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National Parks and Wildlife Service

Conservation Objectives Series

Glenasmole Valley SAC 001209

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***

001209 Glenasmole Valley SAC

6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
6410	*Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)
7220	Petrifying springs with tufa formation (Cratoneurion)*

Supporting documents, relevant reports & publications

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

NPWS Documents

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 :	Ireland Red List No. 8: Bryophytes
Author :	Lockhart, N.; Hodgetts, N.; Holyoak, D.
Series :	Ireland Red List series, NPWS
Year :	2013
Title :	Conservation status assessment for petrifying springs
Author :	Lyons, M.D.; Kelly, D.L.
Series :	Unpublished report to 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 :	2016
Title :	Monitoring guidelines for the assessment of petrifying springs in Ireland
Author :	Lyons, M.D.; Kelly, D.L.
Series :	Irish Wildlife Manuals, No. 94
Year :	2016
Title :	Ireland Red List No. 10: Vascular Plants
Author :	Wyse Jackson, M.; FitzPatrick, Ú.; Cole, E.; Jebb, M.; McFerran, D.; Sheehy Skeffington, M.; Wright, M.
Series :	Ireland Red Lists series, NPWS
Year :	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
Year :	2019
Title :	Checklists Protected and Threatened Species in Ireland 2019
Author :	Nelson, B.; Cummins, S.; Fay, L.; Jeffrey, R.; Kelly, S.; Kingston, N.; Lockhart, N.; Marnell, F.; Tierney, D.; Wyse Jackson, M.
Series :	Irish Wildlife Manuals, No. 116

Year :	2021
Title :	Checklists Protected and Threatened Species in Ireland. Version 2.1. 3 December 2021
Author :	Nelson, B.; Cummins, S.; Fay, L.; Jeffrey, R.; Kelly, S.; Kingston, N.; Lockhart, N.; Marnell, F.; Tierney, D.; Wyse Jackson, M.
Series :	Irish Wildlife Manuals, No. 116

Other References

Year :	2011
Title :	The Fen Management Handbook
Author :	McBride, A.; Diack, I.; Droy, N.; Hamill, B.; Jones, P.; Schutten, J.; Skinner, A.; Street, M. (eds.)
Series :	Scottish Natural Heritage, Perth
Year :	2015
Title :	The flora and conservation status of petrifying springs in Ireland
Author :	Lyons, M.D.
Series :	Unpublished Ph.D. thesis, Trinity College Dublin

Spatial data sources

Year :	2018
Title :	Grasslands Monitoring Survey 2015-2017
GIS Operations :	Dataset clipped to the SAC boundary. Expert opinion used as necessary to resolve any issues arising
Used For :	6210 (map 3)
Year :	2013
Title :	Irish Semi-Natural Grassland Survey
GIS Operations :	Dataset clipped to the SAC boundary. Expert opinion used as necessary to resolve any issues arising
Used For :	6210 (map 3)
Year :	2006
Title :	Grassland Monitoring Project 2006
GIS Operations :	Dataset clipped to the SAC boundary. Expert opinion used as necessary to resolve any issues arising
Used For :	6210 (map 3)
Year :	2016
Title :	Point file associated with Lyons (2015)
GIS Operations :	Dataset created from spatial references; clipped to SAC boundary. Expert opinion used as necessary to resolve any issues arising
Used For :	7220 (map 4)

