

# National Parks and Wildlife Service

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## *Conservation Objectives Series*

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Clare Glen SAC 000930



An Roinn  
Cultúir, Oidhreachta agus Gaeltachta

Department of  
Culture, Heritage and the Gaeltacht



**National Parks and Wildlife Service,  
Department of Culture, Heritage and the Gaeltacht,  
90 King Street North, Dublin 7, D07 N7CV, Ireland.**

**Web: [www.npws.ie](http://www.npws.ie)  
E-mail: [nature.conservation@chg.gov.ie](mailto:nature.conservation@chg.gov.ie)**

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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

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000930 Clare Glen SAC

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1421 Killarney Fern *Trichomanes speciosum*

91A0 Old sessile oak woods with *Q. petraea* and *Q. robur* in the British Isles

**Please note that this SAC is adjacent to Lower River Shannon SAC (002165) and Slieve Felim to Silvermines Mountains SPA (004165). See map 2. The conservation objectives for this site should be used in conjunction with those for the adjacent sites as appropriate.**

## Supporting documents, relevant reports & publications

Supporting documents, NPWS reports and publications are available for download from: [www.npws.ie/Publications](http://www.npws.ie/Publications)

### NPWS Documents

<b>Year :</b>	1971
<b>Title :</b>	A Report of Areas of Scientific Interest in County Limerick
<b>Author :</b>	Young, R.
<b>Series :</b>	Unpublished report
<hr/>	
<b>Year :</b>	2008
<b>Title :</b>	National survey of native woodlands 2003-2008
<b>Author :</b>	Perrin, P.M.; Martin, J.; Barron, S.; O'Neill, F.H.; McNutt, K.E.; Delaney, A.
<b>Series :</b>	Unpublished report to NPWS
<hr/>	
<b>Year :</b>	2010
<b>Title :</b>	A provisional inventory of ancient and long-established woodland in Ireland
<b>Author :</b>	Perrin, P.M.; Daly, O.H.
<b>Series :</b>	Irish Wildlife Manual No. 46
<hr/>	
<b>Year :</b>	2012
<b>Title :</b>	Ireland Red List No. 8: Bryophytes
<b>Author :</b>	Lockhart, N.; Hodgetts, N.; Holyoak, D.
<b>Series :</b>	Ireland Red List series, NPWS
<hr/>	
<b>Year :</b>	2013
<b>Title :</b>	The status of EU protected habitats and species in Ireland. Volume 3. Species assessments
<b>Author :</b>	NPWS
<b>Series :</b>	Conservation assessments
<hr/>	
<b>Year :</b>	2015
<b>Title :</b>	Monitoring methods for the Killarney fern ( <i>Trichomanes speciosum</i> Willd.) in Ireland
<b>Author :</b>	Ní Dhúill, E.; Smyth, N.; Waldren, S.; Lynn, D.
<b>Series :</b>	Irish Wildlife Manual No. 82
<hr/>	
<b>Year :</b>	undated
<b>Title :</b>	A Preliminary Report on Areas of Scientific Interest in County Tipperary (N.R.)
<b>Author :</b>	Fahy, E.
<b>Series :</b>	Unpublished Report

### Other References

<b>Year :</b>	2002
<b>Title :</b>	Reversing the habitat fragmentation of British woodlands
<b>Author :</b>	Peterken, G.
<b>Series :</b>	WWF-UK, London
<hr/>	
<b>Year :</b>	2012
<b>Title :</b>	Rare and threatened bryophytes of Ireland
<b>Author :</b>	Lockhart, N.; Hodgetts, N.; Holyoak, D.
<b>Series :</b>	National Museums Northern Ireland

## Spatial data sources

**Year :** Revision 2010

**Title :** National Survey of Native Woodlands 2003-2008. Version 1

**GIS Operations :** QI selected; clipped to SAC boundary. Expert opinion used as necessary to resolve any issues arising

**Used For :** 91A0 (map 3)

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## Conservation Objectives for : Clare Glen SAC [000930]

