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:

H1220 - Perennial vegetation of stony banks

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	**1220 - Perennial vegetation of stony banks**

2. Maps

2.1 Year or period	1989-1994
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	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. Creer, J. & Green, H. (2014). Bae Cemlyn SAC. Field visit 19.03.2014 to assess Perennial vegetation of stony banks vegetation. NRW Internal Report Dargie, T. C. D. (1995). Sand Dune Vegetation Survey of Great Britain. A national inventory. Part 3: Wales. Joint nature Conservation Committee. Peterborough. Green, H. (2014a). Bae Cemlyn SAC. Field visit 23.04.2014 to assess Perennial vegetation of stony banks vegetation. NRW Internal Report. Green, H. (2014b). Bae Cemlyn SAC. SAC monitoring data. NRW Internal Data. Horizon Nuclear Power 2018. Wylfa Newydd Project, 6.2.12 ES Volume B - Introduction to the environmental assessments B12 - Coastal processes and coastal geomorphology. Horizon Nuclear Power 2018. Wylfa Newydd Project, 5.2 Shadow Habitats Regulations Assessment Report. Horizon Nuclear Power 2018. Wylfa Newydd Project, 6.4.12 ES Volume D - WNDA Development D12 - Coastal processes and coastal geomorphology. Horizon Nuclear Power 2018. Wylfa Newydd Project, 6.4.80 ES Volume D - WNDA Development App D12-1 - Coastal Geomorphology Baseline for the Wylfa Newydd Project - 2014. Horizon Nuclear Power 2018. Wylfa Newydd Project, 6.4.81 ES Volume D - WNDA Development App D12-2 - Sediment Regime. Horizon Nuclear Power 2018. Wylfa Newydd Project, 6.4.82 ES Volume D - WNDA Development App D12-3 - Wylfa Newydd Main Site Wave Modelling Report. Horizon Nuclear Power 2018. Wylfa Newydd Project, 6.4.90 ES Volume D - WNDA Development App D13-8 - Marine Hydrodynamic Modelling Report - Wylfa Newydd Development Area. Horizon Nuclear Power 2018. Wylfa Newydd Project, 6.4.96 ES Volume D - WNDA Development App D13-14 - Marine modelling of the construction discharge. JNCC (2004). Common Standards Monitoring (CSM) for Vegetated Coastal Shingle Habitats. Joint Nature Conservation Committee, Peterborough.

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

http://jncc.defra.gov.uk/pdf/csm_coastal_shingle.pdf
Kay, L. (2018). Article 17 2018 GIS Layer Processing Notes: H1220 Perennial vegetation of stony banks. Internal NRW document.
Lewis, H. (2003). Bae Cemlyn SAC. Perennial vegetation of stony banks H1220. SAC Monitoring Report. CCW Internal Report.
NRW. (2018). Actions Database. NRW Internal Database.
Pybus, R. (2007). Bae Cemlyn SAC. Perennial vegetation of stony banks H1220. SAC Monitoring Report. CCW Internal Report.
Randall, R.E. & Doody, J.P. 2003. Guidance for the management of coastal vegetated shingle. Peterborough, English Nature (EN).
Rawlins, K. (2018). Bae Cemlyn SAC. Field visit to assess the condition of the Perennial vegetation of stony banks feature for informing A17 Reporting. NRW Internal Report.
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. 1993a. Coastal vegetated shingle structures of Great Britain, main report. Peterborough, Joint Nature Conservation Committee (JNCC).
Sneddon, P. & Randall, R.E. 1993b. 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
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	0.5296
5.3 Type of estimate	Best estimate			
5.4 Surface area Method used	Complete survey or a statistically robust estimate			
5.5 Short-term trend Period	2007-2018			

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

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	0.026	Maximum	0.026
	b) Area in not-good condition (km²)	Minimum	0	Maximum	0
	c) Area where condition is not known (km²)	Minimum	0.503	Maximum	0.503
6.2 Condition of habitat Method used	Based mainly on expert opinion with very limited data				
6.3 Short-term trend of habitat area in good condition Period	2007-2014				
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
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

Threat	Ranking
Sports, tourism and leisure activities (F07)	H

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

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

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		Only inside Natura 2000
8.4 Response to the measures		Long-term results (after 2030)

8.5 List of main conservation measures

Reduce impact of outdoor sports, leisure and recreational activities (CF03)

Restore habitats impacted by multi-purpose hydrological changes (CJ03)

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

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

	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 0.23
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	Uncertain (u)
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	
12.2 Other relevant information	

