

National Parks and Wildlife Service

Conservation Objectives Series

Carlingford Mountain SAC 000453



An Roinn Tithíochta,
Rialtais Áitiúil agus Oidhreachta
Department of Housing,
Local Government and Heritage

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Introduction

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats and Birds Directives and Special Areas of Conservation and Special Protection Areas are designated to afford protection to the most vulnerable of them. These two designations are collectively known as the Natura 2000 network.

European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the Natura 2000 network at favourable conservation condition. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

A site-specific conservation objective aims to define favourable conservation condition for a particular habitat or species at that site.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Notes/Guidelines:

1. The targets given in these conservation objectives are based on best available information at the time of writing. As more information becomes available, targets for attributes may change. These will be updated periodically, as necessary.
2. An appropriate assessment based on these conservation objectives will remain valid even if the targets are subsequently updated, providing they were the most recent objectives available when the assessment was carried out. It is essential that the date and version are included when objectives are cited.
3. Assessments cannot consider an attribute in isolation from the others listed for that habitat or species, or for other habitats and species listed for that site. A plan or project with an apparently small impact on one attribute may have a significant impact on another.
4. Please note that the maps included in this document do not necessarily show the entire extent of the habitats and species for which the site is listed. This should be borne in mind when appropriate assessments are being carried out.
5. When using these objectives, it is essential that the relevant backing/supporting documents are consulted, particularly where instructed in the targets or notes for a particular attribute.

Qualifying Interests

* indicates a priority habitat under the Habitats Directive

000453 Carlingford Mountain SAC

- 4010 Northern Atlantic wet heaths with *Erica tetralix*
- 4030 European dry heaths
- 4060 Alpine and Boreal heaths
- 6230 Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe)*
- 7130 Blanket bogs (* if active bog)
- 7140 Transition mires and quaking bogs
- 7230 Alkaline fens
- 8110 Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*)
- 8210 Calcareous rocky slopes with chasmophytic vegetation
- 8220 Siliceous rocky slopes with chasmophytic vegetation

Supporting documents, relevant reports & publications

Supporting documents, NPWS reports and publications are available for download from: www.npws.ie/Publications

NPWS Documents

Year :	2009
Title :	Ireland Red List No. 2: Non-marine molluscs
Author :	Byrne, A.; Moorkens, E.A.; Anderson, R.; Killeen, I.J.; Regan, E.C.
Series :	Ireland Red List series, NPWS
Year :	2010
Title :	Ireland Red List No. 4: Butterflies
Author :	Regan, E.C.; Nelson, B.; Aldwell, B.; Bertrand, C.; Bond, K.; Harding, J.; Nash, D.; Nixon, D.; Wilson, C.J.
Series :	Ireland Red List series, NPWS
Year :	2012
Title :	Ireland Red List No. 8: Bryophytes
Author :	Lockhart, N.; Hodgetts, N.; Holyoak, D.
Series :	Ireland Red List series, NPWS
Year :	2014
Title :	Guidelines for a national survey and conservation assessment of upland vegetation and habitats in Ireland, Version 2.0
Author :	Perrin, P.M.; Barron, S.J.; Roche, J.R.; O'Hanrahan, B.
Series :	Irish Wildlife Manuals, No. 79
Year :	2014
Title :	National Survey of Upland Habitats (Pilot Survey Phase, 2009-2010), Site Report No. 4 (Revision): Carlingford Mountain cSAC (000453) Co. Louth
Author :	Roche, J.R.; Perrin, P.M.; Barron, S.J.; Daly, O.H.
Series :	Unpublished report to NPWS
Year :	2015
Title :	Survey of Flora Protection Order Bryophytes 2015
Author :	Hodd, R.L.
Series :	Unpublished report to NPWS
Year :	2016
Title :	Ireland Red List No. 10: Vascular Plants
Author :	Wyse Jackson, M.; FitzPatrick, Ú.; Cole, E.; Jebb, M.; McFerran, D.; Sheehy Skeffington, M.; Wright, M.
Series :	Ireland Red Lists series, NPWS
Year :	2021
Title :	Carlingford Mountain SAC (site code: 485) Conservation objectives supporting document - upland habitats V1
Author :	NPWS
Series :	Conservation objectives supporting document

Other References

Year :	2012
Title :	Rare and threatened bryophytes of Ireland
Author :	Lockhart, N.; Hodgetts, N.; Holyoak, D.
Series :	National Museums Northern Ireland

Year :	2015
Title :	Irish Vegetation Classification: Technical Progress Report No. 1
Author :	Perrin, P.
Series :	Report submitted to National Biodiversity Data Centre
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Year :	2017
Title :	Irish Vegetation Classification: Technical Progress Report No. 3
Author :	Perrin, P.
Series :	Report submitted to National Biodiversity Data Centre
<hr/>	
Year :	2018
Title :	Irish Vegetation Classification: Technical Progress Report No. 4
Author :	Perrin, P.
Series :	Report submitted to National Biodiversity Data Centre
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Spatial data sources

Year :	2014
Title :	National Survey of Upland Habitats
GIS Operations :	Habitat dataset for site clipped to SAC boundary. Relevant QI selected and exported to new dataset. Expert opinion used as necessary to resolve any issues arising
Used For :	4010, 4030, 4060, 6230, 7130, 7140, 7230, 8110, 8220 (maps 2, 3, 4, 5, 6, 7, 8, 9, 10)

Conservation Objectives for : Carlingford Mountain SAC [000453]

4010 Northern Atlantic wet heaths with *Erica tetralix*

To restore the favourable conservation condition of Northern Atlantic wet heaths with *Erica tetralix* in Carlingford Mountain SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Habitat area	Hectares	Area increasing, subject to natural processes	Carlingford Mountain SAC was surveyed as part of the National Survey of Upland Habitats (NSUH; see Roche et al., 2014 and Perrin et al., 2014). Northern Atlantic wet heaths with <i>Erica tetralix</i> was mapped in detail for the SAC and the total area of the qualifying habitat stated by Roche et al. (2014) is 283.1ha, covering 9.1% of the SAC. Roche et al. (2014) report obvious losses of the habitat since 1995 of approximately 0.08ha. Further information can be found in Roche et al. (2014). Further details on this and the following attributes can be found in the Carlingford Mountain SAC conservation objectives supporting document for upland habitats where a summary of the mapping methodology and a brief discussion of restoration potential are also presented
Habitat distribution	Occurrence	No decline, subject to natural processes. See map 2	Wet heath was recorded throughout Carlingford Mountain SAC by Roche et al. (2014). See Roche et al. (2014) for further information. A summary of the mapping methodology is presented in the uplands supporting document
Ecosystem function: soil nutrients	Soil pH and appropriate nutrient levels at a representative number of monitoring stops	Maintain soil pH and nutrient status within natural ranges	See the uplands supporting document for further details
Community diversity	Abundance of variety of vegetation communities	Maintain variety of vegetation communities, subject to natural processes	Roche et al. (2014) recorded five different wet heath communities within this SAC. Data on the abundance of these communities is reproduced in the uplands supporting document. Further information on the vegetation communities associated with this habitat is presented in Perrin et al. (2014). See also the Irish Vegetation Classification (Perrin, 2017; www.biodiversityireland.ie/projects/ivc-classification-explorer)
Vegetation composition: cross-leaved heath	Occurrence within 20m of a representative number of 2m x 2m monitoring stops	Cross-leaved heath (<i>Erica tetralix</i>) present within a 20m radius of each monitoring stop	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation composition: positive indicator species	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of positive indicator species at least 50%	Attribute and target based on Perrin et al. (2014), where the list of positive indicator species for this habitat is presented. Further details can be found in the uplands supporting document
Vegetation composition: lichens and bryophytes	Percentage cover at a representative number of 2m x 2m monitoring stops	Total cover of <i>Cladonia</i> and <i>Sphagnum</i> species, <i>Racomitrium lanuginosum</i> and pleurocarpous mosses at least 10%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation composition: ericoid species and crowberry	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of ericoid species and crowberry (<i>Empetrum nigrum</i>) at least 15%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation composition: dwarf shrub species	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of dwarf shrubs less than 75%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation composition: negative indicator species	Percentage cover at a representative number of 2m x 2m monitoring stops	Total cover of negative indicator species less than 1%	Attribute and target based on Perrin et al. (2014), where the list of negative indicator species for this habitat is presented. See the uplands supporting document for further details

Vegetation composition: non-native species	Percentage cover at, and in local vicinity of, a representative number of 2m x 2m monitoring stops	Cover of non-native species less than 1%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details. The non-native moss <i>Campylopus introflexus</i> was recorded by Roche et al. (2014) within this habitat in the SAC, but at less than 1% cover
Vegetation composition: native trees and shrubs	Percentage cover in local vicinity of a representative number of monitoring stops	Cover of scattered native trees and shrubs less than 20%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation composition: bracken	Percentage cover in local vicinity of a representative number of monitoring stops	Cover of bracken (<i>Pteridium aquilinum</i>) less than 10%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation composition: soft rush	Percentage cover in local vicinity of a representative number of monitoring stops	Cover of soft rush (<i>Juncus effusus</i>) less than 10%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation structure: <i>Sphagnum</i> condition	Condition at a representative number of 2m x 2m monitoring stops	Less than 10% of the <i>Sphagnum</i> cover is crushed, broken and/or pulled up	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation structure: signs of browsing	Percentage of shoots browsed at a representative number of 2m x 2m monitoring stops	Less than 33% collectively of the last complete growing season's shoots of ericoids, crowberry (<i>Empetrum nigrum</i>) and bog-myrtle (<i>Myrica gale</i>) showing signs of browsing	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation structure: burning	Occurrence in local vicinity of a representative number of monitoring stops	No signs of burning in sensitive areas, into the moss, liverwort or lichen layer or exposure of peat surface due to burning	Attribute and target based on Perrin et al. (2014), where the list of sensitive areas for this habitat is presented. See the uplands supporting document for further details
Physical structure: disturbed bare ground	Percentage cover at, and in local vicinity of, a representative number of 2m x 2m monitoring stops	Cover of disturbed bare ground less than 10%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Physical structure: drainage	Percentage cover in local vicinity of a representative number of monitoring stops	Area showing signs of drainage from heavy trampling, tracking or ditches less than 10%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Indicators of local distinctiveness	Occurrence and population size	No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat	This includes species on the Flora (Protection) Order, 2015 and/or Red Lists (Byrne et al., 2009; Regan et al., 2010; Lockhart et al., 2012; Wyse Jackson et al., 2016, etc.). Roche et al. (2014) compiled and mapped existing rare and notable plant records for the SAC and added any new records collected during the NSUH. No relevant species were recorded in this habitat during the NSUH; however, any new records should be considered within this attribute. See the uplands supporting document for further details

Conservation Objectives for : Carlingford Mountain SAC [000453]