### 91A0 Old sessile oak woods with Ilex and Blechnum in the British Isles

To restore the favourable conservation condition of Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles in Clare Glen 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 woodland in Clare Glen SAC occurs along the Clare River valley and is of mixed composition with native broadleaves and non-native conifers and beech ( <i>Fagus sylvatica</i> ). As part of the National Survey of Native Woodlands (NSNW), the sub-site Clare Glen (NSNW site code 1286) was surveyed by Perrin et al. (2008). The minimum area of old oak woodland in the SAC is estimated to be 17.93ha. Map 3 shows the surveyed woodland classified as 91A0 (17.93ha) by Perrin et al. (2008) in the SAC
Habitat distribution	Occurrence	No decline, subject to natural processes. See map 3 for surveyed area	Distribution based on Perrin et al. (2008)
Woodland size	Hectares	Area stable or increasing. Where topographically possible, "large" woods at least 25ha in size and "small" woods at least 3ha in size	The target areas for individual woodlands aim to reduce habitat fragmentation and benefit those species requiring 'deep' woodland conditions (Peterken, 2002). In some cases, topographical constraints may restrict expansion
Woodland structure: cover and height	Percentage and metres	Diverse structure with a relatively closed canopy containing mature trees; subcanopy layer with semi-mature trees and shrubs; and well-developed herb layer	Described in Perrin et al. (2008) and NPWS internal files
Woodland structure: community diversity and extent	Hectares	Maintain diversity and extent of community types	Described in Perrin et al. (2008) and NPWS internal files
Woodland structure: natural regeneration	Seedling:sapling:pole ratio	Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy	Sessile oak ( <i>Quercus petraea</i> ) generally regenerates poorly. In suitable sites, ash ( <i>Fraxinus excelsior</i> ) can regenerate in large numbers although few seedlings reach pole size
Woodland structure: dead wood	m <sup>3</sup> per hectare; number per hectare	At least 30m <sup>3</sup> /ha of fallen timber greater than 10cm diameter; 30 snags/ha; both categories should include stems greater than 40cm diameter	Dead wood is a valuable resource and an integral part of a healthy, functioning woodland ecosystem
Woodland structure: veteran trees	Number per hectare	No decline	Mature and veteran trees are important habitats for bryophytes, lichens, saproxylic organisms and some bird species. Their retention is important to ensure continuity of habitats/niches and propagule sources

Woodland structure: indicators of local distinctiveness	Occurrence	No decline	Includes ancient or long-established woodlands (Perrin and Daly, 2010), archaeological and geological features as well as red-data and other rare or localised species. Clare Glen (NSNW site code 1286) has been classified as possible ancient woodland by Perrin and Daly (2010). The Near Threatened liverworts <i>Dumortiera hirsuta</i> and <i>Lejeunea eckloniana</i> (Lockhart et al., 2012) are associated with wet rocks in the river, shaded by the woodland in the SAC (NPWS internal files). The rare Myxomycete fungi <i>Fuligo muscorum</i> , <i>Stemonitopsis hyperopta</i> and <i>Licea testudinacea</i> are present in the woodland and the Annex II listed Killarney fern ( <i>Trichomanes speciosum</i> ) has also been recorded (NPWS internal files). See also the conservation objective for Killarney fern (1421) in this volume
Vegetation composition: native tree cover	Percentage	No decline. Native tree cover not less than 95%	Species reported in Perrin et al. (2008) and NPWS internal files
Vegetation composition: typical species	Occurrence	A variety of typical native species present, depending on woodland type, including sessile oak ( <i>Quercus petraea</i> ) and birch ( <i>Betula pubescens</i> )	Species reported in Perrin et al. (2008) and NPWS internal files. See also Young (1971) and Fahy (undated)
Vegetation composition: negative indicator species	Occurrence	Negative indicator species, particularly non-native invasive species, absent or under control	The following are the most common non-native invasive species in this woodland type: beech ( <i>Fagus sylvatica</i> ), sycamore ( <i>Acer pseudoplatanus</i> ) and rhododendron ( <i>Rhododendron ponticum</i> ). Parts of Clare Glen have been planted with conifers ( <i>Abies</i> , <i>Picea</i> and <i>Pinus</i> spp.). Beech, rhododendron and cherry laurel ( <i>Prunus laurocerasus</i> ) also occur in the woodland in the SAC (Perrin et al., 2008; NPWS internal files)



