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:

H8210 - Calcareous rocky slopes with chasmophytic vegetation

NORTHERN IRELAND

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 (Northern Ireland information only)**
1.2 Habitat code	**8210 - Calcareous rocky slopes with chasmophytic vegetation**

2. Maps

2.1 Year or period	2013-2018
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	Cooper, A. & McCann, T. (2001). The Northern Ireland Countryside Survey 2000. Environment and Heritage Service, Belfast Cooper, A., McCann, T. and Rogers, D. (2009) Northern Ireland Countryside Survey 2007: Broad Habitat Change 1998-2007. Northern Ireland Environment Agency. Northern Ireland Environment Agency Research and Development Series No. 09/06. Belfast. 58 pp. McCann, T., Rogers, D. and Cooper, A. (2009) Northern Ireland Countryside Survey 2007: Field methods and technical manual. Northern Ireland Environment Agency. Northern Ireland Environment Agency, Research and Development Series No 09/07. Belfast. Murray, R., McCann, T. and Cooper, A. (1992). A Land Classification and Landscape Ecological Study of Northern Ireland. Department of the Environment NI and Department of Environmental Studies, University of Ulster, Coleraine. Rodwell, J.S. (1992). British Plant Communities. Volume 3, Grasslands and Montane Communities. Cambridge: Cambridge University Press NIEA. Internal Condition Assessment Reports (various sites and years). NIEA. Internal Survey Reports (various sites and years). Rodwell, J.S., Dring, J.C., Averis, A.B.V., Proctor, M.C.F., Malloch, A.J.C., Schaminee, J.H.J & Dargie, T.C.D. 1998. Review of Coverage of the National Vegetation Classification. Lancaster: Unit of Vegetation Science report to the Joint Nature Conservation Committee. Data on aerial Nitrogen deposition taken from Air Pollution Information System website - http://www.apis.ac.uk/

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

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

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	No change The change is mainly due to:
4.12 Additional information	

5. Area covered by habitat

5.1 Year or period	2013-2018		
5.2 Surface area (in km²)	a) Minimum	b) Maximum	c) Best single value 0.2
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	Stable (0)		
5.7 Short-term trend Magnitude	a) Minimum	b) Maximum	c) Confidence interval
5.8 Short-term trend Method used	Based mainly on extrapolation from a limited amount of data		
5.9 Long-term trend Period	1994-2018		
5.10 Long-term trend Direction	Stable (0)		
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	No change The change is mainly due to:		
5.15 Additional information			

6. Structure and functions

6.1 Condition of habitat	a) Area in good condition (km²)	Minimum 0.047	Maximum 0.047
	b) Area in not-good condition (km²)	Minimum 0	Maximum 0
	c) Area where condition is not known (km²)	Minimum 0.153	Maximum 0.153
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	2007-2018		
6.4 Short-term trend of habitat area in good condition Direction	Stable (0)		

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6.5 Short-term trend of habitat area in good condition Method used	Based mainly on extrapolation from a limited amount of data
6.6 Typical species	Has the list of typical species changed in comparison to the previous reporting period? No
6.7 Typical species Method used	
6.8 Additional information	

7. Main pressures and threats

7.1 Characterisation of pressures/threats

Pressure	Ranking
Extensive grazing or undergrazing by livestock (A10)	H
Intensive grazing or overgrazing by livestock (A09)	M
Agricultural activities generating air pollution (A27)	M
Temperature changes (e.g. rise of temperature & extremes) due to climate change (N01)	M
Other invasive alien species (other then species of Union concern) (I02)	M
Burning for agriculture (A11)	M
Sports, tourism and leisure activities (F07)	M

Threat	Ranking
Extensive grazing or undergrazing by livestock (A10)	H
Intensive grazing or overgrazing by livestock (A09)	M
Agricultural activities generating air pollution (A27)	M
Temperature changes (e.g. rise of temperature & extremes) due to climate change (N01)	M
Other invasive alien species (other then species of Union concern) (I02)	M
Burning for agriculture (A11)	M
Sports, tourism and leisure activities (F07)	M

7.2 Sources of information

7.3 Additional information

8. Conservation measures

8.1 Status of measures	a) Are measures needed?	Yes
	b) Indicate the status of measures	Measures identified and taken
8.2 Main purpose of the measures taken	Maintain the current range, population and/or habitat for the species	
8.3 Location of the measures taken	Both inside and outside Natura 2000	
8.4 Response to the measures	Medium-term results (within the next two reporting periods, 2019-2030)	
8.5 List of main conservation measures		

