

National Parks and Wildlife Service

Conservation Objectives Series

Silvermine Mountains SAC 000939



An Roinn Cultúir,
Oidhreacht agus Gaeltachta
Department of Culture,
Heritage and the Gaeltacht

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Citation:

**NPWS (2018) Conservation Objectives: Silvermine Mountains SAC 000939.
Version 1. National Parks and Wildlife Service, Department of Culture, Heritage
and the Gaeltacht.**

**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*

000939	Silvermine Mountains SAC
4010	Northern Atlantic wet heaths with <i>Erica tetralix</i>
6230	Species-rich <i>Poa</i> grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe)E

Please note that this SAC overlaps with Slievefelim to Silvermines Mountains SPA (004165). See map 2. The conservation objectives for this site should be used in conjunction with those for the overlapping 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 :	2005
Title :	Conservation Plan for 2005-2010. Silvermine Mountains cSAC Site Code 000939 Co. Tipperary
Author :	NPWS
Series :	Conservation Plan
Year :	2007
Title :	Grasslands monitoring project 2006
Author :	Dwyer, R.; Crowley, W.; Wilson, F.
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 :	2013
Title :	The status of EU protected habitats and species in Ireland. Volume 2. Habitats assessments
Author :	NPWS
Series :	Conservation assessments
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 :	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

Other References

Year :	2009
Title :	Common Standards Monitoring guidance for upland habitats
Author :	JNCC
Series :	Joint Nature Conservation Committee, Peterborough
Year :	2013
Title :	Interpretation manual of European Union habitats- Eur 28
Author :	European Commission- DG Environment
Series :	European Commission

4010 Northern Atlantic wet heaths with *Erica tetralix*

To maintain the favourable conservation condition of Northern Atlantic wet heaths with *Erica tetralix* in Silvermine Mountains 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	Northern Atlantic wet heaths with <i>Erica tetralix</i> has not been mapped in detail for Silvermine Mountains SAC and thus the total area of the qualifying habitat in the SAC is unknown. However, it is documented that wet heath is the dominant habitat in the SAC (NPWS, 2005), occurring on both sides of the road that cuts through this upland SAC, being most extensive on the east side. The habitat occurs in association with species-rich <i>Nardus</i> grassland (6230*) and upland grassland in the SAC (NPWS internal files)
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 soil pH and nutrient status within natural ranges	Relevant nutrients and their natural ranges are yet to be defined. However, nitrogen deposition is noted as being relevant to this habitat (NPWS, 2013)
Community diversity	Abundance of variety of vegetation communities	Maintain variety of vegetation communities, subject to natural processes	The entire diversity of wet heath vegetation communities within this SAC is unknown. Information on vegetation communities associated with this habitat is presented in Perrin et al. (2014)
Vegetation composition: cross-leaved heath	Occurrence within 20m of a representative number of 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). Cross-leaved heath is the only characteristic species of the habitat listed in European Commission (2013). Whilst it is seldom abundant in wet heaths, its presence at high frequencies is considered one of the few characteristics common between the varied communities of this habitat (JNCC, 2009)
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 also presented. The positive indicator species ling (<i>Calluna vulgaris</i>) and tormentil (<i>Potentilla erecta</i>) have been recorded in the habitat in the SAC along with purple moor-grass (<i>Molinia caerulea</i>) and bilberry (<i>Vaccinium myrtillus</i>), with rushes (<i>Juncus effusus</i> and <i>J. acutiflorus</i>), marsh arrowgrass (<i>Triglochin palustris</i>), meadow thistle (<i>Cirsium dissectum</i>) and common butterwort (<i>Pinguicula vulgaris</i>) in localised flushed areas (NPWS, 2005)
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 pleurocarpus mosses at least 10%	Attribute and target based on Perrin et al. (2014). A plentiful lichen/bryophyte layer is characteristic of this habitat
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). A dwarf shrub layer with ericoid species is characteristic of this habitat (crowberry is only rarely present). Low cover of these species would be indicative of chronic overgrazing, burning, etc.
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). A dwarf shrub layer is characteristic of wet heaths, but the vegetation should be a mixture of dwarf shrub and graminoid species with higher cover of dwarf shrubs being potentially indicative of drainage
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). Non-native species can be invasive and have deleterious effects on native vegetation. A low target is set as non-native species can spread rapidly and are most easily dealt with when still at lower abundances
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). High cover of native trees and shrubs would indicate that the habitat may be succeeding towards scrub or woodland due to lack of grazing or due to the habitat drying out
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). High cover of bracken would indicate that the habitat may be succeeding towards a dense bracken community
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). High cover of soft rush would suggest undesirable hydrological conditions. Note, however, that poor flushes dominated by soft rush can naturally occur in mosaic with this habitat. Discrete areas of this separate habitat should not be considered here
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). High levels of disturbed <i>Sphagnum</i> would indicate undesirable levels of grazers
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)
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). Disturbance can include hoof marks, wallows, human footprints and vehicle and machinery tracks. Excessive disturbance can result in loss of characteristic species and presage erosion for heaths and peatlands
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). Drainage can result in loss of characteristic species and transition to drier habitats
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 and no decline in status of hepatic mats associated with this 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)

