

National Parks and Wildlife Service

Conservation Objectives Series

Barrigone SAC 000432



An Roinn Cultúir,
Oidhreacht 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
E-mail: nature.conservation@chg.gov.ie**

Citation:

**NPWS (2019) Conservation Objectives: Barrigone SAC 000432. 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

000432 Barrigone SAC

1065 Marsh Fritillary *Euphydryas aurinia*

5130 *Ranunculus acris* formations on heaths or calcareous grasslands

6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates
(Festuco-Brometalia) (* important orchid sites)

8240 Limestone pavementsE

Supporting documents, relevant reports & publications

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

NPWS Documents

| | |
|-----------------|--|
| Year : | 1971 |
| Title : | A Report of Areas of Scientific Interest in County Limerick |
| Author : | Young, R. |
| Series : | Unpublished report |
| Year : | 2005 |
| Title : | Conservation Plan for 2005-2010. Barrigone cSAC Site Code 000432 Co. Limerick |
| 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 : | 2009 |
| Title : | Ireland Red List No. 2: Non-marine molluscs |
| Author : | Byrne, A.; Moorkens, E.A.; Anderson, R.; Killeen, I.J.; Regan, E.C. |
| Series : | Ireland Red List series, NPWS |
| Year : | 2010 |
| Title : | Ireland Red List No. 4: Butterflies |
| Author : | Regan, E.C.; Nelson, B.; Aldwell, B.; Bertrand, C.; Bond, K.; Harding, J.; Nash, D.; Nixon, D.; Wilson, C.J. |
| Series : | Ireland Red List series, NPWS |
| Year : | 2012 |
| Title : | The conservation status of juniper formations in Ireland |
| Author : | Cooper, F.; Stone, R.E.; McEvoy, P.; Wilkins, T.; Reid, N. |
| Series : | Irish Wildlife Manuals, No. 63 |
| 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 : | Irish semi-natural grasslands survey 2007-2012 |
| Author : | O'Neill, F.H.; Martin, J.R.; Devaney, F.M.; Perrin, P.M. |
| Series : | Irish Wildlife Manuals, No. 78 |
| Year : | 2013 |
| Title : | National survey of limestone pavement and associated habitats in Ireland |
| Author : | Wilson, S.; Fernandez, F. |
| Series : | Irish Wildlife Manuals, No. 73 |
| Year : | 2013 |
| Title : | Survey of Marsh Fritillary Colonies – South and East Ireland 2012 |
| Author : | Wilson, F.; Bond, K.; Crushell, P.; Foss, P.J.; Osthoff, C. |
| Series : | Unpublished report to NPWS |

Year : 2016
Title : Ireland Red List No. 10: Vascular Plants
Author : Wyse Jackson, M.; FitzPatrick, Ú.; Cole, E.; Jebb, M.; McFerran, D.; Sheehy Skeffington, M.; Wright, M.
Series : Ireland Red List Series, NPWS

Year : 2018
Title : The Irish Juniper Monitoring Survey 2017
Author : O'Neill, F.H.; Martin, J.R.
Series : Irish Wildlife Manuals, No. 101

Year : 2018
Title : The Irish Juniper Monitoring Survey 2017 - Appendices
Author : O'Neill, F.H.; Martin, J.R.
Series : Irish Wildlife Manuals, No. 101

Year : 2018
Title : The monitoring and assessment of three EU Habitats Directive Annex I grassland habitats
Author : Martin, J.R.; O'Neill, F.H.; Daly, O.H.
Series : Irish Wildlife Manuals, No. 102

Other References

Year : 1993
Title : A review of the distribution, ecology and status of the Marsh Fritillary *Euphydryas aurinia* Rottemburg, 1775 (Lepidoptera: Nymphalidae) in Ireland
Author : Lavery, T.A.
Series : Irish Naturalists' Journal, 24(5): 192-199

