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:

H1210 - Annual vegetation of drift lines

WALES

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 (Wales information only)**
1.2 Habitat code	**1210 - Annual vegetation of drift lines**

2. Maps

2.1 Year or period	1989-1994
2.3 Distribution map	Yes
2.3 Distribution map Method used	Based mainly on extrapolation from a limited amount of data
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	Colenutt, S., Denton, J. & Godfrey, A. (2003). Managing priority habitats for invertebrates, habitat section 9, coastal vegetated shingle. UK BAP Priority Habitats, Habitat section 9. Peterborough, Buglife The Invertebrate Conservation Trust. Dargie, T. C. D. (1995). Sand Dune Vegetation Survey of Great Britain. A national inventory. Part 3: Wales. Joint nature Conservation Committee. Peterborough. JNCC (2004). Common Standards Monitoring (CSM) for sand dune habitats. Joint Nature Conservation Committee, Peterborough http://jncc.defra.gov.uk/pdf/CSM_coastal_sand_dune.pdf JNCC (2004). Common Standards Monitoring (CSM) for Vegetated Coastal Shingle Habitats. Joint Nature Conservation Committee, Peterborough. http://jncc.defra.gov.uk/pdf/csm_coastal_shingle.pdf Kay, L. (2018). Article 17 2018 GIS Layer Processing Notes: H1210 Annual vegetation of drift lines. Internal NRW document. NRW. (2018). Actions Database. NRW internal database. Randall, R.E. & Doody, J.P. (2003). Guidance for the management of coastal vegetated shingle. Peterborough, English Nature. Rodwell, J. S. (ed.) (2000). British Plant Communities. Volume 5. Maritime Communities and Vegetation of Open Habitats. Cambridge University Press. Sneddon, P. & Randall, R.E. (1989). Vegetated shingle structures survey of Great Britain bibliography. Research and Survey in Nature Conservation; 20. Nature Conservancy Council (NCC) Sneddon, P. & Randall, R.E. (1993). Coastal vegetated shingle structures of Great Britain main report. Peterborough, Joint Nature Conservation Committee (JNCC). Sneddon, P. & Randall, R.E. (1993). Coastal vegetated shingle structures of Great Britain Appendix 1, Shingle sites in Wales. Peterborough, Joint Nature Conservation Committee (JNCC).

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

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4.5 Short-term trend Method used			
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)		
	b) Operator		
	c) Unknown	No	
	d) Method		
4.11 Change and reason for change in surface area of range	Use of different method		
	The change is mainly due to:	Use of different method	
4.12 Additional information			

5. Area covered by habitat

5.1 Year or period	1989-1994		
5.2 Surface area (in km²)	a) Minimum	b) Maximum	c) Best single value 0.132
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	2007-2018		
5.6 Short-term trend Direction	Uncertain (u)		
5.7 Short-term trend Magnitude	a) Minimum	b) Maximum	c) Confidence interval
5.8 Short-term trend Method used	Insufficient or no data available		
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	Use of different method		
	The change is mainly due to:	Use of different method	
5.15 Additional information			

6. Structure and functions

6.1 Condition of habitat	a) Area in good condition (km²)	Minimum	Maximum
	b) Area in not-good condition (km²)	Minimum	Maximum
	c) Area where condition is not known (km²)	Minimum 0.132	Maximum 0.132
6.2 Condition of habitat Method used	Insufficient or no data available		

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6.3 Short-term trend of habitat area in good condition Period	
6.4 Short-term trend of habitat area in good condition Direction	Unknown (x)
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
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
Sports, tourism and leisure activities (F07)	M
Sea-level and wave exposure changes due to climate change (N04)	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 sea defences or coastal protection works and infrastructures) (F08)	H
Sports, tourism and leisure activities (F07)	M
Sea-level and wave exposure changes due to climate change (N04)	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, but none yet taken
8.2 Main purpose of the measures taken		
8.3 Location of the measures taken		
8.4 Response to the measures		
8.5 List of main conservation measures		

Restore habitats impacted by multi-purpose hydrological changes (CJ03)
Reduce impact of outdoor sports, leisure and recreational activities (CF03)

