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:

H6130 - *Calaminarian* grasslands of the *Violetalia calaminariae*

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	**6130 - Calaminarian grasslands of the Violetalia calaminariae**

2. Maps

2.1 Year or period	1992-2017
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	Barton-Allan, L. 2005. Elenydd SAC Calaminarian Grassland: Monitoring report 2005. Internal NRW file note. Countryside Council for Wales. 2012. Interpretation of grassland Annex 1 habitats in Wales for 2013 Article 17 reporting. CCW HQ internal document. Davies, C. 2017. Halkyn Mountain / Mynydd Helygain SAC - Calaminarian grassland monitoring 2017 - Herward Smithy Section. Internal NRW file note. Dyfed Wildlife Trust. 1992-3. Mid-Wales metal mine survey. CCW site reports. Forster-Brown, C. & Chambers, S.P. 2017. Mapping the extent of calaminarian grassland at Mwyngloddfa Cwmystwyth SSSI. NRW Evidence Report No. 203. Garrett, H. 2008. Mwyngloddiau Fforest Gwydir / Gwydyr Forest Mines SAC Calaminarian grassland SAC Monitoring project. CCW internal report. DRAFT Guest, D. 2012. Assessing N deposition as a pressure for Article 17 reporting on habitats. CCW HQ internal document. Harrison, T. 2017. Halkyn Mountain SAC Monitoring Summary report: 6130 Calaminarian grasslands of the Violetalia calaminariae. NRW Evidence Report. Harrison, T & Creer, J. 2009. Halkyn Mountain/Mynydd Helygain SAC 6130: Calaminarian grasslands of the Violetalia calaminariaet SAC Monitoring report 2009. CCW internal report. DRAFT Lovering, T, 2010. Grogwynion SAC Monitoring Report 2010. CCW internal report. DRAFT NRW. 2015. Natura 2000 Thematic Action Plan. Air pollution: Nitrogen deposition. LIFE Natura 2000 Programme for Wales. NRW. 2017. Actions Database. NRW internal database. NRW. 2018. Briefing Note. Article 17, 2013-18: Pressures, threats and conservation measures guidance. Internal NRW document. Owen, A. 2012. An overview of the Calaminarian grassland mapping exercise, Mwyngloddiau Fforest Gwydir / Gwydyr Forest Mines SAC. CCW internal report: North Region. Ridding, L.E., Redhead, J.W. & Pywell, R.F. 2015. Fate of semi-natural grassland in England between 1960 and 2013: A test of national conservation policy. Global Ecology and Conservation 4: 516-525. Rodwell, J.S. (ed.). 2000. British plant communities. Volume 5. Maritime communities and vegetation of open habitats. Cambridge. University Press, Cambridge.

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

Simkin, J.M. 2015. A survey of calaminarian grassland in mid-Wales. Natural Resources Wales Evidence Report No: 061.NRW, Bangor.
Smith, S.L.N., Birch, K.S, Bosanquet, S.D.S., Davies, C & May, R. 2017. SJ15/14 Glaswelltiroedd Eryrys: site survey. Internal NRW report and vegetation map.
Smith, S.L.N., Sutton, M.D. & Turner, A.J. In prep. An assessment of a selection of non-statutory priority grasslands in Wales. NRW Evidence Report.
Stevens, D.P., Smith, S.L.N., Turner, A.J., Bosanquet S.D.S., Dobson, D.J.T., Reed, D.K., Guest, D.G., Averis, A.B.G. & Hodgetts, N.G. 2002. A vegetation survey and conservation assessment of Halkyn Mountain, Flintshire. CCW Natural Science Report No. 02/7/1.
Stewart, B. 2016. Upper Bank Cycle Way: Lower plant impact assessment of proposed cycleway / footway. Unpublished report to the city and county of Swansea.
Stevens, D. P., Smith, S. L. N., Blackstock, T. H., Bosanquet, S. D. S. & Stevens, J. P. 2010. Grasslands of Wales. A survey of lowland species-rich grasslands, 1987-2004. University of Wales Press, Cardiff.
Stevens, J. & Smith, S. 2012. H6130 Calaminarian grasslands of the Violetalia calaminariae: Wales GIS inventory. CCW HQ dataset.