Spatial data sources

| | |
|-------------------------|---|
| Year : | 2012 |
| Title : | The conservation status of juniper formations in Ireland |
| GIS Operations : | Juniper survey location centroid clipped to SAC boundary |
| Used For : | 5130 (map 2) |
| <hr/> | |
| Year : | 2018 |
| Title : | Grasslands Monitoring Survey 2015-2017 |
| GIS Operations : | Dataset clipped to SAC boundary. Expert opinion used as necessary to resolve any issues arising |
| Used For : | 6210 (map 3) |
| <hr/> | |

5130 Juniperus communis formations on heaths or calcareous grasslands

To restore the favourable conservation condition of *Juniperus communis* formations on heaths or calcareous grasslands in Barrigone 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 | <i>Juniperus communis</i> formations on heaths or calcareous grasslands is particularly well-developed in the north of Barrigone SAC and occurs in association with the Annex I habitat Limestone pavements (habitat code 8240*) and calcareous grassland. Cooper et al. (2012) surveyed and mapped the habitat at one sub-site (Barrigone, site code LK01) associated with Barrigone SAC (see map 2). It is important to note that further unsurveyed areas may be present within the SAC |
| Habitat distribution | Occurrence | No decline, subject to natural processes. Point location of surveyed formation shown on map 2 | Distribution based on Cooper et al. (2012). Map 2 shows the point location of the surveyed juniper (<i>Juniperus communis</i>) formation in the Barrigone sub-site. Note that further unsurveyed areas may be present within the SAC |
| Juniper formation size | Number and proximity of juniper plants | At least 50 juniper plants present with each plant separated by no more than 20m | Attribute and target based on O'Neill and Martin (2018). A juniper formation is defined by O'Neill and Martin (2018) as any cluster of ≥50 juniper plants where no plant is more than 20m from another. In practice, this means that juniper plants should achieve a minimum density of 25 plants per hectare to qualify as a formation |
| Vegetation structure: female fruiting plants | Percentage in a representative number of 5m x 5m monitoring stops or in an <i>ad hoc</i> count of 50 plants | Fruiting females comprise at least 10% of juniper plants rooted in plot in at least 50% of stops or in an <i>ad hoc</i> count of 50 plants | Attribute and target based on Cooper et al. (2012) and O'Neill and Martin (2018) |
| Vegetation structure: seedling recruitment | Presence in a representative number of 5m x 5m monitoring stops | At least one seedling recorded in at least one monitoring stop | Attribute and target based on O'Neill and Martin (2018). Juniper seedlings are defined as plants less than 15cm high that are still flexible and single-stemmed, or with only two branches at most. No seedlings were recorded by Cooper et al. (2012) in the Barrigone sub-site (LK01) |
| Vegetation structure: live juniper | Percentage in a representative number of 5m x 5m monitoring stops or across the site as a whole | At least 90% of juniper plants rooted in plot alive in at least 75% of stops or across the site as a whole | Attribute and target based on Cooper et al. (2012) and O'Neill and Martin (2018) |
| Vegetation composition: negative indicator species | Percentage in a representative number of 5m x 5m monitoring stops | Total cover of negative indicator species to be less than 10% in at least 50% of stops | Attribute and target based on O'Neill and Martin (2018) where the list of negative indicator species is also presented |
| Physical structure: germination niches | Percentage in a representative number of 5m x 5m monitoring stops | At least 5% bare soil and/or at least 5% bare rock in at least 50% of stops | Attribute and target based on O'Neill and Martin (2018). Bare soil is important as a germination micro-site and bare rock can also contribute, particularly at the soil-rock interface and in limestone pavement grikes |
| Formation structure: browning/die-back of plants | Percentage of juniper cover in a representative number of 5m x 5m monitoring stops | Browning or dead juniper branches (excluding fully dead plants) comprise no more than 20% of total juniper cover in plot in at least 75% of stops | Attribute and target based on O'Neill and Martin (2018) |
| Formation structure: evidence of browsing and bark stripping | Occurrence across a representative number of 5m x 5m monitoring stops | Recent browsing of juniper plants and bark stripping and trampling due to browsers evident in no more than 50% of stops | Attribute and target based on O'Neill and Martin (2018). This attribute concerns bark stripping by animals. Bark stripping or damage from abrasion by rock is not included here. It should be noted, however, that distinguishing between the two may be difficult |

| | | | |
|-------------------------------------|--------------------------------|--|---|
| Indicators of local distinctiveness | Occurrence and population size | No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat | This includes species on the Flora (Protection) Order, 2015 and/or Red Lists (Byrne et al., 2009; Regan et al., 2010; Lockhart et al., 2012; Wyse Jackson et al., 2016, etc.) |
|-------------------------------------|--------------------------------|--|---|

