Report under The Conservation of Habitats and Species Regulations 2017 (as amended), Regulation 9A

2019-2024

Conservation status assessment for the habitat:

H8120 - Calcareous and calcshist screes of the montane to alpine levels (*Thlaspietea rotundifolii*)

Wales

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Important note - Please read

- The information in this document represents Wales Report under The Conservation of Habitats and Species Regulations 2017 (as amended), Regulation 9A, for the period 2019-2024.
- It is based on supporting information provided by Natural Resources Wales, 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.
- Maps showing the distribution and range of the habitat are 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 habitat (section 11 National Site Network coverage for Annex I habitats).

Further details on the approach to the Habitats Regulations Reporting 2019-2024 are available on the JNCC website.

Assessment Summary: Calcareous and calcshist screes of the montane to alpine levels (*Thlaspietea rotundifolii*)

Distribution Map

Range Map

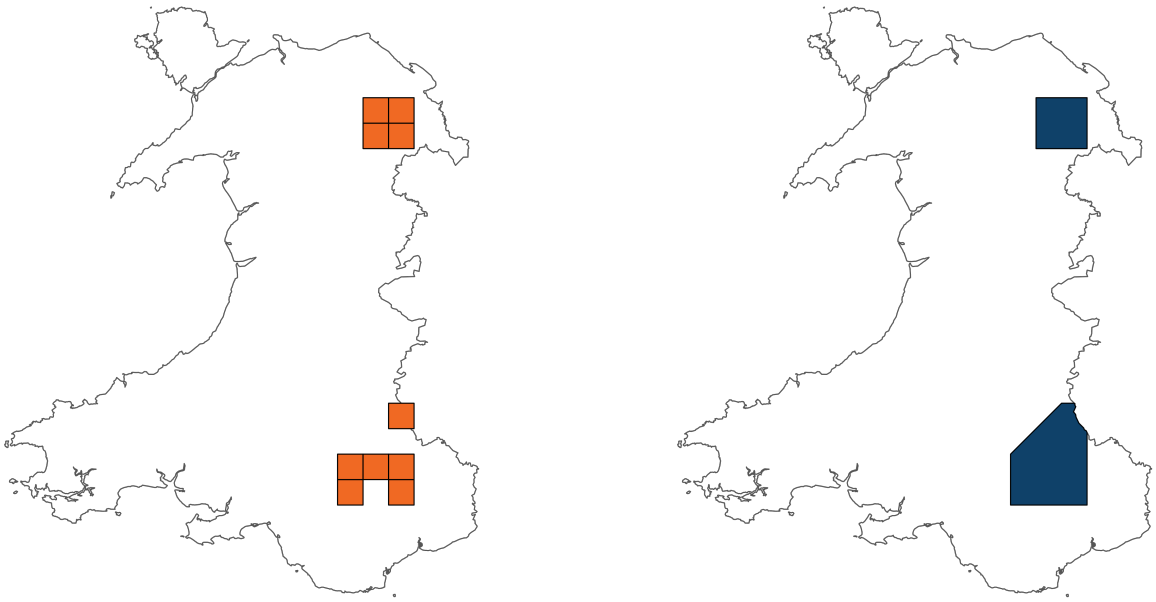

Figure 1: Wales distribution and range map for H8120 - Calcareous and calcshist screes of the montane to alpine levels (*Thlaspietea rotundifolii*). Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority. The 10km grid square distribution map is based on available habitat records within the current reporting period.

Table 1: Table summarising the conservation status for H8120 - Calcareous and calcshist screes of the montane to alpine levels (*Thlaspietea rotundifolii*). Overall conservation status for habitat is based on assessments of range, area covered by habitat, structure and functions, and future prospects.

