European Community Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC)

Fourth Report by the United Kingdom under Article 17

on the implementation of the Directive
from January 2013 to December 2018

Conservation status assessment for the habitat:

H2110 - Embryonic shifting dunes

UNITED KINGDOM

IMPORTANT NOTE - PLEASE READ

- The information in this document represents the UK Report on the conservation status of this habitat, submitted to the European Commission as part of the 2019 UK Reporting under Article 17 of the EU Habitats Directive.
- It is based on supporting information provided by the geographically-relevant Statutory Nature Conservation Bodies, which is documented separately.
- The 2019 Article 17 UK Approach document provides details on how this supporting information contributed to the UK Report and the fields that were completed for each parameter.
- The reporting fields and options used are aligned to those set out in the European Commission guidance.
- Maps showing the distribution and range of the habitat are included (where available).
- Explanatory notes (where provided) are included at the end. These provide additional audit trail information to that included within the UK assessments. Further underpinning explanatory notes are available in the related country-level and/or UK offshore-level reports.
- Some of the reporting fields have been left blank because either: (i) there was insufficient information to complete the field; and/or (ii) completion of the field was not obligatory.
- The UK-level reporting information for all habitats and species is also available in spreadsheet format.

Visit the JNCC website, https://jncc.gov.uk/article17, for further information on UK Article 17 reporting.

Report on the main results of the surveillance under Article 17 for Annex I habitat types (Annex D)

NATIONAL LEVEL

1. General information

1.1 Member State	**UK**
1.2 Habitat code	**2110 - Embryonic shifting dunes**

2. Maps

2.1 Year or period	1987-2018
2.3 Distribution map	Yes
2.3 Distribution map Method used	Complete survey or a statistically robust estimate
2.4 Additional maps	No

BIOGEOGRAPHICAL LEVEL

3. Biogeographical and marine regions

3.1 Biogeographical or marine region where the habitat occurs	**Atlantic (ATL)**
3.2 Sources of information	England JNCC (14/11/2017) Spreadsheet of UK SAC information as contained within the Natura 2000 standard data forms submitted to the European Union. http://jncc.defra.gov.uk/page-1461 Brownett, JM., Mills, RS,. (2017) The development and application of remote sensing to monitor sand dune habitats. Journal of Coastal Conservation, Volume 21, Number 5, page 643-656. https://link.springer.com/article/10.1007/s11852-017-0504-x JNCC (2013) 3rd UK Habitats Directive Reporting 2013. UK-level reporting information on Favourable Reference Values. http://jncc.defra.gov.uk/page-6387 Natural England (2015 unpublished) Site of Special Scientific Interest Series short review and assessment for coastal habitat features. Natural England. 2015. Coastal management theme plan (IPENSTP019) http://publications.naturalengland.org.uk/publication/6371629661683712?category=5605910663659520 Natural England. 2015.Climate change theme plan: Developing a strategic approach to climate change adaptation (IPENSTP014) http://publications.naturalengland.org.uk/publication/4954594591375360?category=5605910663659520 Natural England. 2015.Public access and disturbance theme plan: A strategic approach to identifying and addressing significant effects on the features of Natura 2000 sites (IPENSTP022) http://publications.naturalengland.org.uk/publication/6621454219083776?category=5605910663659520 Natural England. 2015. Atmospheric nitrogen theme plan: Developing a strategic approach for England's Natura 2000 sites (IPENSTP013) http://publications.naturalengland.org.uk/publication/6140185886588928?category=5605910663659520 Natural England. 2015. Diffuse water pollution theme plan: Developing a strategic approach to diffuse water pollution for England's Natura 2000 sites (IPENSTP015) http://publications.naturalengland.org.uk/publication/5848526737113088?category=5605910663659520