Conservation Objectives for : Barrigone SAC [000432]

6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)

To restore the favourable conservation condition of Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) in Barrigone 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; at least 5.85ha for the sub-site (Barrigone - site code 2701) mapped | As part of the Irish Semi-natural Grassland Survey (ISGS; O'Neill et al., 2013), Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) was surveyed and mapped within the sub-site Barrigone (site code 2701). The sub-site was monitored in 2017 as part of the Grasslands Monitoring Survey (GMS; Martin et al., 2018). The area of the habitat in the sub-site was mapped as 5.85ha. Map 2 shows the surveyed grassland area classified as 6210 (5.85ha) by Martin et al. (2018). The habitat in the SAC had also been surveyed by the Grassland Monitoring Project (GMP) in 2006 (Dwyer et al., 2007) |
| Habitat distribution | Occurrence | No decline, subject to natural processes. See map 3 which shows the sub-site 2701 | Distribution based on Martin et al. (2018). It is important to note that further areas of the habitat may be present within the SAC |
| Vegetation composition: positive indicator species | Number at a representative number of 2m x 2m monitoring stops; within 20m surrounding area of monitoring stops | At least 7 positive indicator species present in monitoring stop or, if 5–6 present in stop, additional species within 20m of stop; this includes at least two 'high quality' positive indicator species present in stop or within 20m of stop | Attribute and target based on O'Neill et al. (2013) and Martin et al. (2018), where the lists of positive indicator species, including high quality positive indicator species, are also presented. These documents should be consulted for further details. High quality indicators recorded in the habitat include salad burnet (<i>Sanguisorba minor</i>), kidney vetch (<i>Anthyllis vulneraria</i>), cowslip (<i>Primula veris</i>) and quaking-grass (<i>Briza media</i>) (Martin et al., 2018), with orchids recorded including fragrant orchid (<i>Gymnadenia conopsea</i>), early-purple orchid (<i>Orchis mascula</i>) and the Near Threatened orchids frog orchid (<i>Coeloglossum viride</i>) and dense-flowered orchid (<i>Neotinea maculata</i>) (NPWS, 2005; O'Neill et al., 2013; Wyse Jackson et al., 2016; Martin et al., 2018). The Vulnerable and Flora (Protection) Order, 2015 listed species hairy violet (<i>Viola hirta</i>) also occurs (Young, 1971; O'Neill et al., 2013) |
| Vegetation composition: negative indicator species | Percentage cover at a representative number of 2m x 2m monitoring stops | Negative indicator species collectively not more than 20% cover, with cover by an individual species not more than 10% | Attribute and target based on O'Neill et al. (2013), where the list of negative indicator species is also presented |
| Vegetation composition: non-native species | Percentage cover at a representative number of 2m x 2m monitoring stops | Cover of non-native species not more than 1% | Attribute and target based on O'Neill et al. (2013) |