4030 European dry heaths

To restore the favourable conservation condition of European dry heaths in Carlingford Mountain SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Habitat area	Hectares	Area increasing, subject to natural processes	Carlingford Mountain SAC was surveyed as part of the National Survey of Upland Habitats (NSUH; see Roche et al., 2014 and Perrin et al., 2014). European dry heaths was mapped in detail for the SAC and the total area of the qualifying habitat stated by Roche et al. (2014) is 1,073.3ha. It is the most extensive Annex I habitat, covering 34.6% of the SAC. Roche et al. (2014) report obvious losses of habitat since 1995 of approximately 0.43ha. Further information can be found in Roche et al. (2014). Further details on this and the following attributes can be found in the Slieve Mish Mountains SAC conservation objectives supporting document for upland habitats where a summary of the mapping methodology and a brief discussion of restoration potential are also presented
Habitat distribution	Occurrence	No decline, subject to natural processes. See map 3	Dry heath was recorded by Roche et al. (2014) as the dominant habitat throughout Carlingford Mountain SAC. See Roche et al. (2014) for further information. A summary of the mapping methodology is presented in the uplands supporting document
Ecosystem function: soil nutrients	Soil pH and appropriate nutrient levels at a representative number of monitoring stops	Maintain soil pH and nutrient status within natural ranges	See the uplands supporting document for further details
Community diversity	Abundance of variety of vegetation communities	Maintain variety of vegetation communities, subject to natural processes	Roche et al. (2014) recorded four different dry heath communities within this SAC. Data on the abundance of these communities is reproduced in the uplands supporting document. Further information on the vegetation communities associated with this habitat is presented in Perrin et al. (2014). See also the Irish Vegetation Classification (Perrin, 2017; www.biodiversityireland.ie/projects/ivc-classification-explorer)
Vegetation composition: lichens and bryophytes	Number of species at a representative number of 2m x 2m monitoring stops	Number of bryophyte or non-crustose lichen species present at each monitoring stop at least three, excluding <i>Campylopus</i> and <i>Polytrichum</i> mosses	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation composition: number of positive indicator species	Number of species at a representative number of 2m x 2m monitoring stops	Number of positive indicator species present at each monitoring stop at least two	Attribute and target based on Perrin et al. (2014), where the list of positive indicator species for this habitat, which is composed of dwarf shrubs, is presented. See the uplands supporting document for further details
Vegetation composition: cover of positive indicator species	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of positive indicator species at least 50% for siliceous dry heath and 50-75% for calcareous dry heath	Attribute and target based on Perrin et al. (2014), where the list of positive indicator species for this habitat, which is composed of dwarf shrubs, is presented. See the uplands supporting document for further details
Vegetation composition: dwarf shrub composition	Percentage cover at a representative number of 2m x 2m monitoring stops	Proportion of dwarf shrub cover composed collectively of bog-myrtle (<i>Myrica gale</i>), creeping willow (<i>Salix repens</i>) and western gorse (<i>Ulex gallii</i>) is less than 50%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details

Vegetation composition: negative indicator species	Percentage cover at a representative number of 2m x 2m monitoring stops	Total cover of negative indicator species less than 1%	Attribute and target based on Perrin et al. (2014), where the list of negative indicator species is presented. See the uplands supporting document for further details
Vegetation composition: non-native species	Percentage cover at, and in local vicinity of, a representative number of 2m x 2m monitoring stops	Cover of non-native species less than 1%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details. The non-native moss <i>Campylopus introflexus</i> was recorded by Roche et al. (2014) within this habitat in the SAC
Vegetation composition: native trees and shrubs	Percentage cover in local vicinity of a representative number of monitoring stops	Cover of scattered native trees and shrubs less than 20%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation composition: bracken	Percentage cover in local vicinity of a representative number of monitoring stops	Cover of bracken (<i>Pteridium aquilinum</i>) less than 10%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation composition: soft rush	Percentage cover in local vicinity of a representative number of monitoring stops	Cover of soft rush (<i>Juncus effusus</i>) less than 10%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation structure: senescent ling	Percentage cover at a representative number of 2m x 2m monitoring stops	Senescent proportion of ling (<i>Calluna vulgaris</i>) cover less than 50%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation structure: signs of browsing	Percentage of shoots browsed at a representative number of 2m x 2m monitoring stops	Less than 33% collectively of the last complete growing season's shoots of ericoids showing signs of browsing	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation structure: burning	Occurrence in local vicinity of a representative number of monitoring stops	No signs of burning in sensitive areas	Attribute and target based on Perrin et al. (2014), where the list of sensitive areas is presented. See the uplands supporting document for further details
Vegetation structure: growth phases of ling	Percentage cover in local vicinity of a representative number of monitoring stops	Outside sensitive areas, all growth phases of ling (<i>Calluna vulgaris</i>) should occur throughout, with at least 10% of cover in the mature phase	Attribute and target based on Perrin et al. (2014), where the list of sensitive areas is also presented. See the uplands supporting document for further details
Physical structure: disturbed bare ground	Percentage cover at, and in local vicinity of, a representative number of 2m x 2m monitoring stops	Cover of disturbed bare ground less than 10%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Indicators of local distinctiveness	Occurrence and population size	No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat	This includes species on the Flora (Protection) Order, 2015 and/or Red Lists (Byrne et al., 2009; Regan et al., 2010; Lockhart et al., 2012; Wyse Jackson et al., 2016, etc.). Roche et al. (2014) compiled and mapped existing rare and notable plant records for the SAC and added any new records collected during the NSUH. No relevant species were recorded in this habitat during the NSUH; however, new records should be considered within this attribute. See the uplands supporting document for further details

Conservation Objectives for : Carlingford Mountain SAC [000453]

4060 Alpine and Boreal heaths

To restore the favourable conservation condition of Alpine and Boreal heaths in Carlingford Mountain SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Habitat area	Habitat area	Area stable or increasing, subject to natural processes	Carlingford Mountain SAC was surveyed as part of the National Survey of Upland Habitats (NSUH; see Roche et al., 2014 and Perrin et al., 2014). Alpine and Boreal heath was mapped in detail for the SAC and the total area of the qualifying habitat stated by Roche et al. (2014) is 28.8ha. It is relatively infrequent, covering only 0.93% of the SAC. Roche et al. (2014) report no significant losses of area since 1995. Further information can be found in Roche et al. (2014). Further details on this and the following attributes can be found in the Carlingford Mountain SAC conservation objectives supporting document for upland habitats where a summary of the mapping methodology is also presented
Habitat distribution	Occurrence	No decline, subject to natural processes. See map 4	Alpine and Boreal heath was recorded by Roche et al. (2014) around the peaks of Carlingford Mountain and around the unnamed peak adjacent to Black Mountain. See Roche et al. (2014) for further information. A summary of the mapping methodology is presented in the uplands supporting document
Ecosystem function: soil nutrients	Soil pH and appropriate nutrient levels at a representative number of monitoring stops	Maintain soil pH and nutrient status within natural ranges	See the uplands supporting document for further details
Community diversity	Abundance of variety of vegetation communities	Maintain variety of vegetation communities, subject to natural processes	Roche et al. (2014) recorded one Alpine and Boreal heath community within this SAC. Data on the abundance of this community is reproduced in the uplands supporting document. Further information on the vegetation communities associated with this habitat is presented in Perrin et al. (2014). See also the Irish Vegetation Classification (Perrin, 2017; www.biodiversityireland.ie/projects/ivc-classification-explorer)
Vegetation composition: lichens and bryophytes	Number of species at a representative number of 2m x 2m monitoring stops	Number of bryophyte or non-crustose lichen species present at each monitoring stop at least three	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation composition: positive indicator species	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of positive indicator species at least 66%	Attribute and target based on Perrin et al. (2014), where the list of positive indicator species for this habitat is presented. See the uplands supporting document for further details
Vegetation composition: dwarf shrub species	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of dwarf shrub species at least 10%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation composition: negative indicator species	Percentage cover at a representative number of 2m x 2m monitoring stops	Total cover of negative indicator species less than 10%	Attribute and target based on Perrin et al. (2014), where the list of negative indicator species is presented. See the uplands supporting document for further details
Vegetation composition: non-native species	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of non-native species less than 1%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details. No non-native species were recorded within this habitat by Roche et al. (2014)
Vegetation structure: signs of grazing	Percentage of leaves grazed at a representative number of 2m x 2m monitoring stops	Less than 10% collectively of the live leaves of specific graminoids showing signs of grazing	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details, including the list of specific graminoids

Vegetation structure: signs of browsing	Percentage of shoots browsed at a representative number of 2m x 2m monitoring stops	Less than 33% collectively of the last complete growing season's shoots of ericoids and crowberry (<i>Empetrum nigrum</i>) showing signs of browsing	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation structure: burning	Occurrence in local vicinity of a representative number of monitoring stops	No signs of burning within the habitat	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Physical structure: disturbed bare ground	Percentage cover at, and in local vicinity of, a representative number of 2m x 2m monitoring stops	Cover of disturbed bare ground less than 10%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Indicators of local distinctiveness	Occurrence and population size	No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat	This includes species on the Flora (Protection) Order, 2015 and/or Red Lists (Byrne et al., 2009; Regan et al., 2010; Lockhart et al., 2012; Wyse Jackson et al., 2016, etc.). Roche et al. (2014) compiled and mapped existing rare and notable plant records for the SAC and added any new records collected during the NSUH. Alpine clubmoss (<i>Diphasiastrum alpinum</i>) was recorded in the habitat on both Carlingford Mountain and Black Mountain in the SAC by Roche et al. (2014). Alpine clubmoss is listed on Annex V of the Habitats Directive and is classified as Near Threatened in Ireland (Wyse Jackson et al., 2016). See the uplands supporting document for further details

Conservation Objectives for : Carlingford Mountain SAC [000453]

6230 Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe)*

To restore the favourable conservation condition of Species-rich *Nardus* grassland, on siliceous substrates in mountain areas (and sub-mountain areas, in Continental Europe)* in Carlingford Mountain SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Habitat area	Hectares	Area stable or increasing, subject to natural processes	Carlingford Mountain SAC was surveyed as part of the National Survey of Upland Habitats (NSUH; see Roche et al., 2014 and Perrin et al., 2014). Species-rich <i>Nardus</i> grassland was mapped in detail for the SAC and the total area of the qualifying habitat stated by Roche et al. (2014) is 13.3ha. It is relatively infrequent, covering only 0.43% of the SAC. Roche et al. (2014) report no significant losses of area since 1995. Further details on this and the following attributes can be found in the Carlingford Mountain SAC conservation objectives supporting document for upland habitats where a summary of the mapping methodology is also presented
Habitat distribution	Occurrence	No decline, subject to natural processes. See map 5	Species-rich <i>Nardus</i> grassland* was recorded by Perrin et al. (2014) predominantly on the upper slopes of Carlingford Mountain. See Roche et al. (2014) for further information. A summary of the mapping methodology is presented in the uplands supporting document
Ecosystem function: soil nutrients	Soil pH and appropriate nutrient levels at a representative number of monitoring stops	Maintain soil pH and nutrient status within natural ranges	See the uplands supporting document for further details
Community diversity	Abundance of variety of vegetation communities	Maintain variety of vegetation communities, subject to natural processes	Perrin et al. (2014) recorded two different species-rich <i>Nardus</i> grassland communities within this SAC. Data on the abundance of these communities is reproduced in the uplands supporting document. Further information on these communities is presented in Perrin et al. (2014). See also the Irish Vegetation Classification (Perrin, 2015; www.biodiversityireland.ie/projects/ivc-classification-explorer)
Vegetation composition: positive indicator species	Number of species at a representative number of 2m x 2m monitoring stops	Number of positive indicator species present at each monitoring stop at least seven	Attribute and target based on Perrin et al. (2014), where the list of positive indicator species for this habitat is presented. See the uplands supporting document for further details
Vegetation composition: high quality indicator species	Number of species at a representative number of 2m x 2m monitoring stops	At least two high quality species for base-rich examples of the habitat and at least one for base-poor examples of the habitat	Attribute and target based on Perrin et al. (2014), where the list of positive indicator species for this habitat is presented. See the uplands supporting document for further details
Vegetation composition: species richness	Number of species at a representative number of 2m x 2m monitoring stops	Species richness at each monitoring stop at least 25	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation composition: non-native species	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of non-native species less than 1%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation composition: negative indicator species	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of negative indicator species individually less than 10% and collectively less than 20%	Attribute and target based on Perrin et al. (2014), where the list of negative indicator species for this habitat is presented. See the uplands supporting document for further details
Vegetation composition: <i>Sphagnum</i> cover	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of <i>Sphagnum</i> species less than 10%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details