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 Glenasmole Valley 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	Orchid-rich calcareous grassland has been the subject of three grassland surveys in this SAC: the Grasslands Monitoring Project (Dwyer et al., 2007), the Irish Semi-natural Grasslands Survey (O'Neill et al., 2013; site 1300), and most recently, the Grasslands Monitoring Survey (Martin et al., 2018; site 1300). The total area of the habitat recorded in the SAC by the three surveys is 3.93ha. See map 3. It is important to note that further unmapped areas of the habitat are likely to be present within the SAC, particularly to the west of the reservoirs. It should also be noted that some areas of orchid-rich calcareous grassland were incorrectly mapped as 'lowland hay meadow' (Annex I habitat code 6510) by the Irish Semi-natural Grasslands Survey; this was because hay was cut at the time of survey, an unusual management for this site, which is usually grazed, and such is the richness of the flora, that many indicators for both Annex-listed habitat types were present
Habitat distribution	Occurrence	No decline, subject to natural processes	Distribution based on Dwyer et al. (2007), O'Neill et al. (2013) and Martin et al. (2018). See map 3. Note that further unsurveyed areas of the habitat are likely to be present within the SAC, particularly to the west of the reservoirs
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 indicators, are also presented. These documents should be consulted for further details
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 of an individual species not more than 10%	Attribute and target based on O'Neill et al. (2013) and Martin et al. (2018), where the list of negative indicator species is 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) and Martin et al. (2018)
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 (*Pteridium aquilinum*) not more than 5%	Woody species that can occur above 5% cover are juniper (*Juniperus communis*), burnet rose (*Rosa spinosissima*), mountain avens (*Dryas octopetala*) and hoary rock-rose (*Helianthemum oelandicum*). However, cover of these species above 25% may indicate transition to another Annex I habitat such as Alpine and Boreal heaths (4060) or *Juniperus communis* formations (5130). Attribute and target based on O'Neill et al. (2013) and Martin et al. (2018). Bracken has been noted as being problematic in species-rich calcareous grasslands in this SAC, particularly where farming is being abandoned or lessened (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) and Martin et al. (2018). Broadleaf herb component of vegetation between 30% and 40% 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) and Martin et al. (2018)
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) and Martin et al. (2018)
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) and Martin et al. (2018)
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 20m²	Attribute and target based on O'Neill et al. (2013) and Martin et al. (2018)

6410 Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)

To restore the favourable conservation condition of *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) in Glenasmole Valley 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 current area of *Molinia* meadows Glenasmole Valley SAC is unknown, although the habitat is known to occur near the centre of the SAC, on the eastern side of the reservoirs. It is likely that it occurs in other areas also, most often associated with areas of water seepage and flushing
Habitat distribution	Occurrence	No decline, subject to natural processes	See the notes for habitat area above
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 one 'high quality' positive indicator species present in the 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 positives, are presented. These documents should be consulted for further details. Note that purple moor-grass (*Molinia caerulea*) should be present in at least one monitoring stop, or within 20m of a monitoring stop (Martin et al., 2018). Note that Martin et al. (2018) mention two additional species which may be considered, should stops fail marginally on presence of indicators. The high-quality positive indicator marsh hawk's-beard (*Crepis paludosa*) was recorded from within the habitat in the SAC in recent years, and as an indication of the quality of this habitat within the Glenasmole Valley as a whole, five high quality indicator species were recorded in a small area of the habitat adjacent to (but outside of) the SAC by NPWS staff in 2019 (NPWS internal files)
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) and Martin et al. (2018), where the list of negative indicator species is 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) and Martin et al. (2018)
Vegetation composition: moss species	Percentage cover at a representative number of 2m x 2m monitoring stops	Hair mosses (*Polytrichum* spp.) not more than 25% cover	Attribute and target based on O'Neill et al. (2013) and Martin et al. (2018)
Vegetation composition: woody species and bracken	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of woody species and bracken (*Pteridium aquilinum*) not more than 5% cover	Attribute and target based on O'Neill et al. (2013) and Martin et al. (2018)
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) and Martin et al. (2018). Broadleaf herb component of vegetation between 30% and 40% 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 10cm and 80cm tall	Attribute and target based on O'Neill et al. (2013) and Martin et al. (2018)
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) and Martin et al. (2018)