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	Improved knowledge/more accurate data 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	2002-2017			
5.2 Surface area (in km²)	a) Minimum	b) Maximum	c) Best single value	0.7453
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			
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			

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

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			

6. Structure and functions

6.1 Condition of habitat	a) Area in good condition (km²)	Minimum 0.1627	Maximum 0.1627
	b) Area in not-good condition (km²)	Minimum 0.228	Maximum 0.228
	c) Area where condition is not known (km²)	Minimum 0.3546	Maximum 0.3546
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	2003-2018		
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
Sports, tourism and leisure activities (F07)	H
Other invasive alien species (other then species of Union concern) (I02)	H
Mixed source air pollution, air-borne pollutants (J03)	H
Natural succession resulting in species composition change (other than by direct changes of agricultural or forestry practices) (L02)	H
Abandonment of grassland management (e.g. cessation of grazing or mowing) (A06)	M
Intensive grazing or overgrazing by livestock (A09)	M
Extensive grazing or undergrazing by livestock (A10)	M

Extraction of minerals (e.g. rock, metal ores, gravel, sand, shell) (C01)	M
Mining and extraction activities not referred to above (C15)	M
Other human intrusions and disturbance not mentioned above (H08)	M

Threat	Ranking
Sports, tourism and leisure activities (F07)	H
Other invasive alien species (other then species of Union concern) (I02)	H
Mixed source air pollution, air-borne pollutants (J03)	H
Natural succession resulting in species composition change (other than by direct changes of agricultural or forestry practices) (L02)	H
Abandonment of grassland management (e.g. cessation of grazing or mowing) (A06)	M
Extensive grazing or undergrazing by livestock (A10)	M
Extraction of minerals (e.g. rock, metal ores, gravel, sand, shell) (C01)	M
Mining and extraction activities not referred to above (C15)	M
Other human intrusions and disturbance not mentioned above (H08)	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

Prevent conversion of natural and semi-natural habitats, and habitats of species into agricultural land (CA01)
Manage the use of natural fertilisers and chemicals in agricultural (plant and animal) production (CA09)
Management, control or eradication of other invasive alien species (CI03)
Adapt mowing, grazing and other equivalent agricultural activities (CA05)
Management of problematic native species (CI05)
Reduce impact of outdoor sports, leisure and recreational activities (CF03)
Maintain existing extensive agricultural practices and agricultural landscape features (CA03)
Reduce impact of mixed source pollution (CJ01)

8.6 Additional information

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

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 0.42
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	