Distribution Map

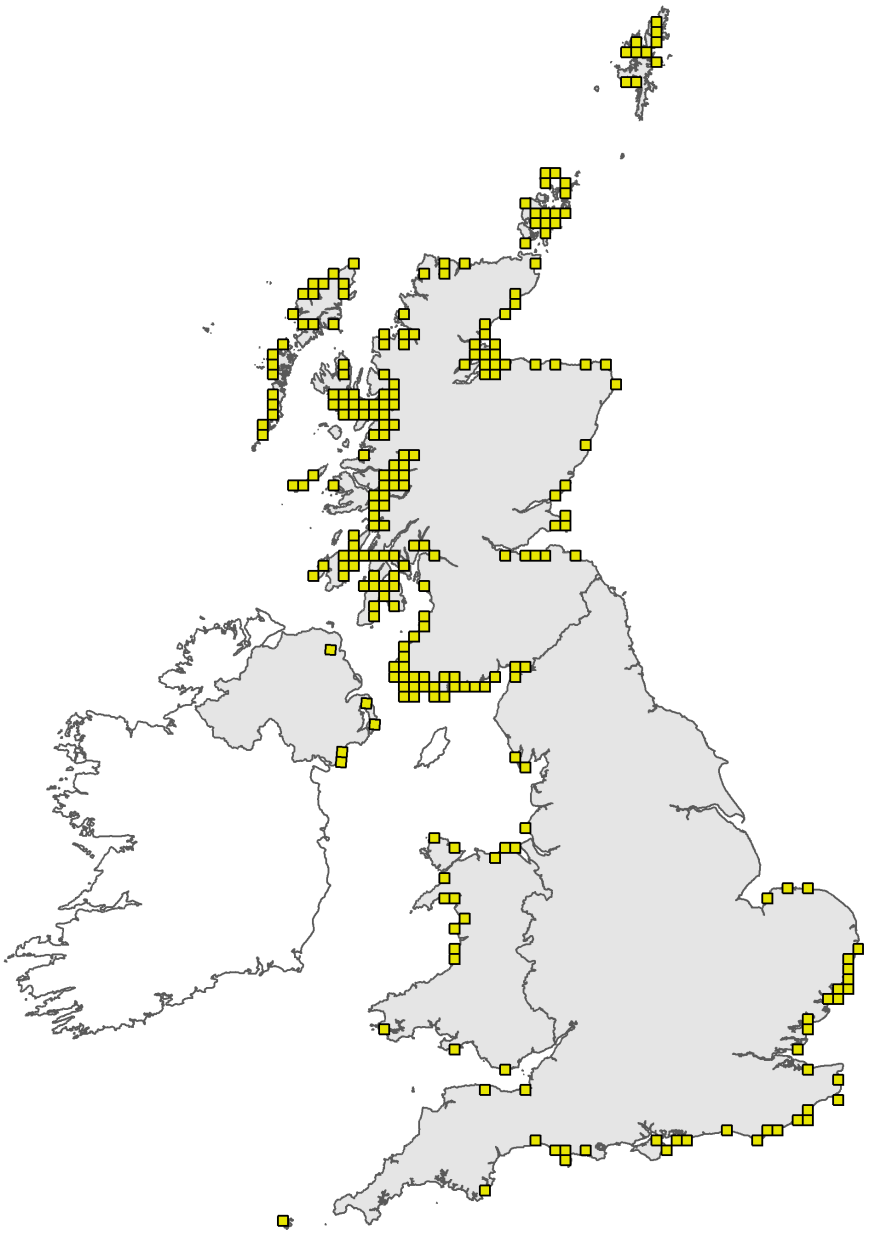

Figure 1: UK distribution map for H1220 - Perennial vegetation of stony banks. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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