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4. Range

4.1 Surface area (in km²)	33057.86	
4.2 Short-term trend Period	2007-2018	
4.3 Short-term trend Direction	Stable (0)	
4.4 Short-term trend Magnitude	a) Minimum	b) Maximum
4.5 Short-term trend Method used	Based mainly on extrapolation from a limited amount of data	
4.6 Long-term trend Period		
4.7 Long-term trend Direction		
4.8 Long-term trend Magnitude	a) Minimum	b) Maximum
4.9 Long-term trend Method used		
4.10 Favourable reference range	a) Area (km²)	33057.86
	b) Operator	
	c) Unknown	No
	d) Method	The FRR is approximately equal to the current range area. The FRR value has been updated to take account of improved information on the habitat range. The approach taken to set the FRR is explained in the 2007 and 2013 UK Article 17 habitat reports (see http://jncc.defra.gov.uk/page-4064 and http://jncc.defra.gov.uk/page-6563).
4.11 Change and reason for change in surface area of range	Improved knowledge/more accurate data Use of different method	
	The change is mainly due to:	Improved knowledge/more accurate data
4.12 Additional information		

5. Area covered by habitat

5.1 Year or period	1987-2018			
5.2 Surface area (in km²)	a) Minimum	b) Maximum	c) Best single value	5.122
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	1991-2018			
5.6 Short-term trend Direction	Decreasing (-)			
5.7 Short-term trend Magnitude	a) Minimum	b) Maximum	c) Confidence interval	
5.8 Short-term trend Method used	Based mainly on expert opinion with very limited 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	
5.12 Long-term trend Method used				
5.13 Favourable reference area	a) Area (km²)			
	b) Operator	More than (>)		
	c) Unknown	No		
	d) Method	The FRA is not more than 10% above the current area. An FRA operator has been used as it is not clear what the exact area of the FRA is. The approach taken to set the FRA is explained in the		

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2007 and 2013 UK Article 17 habitat reports (see http://jncc.defra.gov.uk/page-4064 and http://jncc.defra.gov.uk/page-6563). Although the area has declined by <1%/yr during 2007-2018, it is likely that the FRA it still not more than 10% above the current area.

5.14 Change and reason for change in surface area of range	Improved knowledge/more accurate data Use of different method
	The change is mainly due to: Improved knowledge/more accurate data
5.15 Additional information	The short term trend direction is considered to be decreasing by 1%/yr or less, based on the rate of decline identified in Wales.

6. Structure and functions

6.1 Condition of habitat	a) Area in good condition (km^2)	Minimum 1.5852	Maximum 2.0752
	b) Area in not-good condition (km^2)	Minimum 1.2197	Maximum 1.4097
	c) Area where condition is not known (km^2)	Minimum 1.8171	Maximum 2.1371
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	2007-2018		
6.4 Short-term trend of habitat area in good condition Direction	Uncertain (u)		
6.5 Short-term trend of habitat area in good condition Method used	Insufficient or no data available		
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			

7. Main pressures and threats

7.1 Characterisation of pressures/threats

Pressure	Ranking
Development and maintenance of beach areas for tourism and recreation incl. beach nourishment and beach cleaning (F06)	H
Sports, tourism and leisure activities (F07)	H
Modification of coastline, estuary and coastal conditions for development, use and protection of residential, commercial, industrial and recreational infrastructure and areas (including sea defences or coastal protection works and infrastructures) (F08)	H
Other invasive alien species (other then species of Union concern) (I02)	M
Mixed source air pollution, air-borne pollutants (J03)	H
Abiotic natural processes (e.g. erosion, silting up, drying out, submersion, salinization) (L01)	M

Sea-level and wave exposure changes due to climate change (N04)	M

Threat	Ranking
Development and maintenance of beach areas for tourism and recreation incl. beach nourishment and beach cleaning (F06)	H
Sports, tourism and leisure activities (F07)	H
Modification of coastline, estuary and coastal conditions for development, use and protection of residential, commercial, industrial and recreational infrastructure and areas (including sea defences or coastal protection works and infrastructures) (F08)	H
Other invasive alien species (other then species of Union concern) (I02)	M
Mixed source air pollution, air-borne pollutants (J03)	H
Abiotic natural processes (e.g. erosion, silting up, drying out, submersion, salinization) (L01)	M
Sea-level and wave exposure changes due to climate change (N04)	M