Vegetation composition: <i>Polytrichum</i> cover	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of <i>Polytrichum</i> species less than 25%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation composition: shrubs, bracken and heath cover	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of shrubs, bracken (<i>Pteridium aquilinum</i>) and heath collectively less than 5%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation structure: forb to graminoid ratio	Percentage cover at a representative number of 2m x 2m monitoring stops	Forb component of forb:graminoid ratio is 20-90%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation structure: sward height	Sward height at a representative number of 2m x 2m monitoring stops	Proportion of the sward between 5cm and 50cm tall is at least 25%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation structure: litter cover	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of litter less than 20%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Physical structure: disturbed bare ground	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of disturbed bare ground less than 10%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Physical structure: grazing or disturbance	Percentage cover in local vicinity of a representative number of monitoring stops	Area of the habitat showing signs of serious grazing or disturbance less than 20m ²	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Indicators of local distinctiveness	Occurrence and population size	No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat	This includes species on the Flora (Protection) Order, 2015 and/or Red Lists (Byrne et al., 2009; Regan et al., 2010; Lockhart et al., 2012; Wyse Jackson et al., 2016, etc.). Roche et al. (2014) compiled and mapped existing rare and notable plant records for the SAC and added any new records collected during the NSUH. No relevant species were recorded in this habitat during the NSUH; however, new records should be considered within this attribute. See the uplands supporting document for further details

Conservation Objectives for : Carlingford Mountain SAC [000453]

7130 Blanket bogs (* if active bog)

To restore the favourable conservation condition of Blanket bogs (* if active bog) in Carlingford Mountain SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Habitat area	Hectares	Area increasing, subject to natural processes	Carlingford Mountain SAC was surveyed as part of the National Survey of Upland Habitats (NSUH; see Roche et al., 2014 and Perrin et al., 2014). Roche et al. (2014) state that the total area of blanket bog in the SAC is 96.2ha (3.1% of the SAC). The comprises 92.6ha of active blanket bog and 3.6ha of inactive blanket bog. Roche et al. (2014) did not report a net loss of the habitat since 1995; however, it is important to note that chronic losses due to erosion since 1995 cannot be quantified (1.9ha were mapped as eroding blanket bog by Roche et al., 2014). It should be noted also that further restoration of blanket bog would be required in order to fulfil the targets for peat formation and hydrology presented below. See the Carlingford Mountain SAC conservation objectives supporting document for upland habitats for further details
Habitat distribution	Occurrence	No decline, subject to natural processes. See map 6	Small areas of blanket bog were recorded by Roche et al. (2014) throughout Carlingford Mountain SAC. See Roche et al. (2014) for further information. A summary of the mapping methodology is presented in the uplands supporting document
Ecosystem function: soil nutrients	Soil pH and appropriate nutrient levels at a representative number of monitoring stops	Maintain soil pH and nutrient status within natural ranges	See the uplands supporting document for further details
Ecosystem function: peat formation	Active blanket bog as a proportion of the total area of Annex I blanket bog habitat	At least 99% of the total Annex I blanket bog area is active	From the areas given by Roche et al. (2014) above, 96.3% of the Annex I blanket bog habitat is currently active. See the uplands supporting document for further details
Ecosystem function: hydrology	Flow direction, water levels, occurrence of drains and erosion gullies	Natural hydrology unaffected by drains and erosion	Further details and a brief discussion of restoration potential is presented in the uplands supporting document
Community diversity	Abundance of variety of vegetation communities	Maintain variety of vegetation communities, subject to natural processes	Roche et al. (2014) recorded four different active blanket bog communities within this SAC. Data on the abundance of these communities is reproduced in the uplands supporting document. Further information on the vegetation communities associated with this habitat is presented in Perrin et al. (2014). See also the Irish Vegetation Classification (Perrin, 2017; www.biodiversityireland.ie/projects/ivc-classification-explorer)
Vegetation composition: positive indicator species	Number of species at a representative number of 2m x 2m monitoring stops	Number of positive indicator species at each monitoring stop at least seven	Attribute and target based on Perrin et al. (2014), where the list of positive indicator species for this habitat is presented. See the uplands supporting document for further details
Vegetation composition: lichens and bryophytes	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of bryophytes or lichens, excluding <i>Sphagnum fallax</i> , at least 10%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation composition: potential dominant species	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of each of the potential dominant species less than 75%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details, including the list of potentially dominant species
Vegetation composition: negative indicator species	Percentage cover at a representative number of 2m x 2m monitoring stops	Total cover of negative indicator species less than 1%	Attribute and target based on Perrin et al. (2014), where the list of negative indicator species is presented. See the uplands supporting document for further details

Vegetation composition: non-native species	Percentage cover at, and in local vicinity of, a representative number of 2m x 2m monitoring stops	Cover of non-native species less than 1%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details. The non-native moss <i>Campylopus introflexus</i> was recorded within this habitat in the SAC by Roche et al. (2014)
Vegetation composition: native trees and shrubs	Percentage cover in local vicinity of a representative number of monitoring stops	Cover of scattered native trees and shrubs less than 10%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation structure: <i>Sphagnum</i> condition	Condition at a representative number of 2m x 2m monitoring stops	Less than 10% of the <i>Sphagnum</i> cover is crushed, broken and/or pulled up	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation structure: signs of browsing	Percentage of shoots browsed at a representative number of 2m x 2m monitoring stops	Last complete growing season's shoots of ericoids, crowberry (<i>Empetrum nigrum</i>) and bog-myrtle (<i>Myrica gale</i>) showing signs of browsing collectively less than 33%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation structure: burning	Occurrence in local vicinity of a representative number of monitoring stops	No signs of burning in sensitive areas, into the moss, liverwort or lichen layer or exposure of peat surface due to burning	Attribute and target based on Perrin et al. (2014), where the list of sensitive areas is presented. See the uplands supporting document for further details
Physical structure: disturbed bare ground	Percentage cover at, and in local vicinity of, a representative number of 2m x 2m monitoring stops	Cover of disturbed bare ground less than 10%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Physical structure: drainage	Percentage area in local vicinity of a representative number of monitoring stops	Area showing signs of drainage from heavy trampling, tracking or ditches less than 10%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Physical structure: erosion	Percentage area in local vicinity of a representative number of monitoring stops	Less than 5% of the greater bog mosaic comprises erosion gullies and eroded areas	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Indicators of local distinctiveness	Occurrence and population size	No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat	This includes species on the Flora (Protection) Order, 2015 and/or Red Lists (Byrne et al., 2009; Regan et al., 2010; Lockhart et al., 2012; Wyse Jackson et al., 2016, etc.). Roche et al. (2014) compiled and mapped existing rare and notable plant records for the SAC and added any new records collected during the NSUH. No relevant species were recorded in this habitat during the NSUH; however, new records should be considered within this attribute. See the uplands supporting document for further details

Conservation Objectives for : Carlingford Mountain SAC [000453]

7140 Transition mires and quaking bogs

To maintain the favourable conservation condition of Transition mires and quaking bogs in Carlingford Mountain SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Habitat area	Hectares	Area stable or increasing, subject to natural processes	Carlingford Mountain SAC was surveyed as part of the National Survey of Upland Habitats (NSUH; see Roche et al., 2014 and Perrin et al., 2014). Transition mire was mapped in detail for the SAC and the total area of the qualifying habitat stated by Roche et al. (2014) is 1.6ha, covering only 0.05% of the SAC. Roche et al. (2014) report no significant losses of area since 1995. Further details on this and the following attributes can be found in the Carlingford Mountain SAC conservation objectives supporting document for upland habitats where a summary of the mapping methodology is also presented
Habitat distribution	Occurrence	No decline, subject to natural processes. See map 7	Transition mire was predominantly recorded by Roche et al. (2014) around some of the small dystrophic lakes found in The White Bog area, west of Carlingford Mountain. See Roche et al. (2014) for further information. A summary of the mapping methodology is presented in the uplands supporting document
Ecosystem function: soil nutrients	Soil pH and appropriate nutrient levels at a representative number of monitoring stops	Maintain soil pH and nutrient status within natural ranges	See the uplands supporting document for further details
Community diversity	Abundance of variety of vegetation communities	Maintain variety of vegetation communities, subject to natural processes	Roche et al. (2014) recorded two different transition mire communities within this SAC. Data on the abundance of these communities is reproduced in the uplands supporting document. Further information on vegetation communities associated with this habitat is presented in Perrin et al. (2014). See also the Irish Vegetation Classification (Perrin, 2018; www.biodiversityireland.ie/projects/ivc-classification-explorer)
Vegetation composition: number of positive indicator species	Number at a representative number of 2m x 2m monitoring stops	Number of positive indicator species at least three for in-filling pools and flushes and at least six for fens	Attribute and target based on Perrin et al. (2014), where the list of positive indicator species for this habitat is also presented. See the uplands supporting document for further details
Vegetation composition: number of core positive indicator species	Number of species at a representative number of 2m x 2m monitoring stops	At least one core positive indicator species present	Attribute and target based on Perrin et al. (2014), where the list of positive indicator species for this habitat is also presented. See the uplands supporting document for further details
Vegetation composition: cover of positive indicator species	Percentage cover at a representative number of 2m x 2m monitoring stops	Total cover of positive indicator species is at least 25%	Attribute and target based on Perrin et al. (2014), where the list of positive indicator species for this habitat is also presented. See the uplands supporting document for further details
Vegetation composition: negative indicator species	Percentage cover at a representative number of 2m x 2m monitoring stops	Total cover of negative indicator species less than 1%	Attribute and target based on Perrin et al. (2014), where the list of negative indicator species for this habitat is also presented. See the uplands supporting document for further details
Vegetation composition: non-native species	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of non-native species less than 1%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation structure: height	Percentage at a representative number of 2m x 2m monitoring stops	Proportion of live leaves and/or flowering shoots of vascular plants that are more than 15cm above the ground surface should be at least 50%	Attribute and target based on Perrin et al. (2014). This attribute is only applicable to fen and flush examples, not to in-filling pool examples. See the uplands supporting document for further details