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8.6 Additional information	

9. Future prospects

9.1 Future prospects of parameters	a) Range b) Area c) Structure and functions
9.2 Additional information	

10. Conclusions

10.1. Range	
10.2. Area	
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 0.0897
11.2 Type of estimate	Best estimate
11.3 Surface area of the habitat type inside the network Method used	Based mainly on extrapolation from a limited amount of data
11.4 Short-term trend of habitat area in good condition within the network Direction	Unknown (x)
11.5 Short-term trend of habitat area in good condition within network Method used	Insufficient or no data available
11.6 Additional information	

12. Complementary information

12.1 Justification of % thresholds for trends	

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12.2 Other relevant information

Distribution Map

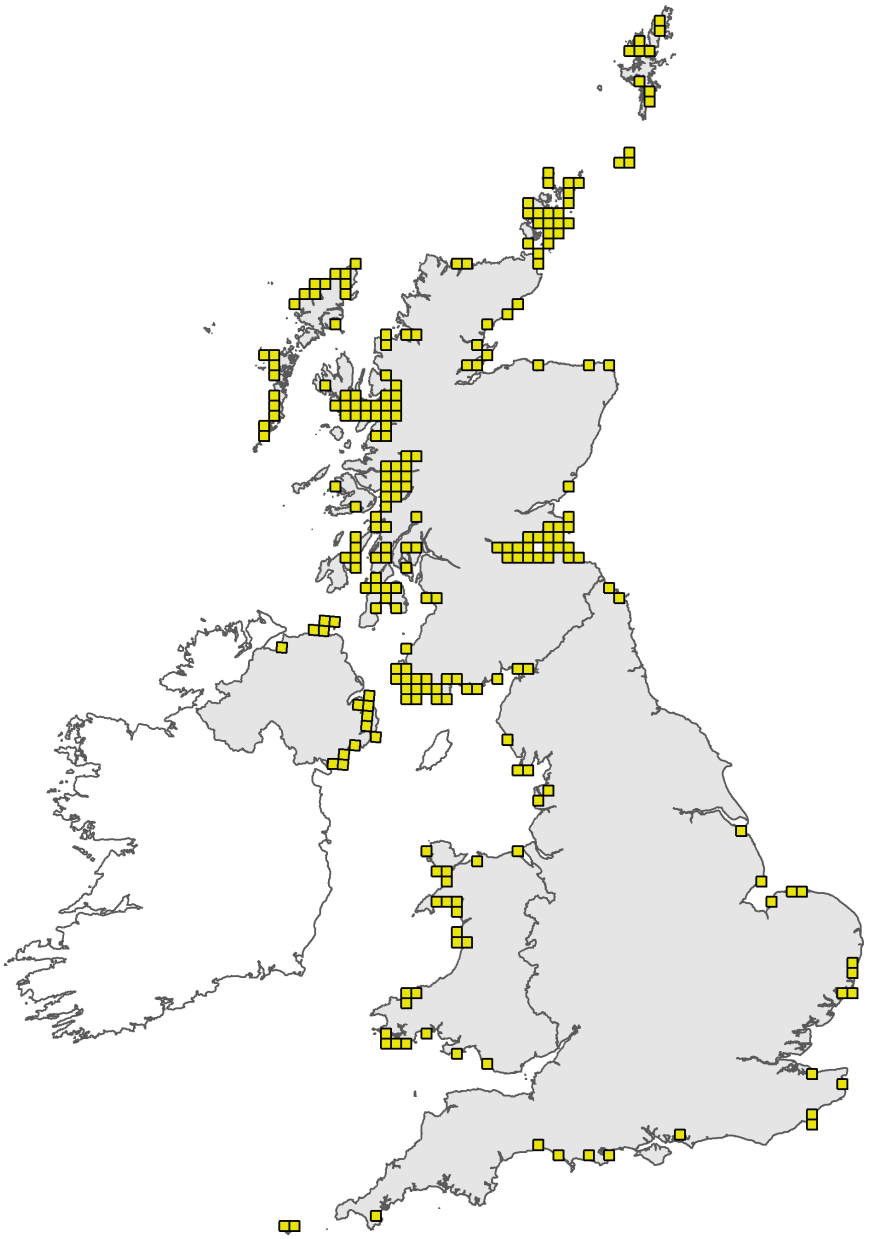

Figure 1: UK distribution map for H1210 - Annual vegetation of drift lines. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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