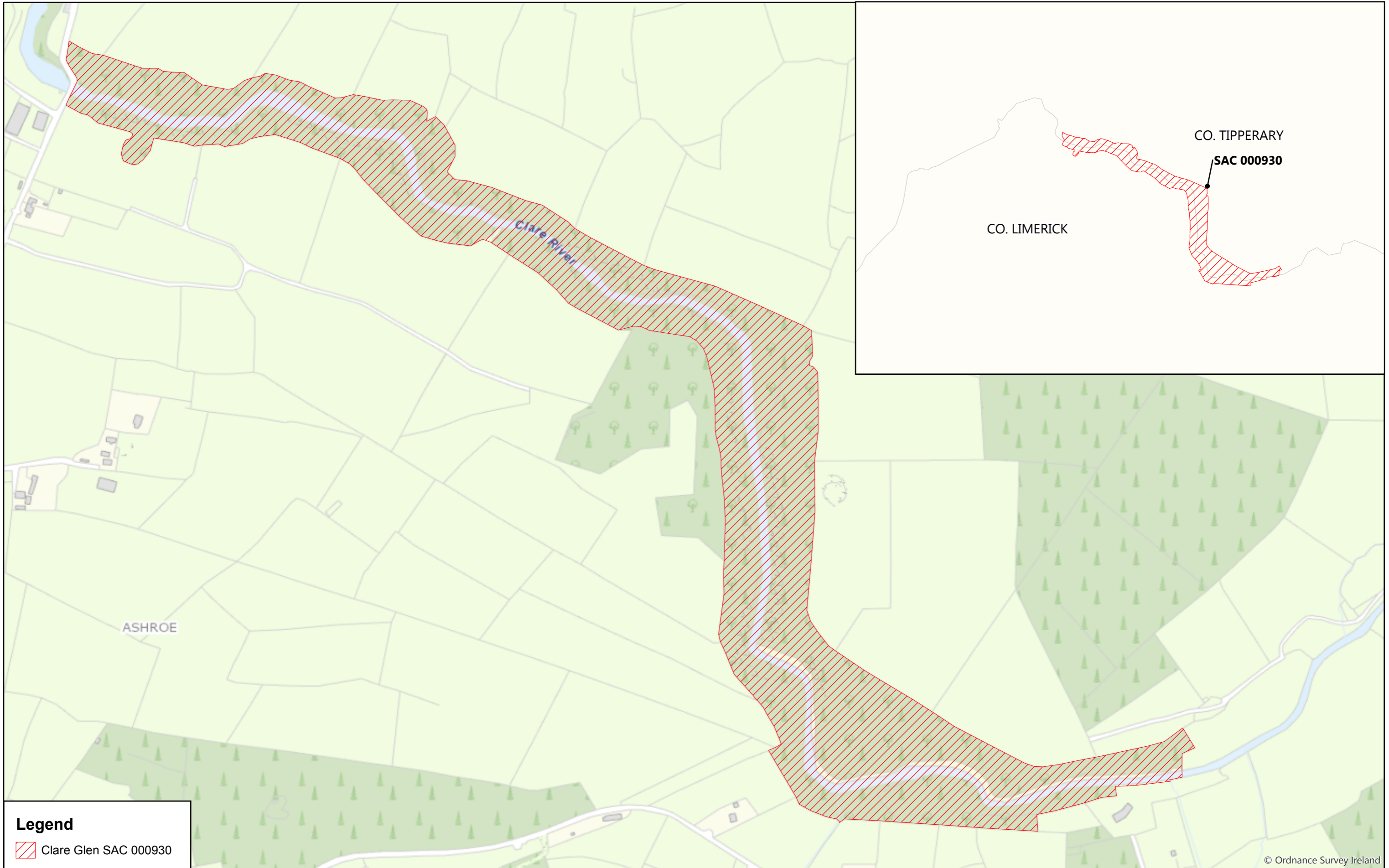
## Conservation Objectives for : Clare Glen SAC [000930]