Physical structure: disturbed bare ground	Percentage cover at, and in local vicinity of, a representative number of 2m x 2m monitoring stops	Cover of disturbed bare ground less than 10%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Physical structure: drainage	Percentage area in local vicinity of a representative number of monitoring stops	Area showing signs of drainage from heavy trampling, tracking or ditches less than 10%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Indicators of local distinctiveness	Occurrence and population size	No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat	This includes species on the Flora (Protection) Order, 2015 and/or Red Lists (Byrne et al., 2009; Regan et al., 2010; Lockhart et al., 2012; Wyse Jackson et al., 2016, etc.). Roche et al. (2014) compiled and mapped existing rare and notable plant records for the SAC and added any new records collected during the NSUH. No relevant species were recorded in this habitat during the NSUH; however, new records should be considered within this attribute. See the uplands supporting document for further details

Conservation Objectives for : Carlingford Mountain SAC [000453]

7230

Alkaline fens

To maintain the favourable conservation condition of Alkaline fens in Carlingford Mountain SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Habitat area	Hectares	Area stable or increasing, subject to natural processes	Carlingford Mountain SAC was surveyed as part of the National Survey of Upland Habitats (NSUH; see Roche et al., 2014 and Perrin et al., 2014). Alkaline fen was mapped in detail for the SAC and the total area of the qualifying habitat stated by Roche et al. (2014) is 45.3ha, covering only 1.46% of the SAC. Roche et al. (2014) report no significant losses of area since 1995. Further details on this and the following attributes can be found in the Carlingford Mountain SAC conservation objectives supporting document for upland habitats where a summary of the mapping methodology is also presented
Habitat distribution	Occurrence	No decline, subject to natural processes. See map 8	Roche et al. (2014) recorded alkaline fen throughout the SAC. See Roche et al. (2014) for further details. A summary of the mapping methodology is presented in the uplands supporting document
Ecosystem function: soil nutrients	Soil pH and appropriate nutrient levels at a representative number of monitoring stops	Maintain soil pH and nutrient status within natural ranges	See the uplands supporting document for further details
Ecosystem function: peat formation	Percentage cover of peat-forming vegetation and water table levels	Maintain active peat formation, where appropriate	In order for peat to form, water levels need to be slightly below or above the soil surface for c.90% of the time
Ecosystem function: hydrology	Metres	Maintain, or where necessary restore, appropriate natural hydrological regimes necessary to support the natural structure and functioning of the habitat	Maintenance of groundwater, surface water flows and water table levels within natural ranges is essential for this wetland habitat
Ecosystem function: water quality	Water chemistry measures	Maintain appropriate water quality, particularly pH and nutrient levels, to support the natural structure and functioning of the habitat	Fens receive natural levels of nutrients (e.g. iron, magnesium and calcium) from water sources. However, they are generally poor in nitrogen and phosphorus, with the latter tending to be the limiting nutrient under natural conditions. Water supply should be also relatively calcium-rich
Community diversity	Abundance of variety of vegetation communities	Maintain variety of vegetation communities, subject to natural processes	Roche et al. (2014) recorded two different alkaline fen vegetation communities within this SAC. Data on the abundance of these communities is reproduced in the uplands supporting document. Further information on vegetation communities associated with this habitat is presented in Perrin et al. (2014). See also the Irish Vegetation Classification (Perrin, 2018; www.biodiversityireland.ie/projects/ivc-classification-explorer)
Vegetation composition: number of positive indicator species (brown mosses)	Number of species at a representative number of 2m x 2m monitoring stops	Number of brown moss species present at each monitoring stop is at least one	Attribute and target based on Perrin et al. (2014), where the list of positive indicator species for this habitat is also presented. See the uplands supporting document for further details
Vegetation composition: number of positive indicator species (vascular plants)	Number of species at a representative number of 2m x 2m monitoring stops	Number of positive vascular plant indicator species present at each monitoring stop is at least two for small-sedge flushes and at least three for black bog-rush (<i>Schoenus nigricans</i>) flush and bottle sedge (<i>Carex rostrata</i>) fen	Attribute and target based on Perrin et al. (2014), where the list of positive indicator species for this habitat is also presented. See the uplands supporting document for further details

Vegetation composition: cover of positive indicator species	Percentage cover at a representative number of 2m x 2m monitoring stops	Total cover of brown moss species and positive vascular plant indicator species at least 20% for small-sedge flushes and at least 75% cover for black bog-rush (<i>Schoenus nigricans</i>) flush and bottle sedge (<i>Carex rostrata</i>) fen	Attribute and target based on Perrin et al. (2014), where the list of positive indicator species for this habitat is also presented. See the uplands supporting document for further details
Vegetation composition: negative indicator species	Percentage cover at a representative number of 2m x 2m monitoring stops	Total cover of negative indicator species less than 1%	Attribute and target based on Perrin et al. (2014), where the list of negative indicator species for this habitat is also presented. See the uplands supporting document for further details
Vegetation composition: non-native species	Percentage cover at, and in local vicinity of, a representative number of 2m x 2m monitoring stops	Cover of non-native species less than 1%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details. No non-native species were recorded within this habitat during the NSUH (Roche et al., 2014)
Vegetation composition: native trees and shrubs	Percentage cover in local vicinity of a representative number of monitoring stops	Cover of scattered native trees and shrubs less than 10%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation composition: soft rush and common reed cover	Percentage cover in local vicinity of a representative number of monitoring stops	Total cover of soft rush (<i>Juncus effusus</i>) and common reed (<i>Phragmites australis</i>) less than 10%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation structure: height	Percentage of leaves/shoots at a representative number of 2m x 2m monitoring stops	Proportion of live leaves and/or flowering shoots of vascular plants that are more than 5cm above the ground surface should be at least 50%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Physical structure: disturbed bare ground	Percentage cover at, and in local vicinity of, a representative number of 2m x 2m monitoring stops	Cover of disturbed bare ground not more than 10%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Physical structure: drainage	Percentage area in local vicinity of a representative number of monitoring stops	Area showing signs of drainage from heavy trampling, tracking or ditches less than 10%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Physical structure: tufa formations	Percentage cover in local vicinity of a representative number of 2m x 2m monitoring stops	Disturbed proportion of vegetation cover where tufa is present is less than 1%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Indicators of local distinctiveness	Occurrence and population size	No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat	This includes species on the Flora (Protection) Order, 2015 and/or Red Lists (Byrne et al., 2009; Regan et al., 2010; Lockhart et al., 2012; Wyse Jackson et al., 2016, etc.). Roche et al. (2014) compiled and mapped existing rare and notable plant records for the SAC and added any new records collected during the NSUH. No relevant species were recorded in this habitat during the NSUH; however, new records should be considered within this attribute. See the uplands supporting document for further details

Conservation Objectives for : Carlingford Mountain SAC [000453]

8110 Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*)

To maintain the favourable conservation condition of Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*) in Carlingford Mountain SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Habitat area	Hectares	Area stable or increasing, subject to natural processes	Carlingford Mountain SAC was surveyed as part of the National Survey of Upland Habitats (NSUH; see Roche et al., 2014 and Perrin et al., 2014). Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>) was mapped in detail for the SAC and the total area of the qualifying habitat stated by Roche et al. (2014) is 14.2ha. This covers 0.46% of the SAC. Roche et al. (2014) report no significant losses of area of the habitat in the SAC since 1995. Further information can be found in Roche et al. (2014). Further details on this and the following attributes can be found in the Carlingford Mountain SAC conservation objectives supporting document for upland habitats where a summary of the mapping methodology is also presented
Habitat distribution	Occurrence	No decline, subject to natural processes. See map 9	Siliceous scree was recorded by Roche et al. (2014) as comparatively rare throughout Carlingford Mountain SAC. See Roche et al. (2014) for further information. A summary of the mapping methodology is presented in the uplands supporting document
Ecosystem function: soil nutrients	Soil pH and appropriate nutrient levels at a representative number of monitoring stops	Maintain soil pH and nutrient status within natural ranges	See the uplands supporting document for further details
Vegetation composition: lichens and bryophytes	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of bryophytes and non-crustose lichen species at least 5%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation composition: negative indicator species	Percentage cover at a representative number of 2m x 2m monitoring stops	Proportion of vegetation composed of negative indicator species less than 1%	Attribute and target based on Perrin et al. (2014), where the list of negative indicator species for this habitat is presented. See the uplands supporting document for further details
Vegetation composition: non-native species	Percentage cover at a representative number of 2m x 2m monitoring stops	Proportion of vegetation composed of non-native species less than 1%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details. No non-native species were recorded within this habitat by Roche et al. (2014)
Vegetation composition: positive indicator species	Number of species in local vicinity of a representative number of monitoring stops	At least one positive indicator species present in vicinity of each monitoring stop in block scree	Attribute and target based on Perrin et al. (2014). The list of positive indicator species for this habitat is also presented in Perrin et al. (2014) and is the same as for 8220 Siliceous rocky slopes. Further details can be found in the uplands supporting document
Vegetation composition: grass species and dwarf shrubs	Percentage cover in local vicinity of a representative number of monitoring stops	Total cover of grass species and dwarf shrubs less than 20%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation composition: bracken, native trees and shrubs	Percentage cover in local vicinity of a representative number of monitoring stops	Total cover of bracken (<i>Pteridium aquilinum</i>), native trees and shrubs less than 25%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation structure: grazing and browsing	Percentage of leaves/shoots grazed/browsed at a representative number of 2m x 2m monitoring stops	Live leaves of forbs and shoots of dwarf shrubs showing signs of grazing or browsing collectively less than 50%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details

Physical structure: disturbance	Percentage cover at, and in local vicinity of, a representative number of 2m x 2m monitoring stops	Ground disturbed by human and animal paths, scree running or vehicles less than 10%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Indicators of local distinctiveness	Occurrence and population size	No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat	This includes species on the Flora (Protection) Order, 2015 (FPO) and/or Red Lists (Byrne et al., 2009; Regan et al., 2010; Lockhart et al., 2012; Wyse Jackson et al., 2016, etc.). Roche et al. (2014) compiled and mapped existing rare and notable plant records for the SAC, including the FPO listed and Vulnerable parsley fern (<i>Cryptogramma crista</i>) (Wyse Jackson et al., 2016) which was previously recorded in this habitat, and the FPO listed and Vulnerable moss <i>Hedwigia integrifolia</i> (Lockhart et al., 2012) which was subsequently refound by Hodd (2015) in association with the habitat, with the Near Threatened moss <i>Grimmia decipiens</i> (see Hodd, 2015). No relevant species were recorded in this habitat during the NSUH; however, new records should be considered within this attribute. See the uplands supporting document for further details

Conservation Objectives for : Carlingford Mountain SAC [000453]

8210 Calcareous rocky slopes with chasmophytic vegetation

To maintain the favourable conservation condition of Calcareous rocky slopes with chasmophytic vegetation in Carlingford Mountain SAC, which is defined by the following list of attributes and targets:

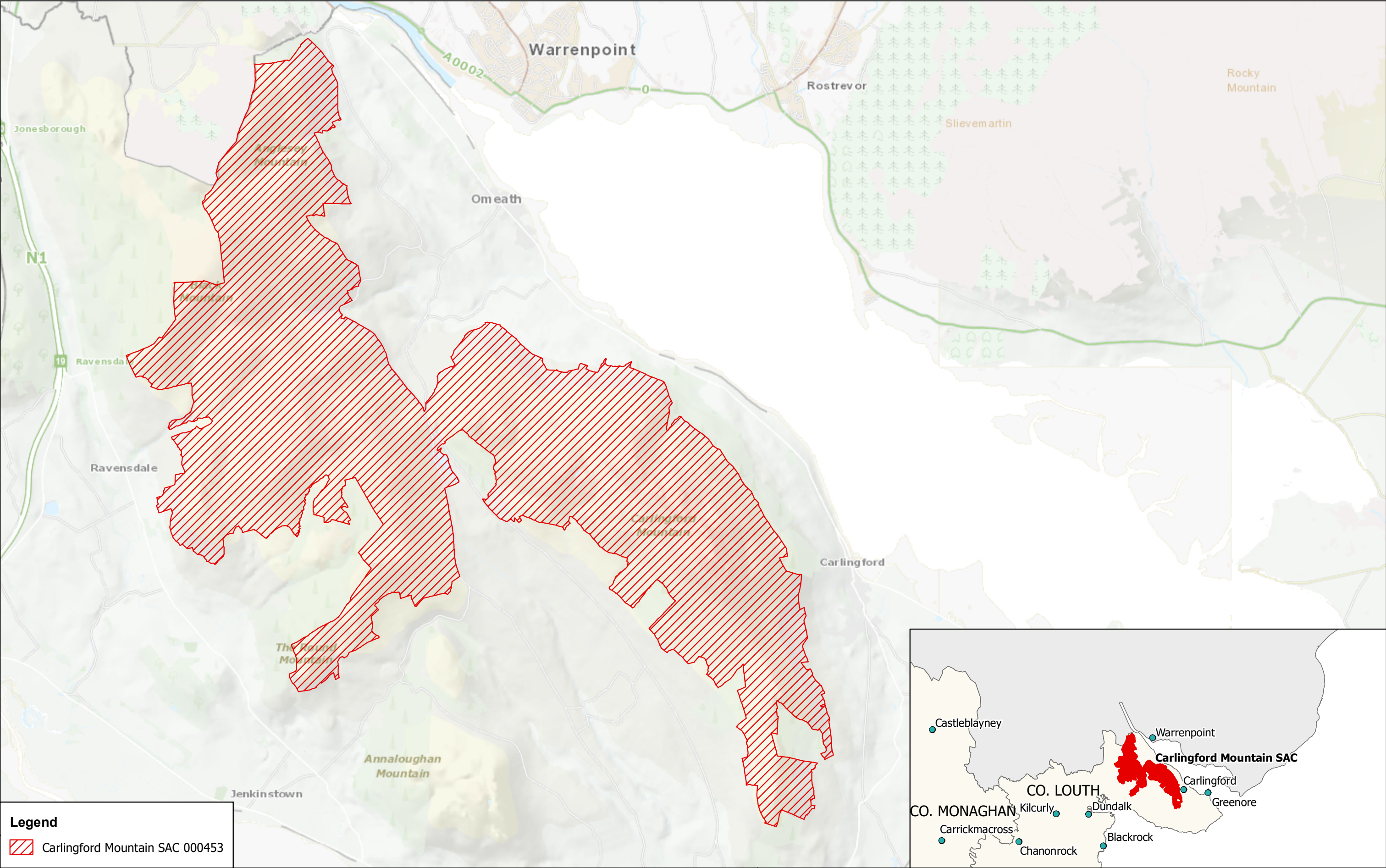
Attribute	Measure	Target	Notes
Habitat area	Hectares	Area stable or increasing, subject to natural processes	Carlingford Mountain SAC was surveyed as part of the National Survey of Upland Habitats (NSUH; see Roche et al., 2014 and Perrin et al., 2014). Calcareous rocky slopes with chasmophytic vegetation was not recorded within the SAC by Roche et al. (2014) during the NSUH. Further information can be found in Roche et al. (2014). Further details on this and the following attributes can be found in the Carlingford Mountain SAC conservation objectives supporting document for upland habitats where a summary of the mapping methodology is also presented
Habitat distribution	Occurrence	No decline, subject to natural processes	See the notes for Habitat area above
Ecosystem function: soil nutrients	Soil pH and appropriate nutrient levels at a representative number of monitoring stops	Maintain pH and soil nutrient status within natural ranges	See the uplands supporting document for further details
Vegetation composition: positive indicator fern and <i>Saxifraga</i> species	Number of species in local vicinity of a representative number of monitoring stops	Number of ferns and <i>Saxifraga</i> indicators in vicinity of each monitoring stop at least one	Attribute and target based on Perrin et al. (2014) where the list of positive indicator species for this habitat is also presented. See the uplands supporting document for further details
Vegetation composition: positive indicator species	Number of species in local vicinity of a representative number of monitoring stops	Number of positive indicator species in vicinity of each monitoring stop at least three	Attribute and target based on Perrin et al. (2014) where the list of positive indicator species for this habitat is presented. Further details can be found in the uplands supporting document
Vegetation composition: non-native species	Percentage cover in local vicinity of a representative number of monitoring stops	Proportion of vegetation composed of non-native species less than 1%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation composition: bracken, native trees and shrubs	Percentage cover in local vicinity of a representative number of monitoring stops	Total cover of bracken (<i>Pteridium aquilinum</i>), native trees and shrubs less than 25%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation structure: grazing and browsing	Percentage of leaves/shoots grazed/browsed in local vicinity of a representative number of monitoring stops	Live leaves of forbs and shoots of dwarf shrubs showing signs of grazing or browsing collectively less than 50%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Indicators of local distinctiveness	Occurrence and population size	No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat	This includes species on the Flora (Protection) Order, 2015 and/or Red Lists (Byrne et al., 2009; Regan et al., 2010; Lockhart et al., 2012; Wyse Jackson et al., 2016, etc.). Roche et al. (2014) compiled and mapped existing rare and notable plant records for the SAC and added any new records collected during the NSUH. Any new records should be considered within this attribute. See the uplands supporting document for further details

Conservation Objectives for : Carlingford Mountain SAC [000453]

8220 Siliceous rocky slopes with chasmophytic vegetation

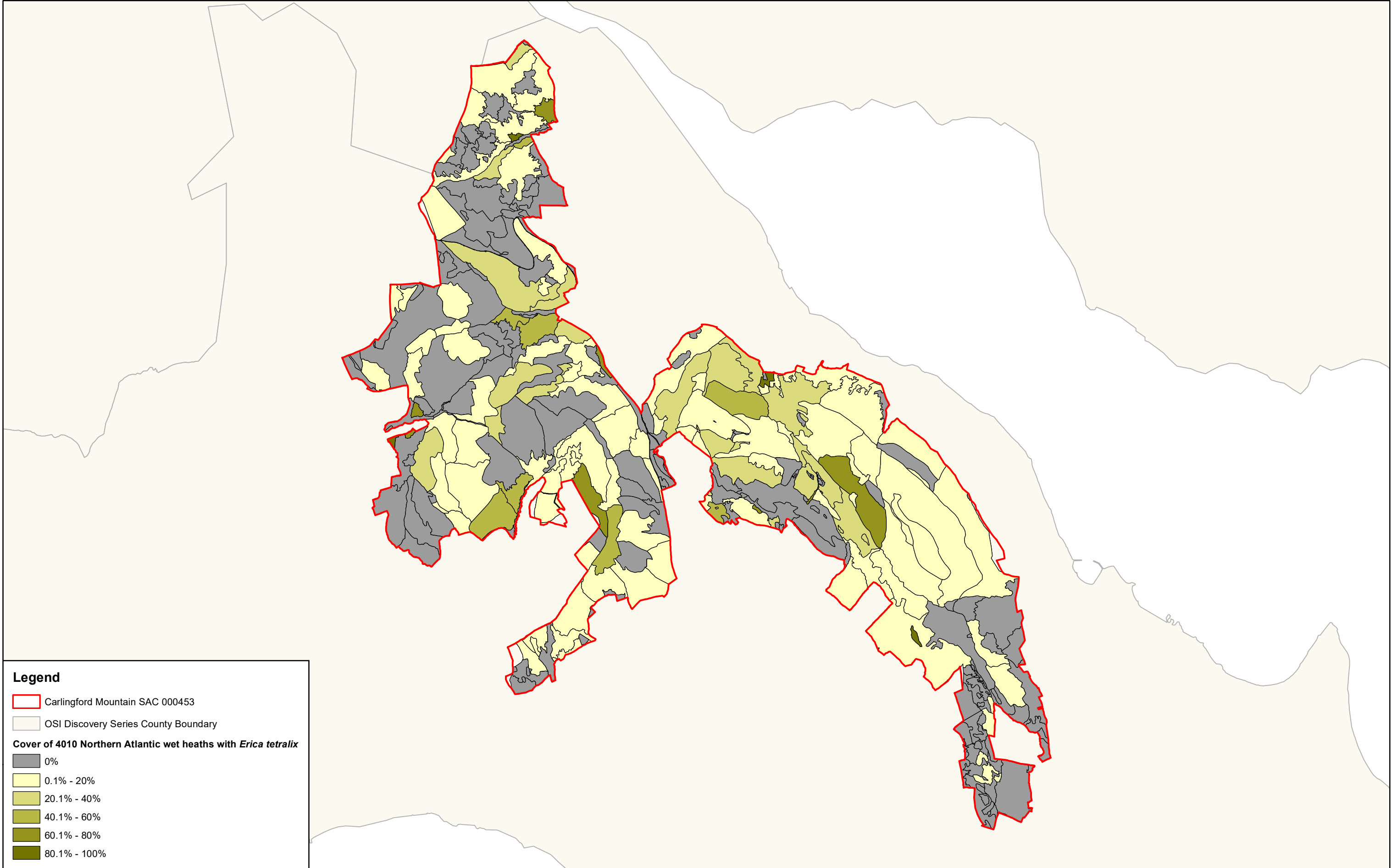
To restore the favourable conservation condition of Siliceous rocky slopes with chasmophytic vegetation in Carlingford Mountain SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Habitat area	Hectares	Area stable or increasing, subject to natural processes	Carlingford Mountain SAC was surveyed as part of the National Survey of Upland Habitats (NSUH; see Roche et al., 2014 and Perrin et al., 2014). Siliceous rocky slopes with chasmophytic vegetation was mapped in detail for the SAC and the total area of the qualifying habitat stated by Roche et al. (2014) is 84.7ha. This covers 2.73% of the SAC. Roche et al. (2014) report no significant losses of area of the habitat in the SAC since 1995. Further information can be found in Roche et al. (2014). Further details on this and the following attributes can be found in the Carlingford Mountain SAC conservation objectives supporting document for upland habitats where a summary of the mapping methodology is also presented
Habitat distribution	Occurrence	No decline, subject to natural processes. See map 10	Siliceous rocky slopes were recorded by Roche et al. (2014) scattered throughout the SAC, particularly around the peaks of Carlingford Mountain. See Roche et al. (2014) for further information. A summary of the mapping methodology is presented in the uplands supporting document
Ecosystem function: soil nutrients	Soil pH and appropriate nutrient levels at a representative number of monitoring stops	Maintain soil pH and nutrient status within natural ranges	See the uplands supporting document for further details
Vegetation composition: positive indicator species	Number of species in local vicinity of a representative number of monitoring stops	At least one positive indicator species present in vicinity of each monitoring stop	Attribute and target based on Perrin et al. (2014). The list of positive indicator species for this habitat is also presented in Perrin et al. (2014) and is the same as for 8110 Siliceous screes. Further details can be found in the uplands supporting document
Vegetation composition: non-native species	Percentage cover in local vicinity of a representative number of monitoring stops	Proportion of vegetation composed of non-native species less than 1%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details. During the NSUH, the non-native moss <i>Campylopus introflexus</i> was recorded within this habitat by Roche et al. (2014), as was the non-native creeping shrub entire-leaved cotoneaster (<i>Cotoneaster integrifolius</i>)
Vegetation composition: bracken, native trees and shrubs	Percentage cover in local vicinity of a representative number of monitoring stops	Total cover of bracken (<i>Pteridium aquilinum</i>), native trees and shrubs less than 25%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Vegetation structure: grazing and browsing	Percentage of leaves/shoots grazed/browsed in local vicinity of a representative number of monitoring stops	Live leaves of forbs and shoots of dwarf shrubs showing signs of grazing or browsing collectively less than 50%	Attribute and target based on Perrin et al. (2014). See the uplands supporting document for further details
Indicators of local distinctiveness	Occurrence and population size	No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat	This includes species on the Flora (Protection) Order, 2015 and/or Red Lists (Byrne et al., 2009; Regan et al., 2010; Lockhart et al., 2012; Wyse Jackson et al., 2016, etc.). Roche et al. (2014) compiled and mapped existing rare and notable plant records for the SAC, including the FPO listed and Vulnerable moss <i>Hedwigia integrifolia</i> (Lockhart et al., 2012) which was subsequently refound by Hodd (2015) in association with the habitat, with the Near Threatened moss <i>Grimmia decipiens</i> (see Hodd, 2015). No relevant species were recorded in this habitat during the NSUH; however, new records should also be considered within this attribute. See the uplands supporting document for further details