Overall Conservation Status (see section 10)

Unfavourable-bad (U2)

Breakdown of Overall Conservation Status

Range (see section 4)	**Unknown (XX)**
Area covered by habitat (see section 5)	**Unknown (XX)**
Structure and functions (see section 6)	**Unfavourable-bad (U2)**
Future prospects (see section 9)	**Unknown (XX)**

List of Sections

National Level

1. General information

1.1 Country	Wales
1.2 Habitat code	H8120 - Calcareous and calcshist screes of the montane to alpine levels (*Thlaspietea rotundifolii*)

2. Maps

2.1 Year or period	1994-2012
2.2 Distribution map	Yes
2.3 Distribution map; Method used	Based mainly on extrapolation from a limited amount of data

2.4 Additional information

No additional information

Biogeographical Level

3. Biogeographical and marine regions

3.1 Biogeographical or marine region where the habitat occurs ATL

3.2 Sources of information

See section 13 References

4. Range

4.1 Surface area (km²)	1,359.54

4.2 Short-term trend; Period

4.3 Short-term trend; Direction	Unknown
4.4 Short-term trend; Magnitude	

a) Estimated minimum	
b) Estimated maximum	
c) Pre-defined range	
d) Unknown	
e) Type of estimate	
f) Rate of decrease	
4.5 Short-term trend; Method used	Insufficient or no data available
4.6 Long-term trend; Period	
4.7 Long-term trend; Direction	
4.8 Long-term trend; Magnitude	
a) Minimum	
b) Maximum	
c) Rate of decrease	
4.9 Long-term trend; Method used	

4.10 Favourable Reference Range (FRR)

a) Area (km²)	
b) Pre-defined increment	Current range is less than 2% smaller than the FRR
c) Unknown	No
d) Method used	Reference-based approach
e) Quality of information	moderate

4.11 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	

4.12 Additional information

No additional information

5. Area covered by habitat

5.1 Year or period	1994-2004
5.2 Surface area (km²)	
a) Minimum	0.34
b) Maximum	0.34
c) Best single value	0.47
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	
5.6 Short-term trend; Direction	Unknown
5.7 Short-term trend; Magnitude	
a) Estimated minimum	
b) Estimated maximum	
c) Pre-defined range	
d) Unknown	
e) Type of estimate	
f) Rate of decrease	
5.8 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	
d) Rate of decrease	
5.12 Long-term trend; Method used	

5.13 Favourable Reference Area (FRA)	
a) Area (km²)	
b) Pre-defined increment	Current area is less than 2% smaller than the FRA
c) Unknown	No
d) Method used	Reference-based approach
e) Quality of information	moderate

5.14 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	

5.15 Additional information

No additional information

6. Structure and functions

6.1 Condition of habitat (km²)	
Area in good condition	
ai) Minimum	0
aii) Maximum	0
Area not in good condition	
bi) Minimum	0.272
bii) Maximum	0.272
Area where condition is unknown	
ci) Minimum	0.071
cii) Maximum	0.328
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	2013-2024
6.4 Short-term trend of habitat area in good condition; Direction	Uncertain
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

Typical species were not used directly in the assessment of conservation status for habitat structure and function as a comprehensive list of typical species for each habitat was not available. However, the status of typical species was considered when the

condition of individual sites was assessed using Common Standards Monitoring Guidance. Common Standards Monitoring (CSM) data was used to assess the area of habitat in ‘good’ and ‘not good’ condition (field 6.1). Species were a component of the attributes assessed under CSM. Therefore, an assessment of species is considered to have formed part of the reporting under field 6.1 which supported the Habitats Structure and Function assessment (field 10.3).

7. Main pressures

7.1 Characterisation of pressures

Table 2: Pressures affecting the habitat, 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
PA07: Intensive grazing or overgrazing by livestock	Ongoing and likely to be in the future	High (H)
PF05: Sports, tourism and leisure activities	Ongoing and likely to be in the future	Medium (M)
PI02: Other invasive alien species (other than species of Union concern)	Only in future	Medium (M)
PI03: Problematic native species	Ongoing and likely to be in the future	Medium (M)
PK03: Mixed source air pollution, air-borne pollutants	Ongoing and likely to be in the future	High (H)
PK04: Atmospheric N-deposition	Ongoing and likely to be in the future	High (H)
PM07: Natural processes without direct or indirect influence from human activities or climate change	Ongoing and likely to be in the future	Medium (M)
PJ10: Change of habitat location, size, and / or quality due to climate change	Only in future	Medium (M)