### 1421 Killarney Fern *Trichomanes speciosum*


To maintain the favourable conservation condition of Killarney Fern in Clare Glen SAC, which is defined by the following list of attributes and targets:


Attribute	Measure	Target	Notes
Distribution	Occurrence	No loss in geographical spread of populations, subject to natural processes	The population of Killarney fern ( <i>Trichomanes speciosum</i> ) is currently known from several locations in Clare Glen SAC, all within hectad R75. Exact locations are not mapped here on account of the threat posed by illegal collecting. Based on Ní Dhúill et al. (2015), NPWS (2013) and NPWS internal files
Number of populations	Number	No decline, subject to natural processes	One population of the species has been recorded in the SAC since 1960. Based on Ní Dhúill et al. (2015), NPWS (2013) and NPWS internal files
Number of colonies	Number	No decline, subject to natural processes	Eleven colonies of the species have been recorded from the population in the SAC since 1960. Based on Ní Dhúill et al. (2015), NPWS (2013) and NPWS internal files
Population: life-cycle stage	Type (sporophyte or gametophyte)	Maintain life-cycle stage composition of populations, subject to natural processes	Three of the eleven colonies recorded since 1960 are composed of sporophytes (frond stage), all of which have co-existing gametophytes (filamentous stage), and eight are composed of gametophytes only. Based on Ní Dhúill et al. (2015), NPWS (2013) and NPWS internal files
Population size: area of occupancy	Square metres	No decline, subject to natural processes	Based on Ní Dhúill et al. (2015), NPWS (2013) and NPWS internal files
Population size: living sporophyte fronds	Number	No decline, subject to natural processes	Based on Ní Dhúill et al. (2015), NPWS (2013) and NPWS internal files
Population structure: young and unfurling fronds	Occurrence	Young (not fully expanded) and/or unfurling (crozier) fronds present in populations previously observed to have these, subject to natural processes	Young and/or unfurling fronds have been recorded from Clare Glen SAC. Based on Ní Dhúill et al. (2015), NPWS (2013) and NPWS internal files
Population structure: fertile fronds	Occurrence	Fertile fronds present in populations previously observed to have these, subject to natural processes	Fertile fronds have been recorded from the SAC. Based on Ní Dhúill et al. (2015), NPWS (2013) and NPWS internal files
Population structure: juvenile sporophyte fronds emerging from gametophytes	Number	No decline, subject to natural processes	Juvenile sporophyte fronds emerging from gametophytes have been recorded from the SAC. Based on Ní Dhúill et al. (2015), NPWS (2013) and NPWS internal files
Habitat extent	Hectares	No loss of suitable habitat, subject to natural processes	The species grows in deeply shaded, humid situations - dripping caves, overhangs and crevices on cliffs, rocky slopes, by waterfalls, in stream ravines and gullies, on rock or soil banks in woodlands and, occasionally, under fallen trees and on the floor of damp woodlands. Whilst also occurring in these habitats, the gametophyte stage can grow in drier areas that do not suit the sporophyte. Based on Ní Dhúill et al. (2015), NPWS (2013) and NPWS internal files
Hydrological conditions: wet/damp microhabitats	Occurrence	Maintain hydrological conditions at the locations of known populations - visible water source, with dripping or seeping water present and/or substrate wet/damp to touch, subject to natural processes	Based on Ní Dhúill et al. (2015), NPWS (2013) and NPWS internal files