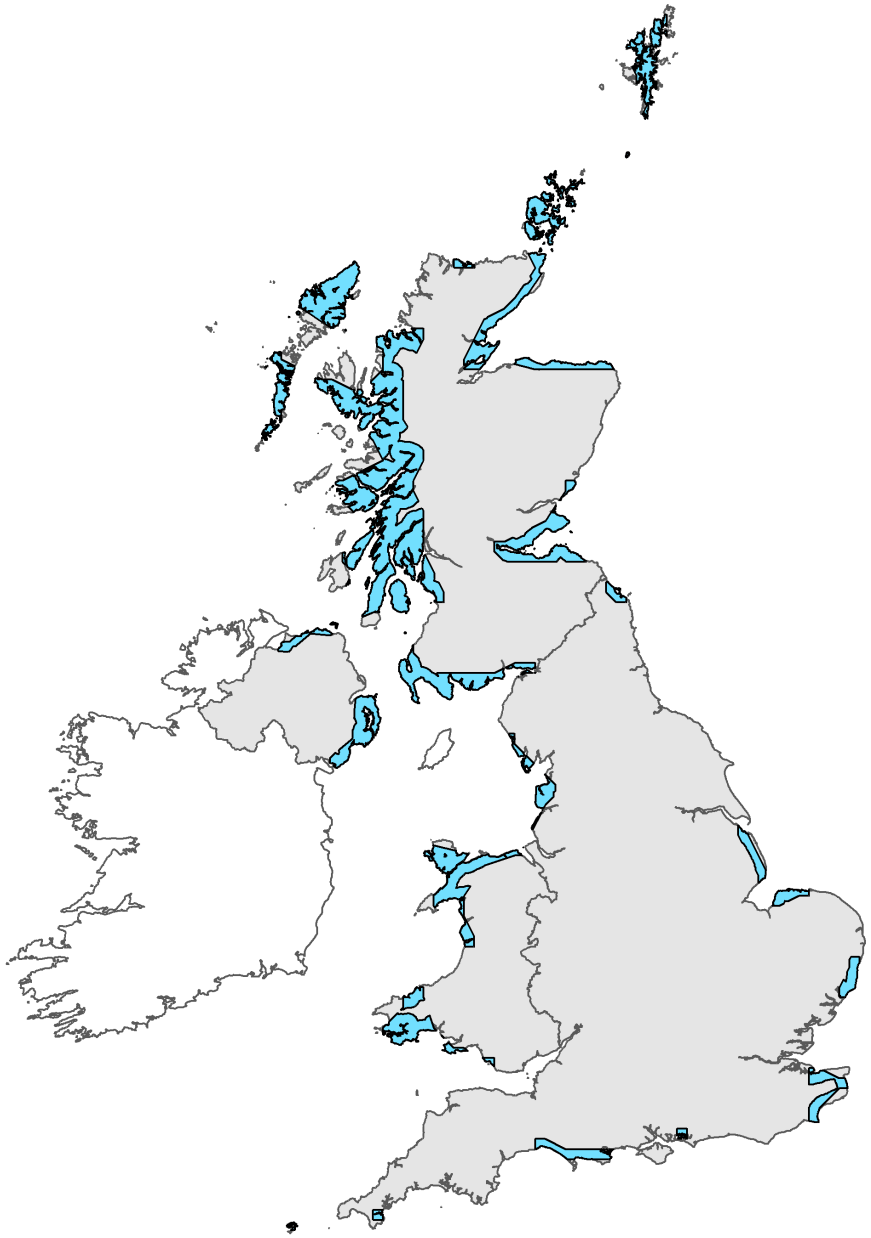

Figure 2: UK range map for H1210 - Annual vegetation of drift lines. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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.

