

National Parks and Wildlife Service

Conservation Objectives Series

Meentygrannagh Bog SAC 000173



An Roinn Ealaíon, Oidhreachta,
Gnóthaí Réigiúnacha, Tuaithe agus Gaeltachta

Department of Arts, Heritage,
Regional, Rural and Gaeltacht Affairs



**National Parks and Wildlife Service,
Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs,
7 Ely Place, Dublin 2, Ireland.
Web: www.npws.ie
E-mail: nature.conservation@ahg.gov.ie**

Citation:

**NPWS (2017) Conservation Objectives: Meentygrannagh Bog SAC 000173.
Version 1. National Parks and Wildlife Service, Department of Arts, Heritage,
Regional, Rural and Gaeltacht Affairs.**

**Series Editor: Rebecca Jeffrey
ISSN 2009-4086**

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*

000173	Meentygrannagh Bog SAC
1393	Slender Green Feather-moss <i>Drepanocladus vernicosus</i>
7130	Blanket bogs (* if active bog)
7140	Transition mires and quaking bogs
7230	Alkaline fens

Please note that this SAC is adjacent to River Finn SAC (002301). See map 2. The conservation objectives for this site should be used in conjunction with those for the adjacent site as appropriate.

Supporting documents, relevant reports & publications

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

NPWS Documents

Year :	1990
Title :	A survey to locate lowland blanket bogs of scientific interest in county Donegal and upland blanket bogs in counties Cavan, Leitrim and Roscommon
Author :	Douglas, C.; Dunnells, D.; Scally, L.; Wyse Jackson, M.
Series :	Unpublished report to NPWS
Year :	1991
Title :	Survey to locate mountain blanket bogs of scientific interest in Ireland
Author :	Mooney, E.; Goodwillie, R.; Douglas, C.
Series :	Unpublished report to 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 Manual No. 79
Year :	2015
Title :	Monitoring methods for <i>Hamatocaulis vernicosus</i> (Mitt.) Hedenäs (Slender green feather-moss) in the Republic of Ireland
Author :	Campbell, C.; Hodgetts, N.; Lockhart, N.
Series :	Irish Wildlife Manual No. 91
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 :	2017
Title :	Meentygrannagh Bog SAC (site code: 173) Conservation objectives supporting document- blanket bogs and supporting habitats V1
Author :	NPWS
Series :	Conservation objectives supporting document

Other References

Year :	1989
Title :	The genera <i>Scorpidium</i> and <i>Hamatocaulis</i> , gen. nov., in northern Europe
Author :	Hedenäs, L.
Series :	Lindbergia, 15: 8-36
Year :	2013
Title :	Conservation of selected legally protected and Red Listed bryophytes in Ireland
Author :	Campbell, C.
Series :	Unpublished Ph.D. Thesis, Trinity College Dublin

Spatial data sources

Year : 2017

Title : NPWS rare and threatened species database

GIS Operations : Dataset created from spatial references in database records. Expert opinion used as necessary to resolve any issues arising

Used For : 1393 (map 3)

Conservation Objectives for : Meentygrannagh Bog SAC [000173]

7130 Blanket bogs (* if active bog)

To restore the favourable conservation condition of Blanket bogs (*if active bog) in Meentygrannagh Bog 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	Blanket bog has not been mapped in detail for Meentygrannagh Bog SAC but from current available data the total area of the qualifying habitat is estimated to be approximately 417ha, covering 79% of the SAC (NPWS internal files). Further details on this and the following attributes can be found in the Meentygrannagh Bog SAC conservation objectives supporting document for blanket bogs and associated habitats
Habitat distribution	Occurrence	No decline, subject to natural processes	The habitat occurs throughout the SAC. Further information can be found in Douglas et al. (1990), Mooney et al. (1991), NPWS internal files and the blanket bogs and associated habitats supporting document
Ecosystem function: soil nutrients	Soil pH and appropriate nutrient levels at a representative number of monitoring stops	Maintain soil nutrient status within natural range	See the blanket bogs and associated habitats 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	See the blanket bogs and associated habitats 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 blanket bogs and associated habitats supporting document
Community diversity	Abundance of variety of vegetation communities	Maintain variety of vegetation communities, subject to natural processes	A variety of blanket bog vegetation communities have been recorded within this SAC (Douglas et al., 1990, Mooney et al., 1991; NPWS internal files), four of which correspond to communities recorded in the National Survey of Upland Habitats and listed in the provisional list of vegetation communities described in Perrin et al. (2014). Further information on vegetation communities associated with this habitat is presented in Perrin et al. (2014)
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 is at least seven	Attribute and target based on Perrin et al. (2014), where the list of positive indicator species for this habitat is also presented
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)
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 blanket bogs and associated habitats supporting document for the list of potential 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 for this habitat is also presented
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)
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)