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

Distribution Map

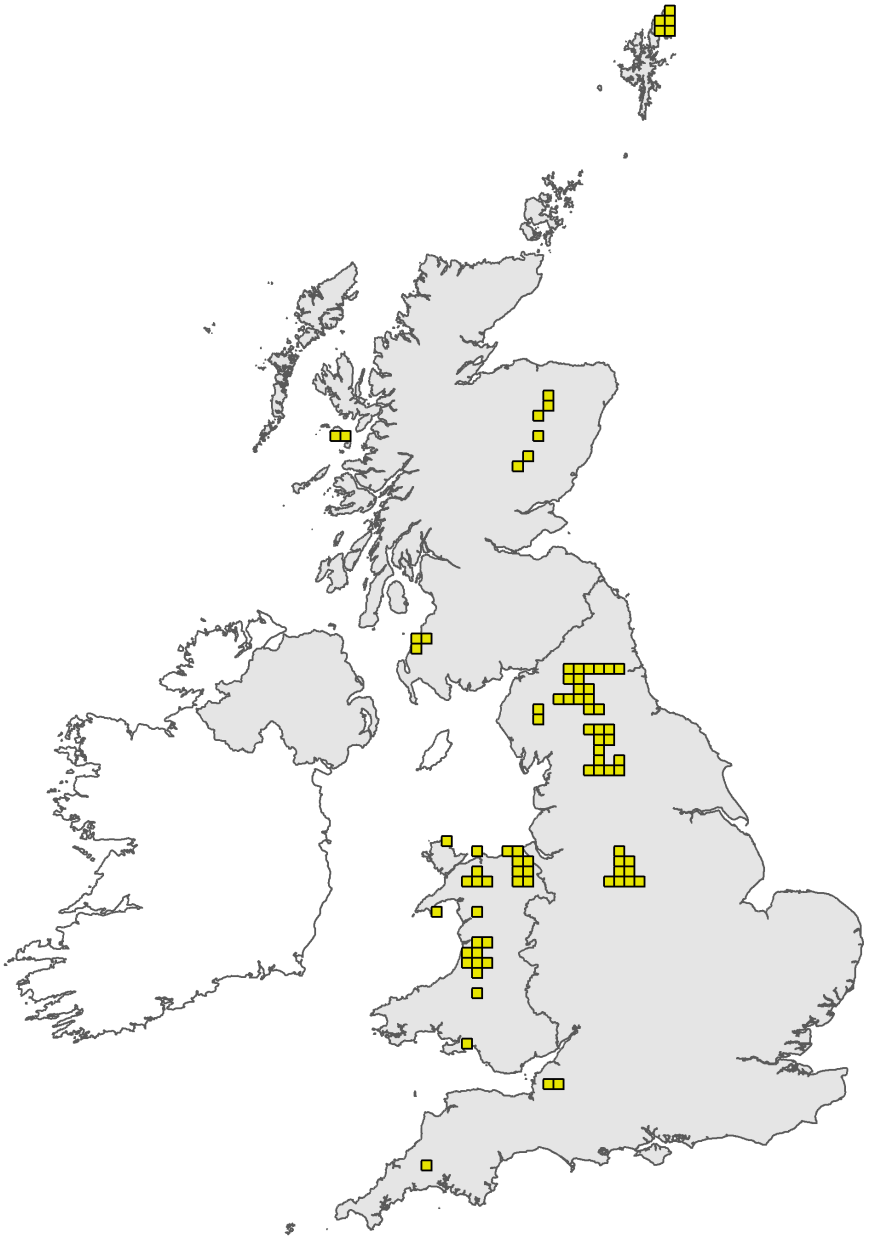

Figure 1: UK distribution map for H6130 - *Calaminarian* grasslands of the *Violetalia calaminariae*. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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