| | | | |
|---|---|--|--|
| Vegetation composition: woody species and bracken | Percentage cover at a representative number of 2m x 2m monitoring stops | Cover of woody species (except certain listed species) and bracken (<i>Pteridium aquilinum</i>) not more than 5% | Woody species that can occur above 5% cover are juniper (<i>Juniperus communis</i>), burnet rose (<i>Rosa spinosissima</i>), mountain avens (<i>Dryas octopetala</i>) and hoary rock-rose (<i>Helianthemum oelandicum</i>). However, cover of these species above 25% may indicate transition to another Annex I habitat such as Alpine and Boreal heaths (4060) or <i>Juniperus communis</i> formations (5130). Attribute and target based on O'Neill et al. (2013). Encroachment by scrub and bracken was reported as a negative impact on the habitat in the SAC by the ISGS (O'Neill et al., 2013); however, when the sub-site was monitored in 2017 there was no evidence to suggest that scrub and bracken in the sub-site had increased since 2012 and thus encroachment was not considered to be a threat in the sub-site (Martin et al., 2018). Scrub and bracken encroachment had also been noted in parts of the habitat by Dwyer et al. (2007) |
| Vegetation structure: broadleaf herb:grass ratio | Percentage at a representative number of 2m x 2m monitoring stops | Broadleaf herb component of vegetation between 40% and 90% | Attribute and target based on O'Neill et al. (2013). Broadleaf herb component of vegetation between 30% and 90% may be allowed to pass on expert judgement (Martin et al., 2018) |
| Vegetation structure: sward height | Percentage at a representative number of 2m x 2m monitoring stops | At least 30% of sward between 5cm and 40cm tall | Attribute and target based on O'Neill et al. (2013) |
| Vegetation structure: litter | Percentage cover at a representative number of 2m x 2m monitoring stops | Litter cover not more than 25% | Attribute and target based on O'Neill et al. (2013) |
| Physical structure: bare soil | Percentage cover at a representative number of 2m x 2m monitoring stops | Not more than 10% bare soil | Attribute and target based on O'Neill et al. (2013) |
| 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 O'Neill et al. (2013) |

Conservation Objectives for : Barrigone SAC [000432]

8240 Limestone pavements

To maintain the favourable conservation condition of Limestone pavements* in Barrigone 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 current total area of Limestone pavements* in Barrigone SAC is unknown. While there is no limestone pavement with the typical clint and grike formation in the SAC, there are limestone outcrops present (Wilson and Fernandez, 2013; NPWS internal files). The limestone outcrops are more extensive towards the north of the SAC and occur in association with <i>Juniperus communis</i> formations on heaths or calcareous grasslands (habitat code 5130) and Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) (6210) (NPWS, 2005). Conservation objectives for all these habitats should be used in conjunction with each other as appropriate |
| Habitat distribution | Occurrence | No decline | See the notes for Habitat area above. This habitat is split into exposed pavement and wooded pavement |
| Vegetation composition: positive indicator species | Number at a representative number of monitoring stops | At least seven positive indicator species present | Positive indicator species for exposed and wooded pavement are listed in Wilson and Fernandez (2013). Positive indicator species of exposed pavement recorded in the SAC include burnet rose (<i>Rosa spinosissima</i>), juniper (<i>Juniperus communis</i>) and sea plantain (<i>Plantago maritima</i>) (NPWS, 2005; NPWS internal files) |
| Vegetation composition: bryophyte layer | Percentage at a representative number of monitoring stops | Bryophyte cover at least 50% on wooded pavement | Attribute and target based on Wilson and Fernandez (2013) |
| Vegetation composition: negative indicator species | Percentage at a representative number of monitoring stops | Collective cover of negative indicator species on exposed pavement not more than 1% | Negative indicator species are listed in Wilson and Fernandez (2013). Negative indicator species for wooded pavement overlap with non-native species (below) |
| Vegetation composition: non-native species | Percentage at a representative number of monitoring stops | Cover of non-native species not more than 1% on exposed pavement; on wooded pavement not more than 10% with no regeneration | Attribute and target based on Wilson and Fernandez (2013) |
| Vegetation composition: scrub | Percentage at a representative number of monitoring stops | Scrub cover no more than 25% of exposed pavement | Attribute and target based on Wilson and Fernandez (2013) |
| Vegetation composition: bracken cover | Percentage at a representative number of monitoring stops | Bracken (<i>Pteridium aquilinum</i>) cover no more than 10% on exposed pavement | Attribute and target based on Wilson and Fernandez (2013) |
| Vegetation structure: woodland canopy | Percentage at a representative number of monitoring stops | Canopy cover on wooded pavement at least 30% | Attribute and target based on Wilson and Fernandez (2013) |
| Vegetation structure: dead wood | Occurrence in a representative number of monitoring stops | Sufficient quantity of dead wood on wooded pavement to provide habitat for saproxylic organisms | Dead wood is a valuable resource and an integral part of a healthy, functioning woodland ecosystem |
| Physical structure: disturbance | Occurrence in a representative number of monitoring stops | No evidence of grazing pressure on wooded pavement | Attribute and target based on Wilson and Fernandez (2013) |