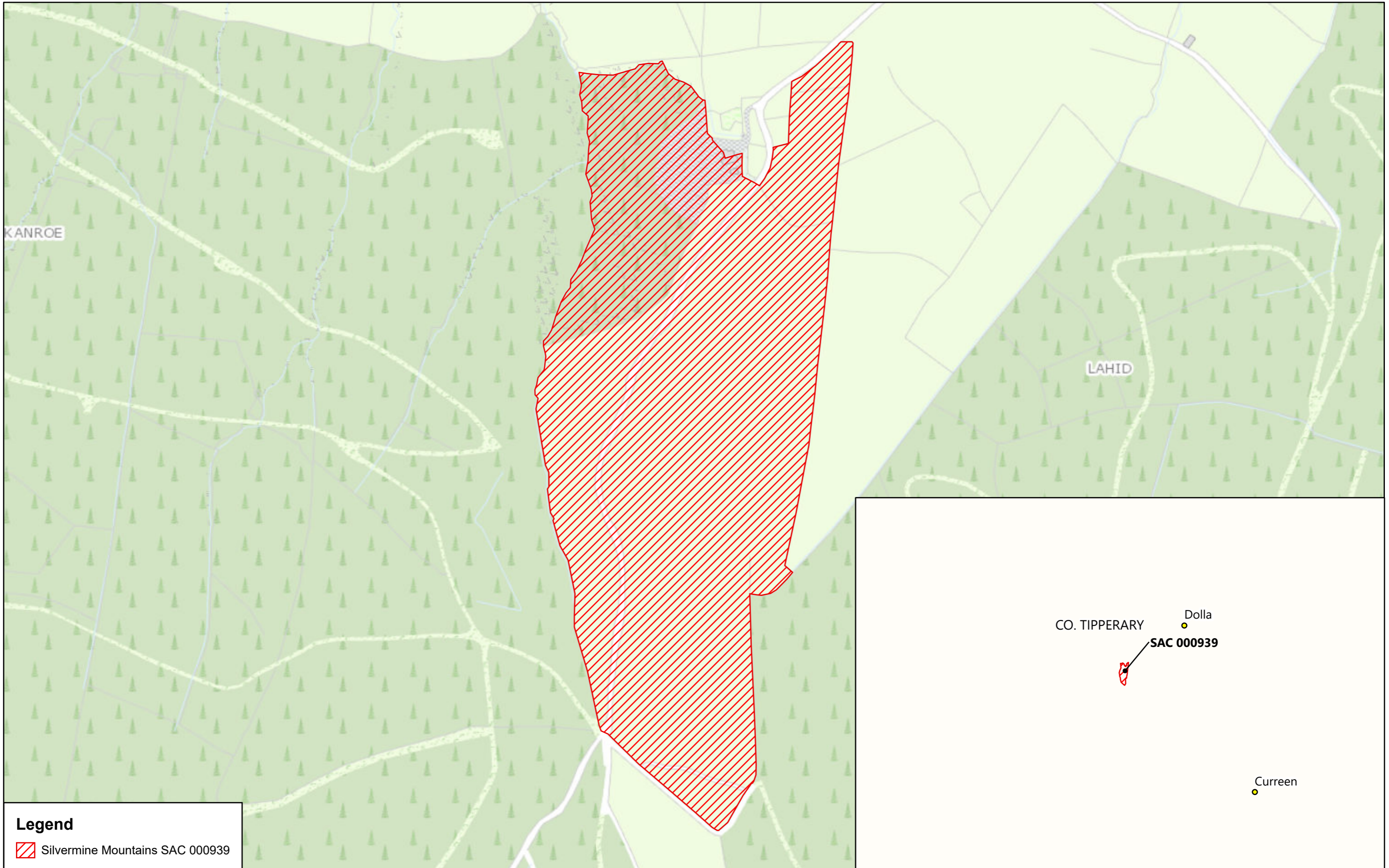
Conservation Objectives for : Silvermine Mountains SAC [000939]