7.2 Sources of information

See section 13 References

7.3 Additional information

No 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 measures	

8.5 List of main conservation measures

Table 3: 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
MA05: Adapt mowing, grazing and other equivalent agricultural activities (e.g. burning)	High (H)
MF03: Reduce impact of outdoor sports, leisure and recreational activities (incl. restoration of habitats)	Medium (M)
MI03: Management, control or eradication of other invasive alien species	Medium (M)
MI05: Management of problematic native species	Medium (M)
MK01: Reduce impact of mixed source pollution	High (H)

8.6 Additional information

No additional information

9. Future prospects

9.1a Future trends of parameters

ai) Range	Unknown
bi) Area	Unknown
ci) Structure and functions	Unknown

9.1b Future prospects of parameters

aii) Range	Unknown
bii) Area	Unknown
cii) Structure and functions	Unknown

9.2 Additional information

No additional information

10. Conclusions

10.1 Range	Unknown (XX)
10.2 Area	Unknown (XX)
10.3 Specific structure and functions (incl. typical species)	Unfavourable-bad (U2)
10.4 Future prospects	Unknown (XX)
10.5 Overall assessment of Conservation Status	Unfavourable-bad (U2)
10.6 Overall trend in Conservation Status	Unknown

10.7 Change and reason for change in conservation status

This field is not reported as the period 2019-2024 marks the first instance in which conservation status has been assessed at the national level, meaning no comparisons to previous reports can be drawn.

10.7 Change and reason for change in conservation status trend

This field is not reported as the period 2019-2024 marks the first instance in which conservation status has been assessed at the national level, meaning no comparisons to previous reports can be drawn.

10.8 Additional information

No additional information

11. UK National Site Network (pSCIs, SCIs, SACs) coverage for Annex I habitat types

11.1 Surface area of the habitat type inside the pSCIs, SCIs and SACs network (km²)

a) Minimum	
b) Maximum	
c) Best single value	0.272
11.2 Type of estimate	Best estimate
11.3 Habitat area inside the network; Method used	Based mainly on extrapolation from a limited amount of data
11.4 Short-term trend of habitat area within the network; Direction	Stable
11.5 Short-term trend of habitat area within the network; Method used	Based mainly on expert opinion with very limited data
11.6 Short-term trend of habitat area in good condition within the network; Direction	Unknown
11.7 Short-term trend of habitat area in good condition within the network; Method used	Insufficient or no data available

11.8 Additional information

No additional information

12. Complementary information

12.1 Justification of percentage thresholds for trends

No justification information

12.2 Other relevant information

No other relevant information

13. References

Biogeographical and marine regions

3.2 Sources of information

Guest, D. 2012. Assessing pressures and threats for article 17 reporting based on information in CCW's Actions Database. CCW HQ internal document.

Blackstock, T.H., Howe, E.A., Stevens, J.P., Burrows, C. R., and P.S Jones. 2010 Habitats of Wales. University of Wales press Cardiff.

Averis, B. 2002. Vegetation survey of Mynydd Eglwyseg, Denbighshire, Wales 2000-2001. CCW Science Report 542.

Gray, D.A., 2003. NVC Survey of Mynydd Llangatwg and Mynydd Llangynidr. CCW Contract Science Report 605.

Preston, C.D., Pearman, D.A., & Dines, T.D. 2002. New atlas of the British and Irish flora: an atlas of the vascular plants of Britain, Ireland, the Isle of Man and the Channel Islands. Oxford, Oxford University Press.

Joint Nature Conservation Committee. 2007. Second Report by the UK under Article 17 on the implementation of the Habitats Directive from January 2001 to December 2006. Peterborough: JNCC. Available from: https://webarchive.nationalarchives.gov.uk/ukgwa/20180804113451mp_/http://jncc.defra.gov.uk/pdf/Article17/FCS2007-H8120-audit-Final.pdf

NRW, 2013. Supporting documentation for the Third Report by the United Kingdom under Article 17 for Wales; Habitat H8120 - Calcareous and calcshist screes of the montane to alpine levels (Thlaspietea rotundifolii). JNCC. Available from: https://webarchive.nationalarchives.gov.uk/ukgwa/20180804113037mp_/http://jncc.defra.gov.uk/pdf/Article17Consult_20131010/H8120_WALES.pdf

Stevens, J., Sherry J. and Turner, A. 2012. H8120 Calcareous and Calcshist Screes of the Montane to Alpine Levels Inventory.

