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

Supporting documentation for the
conservation status assessment for the habitat:

H2120 - Shifting dunes along the shoreline with *Ammophila arenaria* (`white dunes`)

SCOTLAND

IMPORTANT NOTE - PLEASE READ

- The information in this document is a country-level contribution to 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.
- The 2019 Article 17 UK Approach document provides details on how this supporting information was used to produce the UK Report.
- The UK Report on the conservation status of this habitat is provided in a separate document.
- The reporting fields and options used are aligned to those set out in the European Commission guidance.
- Explanatory notes (where provided) by the country are included at the end. These provide an audit trail of relevant supporting information.
- 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 only relevant at UK-level (sections 10 Future prospects and 11 Conclusions).
- For technical reasons, the country-level future trends for Range, Area covered by habitat and Structure and functions are only available in a separate spreadsheet that contains all the country-level supporting information.
- The country-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 (Scotland information only)**
1.2 Habitat code	**2120 - Shifting dunes along the shoreline with Ammophila arenaria ("white d**

2. Maps

2.1 Year or period	1987-2003
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	https://www.environment.gov.scot/our-environment/habitats-and-species/habitat-map-of-scotland/ The Sand Dune Vegetation Survey of Scotland, Tom Dargie 1994-2000 National Report Angus, S. (2008). Outline planning permission for golf course and resort development on land at Menie House, Balmedie, Aberdeen. Principal precognition of Stewart Angus on behalf of Scottish Natural Heritage (DPEA REFERENCE CIN/ABS/001) Dargie, T. 2008. Status, extents, development impacts and mitigation for key vegetation types and rare species at Menie. Production T55, Public Local Inquiry. Janine M Morris, Site Condition Monitoring of Coastal Habitats. (National Contract, Year 2009-2010) and Site Condition Monitoring of Coastal Habitats (National Contract, Year 2010-2011). Contract No: 25639 Angus, S., Hansom, J.D. and Rennie, A. 2011. Habitat Change on Scotland's Coasts - The Changing Nature of Scotland, eds. S.J. Marrs, S. Foster, C. Hendrie, E.C. Mackey, D.B.A. Thompson. TSO Scotland, Edinburgh, pp 183-198. The Sand Dune Vegetation Survey of Scotland 2012 SNH Natural Spaces dataset SNH Site Condition Monitoring results Cycle 3 (from 1 April 2012): see Scotland's environment website. [From the website Detailed tab, select Coastal features by clicking the Feature filter on the left of the screen, then Feature Category= Coast. Data can be exported to spreadsheet by right clicking the table at the bottom of the screen, then Export, then Export Table. Cycle 3 assessments can be seen by filtering the spreadsheet on the 'LatestAssessedSCMcycle' column]. http://jncc.defra.gov.uk/pdf/Article17Consult_20131010/H2120_SCOTLAND.pdf

4. Range

4.1 Surface area (in km²)		
4.2 Short-term trend Period		
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		
4.6 Long-term trend Period		

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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) b) Operator c) Unknown No d) Method		
4.11 Change and reason for change in surface area of range	Improved knowledge/more accurate data The change is mainly due to: Improved knowledge/more accurate data		
4.12 Additional information	Final data has become available from translation of the Sand Dune Survey of Scotland to Annex I habitats as well as some other NVC surveys and this has given a complete picture of the distriubution of this habitat in Scotland. The changes from previous reported distribution are not great however.		

5. Area covered by habitat

5.1 Year or period	1987-2003		
5.2 Surface area (in km²)	a) Minimum	b) Maximum	c) Best single value 12.8
5.3 Type of estimate	95% confidence interval		
5.4 Surface area Method used	Complete survey or a statistically robust estimate		
5.5 Short-term trend Period	2007-2016		
5.6 Short-term trend Direction	Decreasing (-)		
5.7 Short-term trend Magnitude	a) Minimum	b) Maximum 12	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 c) Unknown No d) Method		
5.14 Change and reason for change in surface area of range	Improved knowledge/more accurate data The change is mainly due to: Improved knowledge/more accurate data		
5.15 Additional information	The Sanddune Survey of Scotland has now been completely translated from NVC to Annex I habitats and is available through HabMoS which has given a revised extent figure for this habitat (which was greater than previously reported). This figure was 13.25Km2. However 0.4km2 has been lost at Foveran Links and South Menie from Golf Course Development, so this has been subtracted from that figure - to give 12.8km2 habitat. There are still some issues with the data from HaBMoS (some overlapping polygons) but this is our best current data.		