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* grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe)* in Silvermine Mountains 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	The total area of species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe)* in Silvermine Mountains SAC is currently unknown. The habitat was surveyed as part of the Grasslands Monitoring Project 2006 by Dwyer et al. (2007) who state that it occurs mainly in the very north-east of the SAC and also in strips along the western side of the roadway that runs through this upland SAC
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 soil pH and nutrient status within natural ranges	Relevant nutrients and their natural ranges are yet to be defined. However, nitrogen deposition is noted as being relevant to this habitat (NPWS, 2013)
Community diversity	Abundance of variety of vegetation communities	Maintain variety of vegetation communities, subject to natural processes	The entire diversity of species-rich <i>Nardus</i> grassland* vegetation communities within this SAC is unknown. 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. Positive indicator species recorded in the habitat in the SAC by Dwyer et al. (2007) include common bent-grass (<i>Agrostis capillaris</i>), sweet vernal-grass (<i>Anthoxanthum odoratum</i>), tormentil (<i>Potentilla erecta</i>), sheep's-fescue (<i>Festuca ovina</i>), heath bedstraw (<i>Galium saxatile</i>), heath wood-rush (<i>Luzula multiflora</i>) and the moss <i>Rhytidiadelphus squarrosus</i>
Vegetation composition: high quality indicator species	Number of species at a representative number of 2m x 2m monitoring stops	At least two high quality indicator 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 also presented
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). Species richness is a key characteristic of species-rich <i>Nardus</i> grasslands (6230*) which distinguishes it from species-poor <i>Nardus</i> swards that are very common in the uplands of Ireland and the UK. Vascular plant, bryophyte and lichen species are counted
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 or equal to 1%	Attribute and target based on Perrin et al. (2014). Non-native species can be invasive and have deleterious effects on native vegetation. A low target is set as non-native species can spread rapidly and are most easily dealt with when still at lower abundances
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 or equal to 10% and collectively less than or equal to 20%	Attribute and target based on Perrin et al. (2014), where the list of negative indicator species for this habitat is also presented

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 or equal to 10%	Attribute and target based on Perrin et al. (2014). High cover of <i>Sphagnum</i> mosses would not be characteristic of species-rich <i>Nardus</i> grasslands* and may indicate changes in hydrology or soil nutrients within the habitat, but is more likely to indicate that the community is inherently a marginal example of the habitat
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 or equal to 25%	Attribute and target based on Perrin et al. (2014). High cover of <i>Polytrichum</i> mosses would not be characteristic of species-rich <i>Nardus</i> grasslands* and may indicate changes in hydrology or soil nutrients within the habitat, but is more likely to indicate that the community is inherently a marginal example of the habitat
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 or equal to 5%	Attribute and target based on Perrin et al. (2014). High cover of bracken would indicate that the habitat may be succeeding towards a dense bracken community, and high cover of native trees and shrubs would indicate that the habitat may be succeeding towards scrub or woodland due to lack of grazing. Dwyer et al. (2007) noted bracken and scrub encroachment as a negative impact on the habitat in the SAC
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). Forb richness is characteristic of conservation value swards
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). The lower and upper height limits are set to record overgrazing and undergrazing respectively
Vegetation structure: litter cover	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of litter less than or equal to 20%	Attribute and target based on Perrin et al. (2014). High levels of leaf litter can be indicative of undergrazing and rank swards, with a resulting impact on species richness
Physical structure: disturbed bare ground	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of disturbed bare ground less than or equal to 10%	Attribute and target based on Perrin et al. (2014). Disturbance can include hoof marks, wallows, human footprints and vehicle and machinery tracks. Excessive disturbance can result in loss of characteristic species
Physical structure: grazing or disturbance	Area 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). Serious overgrazing and disturbance can impact on species richness, nutrient status and soil stability
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 FPO listed and Vulnerable small-white orchid (<i>Pseudorchis albida</i>) (Wyse Jackson et al., 2016) occurs in the habitat in the SAC (NPWS, 2005; Dwyer et al., 2007)



Legend

 Silvermine Mountains SAC 000939



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**MAP 1:
SILVERMINE MOUNTAINS SAC
CONSERVATION OBJECTIVES
SAC DESIGNATION**