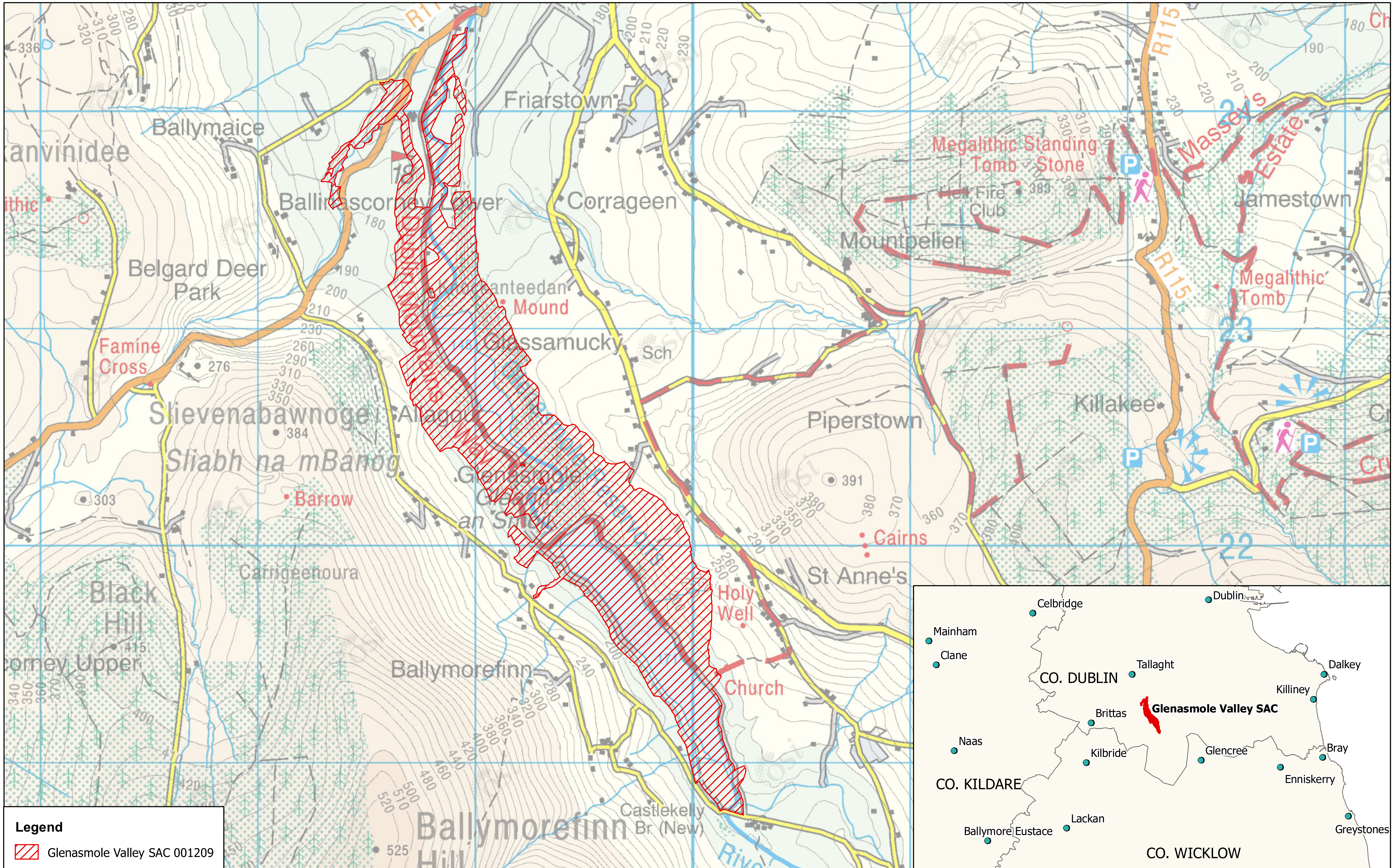
Physical structure: bare ground	Percentage cover at a representative number of 2m x 2m monitoring stops	Not more than 10% bare ground	Attribute and target based on O'Neill et al. (2013) and Martin et al. (2018)
Physical structure: grazing or disturbance	Area in local vicinity of a representative number of monitoring stops	Area of the habitat showing signs of serious grazing or disturbance less than 20m²	Attribute and target based on O'Neill et al. (2013) and Martin et al. (2018)

