

National Parks and Wildlife Service

Conservation Objectives Series

Slieve Aughty Mountains SPA 004168



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*

004168 Slieve Aughty Mountains SPA

A082 Hen Harrier *Circus cyaneus*

A098 Merlin *Falco columbarius*

Please note that this SPA overlaps with Cloonmoylan Bog SAC (000248), Derrycrag Wood Nature Reserve SAC (000261), Loughatorick South Bog SAC (000308), Pollnacknockaun Wood Nature Reserve SAC (000319), Rosturra Wood SAC (001313), Glendree Bog SAC (001912), Sonnagh Bog SAC (001913), Pollagoona Bog SAC (002126), Gortacarnaun Wood SAC (002180), Drummin Wood SAC (002181) and Old Domestic Buildings, Rylane SAC (002314). See map 2. The conservation objectives for this site should be used in conjunction with those for the overlapping sites 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 :	2015
Title :	Hen harrier special protection area (SPA) habitat mapping project 2014
Author :	Moran, P.; Wilson-Parr, R.
Series :	Irish Wildlife Manual No. 83
Year :	2015
Title :	Hen harrier conservation and the forestry sector in Ireland - forestry - V3.2
Author :	NPWS
Series :	Unpublished Report
Year :	2016
Title :	The 2015 national survey of breeding hen harrier in Ireland
Author :	Ruddock, M.; Mee, A.; Lusby, J.; Nagle, A.; O'Neill, S.; O'Toole, L.
Series :	Irish Wildlife Manual No. 93
Year :	2022
Title :	Conservation objectives supporting document: breeding hen harrier
Author :	NPWS
Series :	Conservation objectives supporting document
Year :	2022
Title :	Survey of breeding merlin in the special protection area network 2018
Author :	Lusby, J., O'Brien, I., Lauder, A., Wilson-Parr, R., Breen, D., Cummins, S.; Tierney, D.
Series :	Irish Wildlife Manual No. 139

Other References

Year :	2002
Title :	A national survey of breeding hen harriers (<i>Circus cyaneus</i>) in Ireland 1998-2000
Author :	Norriss, D.W.; Marsh, J.; McMahon, D.; Oliver, G.A.
Series :	Irish Birds, 7, 1-10
Year :	2005
Title :	Merlins of the Wicklow mountains
Author :	McElheron, A.
Series :	Currach Press, Dublin
Year :	2006
Title :	The second national survey of breeding hen harriers <i>Circus cyaneus</i> in Ireland
Author :	Barton, C.; Pollock, C.; Norriss, D.W.; Nagle, T.; Oliver, G.A.; Newton, S.
Series :	Irish Birds, 8, 1-20
Year :	2006
Title :	The distribution of hen harriers in Ireland in relation to land use cover, particularly forest cover
Author :	Wilson, M.; Gittings, T.; O'Halloran, J.; Kelly, T.; Pithon, J.
Series :	Environment No. 6. COFORD, Dublin
Year :	2010
Title :	Breeding biology of merlins <i>Falco columbarius</i> in Ireland, 1986-1992
Author :	Norriss, D.W.; Hara, B.; Hennigan, J.; McElheron, A.; McLaughlin, D.J.; Swan, V.; Walsh, A.
Series :	Irish Birds, 9:23-30