7.2 Sources of information	
7.3 Additional information	J03: Mixed source air pollution, air-borne pollutants is ranked as a High ranked pressure and threat, due to the nutrient N critical load for the habitat being exceeded across >25% of the habitat area

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 habitat of the species (related to 'Habitat for the species')
8.3 Location of the measures taken		Both inside and outside Natura 2000
8.4 Response to the measures		Medium-term results (within the next two reporting periods, 2019-2030)
8.5 List of main conservation measures		

Adapt mowing, grazing and other equivalent agricultural activities (CA05)
Manage/reduce/eliminate diffuse pollution to surface or ground waters from resource exploitation and energy production (CC09)
Reduce impact of outdoor sports, leisure and recreational activities (CF03)
Manage changes in hydrological and coastal systems and regimes for construction and development (CF10)
Management, control or eradication of other invasive alien species (CI03)
Management of problematic native species (CI05)
Implement climate change adaptation measures (CN02)
Improvement of habitat of species from the directives (CS03)

8.6 Additional information	

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9. Future prospects

9.1 Future prospects of parameters	a) Range	Good
	b) Area	Poor
	c) Structure and functions	Bad
9.2 Additional information	Future trend of Range is Overall stable; Future trend of Area is Negative - decreasing <=1% (one percent or less) per year on average; and Future trend of Structure and functions is Negative - slight/moderate deterioration. The Future prospects for Structure and functions takes into account that at least 25% of the habitat area is expected to be in unfavourable (not good) condition in c.2030 due to nutrient N critical load exceedance, unless measures are taken to reduce N deposition impacts.	

10. Conclusions

10.1. Range	Favourable (FV)
10.2. Area	Unfavourable - Inadequate (U1)
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	Deteriorating (-)
10.7 Change and reasons for change in conservation status and conservation status trend	a) Overall assessment of conservation status No change The change is mainly due to: b) Overall trend in conservation status No change The change is mainly due to:
10.8 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 approximately equal to the Favourable Reference Range. Conclusion on Area covered by habitat reached because: (i) the short-term trend direction in Area is decreasing by 1% per year or less; and (ii) the current Area is not more than 10% below the Favourable Reference Area. Conclusion on Structure and functions reached because habitat condition data indicates that more than 25% of the habitat is in unfavourable (not good) condition. 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. Overall assessment of Conservation Status is Unfavourable-bad because one or more of the conclusions is Unfavourable-bad. Overall trend in Conservation Status is based on the combination of the short-term trends for Range - stable, Area covered by habitat - decreasing, and Structure and functions - uncertain. The conclusion reached on the Overall trend deviates from that prescribed within the EU guidelines. Expert opinion of UK habitat specialists is that the

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Overall trend should be assessed as Deteriorating (rather than Unknown), because: (i) the decline in area for H2110 is a critical issue; and (ii) it is more likely that the Uncertain short-term parameter trends are either Stable or Decreasing, rather than Increasing.

11. Natura 2000 (pSCIs, SCIs, SACs) coverage for Annex I habitat types

11.1 Surface area of the habitat type inside the pSCIs, SCIs and SACs network (in km² in biogeographical/ marine region)	a) Minimum b) Maximum c) Best single value 2.0906
11.2 Type of estimate	Best estimate
11.3 Surface area of the habitat type inside the network Method used	Complete survey or a statistically robust estimate
11.4 Short-term trend of habitat area in good condition within the network Direction	Stable (0)
11.5 Short-term trend of habitat area in good condition within network Method used	Based mainly on extrapolation from a limited amount of data
11.6 Additional information	