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)
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)
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 also presented
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)
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)
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)
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 listed in the Flora (Protection) Order, 2015 and/or the red data lists (Lockhart et al., 2012; Wyse Jackson et al., 2016)

Conservation Objectives for : Meentygrannagh Bog SAC [000173]

7140 Transition mires and quaking bogs

To restore the favourable conservation condition of Transition mires and quaking bogs in Meentygrannagh Bog 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	Transition mires and quaking bogs have not been mapped in detail for Meentygrannagh Bog SAC and thus the total area of the qualifying habitat is unknown. Further details on this and the following attributes can be found in the Meentygrannagh Bog SAC conservation objectives supporting document for blanket bogs and associated habitats
Habitat distribution	Occurrence	No decline, subject to natural processes	The habitat occurs in a mosaic with alkaline fens (7230) in the north-east of the SAC (NPWS internal files). Further information can be found within Douglas et al. (1990), NPWS internal files and the blanket bogs and associated habitats supporting document
Ecosystem function: soil nutrients	Soil pH and appropriate nutrient levels at a representative number of monitoring stops	Maintain soil nutrient status within natural range	See the blanket bogs and associated habitats supporting document for further details
Community diversity	Abundance of variety of vegetation communities	Maintain variety of vegetation communities, subject to natural processes	A variety of transition mire vegetation communities have been recorded in this SAC (Douglas et al., 1990; NPWS internal files), one of which corresponds to a community recorded in the National Survey of Upland Habitats and listed in the provisional list of vegetation communities described in Perrin et al. (2014). Further information on vegetation communities associated with this habitat is presented in Perrin et al. (2014)
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 at each monitoring stop is at least three for infilling 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
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
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
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
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)
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 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 of the habitat, not to infilling pool examples
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)

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)
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 listed in the Flora (Protection) Order, 2015 (FPO) and/or the red data lists (Lockhart et al., 2012; Wyse Jackson et al., 2016). The Annex II listed, FPO and Near Threatened slender green feather-moss (<i>Hamatocaulis (Drepanocladus) vernicosus</i>) (Lockhart et al., 2012) can be assigned to transition mire within Meentygrannagh Bog SAC (Campbell et al., 2015). See also the conservation objective for slender green feather-moss (1393) for Meentygrannagh Bog SAC

Conservation Objectives for : Meentygrannagh Bog SAC [000173]

7230

Alkaline fens

To restore the favourable conservation condition of Alkaline fens in Meentygrannagh Bog 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	Alkaline fens have not been mapped in detail for Meentygrannagh Bog SAC and thus the total area of the qualifying habitat is unknown. Further details on this and the following attributes can be found in the Meentygrannagh Bog SAC conservation objectives supporting document for blanket bogs and associated habitats
Habitat distribution	Occurrence	No decline, subject to natural processes	The habitat is documented to occur in the north-eastern section of the SAC (NPWS internal files). Mooney et al. (1991) recorded it in the vicinity of the headwaters of the River Swilly. Further information can be found within Douglas et al. (1990), Mooney et al. (1991), NPWS internal files and the blanket bogs and associated habitats supporting document
Ecosystem function: soil nutrients	Soil pH and appropriate nutrient levels at a representative number of monitoring stops	Maintain soil nutrient status within natural range	See the blanket bogs and associated habitats supporting document for further details
Ecosystem function: peat formation	Flood duration	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 (Jim Ryan, pers. comm.)
Ecosystem function: hydrology	Metres	Maintain 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 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
Community diversity	Abundance of variety of vegetation communities	Maintain variety of vegetation communities, subject to natural processes	A variety of transition mire vegetation communities have been recorded in this SAC (Douglas et al., 1990; NPWS internal files), one of which corresponds to a community recorded in the National Survey of Upland Habitats and listed in the provisional list of vegetation communities described in Perrin et al. (2014). Further information on vegetation communities associated with this habitat is presented in Perrin et al. (2014)
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
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