Indicators of local Occurrence
distinctiveness

Indicators of local
distinctiveness are
maintained


This includes species on the Flora (Protection) Order, 2015 and/or Red Lists (Byrne et al., 2009; Regan et al., 2010; Lockhart et al., 2012; Wyse Jackson et al., 2016, etc.) and other rare or localised species, as well as archaeological and geological features, which often support distinctive species. The FPO listed and Near Threatened hairy violet (*Viola hirta*) (Wyse Jackson et al., 2016) has been recorded in this habitat in the SAC (NPWS, 2005). The SAC is also important for invertebrates and a number of rare and threatened species have been recorded

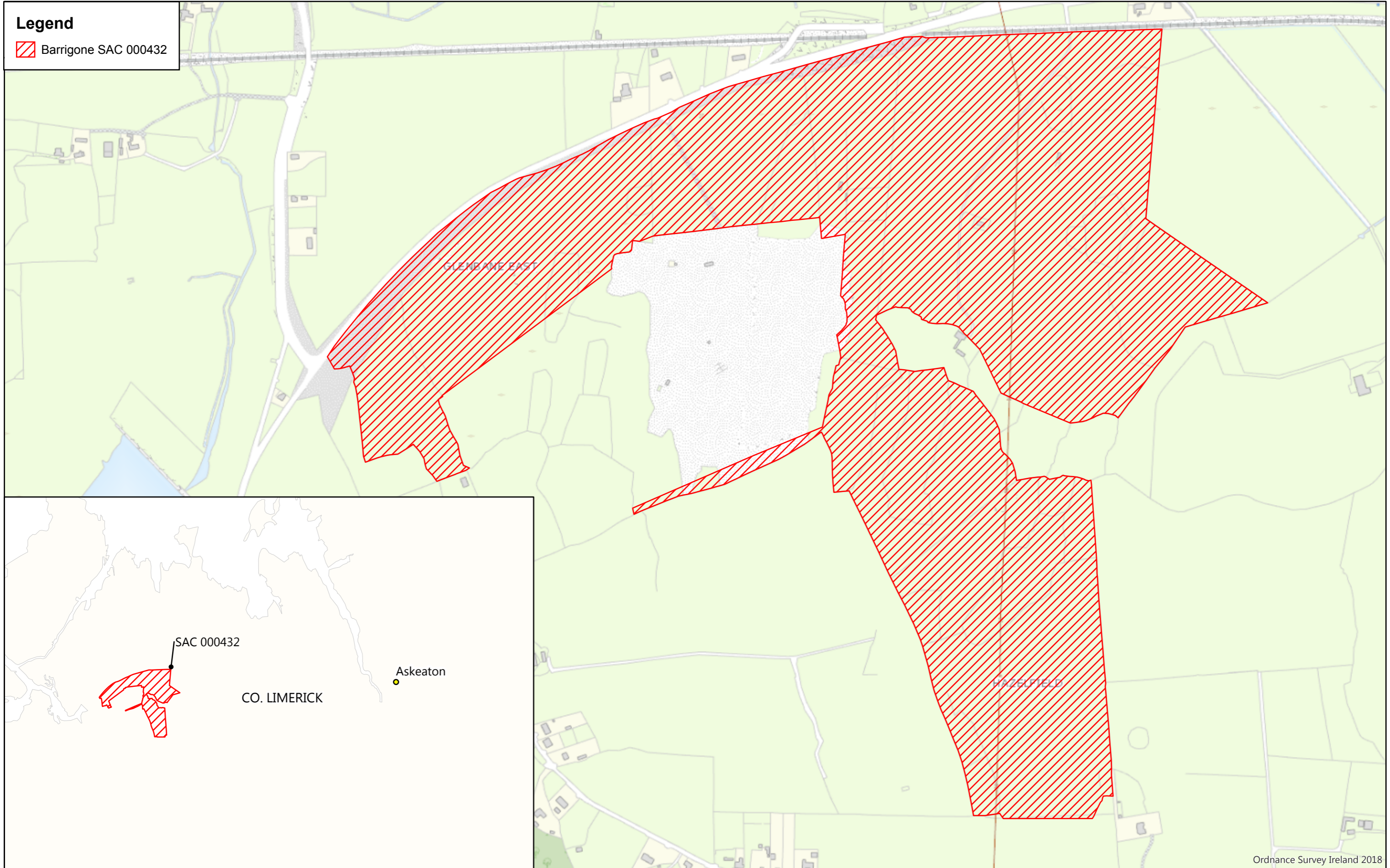
Conservation Objectives for : Barrigone SAC [000432]**1065 Marsh Fritillary *Euphydryas aurinia***