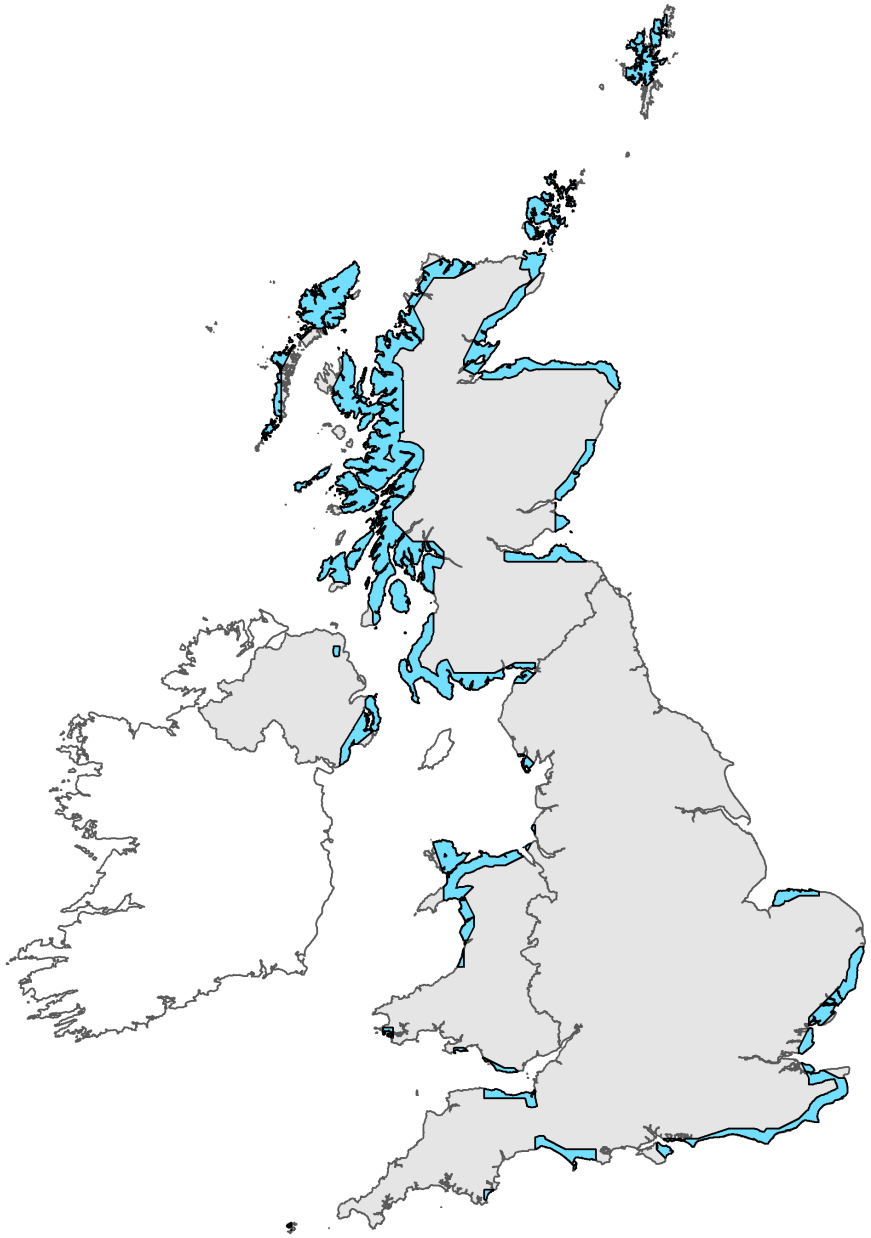

Figure 2: UK range map for H1220 - Perennial vegetation of stony banks. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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: 1220

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 H1220 Perennial vegetation of stony banks. Extent Layer 2018 (Kay, 2018).Data source 2 (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 SD1 (i.e. habitat classes SH27, SH26, SH25, SH24, SH23, SH22, SH21, SH19, SH18, SH15, SH11, SH9, SH8, SH7, SH6, SH4, SH3, SH2 and SH1 - not all of which occur in Wales).Data source 2 (SECONDARY 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 and all records of SD1 have been included.However, these surveys were carried out over 20 years ago and so several intra-site changes are likely to have occurred, but no sites have been lost or irreversibly damaged.SD1 and its Sneddon & Randall equivalents (SH1-4, SH6-9, SH11, SH15, SH18, SH19 & SH21-27 Sneddon & Randall, 1993 a & b) were the only plant communities used for mapping the distribution of this habitat.According to the Sneddon & Randall (1993 a & b) and Dargie (1995) datasets there are 14, Welsh 10km squares where this habitat (SD1 or shingle equivalents (Sneddon & Randall, 1993 a & b)) occurs.The distribution differs to that reported in 2007, however, this is due to a different interpretation method of the original datasets, rather than due to a genuine increase in the distribution of the feature.

Habitat code: 1220 Region code: ATL

Field label	Note
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 since the last report in 2013. However, re-analysis of the Sneddon & Randall (1993b) and Dargie (1995) datasets revealed that there are 14, 10km squares where this habitat (SD1 (or shingle equivalents (Sneddon & Randall, 1993 a & b)) occurs. The range now differs to that reported in 2007, however, this is due to a different interpretation method of the original datasets rather than a genuine increase in the range of the feature (see 2.3 for more details).
5.3 Type of estimate	The area figure has been derived from the Sneddon & Randall (1993) survey using records of shingle vegetation equating to NVC community SD1 (i.e. SH27, SH26, SH25, SH24, SH23, SH22, SH21, SH19, SH18, SH15, SH11, SH9, SH8, SH7, SH6, SH4, SH3, SH2 and SH1 - not all of which occur in Wales) and the Dargie (1995) dataset using occurrences of SD1 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.