7220 Petrifying springs with tufa formation (Cratoneurion)*

To restore the favourable conservation condition of Petrifying springs with tufa formation (Cratoneurion)* in Glenasmole Valley SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Habitat area	Square metres	Area stable or increasing, subject to natural processes	The total current area of the habitat in Glenasmole Valley SAC in unknown. Lyons (2015) mapped 18 petrifying springs with a total area of 10,950m² at the sites Glenasmole Upr Reservoir (site code PS014) and Glenasmole Lwr Reservoir (code PS015), each containing a number of sub-sites (PS014a, PS014e, PS014g, PS015a, PS015b, PS015e, PS015f, PS015g, PS015h and PS015n), most of which were wooded, where Lyons (2015) carried out short/full surveys. This is a dynamic habitat and one which is likely to be significantly impacted by any reduction in water supply. Tufa sites may also decrease naturally due to natural blockages of upwelling springs. See Lyons (2015) for further details on the sub-sites and Lyons and Kelly (2016) for further details on this and all attributes. It is important to note that additional areas of the habitat may be present in the SAC, particularly on the western side of the valley
Habitat distribution	Occurrence	No decline, subject to natural processes. See map 4	See map 4 for the point locations of the habitat surveyed by Lyons (2015). It is important to note that additional areas of the habitat may be present in the SAC, particularly on the western side of the valley
Hydrological regime: height of water table; water flow	Metres; metres per second	Maintain appropriate hydrological regimes	Petrifying springs rely on permanent irrigation, usually from upwelling groundwater sources or seepage sources (Lyons and Kelly, 2013). In karst areas, water tends to flow away rapidly over bare rock surfaces, even on fairly flat ground (Lyons and Kelly, 2013). Water flow should not be altered anthropogenically. See Lyons and Kelly (2016) for further details
Physical structure: tufa formations	Seepage rate to the spring and groundwater quality (saturated calcium carbonate, pH, temperature and alkalinity conditions)	Maintain appropriate levels of tufa formation	Petrifying springs are springs that typically form small calcareous or 'tufa' deposits. On contact with the atmosphere at the spring head, carbon dioxide is lost from calcium saturated water to the atmosphere or is depleted by the photosynthetic activities of plants. This results in the precipitation of a calcium carbonate marl or tufa. Seepage flow rates are crucial for the development of tufa. In this SAC, the main tufa types at the sub-sites surveyed by Lyons (2015) were tufa cascades with stream crust tufa and oncoids/ooids
Ecosystem function: water quality - nitrate level	mg/l	Maintain nitrate level at less than 10mg/l	Attribute and target based on Lyons and Kelly (2016). Nitrate analysis was carried out by Lyons (2015) at the sub-sites PS014g, PS015e, PS015f, PS015g, PS015h and PS015n where levels of 2.30mg/l, 2.95mg/l, 3.92mg/l, 1.59mg/l, 5.04mg/l and 3.30mg/l were recorded, respectively; thus, all sampled sub-sites passed the attribute target
Ecosystem function: water quality - phosphate level	µg/l	Restore phosphate level to less than 15µg/l	Attribute and target based on Lyons and Kelly (2016). Lyons (2015) recorded phosphate levels of 18µg/l at PS014g, 19µg/l at PS015e, 18µg/l at PS015f, 27µg/l at PS015g, 18µg/l at PS015h and 23µg/l at PS015n; thus, all sampled sub-sites failed the attribute target, though some only marginally