Evans, T.G. 2007. Flora of Monmouthshire: Watsonian vice-county 35.

Wade, A.E, Kay, Q.O.N., Ellis, R.G. & National Museum of Wales. 1994. Flora of Glamorgan.

Green, J.A. 1999. The Flowering Plants and Ferns of Denbighshire.

Main pressures

7.2 Sources of information

No sources of information

14. Explanatory Notes

Field label	Note
2.1: Year or period	All data underpinning the 10km were collected between 1994 and 2004 and re-interpreted in 2012 to produce a GIS inventory. The continued presence of habitat has only been formally reconfirmed on those sites which have been visited as part of the 2007-2012 SAC monitoring cycle.
2.3: Distribution map; Method used	The habitat distribution has been mapped on the basis of records of basic scree with Gymnocarpium robertianum. These records have been derived from two main data sources; Upland NVC surveys for Eglwyseg (Averis, 2002) and Mynydd Llangatwg/Llangynidr (Gray, 2003) and 10km atlas data for G. robertianum. The NVC surveys provide digital maps showing the distribution of scree and target notes identifying points where G. robertianum is found within calcareous scree. Records for G. robertianum were collated from the New Atlas of the British and Irish Flora (2002), these data were then checked against local floras to identify those 10 km squares where limestone fern occurs in scree. A revised GIS-based inventory for the habitat was produced using both of these data sources (Stevens, Sherry and Turner 2012). The datasets comprise polygon (mapped stands of scree with Gymnocarpium), point (localised records of Gymnocarpium in scree) and 10km grid square (unlocalised records) data. This is considered only a partial data set and further work is required to confirm the location and extent of the habitat, particularly where species records and 10km flora data have been used.
4.11: Change and reason for change in surface area of range	The distribution data submitted in 2013 has not been updated. Changes in surface area or range may actually have occurred since the last reporting period, but NRW has no system in place for monitoring or recording such changes.
5.1: Year or period	The minimum area estimate is derived from survey data collected between 1994 and 2004 (Stevens, Sherry and Turner 2012). The maximum area figure is derived from the

	Habitat Survey of Wales, which ran between 1979 and 1997 (Blackstock et al 2010).
5.2: Surface area	27.2ha of habitat is mapped at Eglwyseg and Llangatwg. A further eight points are recorded covering an estimated 7.1ha based on mean patch size. A further three 10 km squares have been identified as supporting the habitat but the number of locations within each square is unknown so no extent figure can be estimated. A figure of 60ha of upland basic scree has been calculated form the Phase 1 dataset but the habitat definition may include a wider range of scree and rock communities than that of the Annex 1 habitat (Blackstock et al. 2010). It is therefore estimated that there is a minimum of 34.3ha with a potential upper limit of 60ha. The best estimate value represents the mid-point between these two figures. Note all measurements are made from vertical projections which will significantly underestimate the area of this habitat.
5.4: Surface area; Method used	Habitat extent has been derived from polygon and point data from upland NVC surveys and 10km atlas data for Gymnocarpium robertianum (see 2.3 for details). The figure for Phase 1 basic scree was calculated from the Habitats of Wales (Blackstock et al. 2010). The best estimate value simply represents the mid-point between the estimate derived from the coarser but more comprehensive phase I survey and the more localised but higher resolution NVC surveys and point data.
6.1: Condition of habitat	SAC monitoring indicates that the calcareous scree on Berwyn and South Clwyd Mountains SAC (the only SAC in Wales on which is a recognised feature), is in unfavourable condition. There is no evidence on which to judge the condition of the remainder of the resource in Wales.
6.2: Condition of habitat; Method used	Assessment of structure and function is based on the results of common standards monitoring visits to Berwyn and South Clwyd Mountains SAC, undertaken in 2009. This indicates a low diversity of typical limestone scree species (Geranium robertianum. Asplenium trichomanes, Neckera crispa and Tortella tortuosa), presence of species indicative of nutrient enrichment and disturbance (Cirsium sp., Rumex