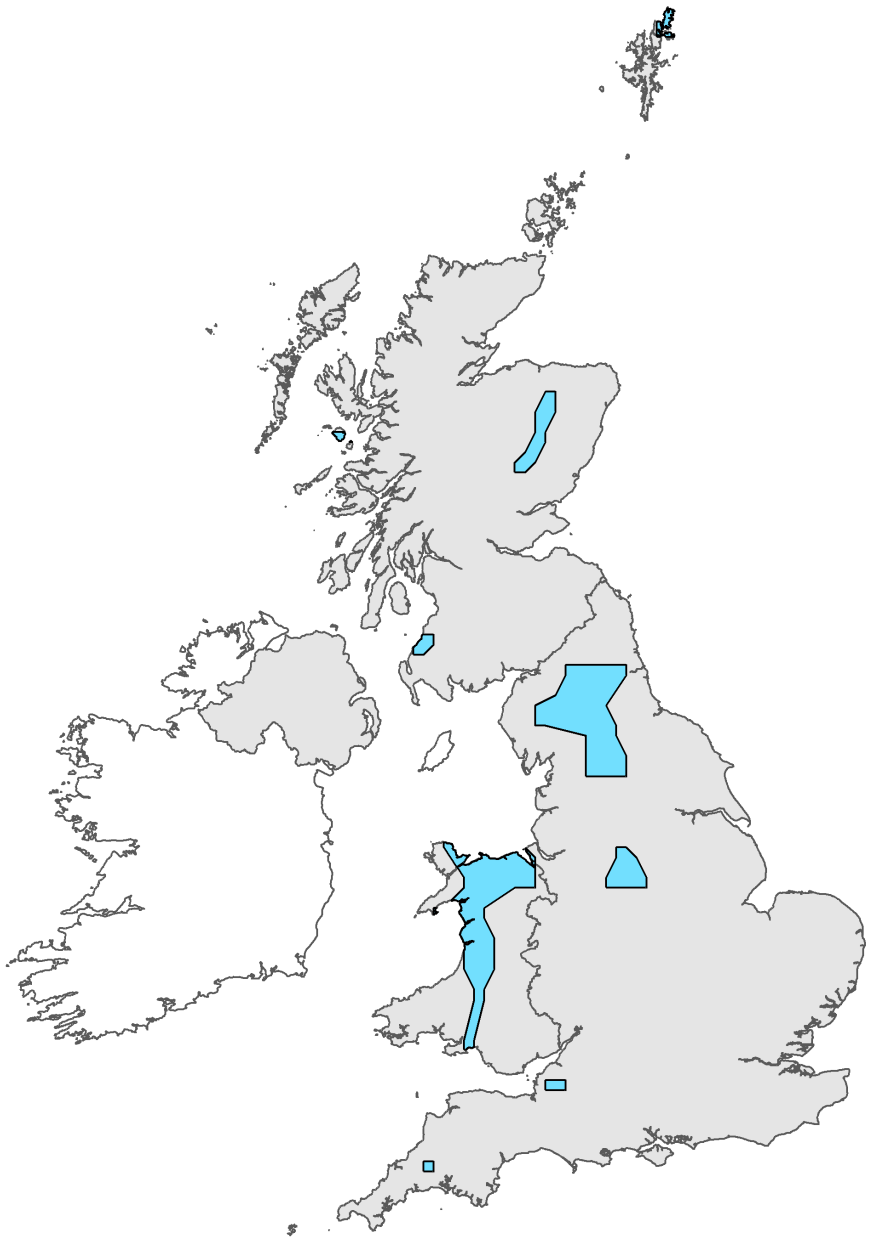

Figure 2: UK range map for H6130 - *Calaminarian* grasslands of the *Violetalia calaminariae*. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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: 6130

Field label	Note
2.3 Distribution map; Method used	The distribution (and extent) of H6130 has been calculated using several data sources, which are summarised below and listed on the 10km Habitat Data spreadsheet. A polygon-based GIS inventory for the habitat has been produced through pooling these data sources together (Stevens & Smith, 2012, with 2018 amendments). Data source 1: Lowland Grassland Survey of Wales (LGSW) 1987-2004 (Stevens et al., 2010) with subsequent updates. This is a targeted NVC (Rodwell (ed.), 2000) survey focusing on grasslands of high conservation interest in the Welsh lowlands. H6130 was mapped at three sites: Halkyn Mountain 2002 (Stevens et al., 2002), Trelogan 2011 and Glaswelltiroedd Eryrys 2016. Examples of the habitat at these sites correspond with NVC OV37. Data source 2: Clwyd mine spoil survey 2002. Stands of calaminarian grassland (OV37) were recorded at six sites in Clwyd (results included in Stevens et al., 2002). Data source 3: Lowland Heathland Survey 1993-2001. CCW commissioned survey. Calaminarian grassland characterised by metallophyte lichen species on river shingle. Data source 4: Upland NVC Survey of Y Wyddfa. A. Turner 1996-1998. Internal NRW data. Data source 5: S. Smith 2008. Prestatyn Walkway - mapping of OV37. Internal NRW data. Data source 6: Distribution of Ditrichum plumbicola and Scopelophila colonies at Nant-y-bai Mine (Nantymwyn SSSI). S. Bosanquet, 2012. Internal NRW data. Data source 7: Gwydyr Forest Mines SAC mapping exercise 2011 (Owen, 2012). Mapped areas of the habitat charactersied by metallophyte vascular plants, bryophytes and lichens. Data source 8: Survey of Six Pits 2012 (Stewart, 2016). Stands of OV37. Data source 9 A survey of 27 mid Wales calaminarian grassland sites was undertaken in 2014 (Simkin, 2015). All mapped areas of the habitat in this survey are characterised by metallophyte lichens or bryophytes. Data source 10: Survey of Mwyngloddfa Cwmystwyth SSSI (Forster-Brown & Chambers, 2017). Lichen and bryophyte forms of the habitat. Data source 11: Records in SSSI files of calaminarian grassland lichens and bryophytes indicate the presence of the habitat at Parys Mountain and Cors Llyferin SSSIs (unmapped). Data source 12: Incidental records of the habitat from R. May (pers. com., 2017). Data source 13: SAC monitoring confirmed the continued presence and extent of the habitat at one site during the 2013-18 reporting period (Davies, 2017; Harrison, 2017), a further two sites in the 2007-12 period (Garrett, 2008; Harrison & Creer, 2009; Lovering, 2010), and one additional site in 2005 (Barton-Allan, 2005). There are no recent data or information for the majority of localities. Notwithstanding the age of much of the information, together these data are considered to give good coverage of the region. For details of interpretation of H6130 in Wales see CCW (2012).