Reduce/eliminate air pollution from agricultural activities (CA12)

Adapt mowing, grazing and other equivalent agricultural activities (CA05)

Implement climate change adaptation measures (CN02)

Reinstate appropriate agricultural practices to address abandonment, including mowing, grazing, burning or equivalent measures (CA04)

Management, control or eradication of other invasive alien species (CI03)

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 0.047
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	Stable (0)

11.5 Short-term trend of habitat area in good condition within network Method used	Based mainly on extrapolation from a limited amount of data
11.6 Additional information	

12. Complementary information

12.1 Justification of % thresholds for trends	
12.2 Other relevant information	

Distribution Map

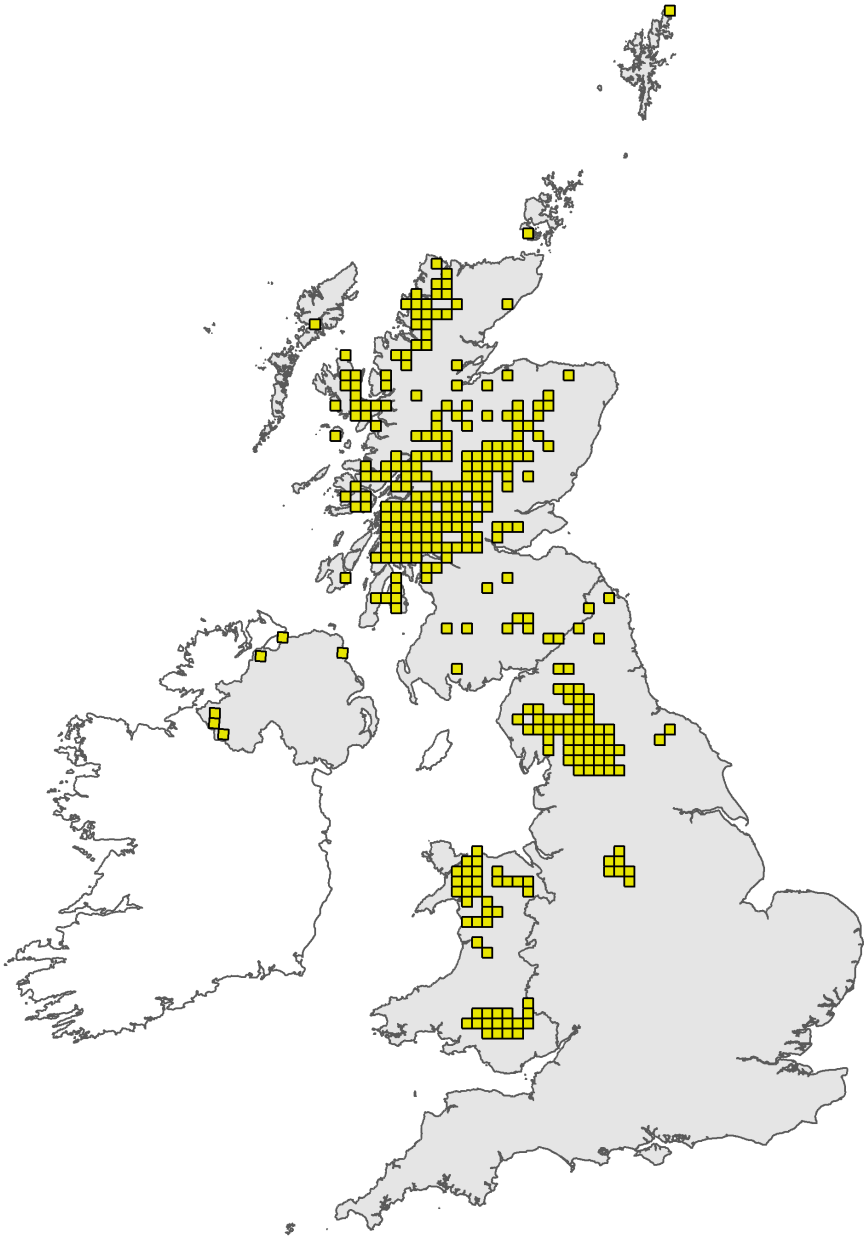

Figure 1: UK distribution map for H8210 - Calcareous rocky slopes with chasmophytic vegetation. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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