Vegetation composition: community diversity	Variety of vegetation communities	Maintain variety of vegetation communities, subject to natural processes	Lyons and Kelly (2016) describe eight plant communities of petrifying springs in Ireland based on relevé data. In Glenasmole Valley SAC, Lyons (2015) recorded the community *Eucladium verticillatum-Pellia endiviifolia* tufa cascades at PS014g, PS015f and PS015h; *Palustriella commutata-Agrostis stolonifera* springheads at PS015a, PS015e and PS015f; *Brachythecium rivulare-Platyhypnidium riparioides* tufaceous streams and flushes at PS015e, PS015f and PS015g; and *Palustriella commutata-Geranium robertianum* springheads at PS015e, PS015g and PS015n. See Lyons (2015) for further details. Further information on the vegetation communities associated with the habitat is presented in Lyons and Kelly (2016)
Vegetation composition: positive indicator species	Number per spring	At least three positive/high quality indicator species as listed in Lyons and Kelly (2016) and no loss from baseline number	Attribute and target based on Lyons and Kelly (2016), where the lists of positive and high quality indicator species are presented. Lyons (2015) recorded 2 positive indicator species at PS014a (small extent of habitat), 3 at PS014e, 9 at PS014g, 5 at PS015a, 8 at PS015b, 11 at PS015e, 13 at PS015f, 6 at PS015g, 7 at PS015h and 7 at PS015n. Positive indicators recorded by Lyons (2015) at a number of sub-site springs in the SAC include red fescue (*Festuca rubra*), remote sedge (*Carex remota*), opposite-leaved saxifrage (*Chrysosplenium oppositifolium*), marsh hawk's-beard (*Crepis paludosa*), yellow pimpernel (*Lysimachia nemorum*), great horsetail (*Equisetum telmateia*) and the bryophytes *Bryum pseudotriquetrum, Didymodon tophaceus, Eucladium verticillatum, Palustriella commutata, Pellia endiviifolia* and *Philonotis calcarea*. See Lyons (2015) for further details
Vegetation composition: negative indicator species	Cover (DAFOR scale)	Potentially negative indicator species should not be Dominant or Abundant; potentially negative woody species should be absent in unwooded springs; invasive species should be absent	Attribute and target based on Lyons and Kelly (2016), where the lists of potentially negative herbaceous, bryophyte, algal and woody species are presented. See Lyons and Kelly (2016) also for details on potentially invasive species. If two or more potentially negative bryophyte/alga species are present, and if at least two are Frequent, or at least one is Abundant, then the habitat fails for this attribute. See Lyons and Kelly (2016). Potentially negative species recorded at a number of sub-site springs in the SAC by Lyons (2015) include the potentially negative herbaceous species hemp-agrimony (*Eupatorium cannabinum*) and the potentially negative bryophytes *Brachythecium rivulare* and *Cratoneuron filicinum*, but none were Dominant or Abundant. The potentially negative woody species sycamore (*Acer pseudoplatanus*) was recorded as Occasional in PS015f, PS015g and PS015n (all wooded springs) by Lyons (2015). See Lyons (2015) for further details
Vegetation composition: algal cover	Percentage cover at, and in local vicinity of, a representative number of monitoring stops	Cover of algae less than 2%	Algal cover is indicative of nutrient enrichment from multiple sources (McBride et al., 2011)
Vegetation structure: sward height	Centimetres	Field layer height between 10cm and 50cm (except for bryophyte-dominated ground <10cm)	Attribute and target based on Lyons and Kelly (2016). See Lyons (2015) for further details
Physical structure: trampling/dung	Cover (DAFOR scale)	Cover should not be Dominant or Abundant	Attribute and target based on Lyons and Kelly (2016). See Lyons (2015) for further details
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; maintain features of local distinctiveness, subject to natural processes	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.; see Nelson et al., 2019, 2021)



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MAP 1:
GLENASMOLE VALLEY SAC
CONSERVATION OBJECTIVES
SAC DESIGNATION

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

SITE CODE:
SAC 001209; version 3.02
CO. DUBLIN

0 125 250 500 Metres

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 garshuiomhach ginearálta. Féadfar athbhreithnithe a déanamh ar theorainneacha na gceantar comharthaithe. Suirbhéarachta Ordonáis na hÉireann Ceadúnas Uimh OSI-NMA-014. © Suirbhéarachta Ordonáis na hÉireann Rialtas na hÉireann