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
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
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)
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)
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)
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)
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)
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)
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)
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 listed in the Flora (Protection) Order, 2015 (FPO) and/or the red data lists (Lockhart et al., 2012; Wyse Jackson et al., 2016). The Vulnerable mosses <i>Tomentypnum nitens</i> and <i>Sphagnum warnstorffii</i> and the Near Threatened moss <i>Sphagnum teres</i> (Lockhart et al., 2012) can be assigned specifically to alkaline fen within Meentygrannagh Bog SAC (Rory Hodd, pers. comm.). The Annex II listed, FPO and Near Threatened slender green feather-moss (<i>Hamatocaulis (Drepanocladus) vernicosus</i>) is associated with the habitat in the SAC. See also the conservation objective for slender green feather-moss (1393)

Conservation Objectives for : Meentygrannagh Bog SAC [000173]

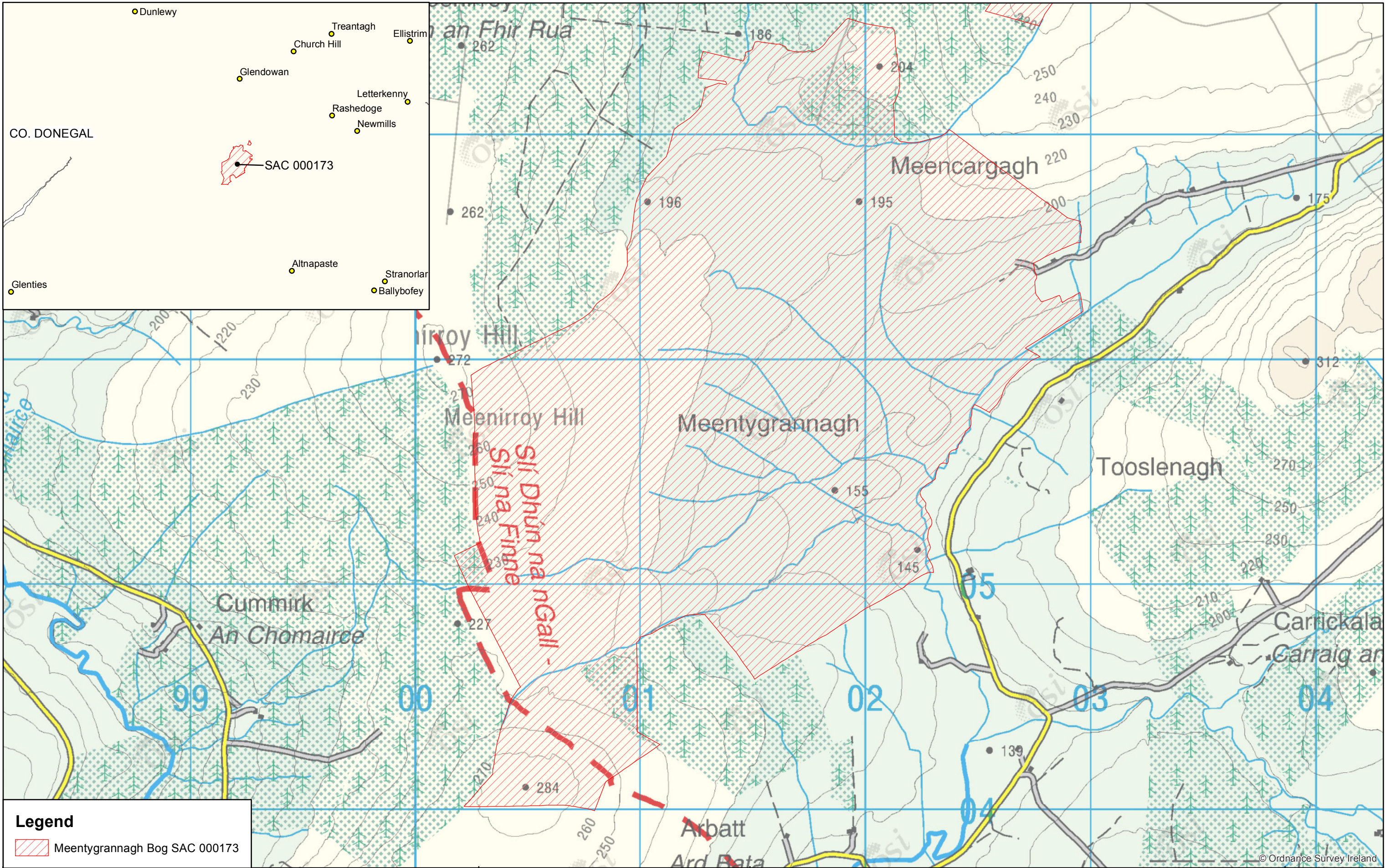
1393

Slender Green Feather-moss *Drepanocladus vernicosus*

To maintain the favourable conservation condition of Slender Green Feather-moss (Shining Sickie-moss) in Meentygrannagh Bog SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Distribution of populations	Number and geographical spread of populations	No decline, subject to natural processes. See map 3 for known location at Meentygrannagh	(Please note that <i>Drepanocladus vernicosus</i> was reclassified as <i>Hamatocaulis vernicosus</i> by Hedenäs (1989)). The known population of slender green feather-moss (<i>Hamatocaulis vernicosus</i>) in Meentygrannagh Bog SAC occurs in areas of transition mire within the SAC. Data from NPWS surveys (NPWS internal files), Campbell (2013) and Campbell et al. (2015)
Population size	Number of individuals	No decline, subject to natural processes	The population at Meentygrannagh was estimated by Campbell (2013) to be 6,313,800 shoots (c.6,314,000 shoots). Counts of shoots were based on the mean of number of shoots in six 10cm x 10cm areas, extrapolated to 10,200 per m ² in 619m ² (Campbell, 2013). See Campbell et al. (2015) for further details