12. Complementary information

12.1 Justification of % thresholds for trends	
12.2 Other relevant information	

Distribution Map

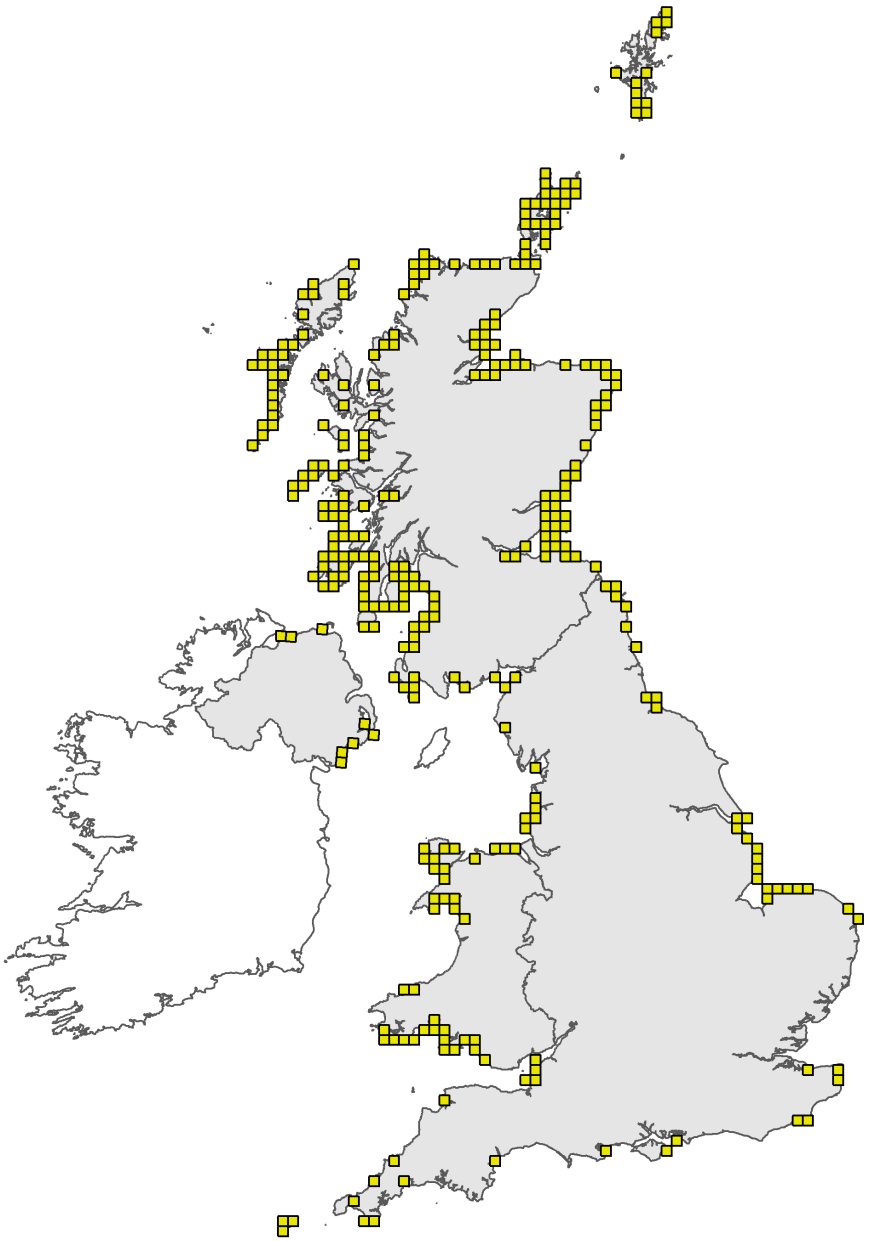

Figure 1: UK distribution map for H2110 - Embryonic shifting dunes. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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. For further details see the 2019 Article17 UK Approach document.