Explanatory Notes

Habitat code: 1210

Field label	Note
2.3 Distribution map; Method used	The 10km square distribution and habitat area estimates are derived from a combination of different original sources, summarised below. A single aggregated GIS layer has been created for this habitat across Wales (data source 1 below) pulling together the maps and records from the other listed sources. Detailed processing notes for the 2018 Article 17 extent layer have been produced (Kay, 2018). Data source 1 (MAIN DATA SOURCE): Digital GIS Map Layer: Article 17 H1210 Embryonic shifting dunes Extent Layer 2018 (Kay, 2018). Data source 2 (MAIN DATA SOURCE): Sand Dune Vegetation Survey of Great Britain Part 3 - Wales (Dargie, 1995). This was a comprehensive survey of all sand dunes in Wales (see published sources) based on the UKs National Vegetation Classification (NVC) (Rodwell, 2000). Shingle structures were not specifically targeted by this survey, however, the most significant examples in Wales were incidentally included. Data source 3 (MAIN DATA SOURCE): Coastal vegetated shingle structures of Great Britain (Sneddon & Randall, 1993 a & b). This was a comprehensive survey of most of the shingle structures around the Welsh coastline. The dataset was used to determine occurrences of shingle vegetation equating to NVC community SD2 (i.e. SH31a, SH31b and SH28). However, these surveys were carried out over 20 years ago and so several intra-site changes are likely to have occurred but, no sites are known to have been lost or irreversibly damaged and the distribution at a 10km square scale is still considered to be a true reflection of the current range of the habitat in Wales. SD2 and SD3 were the only NVC communities used for mapping the distribution of this habitat. According to the Dargie (1995) dataset there are 23, 10km squares where this habitat (SD2 and SD3 on gravel / stony substrate) occurs. The distribution differs to that reported in 2007, however, this is due to a different interpretation method of the original dataset rather than a genuine increase in the distribution of the feature.

Habitat code: 1210 Region code: ATL

Field label	Note
4.3 Short term trend; Direction	See 4.11
4.11 Change and reason for change in surface area of range	There is no evidence of actual change in the range of this habitat in Wales since the last report in 2013. However, re-analysis of the data from the Sand Dune Vegetation Survey Wales (Dargie, 1995) revealed that there are 23, 10km squares where this habitat (SD2 and SD3 on gravel / stony substrate) occurs. The range now differs to that reported in 2007, however, this is due to a different interpretation method of the original dataset rather than a genuine increase in the range of the feature (see 2.3 for more details).
5.2 Surface area	The area figure has been derived from theDargie (1995) dataset using occurrences of SD2 and SD3 on gravel / stony substrate and the Sneddon & Randall (1993) survey using records of shingle vegetation equating to NVC community SD2 (i.e. SH31a, SH31b and SH28) to determine an area figure for the Annex I habitat. Despite the age of the data, these two surveys give good coverage of the habitat in Wales. However, the extrapolated area figure is likely to be an underestimate of the actual area due to a lack of up to date survey information.
5.3 Type of estimate	The current total area is likely to be an underestimate of the actual area due to a lack of up to date survey information.

5.6 Short term trend; Direction	Currently there is a lack of survey data for the Annex I habitat both within and outside Natura 2000 sites in Wales. This lack of contemporary data coupled with the relatively dynamic nature of the habitat leaves assessing the trend in habitat area uncertain. However, what is known is that the habitat is very susceptible to damage from trampling and has been affected by vehicle access and parking. There is also concern that shoreline structures such as groins and seawalls are disrupting coastal processes and causing sediment starvation in places, which suggest that there may be localised losses at some sites.
5.14 Change and reason for change in surface area	The change in the estimated area of this habitat is the result of the re-analysis of existing survey data (see section 5.2) rather than the result or any new survey work or known changes in the habitat extent. The 2007 area estimate was derived from figures for the total area of vegetated shingle in Wales provided by Sneddon & Randall (1993), of which approximately 15% was assumed to be H1210 vegetation. The 2007 area figure did not consider the shingle vegetation recorded by the Sand Dune Survey (Dargie, 1995). The reasons for the change in surface area have been outlined above but, unfortunately no new survey data has been generated since the last reporting round to determine an accurate surface area figure for this report.
6.1 Condition of habitat	Not assessed in this reporting round, therefore, unknown.
6.2 Condition of habitat; Method used	There is only one SAC in Wales with this Annex I habitat (Dee Estuary SAC) and unfortunately this habitat has not been assessed in terms of Common Standards Monitoring, therefore, condition is essentially unknown for this habitat in Wales. Where the habitat occurs outside of the SAC series, the habitat has not been formally assessed either. The habitat is likely to be affected by shoreline structures and sea level rise. Nitrogen deposition is unlikely to be a limiting factor for this habitat. Presently, there is no evidence of critical load exceedance.
6.3 Short term trend of habitat area in good condition; Period	No data available to determine trend.
7.3 Additional information	Data held in NRWs Special Sites Actions Database (NRW, 2018), which provides information on \issues\ affecting habitats and species within the protected sites series in Wales, were used to provide a basis for quantifying pressures / threats relating to the habitat. The special sites (SSSI and SAC) include 93% of the H1210 resource in Wales by area. Pressures: The following pressures are considered important: F08 - Modification of coastline, estuary and coastal conditions for development, use and protection of residential, commercial, industrial and recreational infrastructure and areas (including sea defence or coast protection works and infrastructures). F07 - Sports, tourism and leisure activities. N04 - Sea-level and wave exposure changes due to climate change F06 - Development and maintenance of beach areas for tourism and recreation incl. beach nourishment and beach cleaning. J02 - Mixed source marine water pollution (marine and coastal). F08 - This habitat is being adversely affected by shoreline structures especially where these are restricting sediment transport. Without an influx of new material this habitat is likely to go into decline. F07 - Large numbers of walkers and vehicle access has caused problems on at least one site. N04 - Sea-level rise is likely to result in loss of the shingle habitat and increased storminess may remove significant proportions of shingle vegetation. F06 - Beach cleaning is known to occur at several locations which are outside of the protected sites series and may have a detrimental effect on the integrity of the habitat. J02 - The habitat is likely to be sensitive to pollution, particularly oil pollution. Threats: These were assessed in a similar way to pressures. Five threats have been identified which are the same as those listed for Pressures. The threats listed are current and applicable to future scenarios. Each of the threats listed was regarded as being long term and there is no reason to suppose they will not continue to be applicable.