Hydrological conditions: relative humidity	Percentage	Maintain relative humidity levels at known colonies at not less than 80%, subject to natural processes	Based on Ní Dhúill et al. (2015), NPWS (2013) and NPWS internal files
Hydrological conditions: desiccated fronds	Number	No increase, subject to natural processes	Presence of desiccated sporophyte fronds and gametophyte mats is indicative of unsuitable conditions. Based on Ní Dhúill et al. (2015), NPWS (2013) and NPWS internal files
Light levels: shading	Shade index score	At least 4 for woodland sporophyte-only and mixed colonies; at least 5 for open upland sporophyte-only and mixed colonies; at least 6 for gametophyte-only colonies, subject to natural processes	Shade Index: 4. Moderate shade, e.g. light-medium deciduous canopy with sun flecks. 5. Permanently shaded from direct sunlight but otherwise open to sky. 6. Deep woodland (e.g. coniferous or in ravine) shade, no sun flecks. 7. Perpetual deep shade, e.g. cave entrance, beneath boulder. The species occurs in moderate to deep shade in woodland in Clare Glen SAC. Based on Ní Dhúill et al. (2015), NPWS (2013) and NPWS internal files
Woodland canopy cover	Percentage	No loss of woodland canopy at, or in the vicinity of, the locations of known populations and canopy cover here maintained at more than 33%, subject to natural processes	Woodland management at or near to locations of known populations of the species must take account of its habitat requirements, particularly with regard to maintenance of sufficient canopy cover. The species occurs in woodland in Clare Glen SAC. Based on Ní Dhúill et al. (2015), NPWS (2013) and NPWS internal files
Invasive species	Occurrence	Maintain absence of invasive non-native and vigorous native plant species at the locations of known populations or, if present, maintain vegetation cover of these at less than 10%, taking into account the habitat requirements of <i>T. speciosum</i>	In order to avoid negative impacts on the Killarney fern ( <i>Trichomanes speciosum</i> ), its habitat requirements (site hydrology, relative humidity, canopy cover, shading levels, etc.) must be taken into account in locations that are subject to or proposed for management actions to control invasive non-native and/or vigorous native plant species. Based on Ní Dhúill et al. (2015), NPWS (2013) and NPWS internal files



**Legend**

 Clare Glen SAC 000930

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**MAP 1:  
CLARE GLEN SAC  
CONSERVATION OBJECTIVES  
SAC DESIGNATION**