Population cover	Percentage cover in a representative number of 2m x 2m monitoring plots	Mean percentage cover of slender green feather-moss (<i>Hamatocaulis vernicosus</i>) should be at least 15%	The mean percentage cover of slender green feather-moss (<i>Hamatocaulis vernicosus</i>) recorded in six 2m x 2m plots at Meentygrannagh was 19% (Campbell, 2013). The target cover figure is a 20% reduction of the recorded cover to allow for a margin of error and variability over monitoring seasons. See Campbell et al. (2015) for further details
Area of suitable habitat	Hectares	No decline, subject to natural processes	There are two main areas of occupancy for the species at Meentygrannagh; the first occurs in a lawn at the edge of a water track in a mesotrophic mire near a rocky knoll to the west of the forestry plantation, measured as 1,149m ² ; the second occurs near the edge of the fen/mineral transition on the opposite side of the bog, north of the forestry plantation, measured as 1,874m ² . Three other scattered areas of occupancy in mesotrophic areas sum to 74m ² . The total area of occupancy estimated by Campbell (2013) is thus 3,097m ² , but only c.20% of this is suitable habitat i.e. c.619m ² (0.0619ha). See Campbell et al. (2015) for further details
Hydrological conditions: water table level	Metres	Maintain suitable hydrological conditions	Slender green feather-moss (<i>Hamatocaulis vernicosus</i>) is mostly confined to mesotrophic fens, a transitional habitat between acid bog and base-rich fen. This appears to occur in at least two forms in Ireland: upland transitional flushes, where the plants can occur in lawns that rise and fall with fluctuating water table levels, such as at Meentygrannagh; and wet lowland sedge meadows, where plants can be inundated in winter, but may be subject to some desiccation in the summer. Based on Campbell (2013) and Campbell et al. (2015)
Vegetation composition: tree cover	Percentage cover in a representative number of 2m x 2m monitoring plots	Mean percentage tree cover should be less than 15%	Slender green feather-moss (<i>Hamatocaulis vernicosus</i>) grows in moss-dominated, open communities, generally with a low cover of trees and shrubs. Campbell (2013) recorded 0% tree cover at Meentygrannagh. See also Campbell et al. (2015)
Vegetation composition: shrub cover	Percentage cover in a representative number of 2m x 2m monitoring plots	Mean percentage shrub cover should be less than 20%	Slender green feather-moss (<i>Hamatocaulis vernicosus</i>) grows in moss-dominated, open communities, generally with a low cover of trees and shrubs. Campbell (2013) recorded 0% shrub cover at Meentygrannagh. See also Campbell et al. (2015)