- Year :** 2011
Title : Assessing the effectiveness of monitoring methods for merlin *Falco columbarius* in Ireland: the pilot merlin survey 2010
Author : Lusby, J.; Fernández-Bellon, D.; Norriss, D.; Lauder, A.
Series : Irish Birds 9, 143 – 154
-
- Year :** 2012
Title : Optimum scenarios for hen harrier conservation in Ireland; final report 2012
Author : Irwin, S.; Wilson, W.; O'Donoghue, B.; O'Mahony, B.; Kelly, T.; O'Halloran, J.
Series : Prepared for the Department of Agriculture, Food and the Marine by the School of Biological, Earth and Environmental Sciences, University College Cork
-
- Year :** 2014
Title : Ranging behaviour of hen harriers breeding in special protection areas in Scotland
Author : Arroyo, B.; Leckie, F.; Amar, A.; Cluskie, A; Redpath, S.
Series : Bird Study, 61:1, 48-55
-
- Year :** 2017
Title : Breeding ecology and habitat selection of merlin *Falco columbarius* in forested landscapes
Author : Lusby, J.; Corkery, I.; McGuinness, S.; Fernández-Bellon, D.; Toal, L.; Norriss, D.; Breen, D.; O'Donail, A.; Clarke, D.; Irwin, S.; Quinn, J.L.; O'Halloran, J.
Series : Bird Study 64, 445-454
-

A082 Hen Harrier *Circus cyaneus*

To restore the favourable conservation condition of hen harrier in Slieve Aughty Mountains SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population size	Number of confirmed breeding pairs	Restore numbers to at least 14-24 confirmed breeding pairs	The attribute 'confirmed breeding pairs' is based on standard survey methods (see Ruddock et al., 2016). The target for this SPA is informed by the first two national surveys of 1998–2001 (Norriss et al., 2002) and 2005 (Barton et al., 2006). For further information on this and all other attributes, please refer to the conservation objectives supporting document for breeding hen harrier (NPWS, 2022) for further details
Productivity rate	Number of fledged young per confirmed pair	Restore to at least 1.0–1.4 fledged young per confirmed pair	At the SPA level, the productivity rate can be highly variable in any given year. Generally, the setting of a minimum level of productivity to ensure a stable and/or increasing population at a given site ought to be informed by robust estimates of: post-fledging survival; adult survival; and immigration and emigration rates. Setting a single precise and robust rate is constrained by a lack of comprehensive Irish data. In order to frame this uncertainty, a threshold of 1.0–1.4 fledged young per confirmed breeding pair is set for this attribute. If population size of the SPA is not favourable, then the upper end of this productivity rate range is to be met. In order for estimates to be sufficiently representative of the SPA, they need to be of sufficient sample size and ideally over multiple years in order to account for inter-annual variability
Spatial utilisation by breeding pairs	Percentage	Restore the spatial utilisation of the SPA by breeding pairs to at least 68–92%	Optimal resilience depends on breeding pairs utilising the SPA to the maximum extent possible. The spatial distribution of breeding pairs is expressed by the proportion of the SPA being used by them. Breeding pairs predominantly use the area within 5km of their nest site or centre of territory, though they can travel further (e.g. Irwin et al., 2012; Arroyo et al., 2014). Thus, the core area used by confirmed pairs can be broadly and generically estimated by calculating the portion that lies within 5km of all recorded nest sites. Ideally, the breeding population should be well dispersed around the SPA. The target range for this attribute for this SPA is informed by the first two national surveys of 1998–2001 and 2005
Extent and condition of heath and bog and associated habitats	Hectares; condition assessment	Restore the extent and quality of this resource to support the targets relating to population size, productivity rate and spatial utilisation	Open heath and bog occur in mosaics and often with other semi-natural habitats (e.g. scrub). These habitats can provide important nesting and foraging resources for the breeding population providing they are in suitable condition. Based on the habitat mapping of Moran and Wilson-Parr (2015), the estimated total extent of these habitats in this SPA is 13,748ha. Qualitative aspects were not assessed by Moran and Wilson-Parr (2015), but some important aspects to consider are the habitats' structure, soil integrity and overall open habitat coherence
Extent and condition of low intensity managed grasslands and associated habitats	Hectares; condition assessment	Restore the extent and quality of this resource to support the targets relating to population size, productivity rate and spatial utilisation	Low intensity managed grasslands occur in mosaics and often with other semi-natural habitats (e.g. scrub). These habitats can provide important foraging resources for the breeding population providing they are in suitable condition. Based on the habitat mapping of Moran and Wilson-Parr (2015), the estimated total extent of these habitats in this SPA is 5,865ha. Qualitative aspects were not assessed by Moran and Wilson-Parr (2015), but some important aspects to consider are the habitats' structure and overall open habitat coherence