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 impossible. However, what is known is that the habitat is very susceptible to damage from trampling and has been affected by vehicle access and parking which may have been responsible for the loss of Mertensia maritima from one site in North Wales. 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.
5.8 Short term trend; Method used	There is limited information on short term trends in extent for this habitat. SAC monitoring covers a single site in north Wales (Bae Cemlyn) which supports 5% of the habitat in Wales - no changes in extent were noted during SAC monitoring between 2003 (Lewis) and 2007 (Pybus), however, a field visit post winter storms in 2014 revealed damage to the feature (Creer & Green, 2014), but extent was not formally assessed.It would be unwise to make any conlcusions on trend in the area of the habitat based on such a small sample size.
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 85% was assumed to be H1220 vegetation. The 2007 area figure did not consider the shingle vegetation recorded by the Sand Dune Survey (Dargie, 1995). The reasons for 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 and up-to-date surface area figure.
6.2 Condition of habitat; Method used	A single SSSI / SAC has received Common Standards Monitoring (JNCC, 2004) visits to assess the condition of the H1220 feature. The site (Bae Cemlyn) contains 5% (0.026 km2) of the total area mapped for the habitat in Wales and was monitored in 2003 (Lewis, 2003), 2007 (Pybus, 2007) and 2014 (Green, 2014b). The H1220 feature was found to be in an unfavourable condition in 2003 and 2007 and in favourable condition in 2014. There is very little information about habitat condition on other statutory and non-statutory sites. Condition is essentially unknown for about 95% of the habitat in Wales. 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 which currently has no agreed critical load.
6.3 Short term trend of habitat area in good condition; Period	These are the dates of the two most recent monitoring visits to Bae Cemlyn SAC.
6.4 Short term trend of habitat area in good condition; Direction	The SD1 community along the shingle ridge at Bae Cemlyn was systematically sampled in 2003, 2007 and 2014. No significant decline in quality was seen between the 2003 and 2007 monitoring rounds, although on both occasions the feature was considered to be in an unfavourable condition, due to excessive disturbance / trampling. However, the interpretation of the data recorded in 2014 (Green, 2014b), concluded the habitat to be in favourable condition based on less damage due to trampling recorded for the feature, despite some localised/short-term damage due to winter storms (Creer & Green, 2014) as mentioned in 5.8. However, trend in condition is essentially unknown for at least 95% of the habitat in Wales.
6.5 Short term trend of habitat area in good condition; Method used	See 6.2 & 6.4
8.1 Status of measures	Measures have been identified and some have been undertaken, however, there are some yet to be implemented.

8.5 List of main conservation measures	The special sites (SSSI and SAC) include 94% of the H1220 resource in Wales by area, with just 5% of H1220 within a SAC and covered by management agreement (which is unlikely to be covered by agri-environmental scheme). At Bae Cemlyn SAC the shingle ridge is maintained through a dynamic and generally cyclic process of deposition and erosion of the shingle. Structures or other intervention that interfere with this natural movement should be resisted. Although the ridge consists of a large volume of shingle, the overall resource may be limited. Removal of shingle to provide building material has occurred in the past but must be resisted. Rising sea levels and storm events due to global warming make this even more important (CJ03). Trampling of perennial vegetation: Although subject to movement during winter storms, the shingle vegetation may be susceptible to trampling pressure. Recreational use and walking should therefore avoid the vegetated areas of the shingle ridge. NRW is currently monitoring the situation (CF03). Direct visitor management is undertaken during the tern breeding season by the North Wales Wildlife Trust (CF03). The vegetation is also vulnerable to trampling pressure outside this season. Repositioning of the footpath is necessary both for the conservation of the vegetation and to avoid disturbance of the tern colony (CF03). Investigate relocation of car park, including identification and costs of suitable alternative sites and removal of hard structures and remobilisation of shingle ridge. Isle of Anglesey County Council to take forward this work in partnership with NRW, National Trust (landowners), and the Wildlife Trust (Reserves Managers). Potential to link to study into impacts of footbridge and weir (CF03, CJ03). Other conservation measures outside of Cemlyn SAC include special projects, e.g. towards BAP targets for maintenance, improvement of condition, restoration and expansion of the resource (CF03). Regulations may often be inadequate to fully protect the habitat, e.g. in tackling under-management or neglect.
9.1 Future prospects of parameters	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. 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 several 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 will be \negative\ as current and planned conservation measures are not considered likely to fully mitigate these on-going pressures and threats and as a result 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 the Welsh shingle survey (Sneddon & Randall, 1993b) and the Dargie (1995) dataset using occurrences of SD1 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 where H1220 is a notified N2K feature (Bae Cemlyn SAC with 2.63 ha) and this is the only site where the habitat has been assessed in terms of Common Standards Monitoring. There is insufficient other data available on which to assess trends within the N2K series (20.41 ha) where the feature occurs, therefore, condition is essentially uncertain for this habitat in Wales.