Vegetation composition: grass cover	Percentage cover in a representative number of 2m x 2m monitoring plots	Mean percentage grass species cover should be less than 25%	Slender green feather-moss (<i>Hamatocaulis vernicosus</i>) grows in moss-dominated, open communities, generally with a low cover of grasses, maintained by a low grazing intensity by sheep and deer at Meentygrannagh (Campbell, 2013; Campbell et al., 2015)
Vegetation composition: bryophyte cover	Percentage cover in a representative number of 2m x 2m monitoring plots	Mean percentage bryophyte cover should be more than 50%	Campbell (2013) recorded bryophyte cover of 51-90% in six 2m x 2m plots at Meentygrannagh. See also Campbell et al. (2015)
Vegetation composition: cover of <i>Calliergonella cuspidata</i>	Percentage cover in a representative number of 2m x 2m monitoring plots	Mean percentage cover of <i>Calliergonella cuspidata</i> should be less than 15%	<i>Calliergonella cuspidata</i> , a moss species often associated with high nutrient conditions, is usually present, but with low cover and never dominant. Cover of <i>Calliergonella cuspidata</i> was 0-10% in six 2m x 2m plots recorded by Campbell (2013) at Meentygrannagh. See also Campbell et al. (2015)
Vegetation structure: vegetation height	Centimetres in a representative number 2m x 2m monitoring plots	Mean vegetation height should not exceed 40cm	Campbell (2013) recorded a mean vegetation height of 34.6cm in six 2m x 2m plots at Meentygrannagh. See also Campbell et al. (2015)



Legend

Meentygrannagh Bog SAC 000173

An Roinn Ealaíon, Oidhreachta, Gnóthaí Réigiúnacha, Tuaithe agus Gaeltachta
 Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs

MAP 1:
MEENTYGRANNAGH BOG SAC
CONSERVATION OBJECTIVES
SAC DESIGNATION

Map to be read in conjunction with the NPWS Conservation Objectives Document.