8.5 List of main conservation measures	The special sites (SSSI and SAC) include 93% of the H1210 resource in Wales by area. However, none of this is covered by management agreement and it is unlikely that any is covered by agri-environment scheme. Other conservation measures which are needed but not implemented (CJ03, CF03) include special projects, e.g. towards BAP targets for maintenance, improvement of condition, restoration and expansion of the resource.
9.1 Future prospects of parameters	9.1a. Despite several ongoing threats to the habitat, statutory protection of the bulk of the sites provides protection against total loss and changes to the 10km2 distribution are considered unlikely in the short to medium term.
9.1 Future prospects of parameters	9.1b. This habitat is being adversely affected by shoreline structures especially where these are restricting sediment transport. Without an influx of new material the area of the habitat is likely to reduce in the future. Large numbers of walkers and vehicle access, unless checked, will cause problems for the feature in the future. Predicted sea-level rise is likely to result in loss of the habitat and increased storminess may remove significant proportions of the vegetation, which if sustained consecutively over a number of years is likely to have a negative effect on the area of the habitat in the future. Beach cleaning is known to occur at several locations which are outside of the protected sites series and may have a detrimental effect on the integrity of the habitat and thus affecting future area of the habitat. Taking the above into account it is likely that the future trend for the area covered by the habitat is likely to be \negative\ if conservation measures are not implemented, however, until there is up-to-date survey information for the habitat in Wales, the future prospects of area will remain as \unknown\.
9.1 Future prospects of parameters	9.1c. This habitat is being adversely affected by shoreline structures especially where these are restricting sediment transport. Without an influx of new material the structure and function of the habitat is likely to be compromised in the future. Large numbers of walkers and vehicle access, unless checked, will cause problems for the structure and function of the feature in the future. Predicted sea-level rise is likely to result in loss of the habitat and increased storminess may remove significant proportions of the vegetation, which if sustained consecutively over a number of years is likely to have a negative effect on the structure and function of the habitat in the future. Beach cleaning is known to occur at several locations which are outside of the protected sites series and may have a detrimental effect on the integrity of the habitat and thus affecting future structure and function of the habitat. Taking the above into account it is likely that the future trend for the structure and function covered by the habitat is likely to be \negative\ if conservation measures are not implemented, however, until there is up-to-date survey information for the habitat in Wales, the future prospects of area will remain as \unknown\.
11.3 Surface area of the habitat type inside the network; Method used	The surface area figure for the habitat type inside the SAC network has been derived from Sand Dune Vegetation Survey of Great Britain - Wales (Dargie, 1995) dataset using occurrences of SD2 and SD3 on gravel / stony substrate and the Sneddon & Randall (1993) survey using records of shingle vegetation equating to NVC community SD2 (i.e. SH31a, SH31b and SH28) to determine an area figure for the Annex I habitat.
11.4 Short term trend of habitat area in good condition within the network; Direction	There is only one SAC in Wales with this Annex I habitat (Dee Estuary SAC) and unfortunately this habitat has not been assessed in terms of Common Standards Monitoring and there is insufficient other data available on which to assess trends within the N2K series therefore, condition is essentially unknown for this habitat in Wales.