Extent and condition of hedgerows	Kilometres; condition assessment	Maintain at least the length and quality of this resource to support the targets relating to population size, productivity rate and spatial utilisation	Hedgerows can be an important foraging resource for hen harrier throughout the year by providing food and refuge for prey animals i.e. small mammals and birds. Moran and Wilson-Parr (2015) quantified the hedgerow resource in this SPA with an estimated total linear extent of 1,902.5km, with two structural hedgerow types namely 'intact and dense' and 'boxed and moderate' accounting for 685.5km of that total. These combined types account for 36% of the total hedgerow resource of the SPA
Age structure of forest estate	Percentage	Achieve an even and consistent distribution of age-classes across the forest estate	This attribute aims to define optimal forest age-class composition required to reduce the forest demographic bottleneck, as set out in NPWS (2015) and Wilson et al. (2006)
Disturbance to breeding sites	Level of impact	Disturbance occurs at levels that does not significantly impact upon breeding hen harrier	The impact of any significant disturbance on the SPA's breeding population will ultimately be manifested in the targets which relate to population demographics (i.e. population size, productivity rate) and the spatial utilisation of the SPA by breeding pairs. Factors such as intensity, frequency, timing and duration of a potentially disturbing activity need to be taken into account to determine its significance on breeding hen harrier in the SPA

Conservation Objectives for : Slieve Aughty Mountains SPA [004168]