Legend

 Carlingford Mountain SAC 000453



Legend

Carlingford Mountain SAC 000453

OSI Discovery Series County Boundary

Cover of 4010 Northern Atlantic wet heaths with *Erica tetralix*

0%

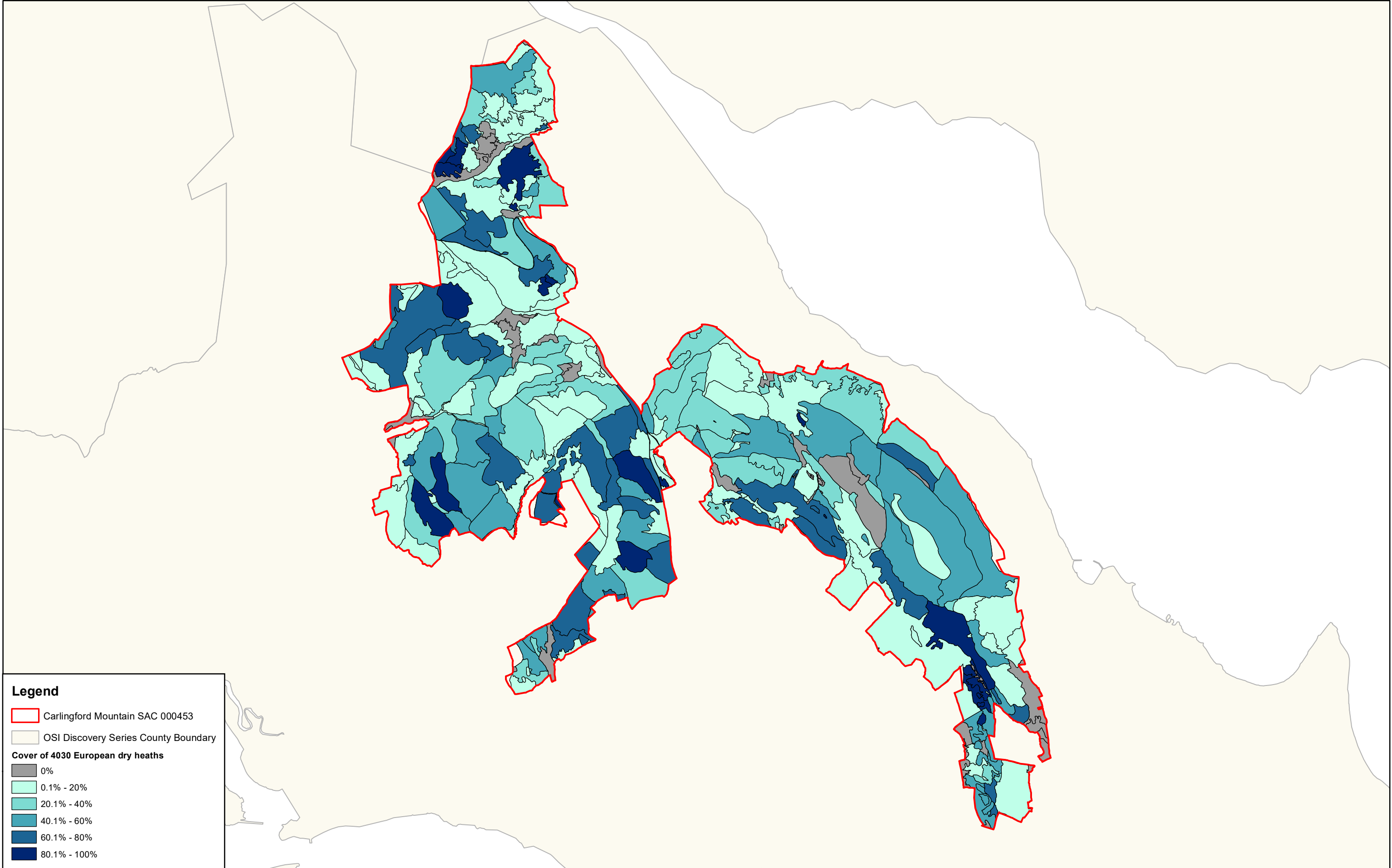
0.1% - 20%

20.1% - 40%


40.1% - 60%


60.1% - 80%

80.1% - 100%





Legend


 Carlingford Mountain SAC 000453


 OSI Discovery Series County Boundary


Cover of 4030 European dry heaths


 0%

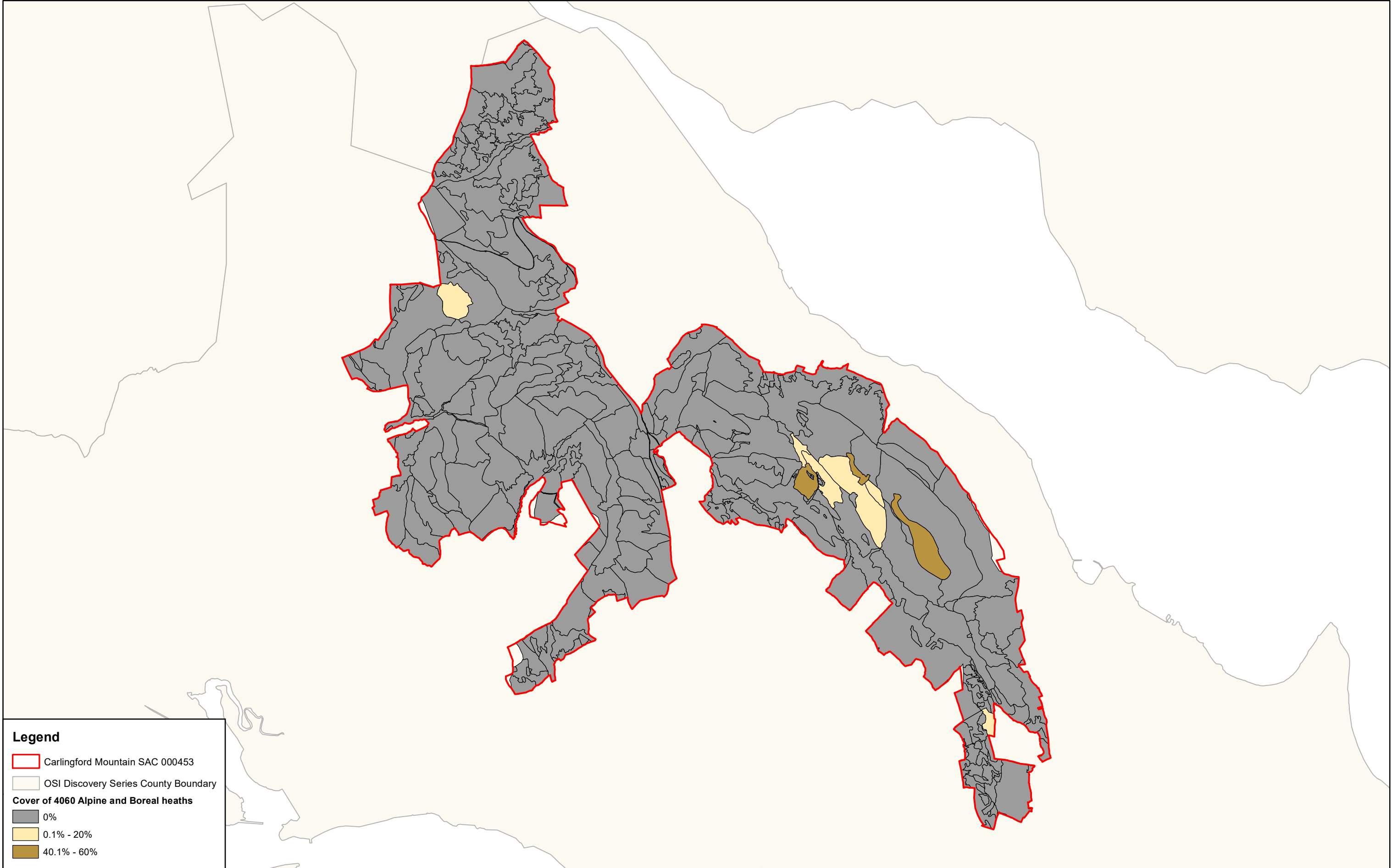
 0.1% - 20%

 20.1% - 40%


 40.1% - 60%


 60.1% - 80%

 80.1% - 100%