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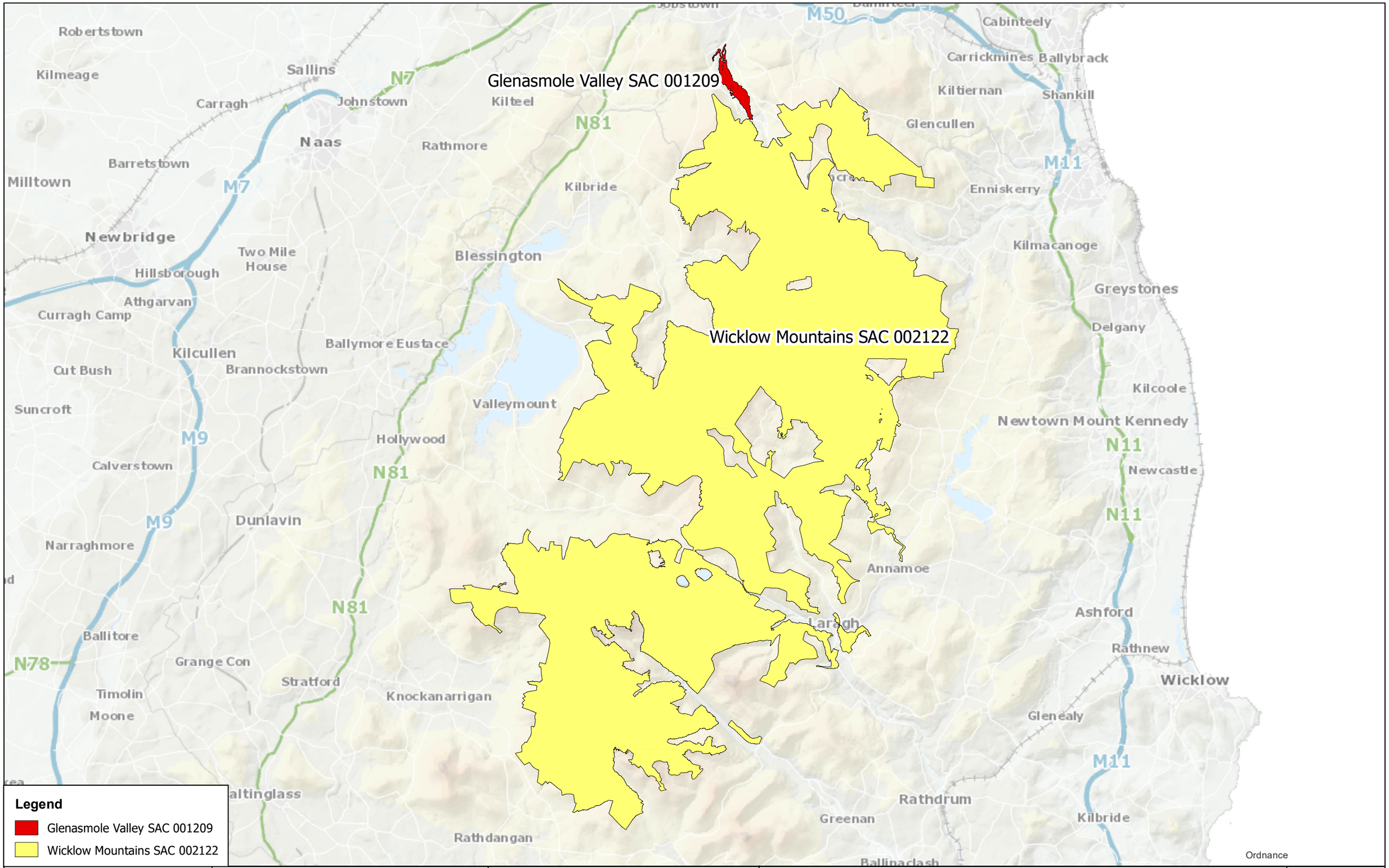
Date: November 2021



Legend

- Glenasmole Valley SAC 001209
- Wicklow Mountains SAC 002122

Ordnance

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MAP 2:
GLENASMOLE VALLEY SAC
CONSERVATION OBJECTIVES
ADJACENT SITE

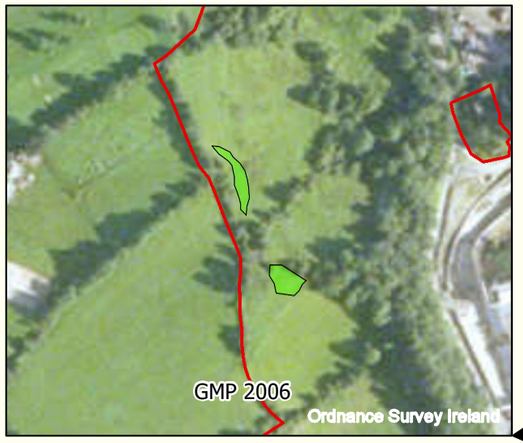
Map to be read in conjunction with the NPWS Conservation Objectives Document

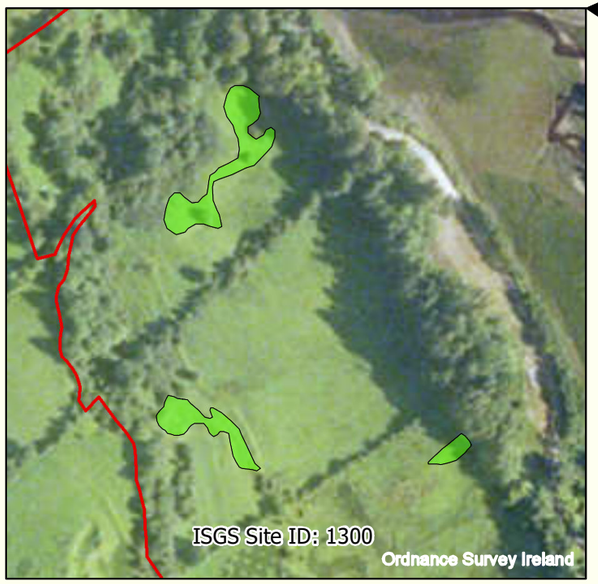
SITE CODE:
SAC 001209; version 3.02
CO. DUBLIN