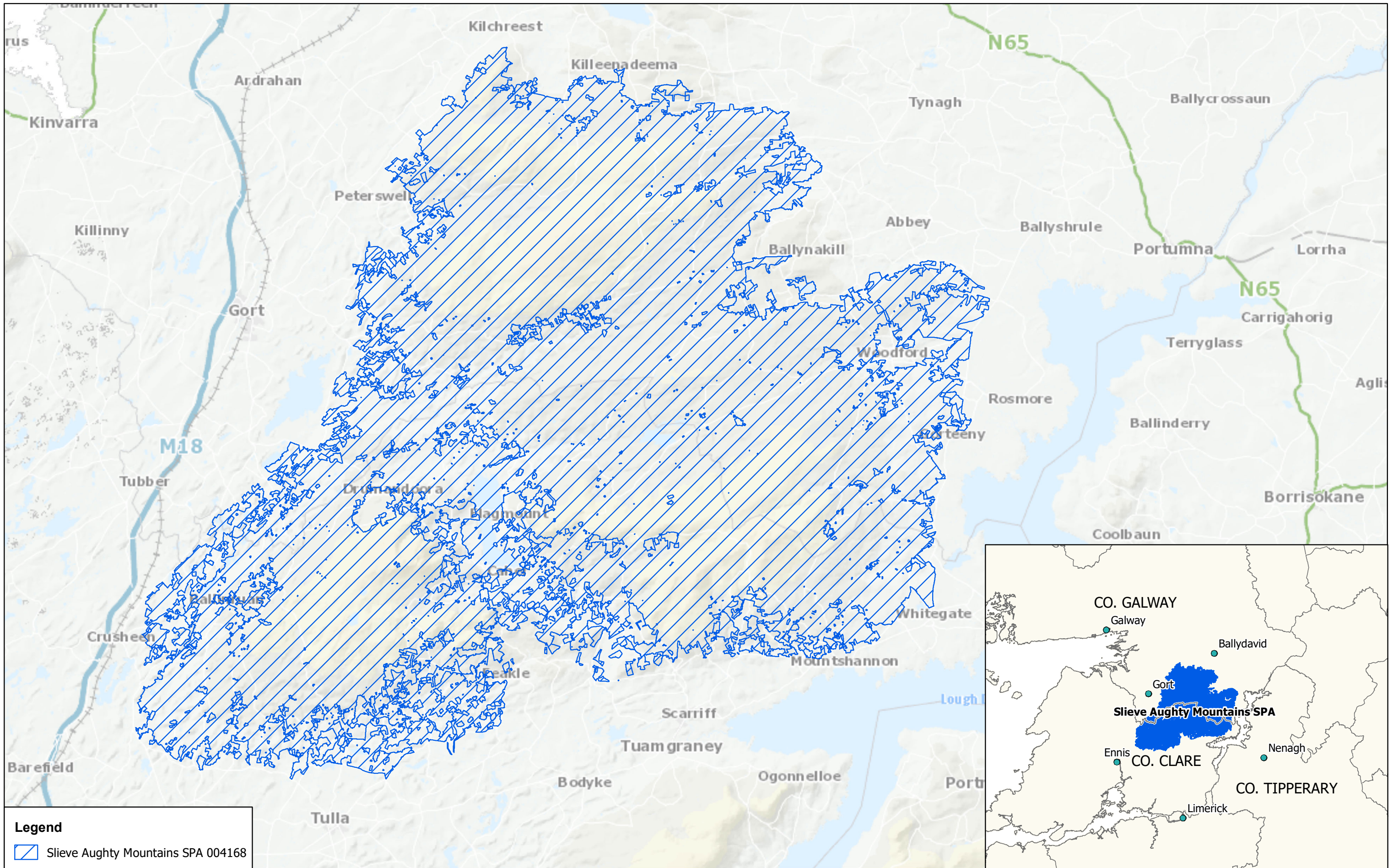
A098

Merlin *Falco columbarius*


To maintain the favourable conservation condition of merlin in the Slieve Aughty Mountains SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population size	Number of occupied territories	The breeding population is stable or increasing	Early season visits improve detectability of merlin, a challenging species to survey (Norriss et al., 2010; Lusby et al., 2011, 2017). There is a lack of substantive breeding records for this SPA that precludes setting a definitive target. As per Lusby et al. (2017), occupied territories are defined according to highest levels of breeding evidence i.e. all confirmed breeding pairs and any occupied territories during the survey breeding season (1 Apr - 15 Jul) and sites with recent signs of occupation e.g. plucking posts with fresh kills on repeat visits. A 2018 survey (Lusby et al., 2022) indicates a minimum number of occupied territories, 'at least three' based on circa 21% coverage of the SPA. An added complexity is that not all territories are occupied each year (Norriss et al., 2010). Thus, the overall carrying capacity of the SPA is unknown. Historical records are scant, though a figure of 'at least five breeding pairs' was set out previously (NPWS internal files)
Productivity rate	Number of fledged young per breeding attempt with known outcome	Sufficient to at least maintain population	A number of Irish studies have provided some estimates of productivity and/or breeding success for merlin in Ireland (e.g. Norriss et al., 2010; Lusby et al., 2017; Lusby et al., 2022) but general information on life history such as natal dispersal, first year and adult survival are lacking in the Irish context. Furthermore, reproductive performance of pairs at this SPA is not known. In the absence of such data, it is not possible to identify a minimum breeding productivity rate for this SPA
Distribution: extent of available nesting options within the SPA	Numbers and spatial distribution	Sufficient availability of suitable nesting sites throughout the SPA to maintain the population	Formerly ground-nesting in heather, merlin is now largely tree-nesting, often utilising old crows' nests (McElheron 2005; Norriss et al., 2010; Lusby et al., 2017). The principal tree species present at this SPA are Sitka spruce (<i>Picea sitchensis</i>), lodgepole pine (<i>Pinus contorta</i>), and broadleaf species, which can be used for nesting. Other options (including copses and shelter belts) can be used as nest sites; their increased availability would lessen the current dependence of merlin on plantation trees. A sufficiency of available nest sites (including mature trees) proximate to suitable open foraging habitats across the SPA is required to support the breeding population. In a study elsewhere, Norriss et al. (2010) found 72% of nests (N=61) were within 60m of forest plantation edge and nests were randomly spaced across study areas