Habitat code: 6130 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	Changes to the reported distribution of H6130 in Wales are the product of addition survey work undertaken since the previous report and are not considered to represent genuine changes in the habitats distribution.

5.3 Type of estimate	The data used to produce the total area figure are considered to provide good coverage of the region. In providing the estimate, there is considered to be good knowledge of the whereabouts of heavy metal-contaminated former mine sites in the region and survey information is available for the most extensive examples of the habitat. However, the figure is considered to be an underestimate as: 1) some records are point locations which do not therefore add to the extent figure, and 2) numerous small mine sites, notably in mid Wales, are not included, some of which are likely to have stands of the habitat. The age of most of the data (see 2.3) limits confidence in it to a degree, and there is no information on recent area change for most of the habitat. However, a small decline in area has been noted on two of the four SACs monitored in the period (Garrett 2008; Davies, 2017) and very small loss of extent has been recorded on non-statutory land at five sites since 2007 (Smith, 2012; R. May, pers. com., 2017; Simkin, 2015; A. Lucas, pers. com., 2018).
5.4 Surface area; Method used	see 2.3
5.6 Short term trend; Direction	As all the examples of recorded decline are small it is not clear if this represents a trend of decreasing habitat extent (see 5.3).
5.7 Short term trend; Magnitude	See 5.6
5.8 Short term trend; Method used	SAC monitoring covered three H6130 sites within the 2007-2018 period (Garrett, 2008; Harrison & Creer, 2009; Lovering, 2010; Davies, 2017; Harrison, 2017). A fourth SAC was last monitored in 2005 (Barton-Allan, 2005), but received a visual check in 2012 (K. Perry, pers. com.). Together these SACs support 52% of the habitat in Wales. Decrease in the area of the habitat was recorded at two of the sites (Garrett 2008; Davies, 2017), but extent change across the whole feature was generally not thoroughly assessed during monitoring. There is very lttle information on change on non-SAC SSSIs and non-statutory sites (see 5.3), although small losses on non-statutory land at five sites have been recorded since 2007 (Smith, 2012; R. May, pers. com., 2017; Simkin, 2015; A. Lucas, pers. com., 2018). In addition, Smith et al. (in prep.) noted loss of a broader range of priority lowland grassland habitats at 48% of non-statutory sites (29 out of 61 sites, visited between 2008 and 2017, with an average 9.7 year between visits), and increase in habitat at only 8% of sites, strongly suggesting a recent trend in decline of unprotected lowland grassland habitats generally.
5.14 Change and reason for change in surface area	Whilst small areas of loss are known we remain uncertain over their implications.
6.2 Condition of habitat; Method used	Three of the four SACs containing the habitat as a qualifying feature have been monitored across the period 2007-2017 (Garrett, 2008; Harrison & Creer, 2009; Lovering, 2010; Davies, 2017). Each assessment was found to be in unfavourable condition and, at two of the three sites, declining. A fourth SAC was last monitored in 2005 (Barton-Allan, 2005), and received a visual check in 2012 (Ken Perry, pers. com.) when it was considered to be probably in favourable condition. Together these SACs have 52% of the habitat extent in Wales. No structured monitoring has taken place on non-SAC SSSIs or non-statutory sites, and therefore condition is essentially unknown for about 48% of the habitat in Wales.
6.3 Short term trend of habitat area in good condition; Period	These are the years between the most recent and the previous monitoring visits to the SACs with the habitat. There has been no structured monitoring on other SSSIs and non-statutory sites with the habitat.

6.5 Short term trend of habitat area in good condition; Method used	The three H6130 SAC features which have received structured monitoring twice during the period were assessed as being in unfavourable condition, both in the most recent (Garrett, 2008; Harrison & Creer, 2009; Lovering, 2010; Davies, 2017; Harrison, 2017) and the previous (Creer, 2003; Lovering, 2006; CCW, 2008; Harrison & Creer, 2009) monitoring rounds, although this is an indication of the feature in general, which in some cases was not wholly in poor condition. Features on two sites are considered to be currently declining. One site received structured monitoring once in the period (unfavourable; Barton-Allan, 2005) and a visual check some years later (provisionally favourable; K. Perry, pers. com.). There is a lack of trend data for the remaining H6130 resource (SSSIs and non-statutory sites).