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

**SITE CODE:  
SAC 000930; version 3.01.  
CO. TIPPERARY / CO. LIMERICK**

0 70 140 210 280 Meters

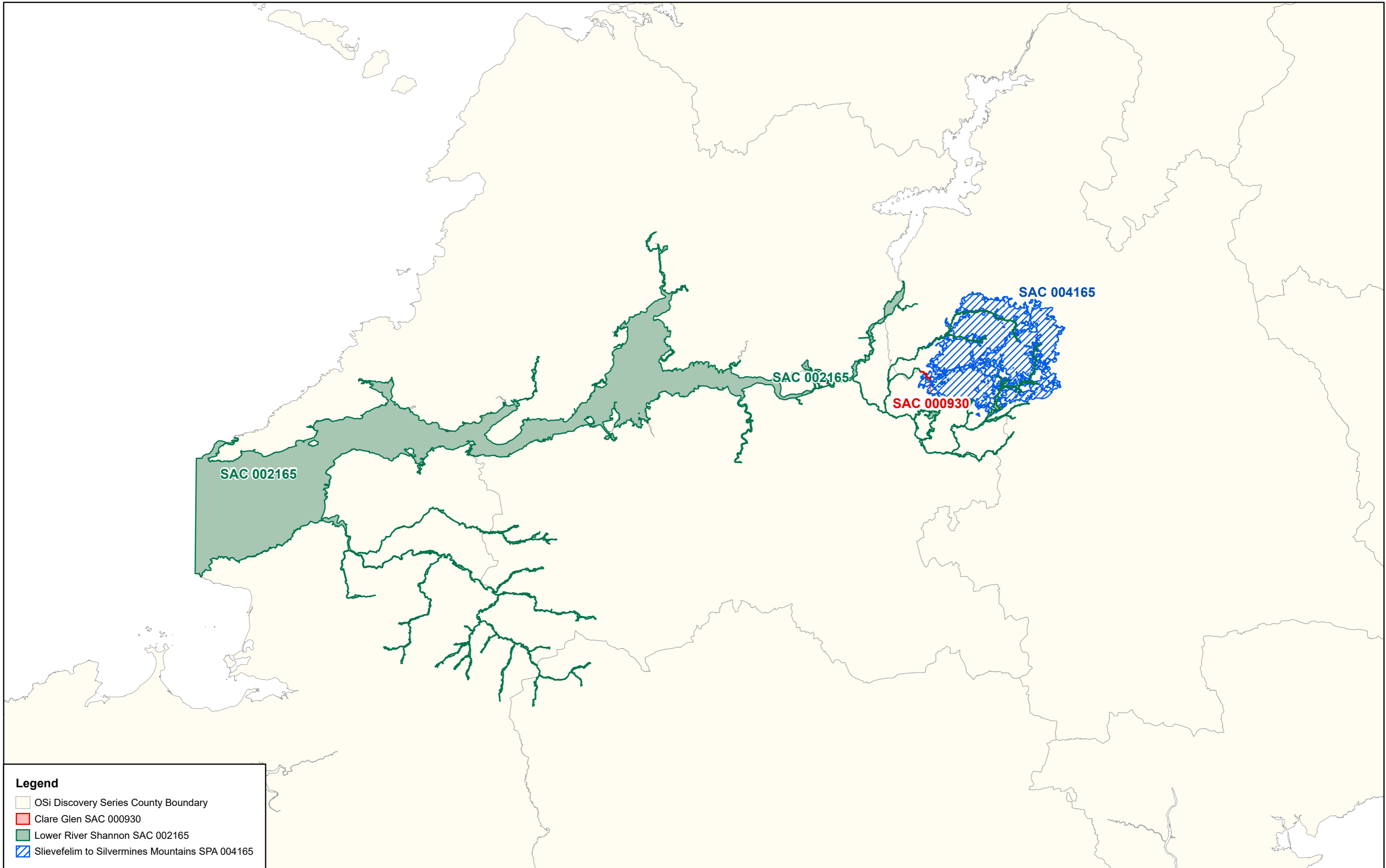
The mapped boundaries are of an indicative and general nature only. Boundaries of designated areas are subject to revision.  
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Níl sna teorainneacha ar na léarscáileanna ach nod garshuíomhach ginearálta. Féadfar athbhreithnithe a déanamh ar theorainneacha na gceantar comharthaíthe. Suirbhéarachta Ordonáis na hÉireann Ceadúnas Uimh EN 0059216. © Suirbhéarachta Ordonáis na hÉireann Rialtas na hÉireann

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**Map Version 1  
Date: Nov 2017**

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**Legend**

- OSi Discovery Series County Boundary
- Clare Glen SAC 000930
- Lower River Shannon SAC 002165
- Slievefelim to Silvermines Mountains SPA 004165

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**MAP 2:  
CLARE GLEN SAC  
CONSERVATION OBJECTIVES ADJACENT  
ADJOINING AND OVERLAPPING DESIGNATIONS**