Extent and condition of suitable open habitats for foraging	Hectares; condition assessment	Sufficient availability of suitable foraging habitat across the SPA to support the targets relating to population size, productivity rate and range	The SPA consists of a variety of upland habitats with 52% afforested (Moran and Wilson-Parr, 2015). The relationship between merlin and commercial forests is complex. Lusby et al. (2017) showed the proportion of 'open suitable habitat' i.e. moors and heathland, peat bogs and semi-natural grasslands (using CORINE LandCover) within 5 km of nest sites was positively related to breeding success. In areas where forest cover is more extensive than that observed within breeding territories (i.e. over 35% forest cover within 5 km of nest sites), their suitability for foraging merlin pairs is likely reduced. The lack of nest records for this SPA precludes such analyses. Habitat mapping by Moran and Wilson-Parr (2015) estimated the total extent of 'open suitable habitats' in this SPA at circa 19,613ha. Some important aspects to consider with respect to any assessment of the condition of open habitats for merlin are structure, soil integrity, overall connectivity and coherence
Disturbance to breeding sites	Level of impact	Disturbance occurs at levels that does not significantly impact upon breeding merlin	The impact of any significant disturbance on the SPA's breeding population will ultimately be manifested in the targets that relate to population demographics (i.e. population density, productivity rate) and the extent of suitable habitat occupied by breeding pairs. Factors such as location (e.g. proximity to nest site), intensity, frequency, timing and duration of a potentially disturbing activity need to be taken into account to determine its significance on breeding merlin. Merlin frequently select the tallest trees in which to nest, thereby potentially increasing nest vulnerability to felling operations (Norriss et al., 2010) for pairs nesting in commercial forests. Lusby et al. (2017) did not record any nests in forests younger than 10 years old. Known aged forests utilised for nesting ranged from 11 to 20 years (n = 5), to forests more than 50 years (n = 2), with the majority of nests (n=27) located in forests aged between 31 and 40 years (i.e. 56 %)



Legend

 Slieve Aughty Mountains SPA 004168




An Roinn Tithíochta,
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Department of Housing,
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**MAP 1:
SLIEVE AUGHTY MOUNTAINS SPA
CONSERVATION OBJECTIVES
SPA DESIGNATION**

