more than 25% less than the Favourable Reference Population. The population estimate for 2022 is based primarily on density estimates from the SCANS IV survey. Offshore waters west of Scotland is considered to be a high-density region for this species, accounting for 44% of the total population estimate in 2015 (Gilles, et al., 2013; Hammond et al 2021), and 80% of the UK proportion. As this offshore region west of Scotland was unable to be surveyed as part of the 2022 SCANS IV effort, it has not been possible to calculate the total population abundance estimate for this species across the entire UK EEZ using SCANS IV survey data.

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 Good; (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 two or more conclusions are Unknown and no conclusions are Unfavourable.

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

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
6.17: Additional information	The 2019 assessment was set as unknown due to the method used on the SCANS and CODA density estimates. In 2019 we attempted to extrapolate CODA estimates to UK level, instead we are collating SCANS II and CODA to get full UK coverage for 2005 to 2007 as a single snapshot so the 2019 argument is not valid. text from 2019 Article 17 report fin whale assessment 'Although the 3rd report (2013) gave a value for fin whale abundance, there is little confidence in the estimate. The estimate was derived from the CODA survey in 2007 (CODA, 2009); with regards to UK coverage, this survey only covered offshore waters west of Scotland. The density value from this survey was used to calculate abundance in the offshore area. However, the lower 95% confidence interval of the density estimates for this offshore area was applied to adjacent areas within the fin whale range (accounting for a large portion of the range), to give a minimum estimate for fin whale abundance in UK shelf waters and combined with the offshore estimate to give a rough overall figure for fin whale abundance in UK waters. This approach is now superseded by the availability of an estimate from the SCANS-III survey (Hammond et al. 2017) which covered both shelf and offshore waters. ' From LFPW 2019 assessment which adds more context: Although the 3rd report (2013) did give estimates of minimum and maximum abundance for long-finned pilot whale in UK waters, these estimates are not comparable with the current estimate derived from SCANS-III (Hammond et al., 2017). These estimates were derived from the CODA survey in 2007 (CODA, 2009); in the UK, this survey only covered offshore waters west of Scotland. The density value from this survey for the offshore area

	was used to calculate long-finned pilot whale abundance in this area. However, the lower 95% confidence interval of the density estimates for this offshore area was applied to adjacent areas within the long-finned pilot whale range (accounting for a large portion of the range), to give a minimum estimate for long-finned pilot whale abundance in UK shelf waters. This was combined with the offshore estimate to give an overall estimate for long-finned pilot whale abundance in UK waters. This method is not considered to be as robust as deriving an estimate from a single survey of both offshore and shelf waters and is not directly comparable with the current estimate derived from SCANS-III (2016).
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 (Heiler et al, 2016, Middel and Verones, 2017). Although impact from many individual noise sources isn't considered a risk for this species, cumulative impact of sources of noise may be greater when combined. Energy-budget modelling has demonstrated that, theoretically, when face with multiple days of continuous disturbance each year, lactating whales experienced increased mortality due to depletion of energy stores (Hin et al., 2021). Long-finned pilot whales may change call characteristics in noisier environment, with louder calls at lower peak frequencies however, there is a concern that there is only a limited capacity to cope with increasing background noise (Kok et al., 2020). Changes in breathing patterns have also been noted in response to naval sonar (Isojunno et al., 2018).
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 (Hoydal et al., 2015). However, there is evidence to suggest long-finned pilot whales have a resilience to these chemicals unlike many other species (Brownlow et al., 2011).
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 long-finned pilot whales. The species has a specific diet, predominantly cephalopods of the families Octopodidae and Ommastrephidae, the second of which is more important in the UK, and little evidence of diversification (Santos et al, 2014). This may limit the ability of the species to adapt to changes in prey availability as a result of climate change.
8.1: Characterisation of pressures	PX02 Threats and pressures from outside member states. Long-finned pilot whales have been historically hunted in neighbouring waters, and the species continues to be hunted annually in NE Atlantic countries out with the EU. The pressure has the potential to have a direct influence acting outside of the UK range. This species is taken as part of the annual hunts in the Faroe Islands (Singleton and Fielding, 2017). Numbers are reported on the Faroese Government website and vary substantially between years making this an unpredictable influence on the population. The total numbers of animals taken between 2000 and 2023 was 15,371, an annual average of 640 animals with peaks of over 1000 animals in 2004, 2010, 2013 and 2017. (http://www.whaling.fo/en/regulated/450-years-of-statistics/catches). Long-finned pilot whales are also hunted without quota in Greenland, taking an annual average of 228 animals between 2000 and 2023, ranging from 5 in 2000 to 433 in 2014 (https://nammco.no/marine-mammal-catch-database/).
8.1: Characterisation of pressures	PJ13 Change of species distribution (natural newcomers) due to climate change. Based on limited evidence, but the distribution of long-finned pilot whales in the northwest Atlantic is moving northwards three times faster than their preferred prey species, suggesting a impacts of climate

	change other than changes in prey availability (Thomas & Nye, 2021).
8.1: Characterisation of pressures	PC07 Geotechnical surveying. Evidence suggests long-finned pilot whales are sensitive to impulsive noise (Stone et al, 2017). Results of analyses of Irish strandings data suggest that the occurrence of offshore seismic surveying operations increases the number of strandings of long-finned pilot whales (McGeady et al, 2016). Avoidance behaviour during seismic surveys has been recorded for this species in UK waters (Stone, 2015). The impact of this pressure is indirect with evidence of recovery/return once the pressure is removed. 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. Exposure to this pressure is limited both spatially and temporarily, although it may be regionally significant when occurring.
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	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	MK01 Reduce impact of mixed source pollution: The impact of chemical pollution on long-finned pilot whales 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	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).