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

**SITE CODE:
SAC 000939; version 3. CO. TIPPERARY**

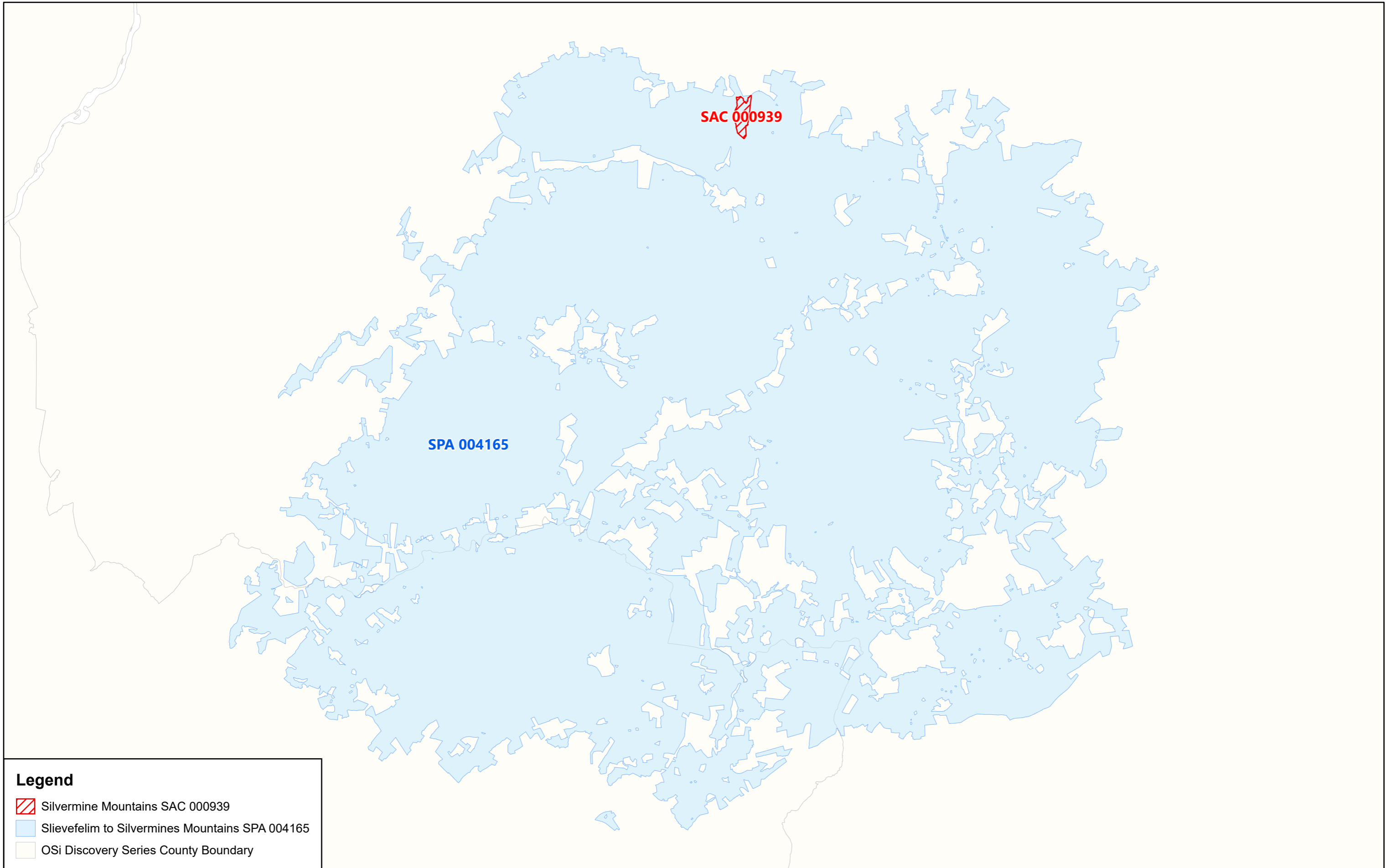
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Níl sna teorainneacha ar na léarscáileanna ach nod garshuíomhach ginearálta. Féadfar athbheithnihe a déanamh ar theorainneacha na gceantar comharthaíthe. Suirbhéarachta Ordonáis na hÉireann Ceadúnas Uimh EN 0059216. © Suirbhéarachta Ordonáis na hÉireann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




**Map Version 1
Date: June 2018**



Legend

- Silvermine Mountains SAC 000939
- Slievefelim to Silvermines Mountains SPA 004165
- OSi Discovery Series County Boundary

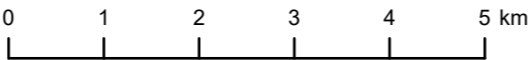


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**MAP 2:
SILVERMINE MOUNTAINS SAC
CONSERVATION OBJECTIVES
OVERLAPPING DESIGNATION**

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

**SITE CODE:
SAC 000939; version 3. SPA 004165; version3.
CO. TIPPERARY / CO. LIMERICK**



0 1 2 3 4 5 km

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**Map Version 1
Date: June 2018**