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


**SITE CODE:
SPA 004168; version 3
CO. CLARE/GALWAY**

0 1.5 3 6 Kilometres

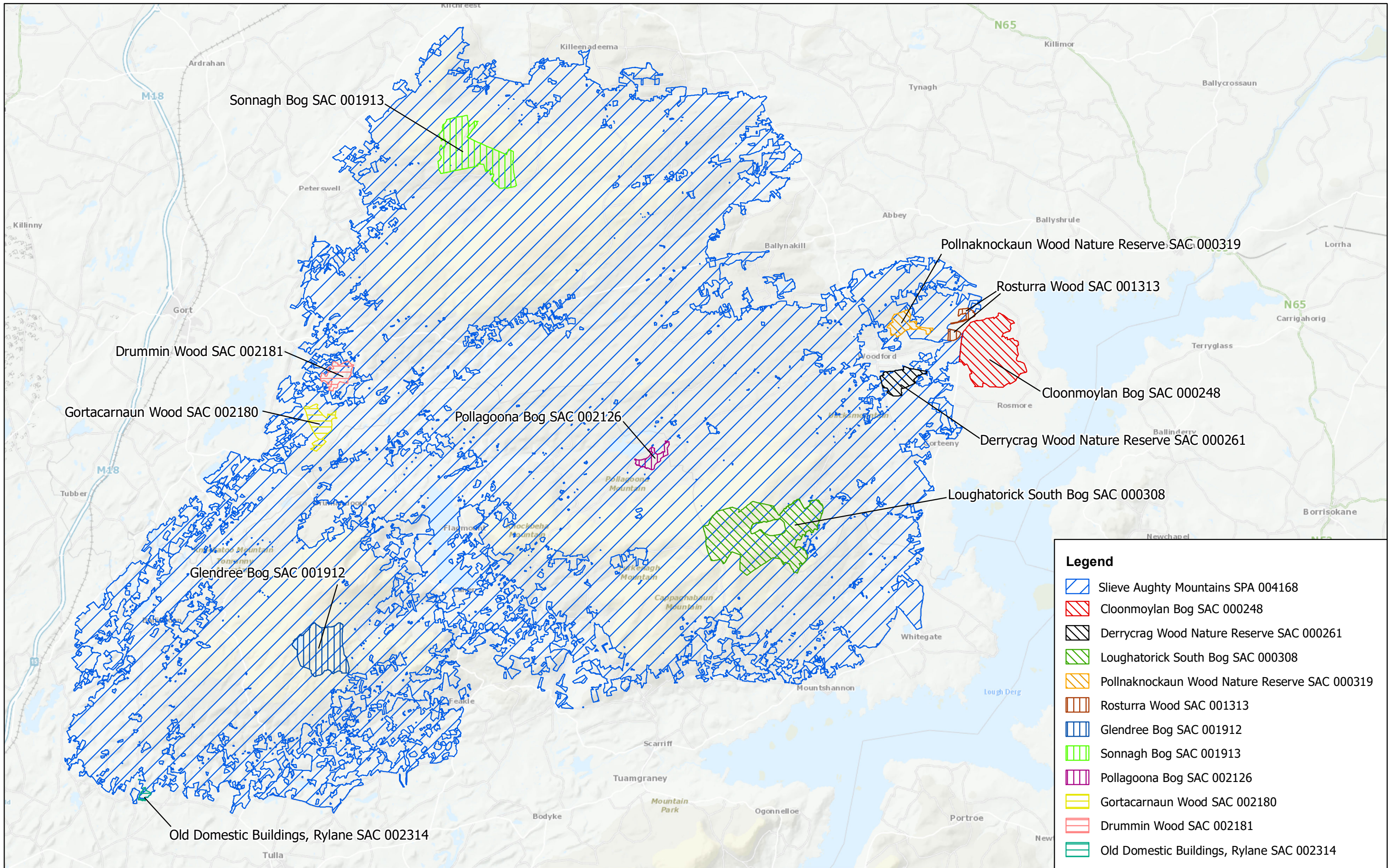


The mapped boundaries are of an indicative and general nature only. Boundaries of designated areas are subject to revision.
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Níl sna teorainneacha ar na léarscáileanna ach nod garshuíomhach ginearálta. Féadfar athbheithnithe a déanamh ar theorainneacha na gceantar comharthaith. Suirbhéarachta Ordoanáis na hÉireann Ceadúnas Uimh OSI-NMA-014. © Suirbhéarachta Ordoanáis na hÉireann Rialtas na hÉireann



Date: July 2022



Legend

-  Slieve Aughty Mountains SPA 004168
-  Cloonmoylan Bog SAC 000248
-  Derrycrag Wood Nature Reserve SAC 000261
-  Loughatorick South Bog SAC 000308
-  Pollnaknockaun Wood Nature Reserve SAC 000319
-  Rosturra Wood SAC 001313
-  Glendree Bog SAC 001912
-  Sonnagh Bog SAC 001913
-  Pollagoona Bog SAC 002126
-  Gortacarnaun Wood SAC 002180
-  Drummin Wood SAC 002181
-  Old Domestic Buildings, Rylane SAC 002314