SITE CODE:
SAC 000173; version 1.02
CO. DONEGAL

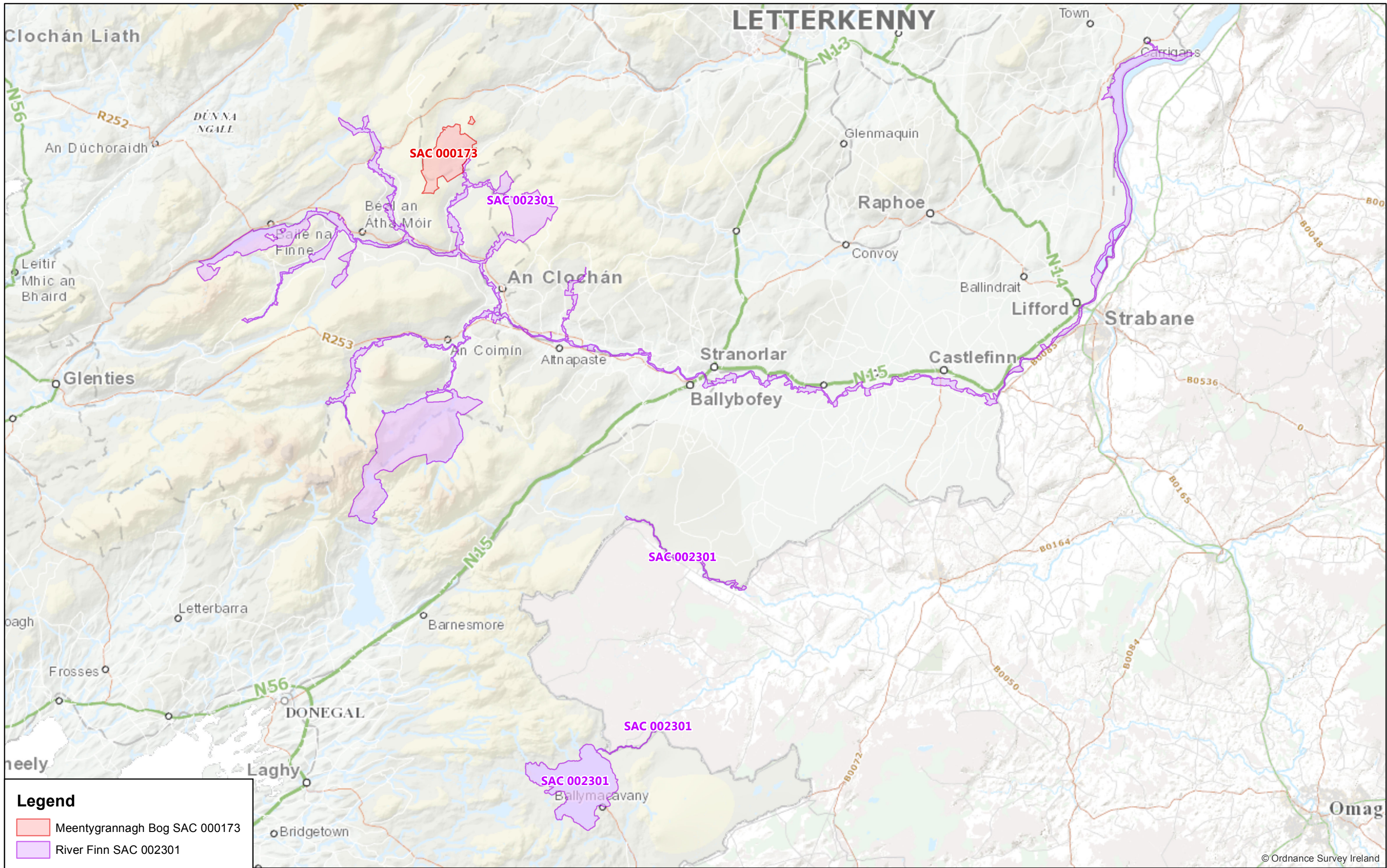
0 0.25 0.5 0.75 1 km

The mapped boundaries are of an indicative and general nature only. Boundaries of designated areas are subject to revision.
 Ordnance Survey of Ireland Licence No EN 0059216. © Ordnance Survey of Ireland Government of Ireland.

Níl sna teorainneacha ar na léarscáileanna ach nod garshuíomhach ginearálta. Féadfar athbheithnithe a déanamh ar theorainneacha na gceantar comharthaithe. Suirbhéarachta Ordonáis na hÉireann Ceadúnas Uimh EN 0059216. © Suirbhéarachta Ordonáis na hÉireann Rialtas na hÉireann.

N

Map Version 1
Date: March 2017



Legend

- Meentygrannagh Bog SAC 000173
- River Finn SAC 002301

An Roinn Ealaíon, Oidhreacht, Gnóthaí Réigiúnacha, Tuaithe agus Gaeltachta
 Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs

MAP 2:
MEENTYGRANNAGH BOG SAC
CONSERVATION OBJECTIVES
ADJACENT / ADJOINING AND
OVERLAPPING DESIGNATION

Map to be read in conjunction with the NPWS Conservation Objectives Document.

SITE CODE:
SAC 000173; version 1.02, SAC 002301; version 1.08
CO. DONEGAL

0 3 6 9 12 km

The mapped boundaries are of an indicative and general nature only. Boundaries of designated areas are subject to revision.
 Ordnance Survey of Ireland Licence No EN 0059216. © Ordnance Survey of Ireland Government of Ireland.

Níl sna teorainneacha ar na léarscáileanna ach nod garshuíomhach ginearálta. Féadfar athbheithnithe a déanamh ar theorainneacha na gceantar comharthaithe. Suirbhéarachta Ordonáis na hÉireann Ceadúnas Uimh EN 0059216. © Suirbhéarachta Ordonáis na hÉireann Rialtas na hÉireann.