To maintain the favourable conservation condition of Marsh Fritillary in Barrigone SAC, which is defined by the following list of attributes and targets:

| Attribute | Measure | Target | Notes |
|---|--|--|--|
| Distribution: occupied 1km grid squares | Number | Confirmed records | There have been no recent verified records of marsh fritillary (<i>Euphydryas aurinia</i>) located within Barrigone SAC. The association of the species with the SAC derives from a paper by Lavery (1993) which refers to a site called Foynes/Barrigone as being one of three major populations in Ireland. A survey in 2012 did not find the species in the SAC (Wilson et al., 2013). However, maintenance of areas of suitable habitat such as those in Barrigone SAC are important for marsh fritillary due to the metapopulation dynamics of the species. Further survey work is required to confirm the status of the species in the SAC |
| Proof or breeding: larval webs | Number at a representative number of sub-sites | Proof of breeding, confirmed by detection of webs | There are no recent confirmed records from this SAC so a target figure cannot be set for the number of webs. Webs would indicate that conditions are suitable for successful reproduction |
| Potential habitat: area | Hectares | Area of potential habitat stable or increasing, subject to natural processes | Suitable potential habitat for marsh fritillary (<i>Euphydryas aurinia</i>) is defined as areas of vegetation where devil's-bit scabious (<i>Succisa pratensis</i>) is present, with mean height less than 50cm and with less than 10% cover of scrub more than 1m tall. In 2012, just over 9ha of habitat was assessed as suitable for the species (Wilson et al., 2013). This is taken as a baseline figure but will be reassessed as further information emerges |

Legend

 Barrigone SAC 000432



Ordnance Survey Ireland 2018

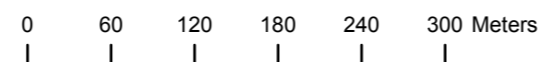


An Roinn Cultúir,
Oidhreacht agus Gaeltachta
Department of Culture,
Heritage and the Gaeltacht