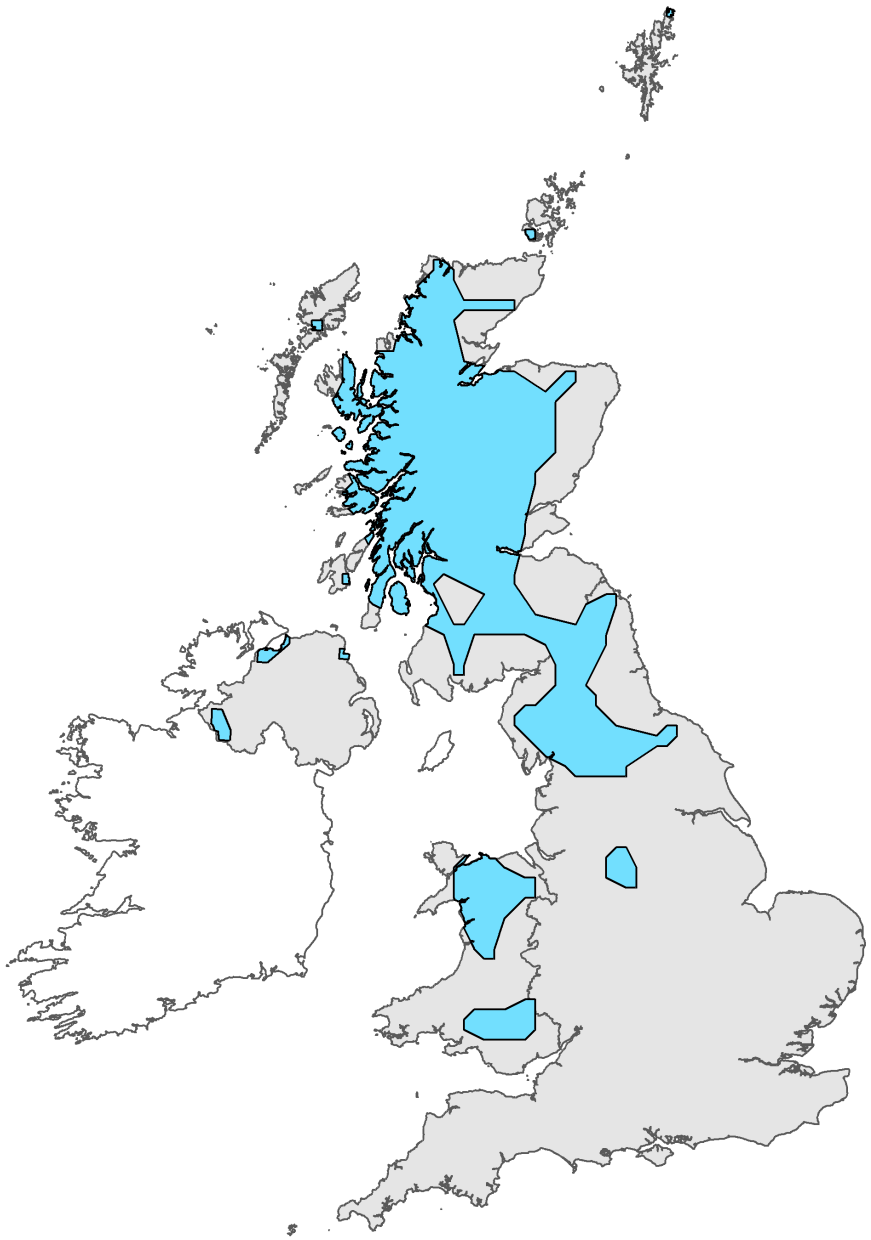

Figure 2: UK range map for H8210 - Calcareous rocky slopes with chasmophytic vegetation. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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: 8210