6. Structure and functions

6.1 Condition of habitat	a) Area in good condition (km²)	Minimum 6.52	Maximum 6.52

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	b) Area in not-good condition (km²)	Minimum 2.93	Maximum 2.93	
	c) Area where condition is not known (km²)	Minimum 3.35	Maximum 3.35	
6.2 Condition of habitat Method used	Complete survey or a statistically robust estimate			
6.3 Short-term trend of habitat area in good condition Period	2009-2016			
6.4 Short-term trend of habitat area in good condition Direction	Decreasing (-)			
6.5 Short-term trend of habitat area in good condition Method used	Based mainly on extrapolation from a limited amount of data			
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	There are two main issues: direct loss of habitat due to golf course development and ii) a trend of increasing stabilisation of mobile dune habitat. Direct loses of habitat have occurred with the construction of a golf course at Menie Links A trend towards stability is occurring throughout north west Europe with examples reported from Belgium and the Netherlands. For example a 72% decrease in SD5 habitat and a 23% decrease in SD6 habitat was reported from the Sefton Coast (north west England) between 1988-89 and 2003-04. (Gateley and Mitchell 2004).			

7. Main pressures and threats

7.1 Characterisation of pressures/threats

Pressure	Ranking
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)	M
Abiotic natural processes (e.g. erosion, silting up, drying out, submersion, salinization) (L01)	M
Other invasive alien species (other then species of Union concern) (I02)	M
Problematic native species (I04)	H
Development and maintenance of beach areas for tourism and recreation incl. beach nourishment and beach cleaning (F06)	M
Sports, tourism and leisure activities (F07)	M
Intensive grazing or overgrazing by livestock (A09)	M
Mixed source air pollution, air-borne pollutants (J03)	M

Threat	Ranking
Modification of coastline, estuary and coastal conditions for development, use and protection of residential, commercial, industrial and recreational infrastructure and areas (including	M

sea defences or coastal protection works and infrastructures) (F08)	
Abiotic natural processes (e.g. erosion, silting up, drying out, submersion, salinization) (L01)	H
Other invasive alien species (other then species of Union concern) (I02)	M
Problematic native species (I04)	H
Development and maintenance of beach areas for tourism and recreation incl. beach nourishment and beach cleaning (F06)	M
Sports, tourism and leisure activities (F07)	M
Intensive grazing or overgrazing by livestock (A09)	M
Mixed source air pollution, air-borne pollutants (J03)	M

7.2 Sources of information

7.3 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 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)
Management, control or eradication of other invasive alien species (CI03)
Management of problematic native species (CI05)
Reduce impact of outdoor sports, leisure and recreational activities (CF03)

8.6 Additional information	Measures include actions on under and over grazing and to remove invasive native (e.g Hippophae rhamnoides) and non-native (e.g. Cineraria maritime) species. Winter stock feeding is also an issue

9. Future prospects

9.1 Future prospects of parameters	a) Range b) Area c) Structure and functions
9.2 Additional information	Nitrogen assessment indicates slight deterioration

10. Conclusions

10.1. Range

10.2. Area

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10.3. Specific structure and functions (incl. typical species)	
10.4. Future prospects	
10.5 Overall assessment of Conservation Status	
10.6 Overall trend in Conservation Status	
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	

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 2.2
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	Decreasing (-)
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