**MAP 1:
BARRIGONE SAC
CONSERVATION OBJECTIVES
SAC DESIGNATION**

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

**SITE CODE:
SAC 000432; version 3. CO. LIMERICK**

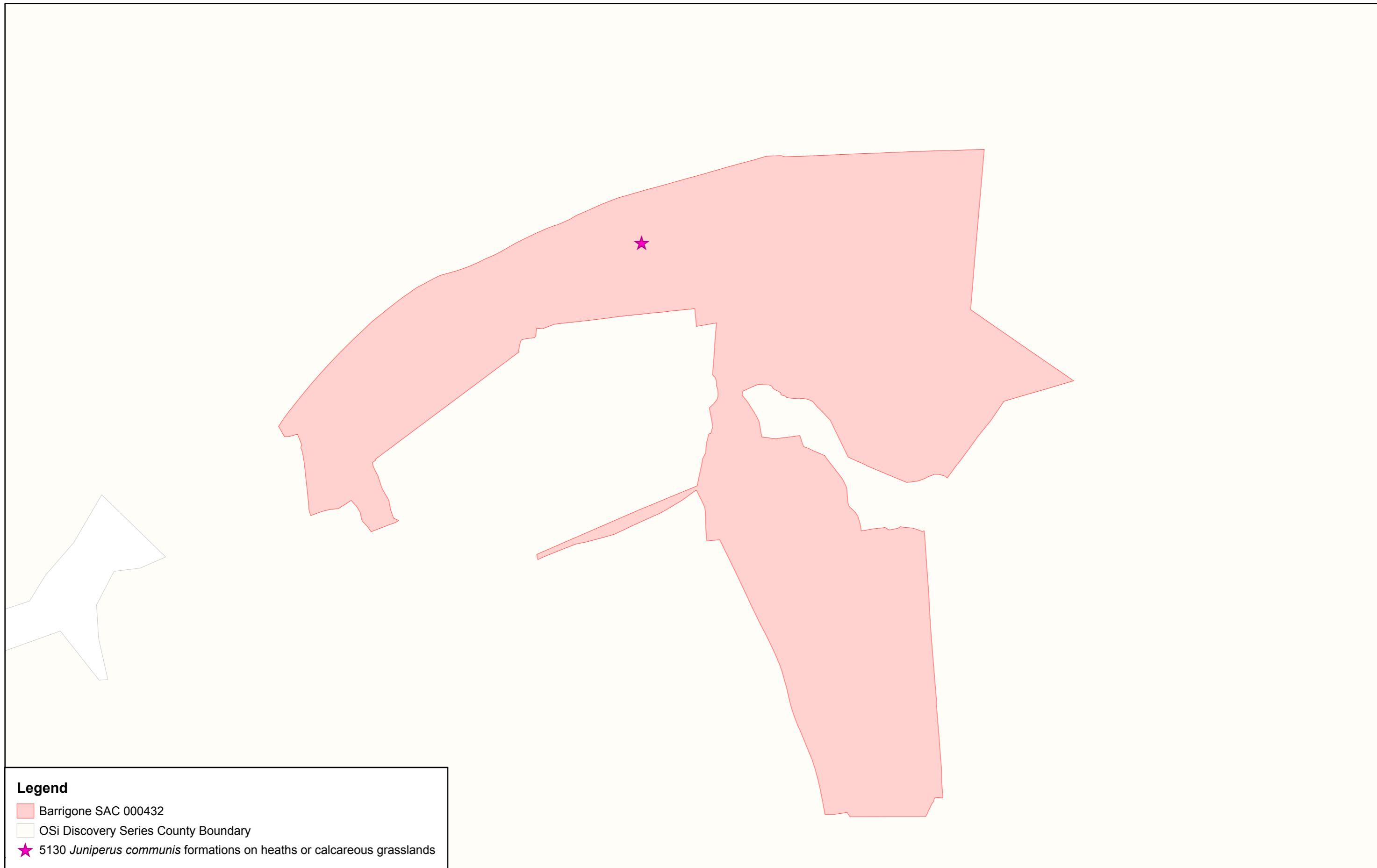


The mapped boundaries are of an indicative and general nature only. Boundaries of designated areas are subject to revision.
Ordnance Survey of Ireland Licence No EN 0059216. © Ordnance Survey of Ireland Government of Ireland