Field label	Note
2.2 Distribution map	As a habitat, Calcareous rocky slopes is widespread in upland areas of the UK, but is localised and usually fragmentary in its occurrence. The vegetation is characterised by bryophytes such as Tortella tortuosa, Anoectangium aestivum and Ctenidium molluscum. Associated vascular plants include brittle bladder-fern Cystopteris fragilis, green spleenwort Asplenium trichomanes-ramosum and glaucous meadow-grass Poa glauca. Some forms of this vegetation are included within the NVC types OV39 Asplenium trichomanes-Asplenium ruta-muraria community and OV40 Asplenium viride-Cystopteris fragilis community, but other forms are not covered by the NVC. Notable species in the Highlands include alpine woodsia Woodsia alpina, tufted saxifrage Saxifraga cespitosa and many rare bryophytes. The habitat occurs sporadically in NI; it is widespread around the basalt scarps of County Antrim and the limestone scarps of Fermanagh, but is scarce elsewhere. As with calchist scree, NI lacks many of the characteristic arctic-alpine elements associated with the habitat. There is one SAC declared for the habitat in NI (Binevenagh), which was primarily chosen for its arctic-alpine species - notably Mountain Avens Dryas octopetala, Moss Campion Silene acaulis and Purple Saxifrage Saxifraga oppositifolia. The habitat also occurs on designated sites at West Fermanagh Scarplands SAC, and at Galboly, The Cliffs of Magho, and Knock Dhu and Sallagh Braes ASSIs.
2.3 Distribution map; Method used	Information on the distribution of the habitat comes from surveys undertaken by NIEA, either in-house or through contract. During the reporting period, NIEA staff have visited SACs and ASSIs known to contain the habitat (e.g. Binevenagh SAC; Galboly, Cliffs of Magho, Marlbank, and Knock Dhu and Sallagh Braes ASSIs). Coverage of the habitat in the wider countryside is more patchy, as the habitat often occurs in small stands on suitable rocks in the uplands.

Habitat code: 8210 Region code: ATL

Field label	Note
4.1 Surface area	The current range of the habitat is naturally limited by environmental factors, in particular slope/landform and geology. Although data on distribution is limited, no loss in range has been recorded in the habitat on SACs or ASSIs since the condition assessment programme was introduced in 2002. In addition, the habitat is a robust one that is very difficult to damage or destroy.
4.5 Short term trend; Method used	Although there is a scarcity of data on the habitat, expert opinion would suggest that the range is unlikely to have declined over the short term. No evidence of loss has been noted at SACs and ASSIs that contain the feature, and the habitat is a robust one that is difficult to destroy. Hence judgement is stable for short term range.
5.2 Surface area	The surface area of this habitat has been estimated very approximately at 20 ha. This is in the absence of any definitive data from outside the SAC and ASSI series.
5.4 Surface area; Method used	The habitat is regularly monitored on SACs and ASSIs, but there is virtually no data from outside the protected sites network. Hence reported as Based mainly on extrapolation from a limited amount of data
5.6 Short term trend; Direction	Regular monitoring of protected sites has not noted any decline in extent of calcareous rocky slopes, and the habitat is very difficult to destroy or remove. Hence reported as Stable, but Based mainly on extrapolation from a limited amount of data.