	sp, Urtica dioica and Rubus fruticosus) and low cover of bracken, trees and shrubs. Non-native cotoneaster was found at 4 sample points and just less than half of all sample points showed signs of erosion/disturbance by people or livestock. The estimated extent of the habitat within the SAC is based on the mapped area of habitat at the site. The upper and lower estimates for extent of the habitat in unknown condition reflect the two different methods used to estimate the total area of habitat in Wales (see section 5.2), the minimum figure (7.1 ha) is most in line with the figure provided for the area in not good condition.
6.4: Short-term trend of habitat area in good condition; Direction	The habitat at Berywn and South Clwyd Mountains SAC was monitored in 2003 and 2009 and was found to be in unfavourable condition on both occasions. While this site represents a significant proportion of the known Welsh resource, we have no information on the condition or trend in condition of the habitat outside the N2K series. As such the short-term trend in the habitat condition must be considered uncertain.
6.5: Short-term trend of habitat area in good condition; Method used	See narrative against section 6.4.
7.1: Characterisation of pressures	Four pressures were identified in the Actions Database as having a high impact: PA07 overgrazing – high grazing levels were identified in units with calcareous scree, sheep may avoid scree but some grazing occurs in more accessible areas. SAC Monitoring, based on one site which covers more than 50% of the resource, suggests grazing levels are low with less than 50% vegetation showing impacts of browsing. However the presence of species indicative of disturbance and nutrient enrichment, such as nettles, docks and thistles might indicate localised dunging and movement by grazing stock. Alternatively nitrogen deposition or an interaction between N deposition and grazing may account for the presence of negative indicator species;

PK03 mixed source air pollution and PK04 atmospheric N-deposition – calcareous scree supports a range of fern, bryophytes and lichens; the sensitivity to of these species to N deposition is not known;

PI03 problematic native species and PM07 habitat succession relate to the spread of bracken and scrub respectively. Whilst these are recorded as high pressures in the Actions Database both were identified as less significant by SAC monitoring so they have been re-scored as moderate pressures.

PF05 Outdoor sports and leisure activities – is identified as a moderate pressure and relates to access and erosion of scree. SAC monitoring found erosion along footpaths and in areas used for climbing access.

PI02 Invasive non-native species were not recorded in the Actions Database but SAC monitoring identified 4 sampling points where non-native cotoneaster was a problem.

Methods used to assess pressures:

Data held in the 'Actions Database' were used to provide a basis for quantifying pressures/threats relating to the H8120 habitat. The 'Actions Database' provides information on pressures within the protected sites series; this was then matched to an expert judgement on the severity of these pressures/threats (at a generic level) to give an overall evaluation of the pressure/threat level (for more details see Guest, 2012). The special sites (SSSI and SAC) account for 100 % of the polygons mapped and 37% of the points mapped. Additional information on pressures was collated from the Berwyn and South Clwyd Mountains SAC monitoring data. The potential impacts of atmospheric nitrogen on this habitat are unclear and no generic critical load range has been agreed. Assessment of the 10km data for the habitat against the 2009 CEH moorland deposition

data, shows that squares within which the habitat has been recorded receive an average of 20kg/N/ha/yr with no areas receiving less than 14kg/N/ha/yr so the potential for impacts are significant.

Threats:

PA07 SSSIs land agency agreements on Berwyn and South Clwyd Mountains SAC cover 97% polygons and 25% points and were in place until 2015. Grazing remains a threat in areas outside SSSI agreements or where agreements are not renewed.

PK03 the impacts of nitrogen on vegetation may continue even with a decline in atmospheric deposition.

PM07 and PI03 scrub and bracken expansion will remain an issue and may become an increasing threat if grazing pressures become too low.

PF05 outdoor recreation is likely at the very least to remain the same but may increase although the impact may be lessened by better management of recreation.

PI02 Invasive non-natives such as cotoneaster are a very significant problem on limestone screes and cliffs in the lowland, e.g. Great Orme and Gower coast; now the species has been found on the Berwyn and South Clwyd Mountains SAC there is a potential for it to spread.