Legend


 Carlingford Mountain SAC 000453

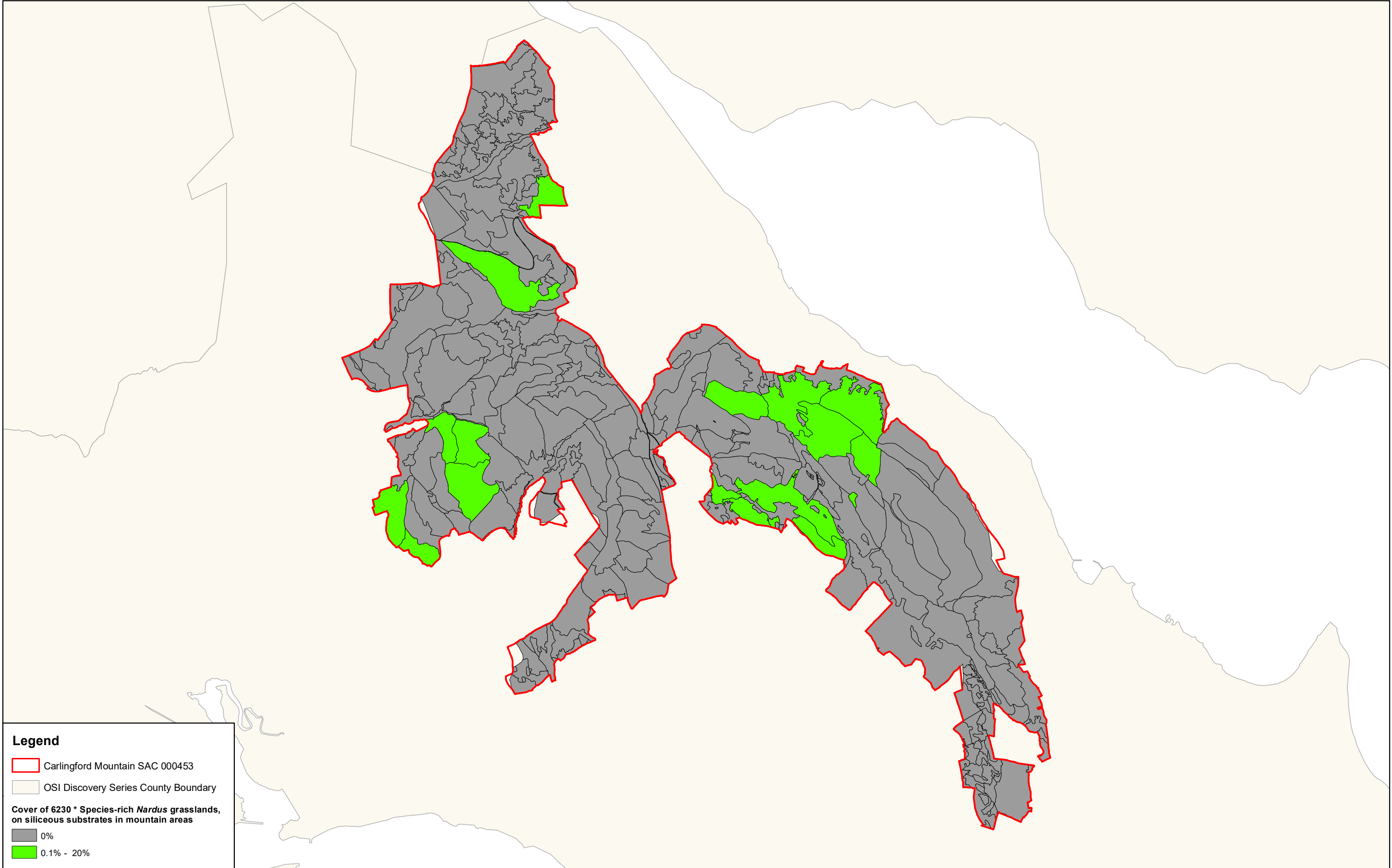
 OSI Discovery Series County Boundary

Cover of 4060 Alpine and Boreal heaths


 0%


 0.1% - 20%

 40.1% - 60%





Legend

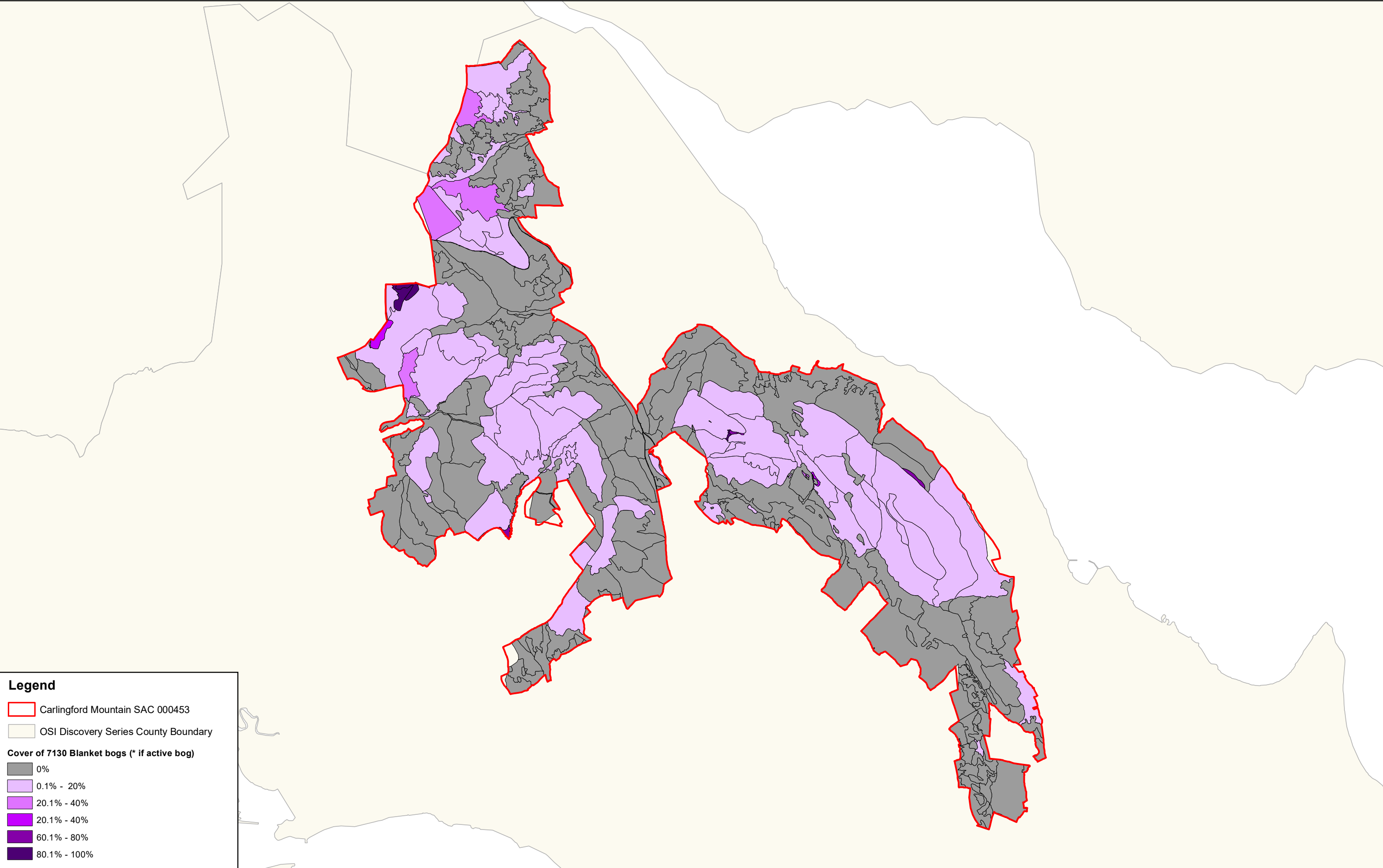
 Carlingford Mountain SAC 000453

 OSI Discovery Series County Boundary

Cover of 6230 * Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas

 0%

 0.1% - 20%



Legend

Carlingford Mountain SAC 000453

OSI Discovery Series County Boundary

Cover of 7130 Blanket bogs (* if active bog)