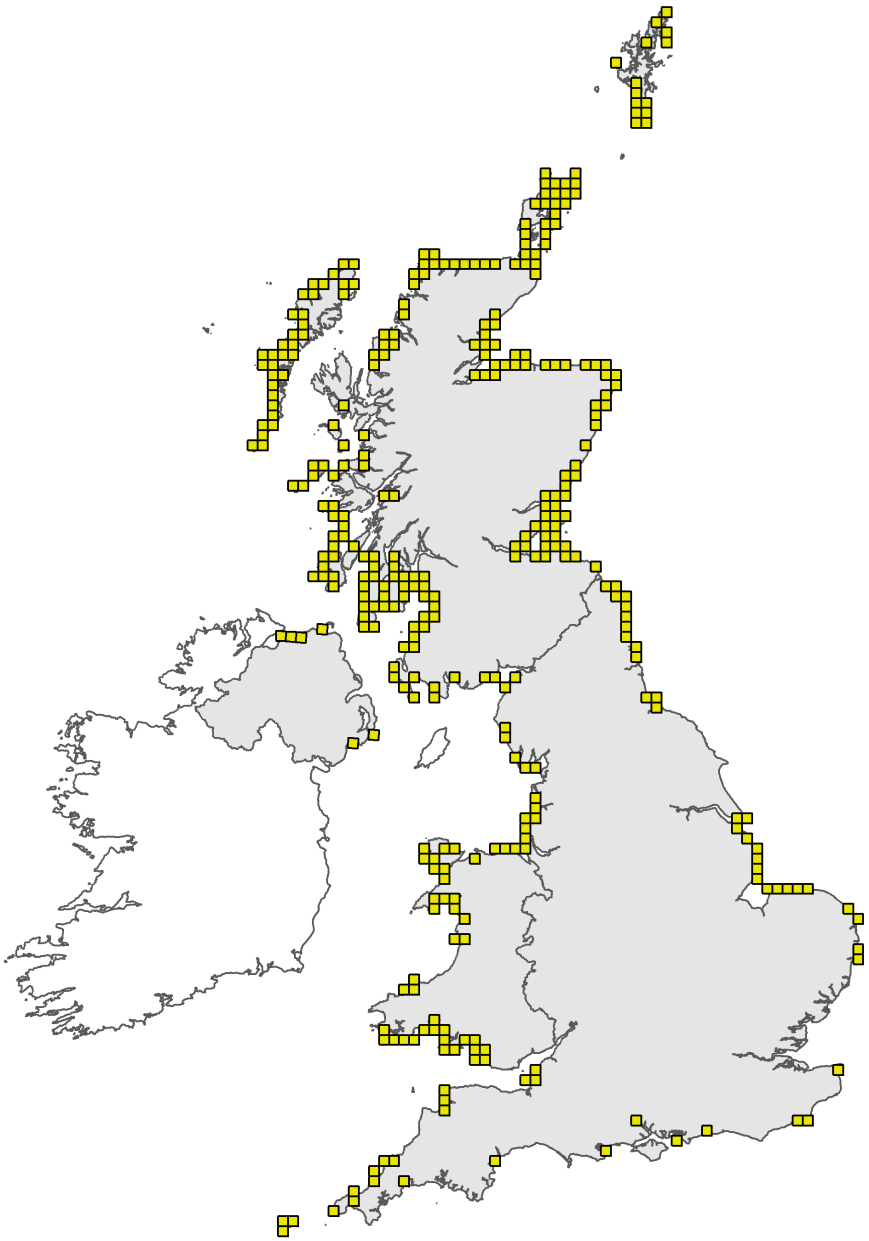

Figure 1: UK distribution map for H2120 - Shifting dunes along the shoreline with *Ammophila arenaria* (`white dunes`). Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 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

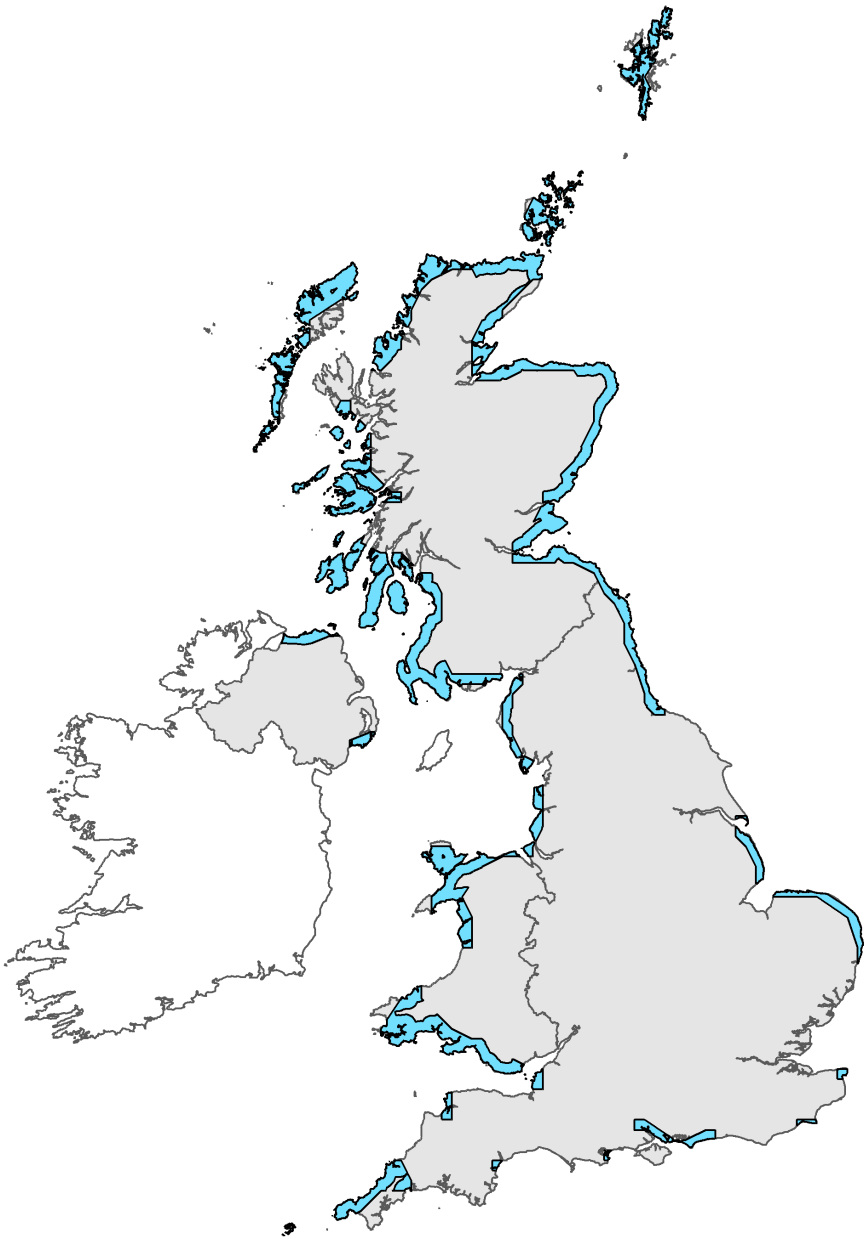

Figure 2: UK range map for H2120 - Shifting dunes along the shoreline with *Ammophila arenaria* (`white dunes`). Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil 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.