Range Map

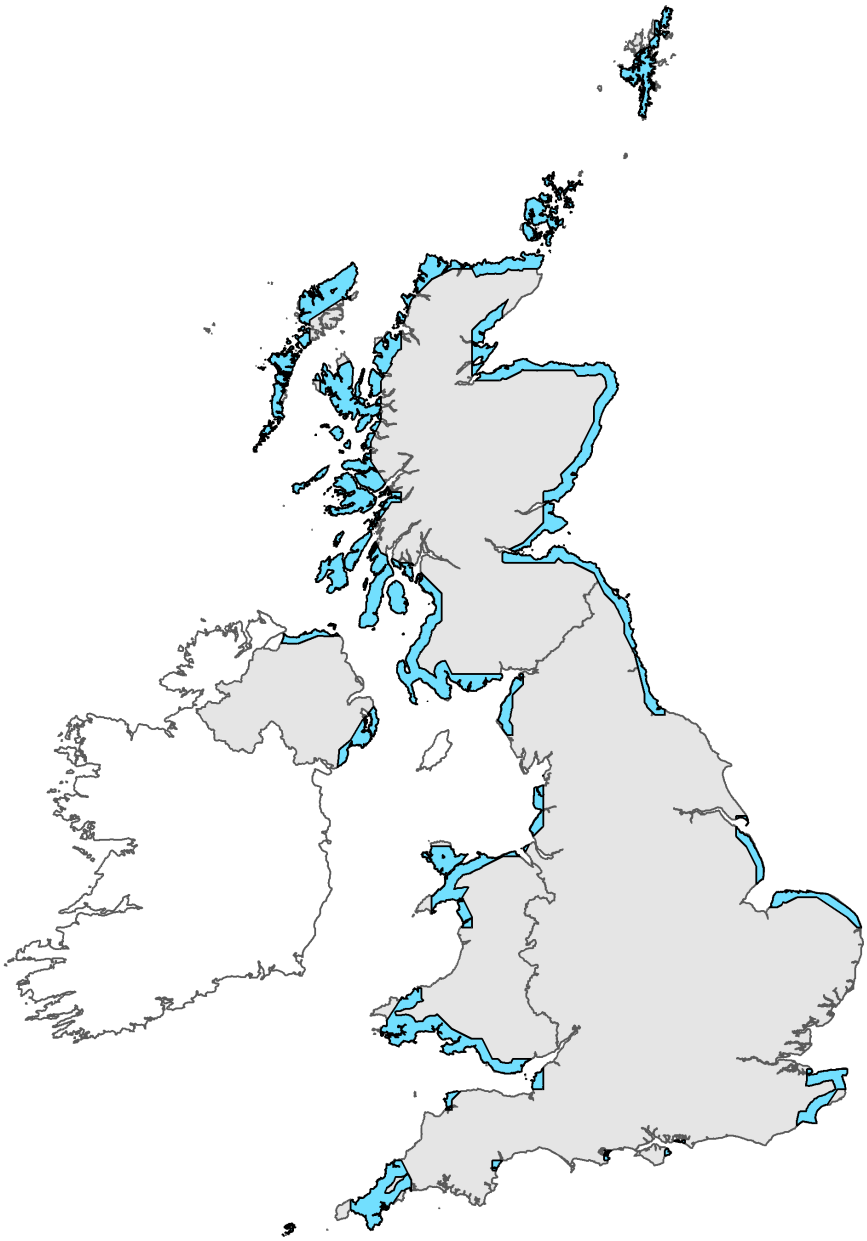

Figure 2: UK range map for H2110 - Embryonic shifting dunes. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

The range map has been produced by applying a bespoke range mapping tool for Article 17 reporting (produced by JNCC) to the 10km grid square distribution map presented in Figure 1. The alpha value for this habitat was 25km. For further details see the 2019 Article 17 UK Approach document.