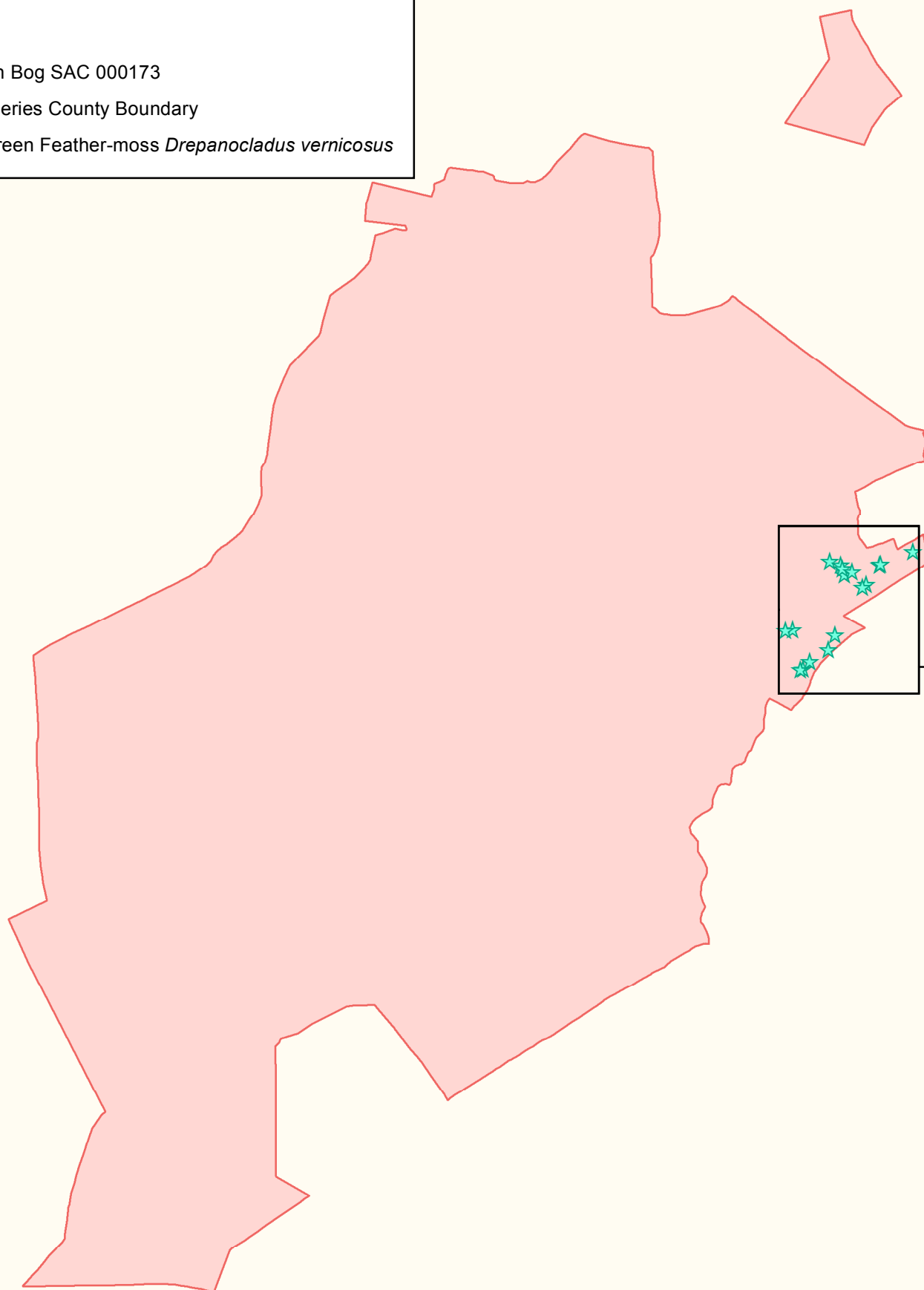
N

Map Version 1
Date: March 2017

© Ordnance Survey Ireland

Legend

- Meentygrannagh Bog SAC 000173
- OSi Discovery Series County Boundary
- ★ 1393 Slender Green Feather-moss *Drepanocladus vernicosus*

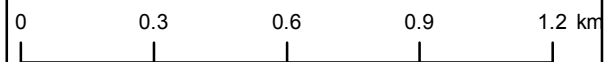


An Roinn Ealaíon, Oidhreacht,
Gnóthaí Réigiúnacha, Tuaithe agus Gaeltachta
Department of Arts, Heritage,
Regional, Rural and Gaeltacht Affairs

**MAP 3:
MEENTYGRANNAGH BOG SAC
CONSERVATION OBJECTIVES
SLENDER GREEN FEATHER-MOSS**

Map to be read in conjunction with the NPWS Conservation Objectives Document.

**SITE CODE:
SAC 000173; version 1.02
Co. Donegal**



The mapped boundaries are of an indicative and general nature only. Boundaries of designated areas are subject to revision.
Ordnance Survey of Ireland Licence No EN 0059216. © Ordnance Survey of Ireland Government of Ireland.
Níl sna teorainneacha ar na léarscáileanna ach nod garshuíomhach ginearálta. Féadfar athbhreithniú a déanamh ar theorainneacha na gceantar comharthaithe. Suirbhéarachta Ordonáis na hÉireann Ceadúnas Uimh EN 0059216. © Suirbhéarachta Ordonáis na hÉireann Rialtas na hÉireann.



**Map Version 1
Date: March 2017**