0%

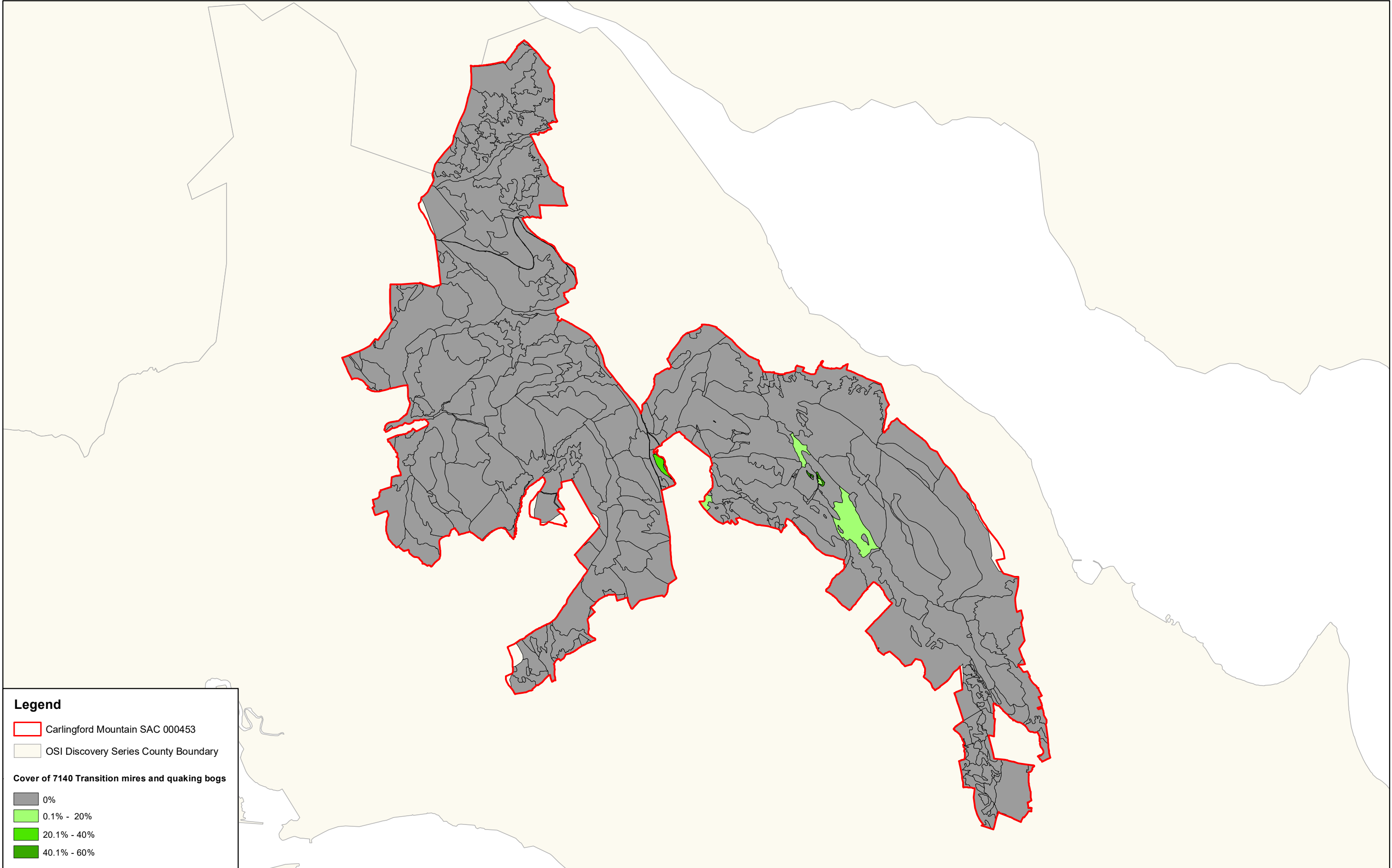
0.1% - 20%

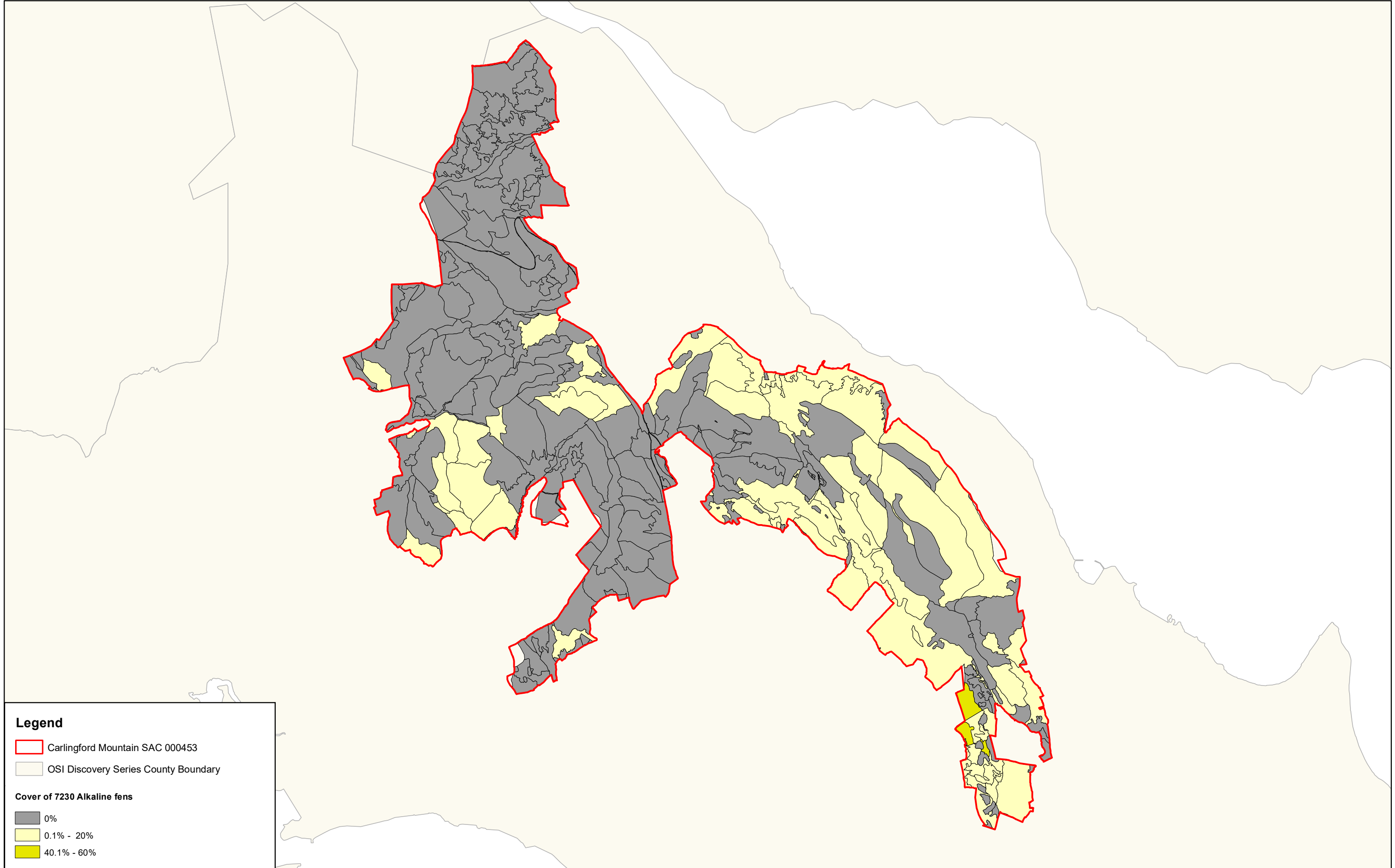
20.1% - 40%

20.1% - 40%

60.1% - 80%

80.1% - 100%





Legend

Carlingford Mountain SAC 000453

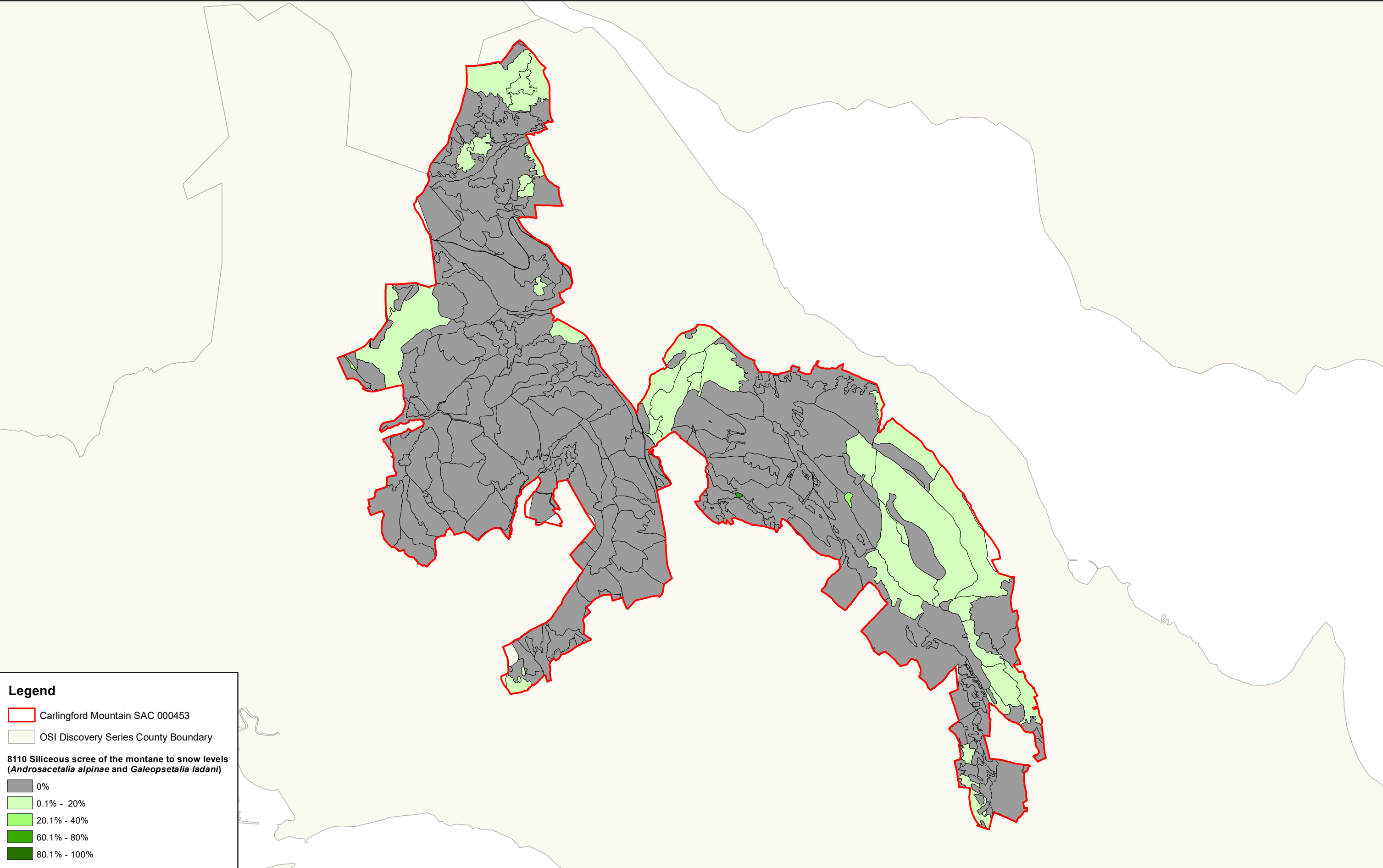
OSI Discovery Series County Boundary

Cover of 7230 Alkaline fens


0%


0.1% - 20%

40.1% - 60%





Legend


 Carlingford Mountain SAC 000453


 OSI Discovery Series County Boundary


8110 Siliceous scree of the montane to snow levels
(Androsacetalia alpinae and Galeopsetalia ladani)

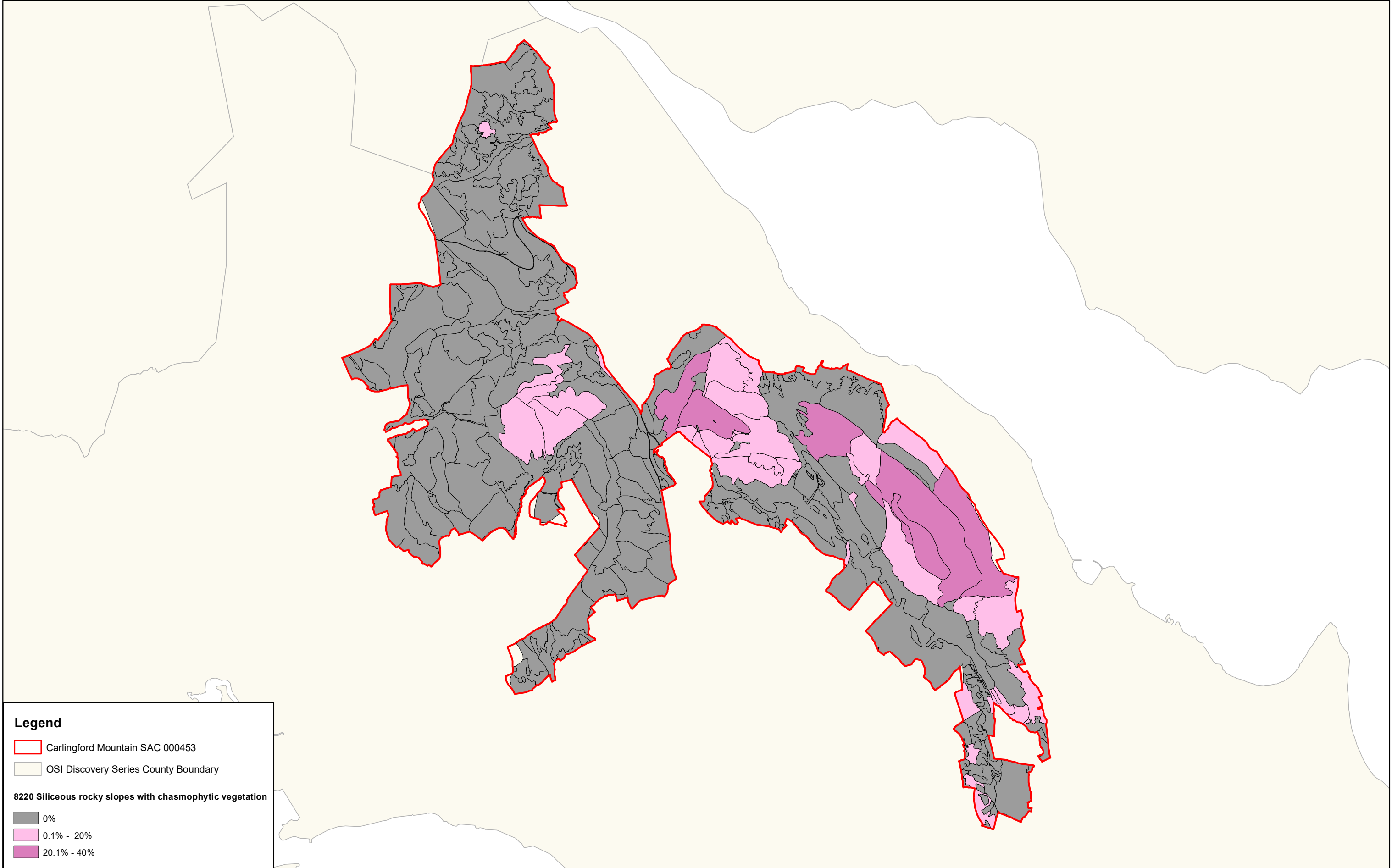
 0%

 0.1% - 20%

 20.1% - 40%

 60.1% - 80%

 80.1% - 100%



Legend

Carlingford Mountain SAC 000453

OSI Discovery Series County Boundary

8220 Siliceous rocky slopes with chasmophytic vegetation

0%

0.1% - 20%

20.1% - 40%