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

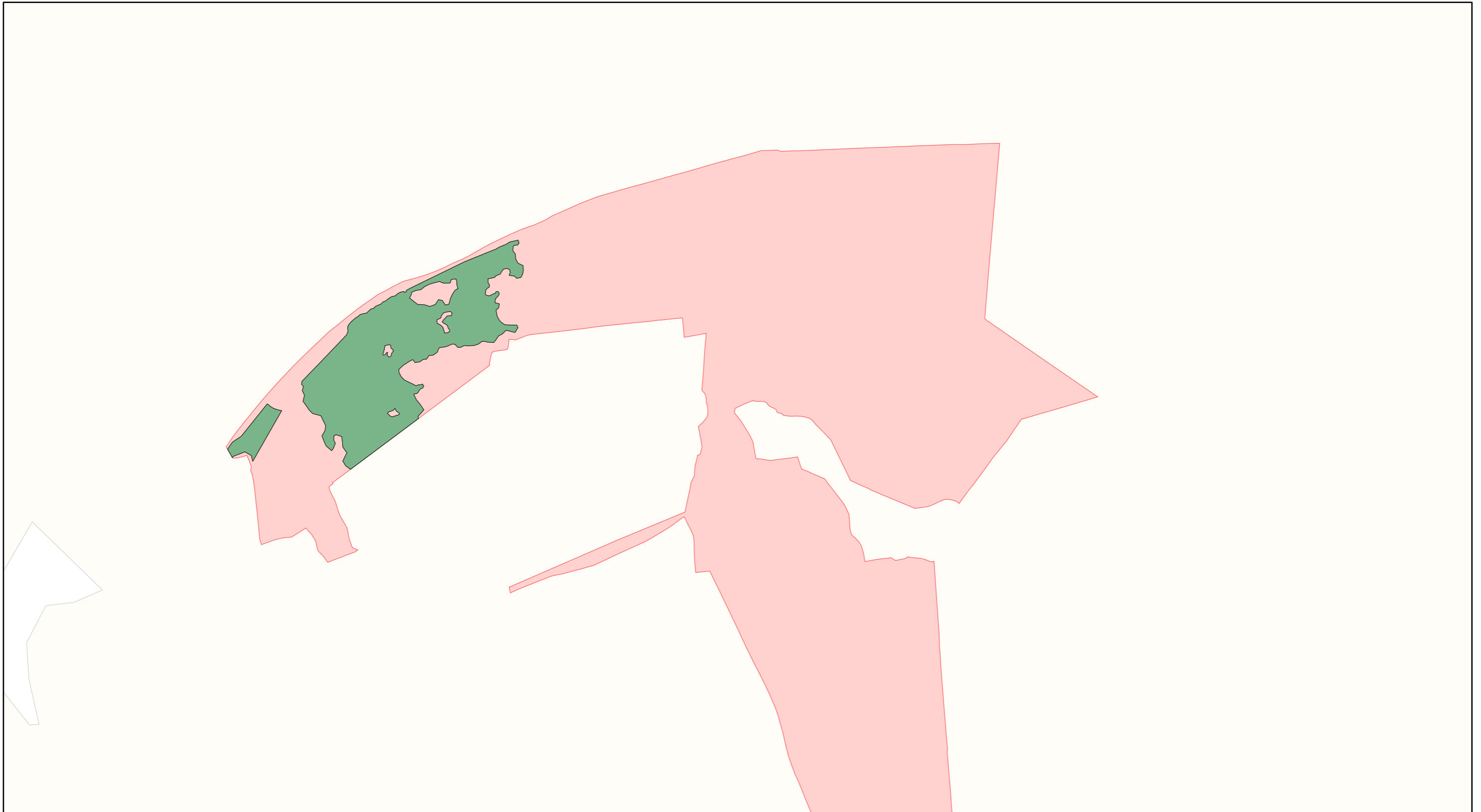


**Map Version 1
Date: Oct 2018**



Legend

- Barrigone SAC 000432
- OSi Discovery Series County Boundary
- 5130 *Juniperus communis* formations on heaths or calcareous grasslands



Legend

- Barrigone SAC 000432
- OSi Discovery Series County Boundary
- 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco Brometalia*)



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

**MAP 3:
BARRIGONE SAC
CONSERVATION OBJECTIVES
GRASSLAND HABITATS**

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

**SITE CODE:
SAC 000432; version 3. CO. LIMERICK**

0 70 140 210 280 350 Meters



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 athbhreithnithe 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: Oct 2018**