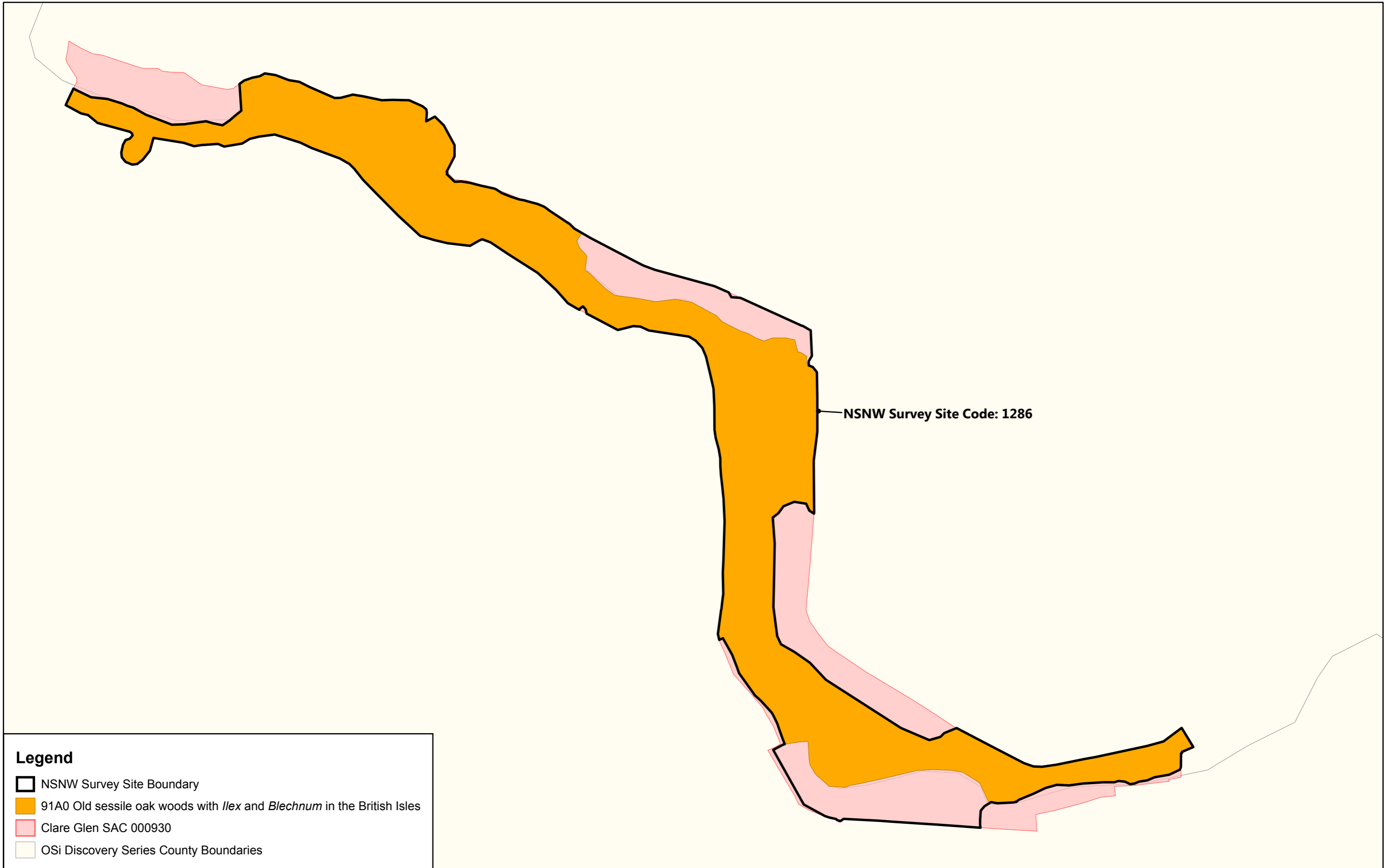
Map to be read in conjunction with the NPWS Conservation Objectives Document.

**SITE CODE: SAC 000930; version 3.01.  
SAC 002165; version 3.02. SPA 004165; version 3.  
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**Map Version 1  
Date: Nov 2017**



**Legend**

-  NSNW Survey Site Boundary
-  91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles
-  Clare Glen SAC 000930
-  OSi Discovery Series County Boundaries




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**MAP 3:  
CLARE GLEN SAC  
CONSERVATION OBJECTIVES  
WOODLAND HABITATS**

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

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0    60    120    180    240 Meters

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**Map Version 1  
Date: Nov 2017**