5.10 Long term trend; Direction	The overall extent of the habitat is not known. However, regular monitoring of protected sites has not noted any decline in extent of calcareous rocky slopes and the habitat is a robust one that is not easily destroyed or removed. Hence reported as Stable.
6.1 Condition of habitat	Results from SACs and ASSIs have shown the habitat to be in Favourable condition. In the wider countryside, the condition of the habitat is largely unknown.
6.2 Condition of habitat; Method used	Data based upon condition assessment of Binevenagh SAC which has been designated for the habitat, in addition to known occurrences of the habitat on ASSIs (see list above - 2.3). There are an unknown number of locations in the wider countryside. Hence Based mainly on extrapolation from a limited amount of data
7.1 Characterisation of pressures/ threats	Threats and pressures for calcareous rocky slopes similar to those for Siliceous rocky slopes - i.e. - Grazing - most of the habitat is out of the reach of grazing animals, occurring on inaccessible rock ledges. However, more accessible stands may be impacted by grazing, with overgrazing potentially reducing the floristic diversity of some chasms and gullies. On the other hand, lack of grazing on these more accessible stands could result in encroachment by scrub and woodland. Recreational activities such as rock climbing may cause localised damage to vegetation, and could increase in the future. Invasive species - a number of species are, or could be invasive - for example non-native Cotoneaster. Uncontrolled burning in nearby habitats (e.g. dry heath) could spread to Calcareous rocky slopes, leading to damage of the skeletal soils in crevices, and poor opportunities for regeneration. Air pollution - based on an assessment of the exceedance of relevant critical loads, air pollution is considered to be a potentially significant threat to the future condition of this habitat - the critical loads lower threshold is exceeded at Binevenagh (Critical load 5-15kg/N/ha/yr, with a predicted average of 10.6 kg/N/ha/yr) and are predicted to remain above the lower limit in the future. Climate change - is considered to be a potential threat to the future condition of this habitat, especially in the long term. However, there is a high degree of uncertainty in defining future climate threats on habitats.
7.2 Sources of information	Threats and pressures assessed from the most recent Common Standards Monitoring of calcareous rocky slopes at protected sites (SACs and ASSIs), and expert judgement to assess pressures in the wider countryside. Threats based upon current pressures and expert judgement on future trends, particularly using information from the APIS website.
8.1 Status of measures	Recent monitoring at Binevenagh SAC and other ASSIs which contain calcareous rocky slopes shows that the habitat is in favourable condition. However, the habitat has not been well surveyed across NI, and it is likely that measures will be required across other sites where the habitat occurs. A management plan for Binevenagh is being prepared, and the Environmental Farming Scheme (EFS) should assist in ensuring favourable management for the habitat both within protected sites and the wider countryside. In addition, the Department is developing a road map to reduce atmospheric Nitrogen from agricultural sources, which may be a factor at some sites where the habitat occurs.
8.2 Main purpose of the measures taken	Measures aimed at reducing damaging impacts from current pressures - such as lack of management - and future threats. Hence this is reported as Maintain the structure and functions, including the status of typical species (related to 'Specific structure and functions').
8.3 Location of the measures taken	Measures are required both inside and outside SACs. Both Interreg and Rural Development Plan (RDP) funds are being used to develop Conservation Management Plans and to potentially implement management measures which will benefit the habitat at SACs which may contain the habitat. Several areas of the habitat across NI - both within designated sites and outside - may be entered into the Environment Farming Scheme (EFS), which aims to implement sympathetic management that should improve the condition of the habitat.

10.1 Range	There is no evidence of any changes in range for Calcareous rocky slopes since 1988, nor any previous historical data on extent or changes. Although data on distribution of the habitat outside of the protected sites network is limited, no loss in range has been recorded in the habitat on SACs or ASSIs since the condition assessment programme was introduced in 2002. In addition, the current range of the habitat is naturally limited by environmental factors, particularly slope/landform and rock type. Range assessment for H8210 is therefore Favourable.
10.2 Area	There has been no evidence of loss of extent of Calcareous rocky slopes from any of the protected sites at which it occurs. Indeed, the habitat is a robust one and it is difficult to envisage how it could be reduced in extent. Therefore, despite lack of knowledge of the full extent and distribution of the resource across NI, expert opinion is that the extent of the habitat has remained stable at the NI level since 1994. Hence, extent assessed as Favourable.
10.3 Specific structure and functions	CSM data for the SACs and ASSIs that contain the habitat show that the habitat here is in favourable condition. However, there is no accurate estimate of the total area of the habitat in NI, so it is doubtful if these data can be judged to be representative of the overall NI resource. This suggests a judgement of Unknown for the structure and function parameter for H8210.
10.4 Future prospects	Given the poor information on the extent and condition of the habitat across NI, and the uncertain future impacts of air pollution and climate change, future prospects are predicted as Unknown.
10.5 Overall assessment of Conservation Status	Range and extent have been assessed as Favourable. Structure and function is Unknown. Future prospects are Unknown with climate change impacts currently unpredictable and atmospheric Nitrogen deposition still a threat. Hence an overall Unknown assessment.
11.1 Surface area of the habitat type inside the pSCIs, SCIs and SACs network	The habitat is represented at Binevenagh SAC. Extent at this site estimated at 4.7 ha.
11.3 Surface area of the habitat type inside the network; Method used	The habitat has been mapped at Binevenagh SAC. Hence reported as Complete survey.
11.4 Short term trend of habitat area in good condition within the network; Direction	Assessment of stable based upon recent condition assessment data for the habitat on the SACs, which has not changed since the previous assessments. Again, it should be noted that the Condition Assessment methodology is generally not sensitive in detecting the impacts of atmospheric Nitrogen deposition on the habitat.
11.5 Short term trend of habitat area in good condition within the network; Method used	Assessment based upon recent condition assessment data from Binevenagh SAC. It should be noted, however, that the Condition Assessment methodology is generally not sensitive in detecting the impacts of atmospheric Nitrogen deposition.