7.1 Characterisation of pressures/ threats	Pressures: Data held in NRW's Special Sites Actions Database (NRW, 2017), 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, following procedures outlined in NRW, 2018. The protected sites (SSSI and SAC) hold 71% of the H6130 Wales resource by area. Using this method, the following are given a High ranking: F07 (Sports, tourism & leisure activities) is an issue on 32% of management units and largely relates to off-road vehicle use; I02 (Invasive alien species) affects 38% of units and relates largely to conifer expansion on two SACs; L02 (Natural succession) affects 45% of units and largely relates to scrub expansion, and to a lesser extent expansion of herbaceous vascular plants. A critical load level has not been formally allocated to this habitat, so that listed for calcareous grassland (15-25 kg N/ha/year) was adopted in 2007 and is used again in this Article 17 reporting round. Air pollution (N deposition) (J03) is known to detrimentally affect calcareous and other dry grasslands (Stevens et al., 2004; Van Den Berg et al., 2011) and is considered highly likely to similarly affect H6130. It is assessed separately using a defined approach (Guest, 2012), using updated deposition data. Using a data overlay method in ARC GIS, 35% of the habitat by area (polygon data) was recorded at or above the lower Critical Load limit and the habitat is given a High ranking. Using methods outlined in NRW, 2018, medium ranking was allocated to: A06 (Abandonment of agriculture), recorded on 4% of units; A09 (Overgrazing) on 4% of units; A10 (under-grazing) on 4% of units; C01 (Extraction of minerals) on 4% of units; and H08 (dumping of material) on 6% of units. C15 (Other mining activity) is also given a medium ranking (from expert opinion) - it relates to issues around the reclamation of former mine sites, for example for health and safety reasons. Using methods outlined in NRW, 2018, the following are assessed as Low ranking pressures: A14 (supplementary feeding), A19 (application of natural fertilisers), D06 (cables and pipelines) and I04 (problematic terrestrial native species). B01 (afforestation) is included as a (Low) pressure as there are national targets to greatly increase forest cover in the region. F01 (conversion to housing/recreation areas) is included as some H6130 sites are situated in urban areas and some loss occurred at one of these sites in the past few years (A. Lucas, pers. com., 2018). H6130 is likely to have relatively low sensitivity to climate change (as for calcareous grassland), but being a habitat of mostly very dry situations, it could be negatively affected by increasing precipitation (N03). Information on a sample of non-statutory grassland sites is provided by Smith et al. (in prep.). Although they did not include any examples of calaminarian grassland, the information is the best available to indicate recent or current pressures on non-statutory grassland habitats in general. They recorded some cases of conversion to intensive production (A02) and artificial fertiliser application (A20) which are considered relevant to the H6130 habitat but are given a low ranking due to lack known actual cases. Threats: These were assessed in a similar way to pressures. However, issues in the Actions Database which were listed as 'resolved' were excluded from the assessment of threats. The results are very similar to those for Pressures, but A09 receives a Low ranking using the set criteria (NRW, 2018), reflecting recent success in dealing with this issue on H6130 statutory sites. Despite modest projected reductions in the overall deposition rates for atmospheric nitrogen, air pollution (J03) is expected to remain a High pressure (threat) to the habitat (Guest, 2012).
8.1 Status of measures	Whilst a significant number of units have at least 1 measure (94%), these are currently considered insufficient to address the pressures and threats on the grassland. The majority of the measures (52%) have yet to be taken and materially lead to the negative future prospects for the feature discussed in 9.1c.