PJ10 the potential impacts of climate change on this habitat are unclear but upland species at the southern edge of their distribution are likely to be most sensitive

Methods used to assess threats:

Threats were assessed in 2012, on the basis of expert opinion. The majority of the listed pressures are considered to be ongoing and there is no reason to suppose they will

	not continue to be applicable.
8.1: Status of measures	While the majority of the most important measures required to restore/maintain this habitat to FCS in Wales have been identified, the bulk have not yet been fully implemented.
8.5: List of main conservation measures	MA05 Maintaining appropriate grazing through agreement. 97% calcareous scree polygons plus 25% of points were covered by SSSI land agency agreements until 2015. Grazing levels are not targeted specifically at scree as it comprises only part of a management unit therefore the overall grazing rate within agreements may not be appropriate. MI03 and MI05 management of problematic native species (e.g. bracken and scrub) and invasive non-native (e.g. cotoneaster). MF03 Management of footpaths and erosion control to protect fragile habitat e.g. Local Authority Management of Offa's Dyke Footpath through calcareous scree at Eglwyseg Escarpment. MK01 Nitrogen emissions are currently controlled by a range of national regulations and local measures. However, further measures are required to bring deposition down to safe levels for the habitat as is a better understanding of the impacts of excess nitrogen on this vegetation.
9.1:Future trends and prospects of parameters	9.1a Future prospects of range - NRW currently lacks a specialist covering this habitat and as such we are unable to predict the likely trend in the range of this habitat over the next twelve years. 9.1b Future prospects of area - NRW currently lacks a specialist covering this habitat and as such we are unable to predict the likely trend in the area of this habitat over the next twelve years. 9.1c Future prospects of structure and function - NRW

	currently lacks a specialist covering this habitat and as such we are unable to predict the likely trend in the area of this habitat over the next twelve years.
10.1: Range	Conclusion on Range reached because:(i) the short-term trend direction in Range surface area is unknown; and (ii) the current Range surface area is approximately equal to the Favourable Reference Range.
10.2: Area	Conclusion on Area reached because:(i) the short-term trend direction in Area is unknown; (ii) the current Area is approximately equal to the Favourable Reference Area; and iii) the change in distribution pattern is unknown.
10.3: Specific structure and functions	Conclusion on Structure and function reached because: i) habitat condition data indicates that more than 25% of the habitat is in unfavourable (not good) condition; ii) short-term trend in area of habitat in good condition is unknown; and iii) expert opinion determines that although there are no significant issues for this habitat, as the short-term trend in area of habitat in good condition is unknown then this habitat should be considered as unfavourable-bad under the precautionary principle.
10.4: Future prospects	Conclusion on Future prospects reached because: (i) the Future prospects for Range are unknown; (ii) the Future prospects for Area covered by habitat are unknown; and (iii) the Future prospects for Structure and function are unknown.
10.5: Overall assessment of Conservation Status	Overall assessment of Conservation Status is Unfavourable-bad because one or more of the conclusions are Unfavourable-bad.
11.1: Surface area of the habitat type inside the pSCIs, SCIs and SACs network	The area figure was produced by overlaying the H8120 GIS inventory (Stevens, Sherry and Turner. 2012) with SAC boundaries. The current data show an area of 25.53 ha plus 2 additional points with an estimated area of 1.7ha totalling 27.23 ha.
11.4: Short-term trend of habitat area within the network; Direction	SAC monitoring on the only welsh SAC on which the habitat is a recognised feature, identified it as being in unfavourable condition in both 2003 and 2009. While no

	more recent monitoring data is available for the feature recovery is considered unlikely.
5.13: Favourable Reference Area (FRA)	The UK-level FRV for surface area was developed by JNCC using an audit trail based on the year the FRV was first established and any changes made in subsequent reporting rounds. The audit may draw from any combination of the 2007, 2013, or 2019 Habitats Directive reports and reflects the full rationale used for the 2019 Article 17 reporting. This FRV was reviewed by Welsh experts and considered appropriate for use in Wales based on current habitat extent and trends.
4.10: Favourable Reference Range (FRR)	The UK-level FRV for range was developed by JNCC using an audit trail based on the year the FRV was first established and any changes made in subsequent reporting rounds. The audit may draw from any combination of the 2007, 2013, or 2019 Habitats Directive reports and reflects the full rationale used for the 2019 Article 17 reporting. This FRV was reviewed by Welsh experts and considered appropriate for use in Wales based on current distribution and trends.