8.5 List of main conservation measures	Using data from NRW's Special Sites Actions Database (NRW, 2017), 94% of SAC/SSSI management units with the feature as a key habitat have at least one Conservation Measure taken or identified. The majority (52%) of these are identified but not yet taken. SSSI comprise 71% of the total extent of the habitat. 26% by area of the habitat in Wales is covered by a relevant Glastir grassland option. Site protection has been shown to act as an effective mechanism in preventing conversion of grassland into agricultural land (CA01) and preventing or limiting fertiliser and chemical usage (CA09) (e.g. Stevens et al., 2010; Ridding et al. 2015). NRWs Actions Database (NRW, 2017) lists 33 management units with H6210 as a key feature with actions expected to have a positive impact in the next 12 years (actions listed as Completed, Underway, Planned or Agreed in principle). The most common actions are: CI03, management of problematic non-native, mainly conifers (32% of all units with the habitat) (Pressure/Threat I02), CA05, mainly adapting grazing management (9%) (Pressure/Threat A10), CI05 (management of problematic native (9%) (Pressure/Threat L02 and A10); and CF03 Reduce impact of leisure and recreation activities (8%) Pressure/Threat F07). CA03 maintain extensive agricultural practice is also ranked Medium. A large majority of Glastir options focused on the habitat are essentially for maintenance of existing agricultural practise. Many of the specific actions on SSSIs also essentially maintain extensive agricultural practice. Three sites with the habitat have been notified as SSSIs since the previous reporting round; these support 5% of the total extent of the habitat in Wales. (Pressure/Threat A02, A09, A10, A19 A20, L02). 52% of H6130 total area is listed as a SAC feature. Thematic Action Plans have been produced for the SACs; these provide priorities for each theme. CJ01: The Natura 2000 Thematic Action Plan sets out the policy surrounding air pollution in Wales. There are various air quality strategies and initiatives in place to protect and enhance biodiversity. Air quality limit values set out in the Air Quality Strategy (AQS) are transposed into national legislation by the Air Quality Standards Regulations 2010. Nitrogen deposition, however, is still a major issue on semi-natural habitats in the UK. These regulations are not habitat-specific (NRW, 2015). (Pressure/Threat J03). The Actions Database lists actions for the following Conservation Measures, each given a Low ranking: CA09, relating to use of natural fertilisers (Pressure/Threat A19), CA04, relating agricultural abandonment (Pressure/Threat A06), and CF04, relating mainly to control/prevention of fly tipping (Pressure/Threat H08). CC01, relating to managing quarrying activities (Pressure/Threat C01) is given a Low ranking as all listed actions are labelled as identified only. No specific conservation measures are identified for CC14 tackling Pressure/Threat C15 Other mining activity, which refers to reclamation of abandoned mine sites, such as for health & safety reasons (Pressure/Threat C15). One additional Low ranking Conservation Measure is included: CB01 (guidance is in place aiming to protect habitat land from tree planting under Glastir) (Pressure/Threat B04).

9.1 Future prospects of parameters	No changes in range of the habitat are expected in the short to medium term, although some 10 km square records are represented only by small individual sites, so have an inherent vulnerability. Expansion of range is unlikely given the habitat's confinement to particular environmental conditions. A wide range of Pressures and Threats affect a large proportion of the habitat, notably off-road vehicle use and spread of non-native conifers species; successional change is a major long-term threat. Conservation measures to combat these are in place or intended for much, but not all, of the habitat on statutory sites. There is a general lack of known measures for the non-statutory sites, which form 29% of the resource. Glastir coverage (Advanced level scheme prescriptions) is only 26% of the total habitat (statutory and non-statutory sites). There is limited information on recent trend in area, but some small losses of extent have been recorded on both statutory and non-statutory sites, with incomplete knowledge of the latter (see 5.8). Overall it is likely that a slow decline in area will occur, but it is unclear if it is < or > 1% per year. The condition on statutory sites is, where assessed, poor (see 6.2) and there is little or no structure and function information for about 50% of the habitat by area (SSSI and non-statutory sites). Many actions on statutory site units have been completed or are set to proceed, but 46% of actions affecting the habitat which have been identified on statutory sites are not currently being progressed. 35% of the habitat area in Wales currently exceeds the critical load (CL) for atmospheric nitrogen deposition and only a modest projected decrease in total deposition in the Principality is projected over the next 12 years.
11.4 Short term trend of habitat area in good condition within the network; Direction	Condition at two of the four SACs monitored is considered to be declining. Although condition was considered favourable at one of the four sites, this was a provisional assessment based only on a visual check. See 6.5 for details.