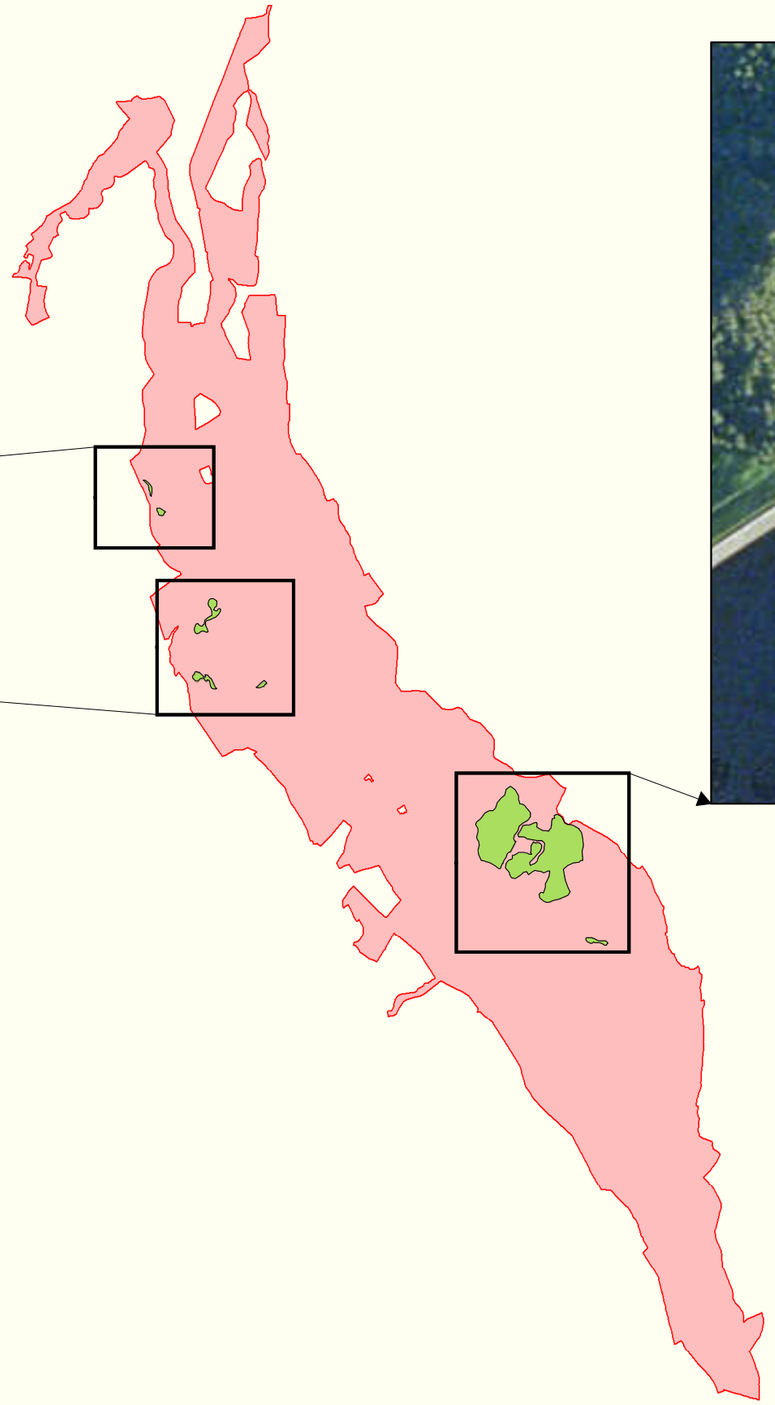
0 1 2 4 Kilometres

N

Date: December 2021







Legend

- 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates(*Festuco-Brometalia*) (* important orchid sites)
- Glenasmole Valley SAC 001209

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MAP 3:
GLENASMOLE VALLEY SAC
CONSERVATION OBJECTIVES
GRASSLAND HABITATS

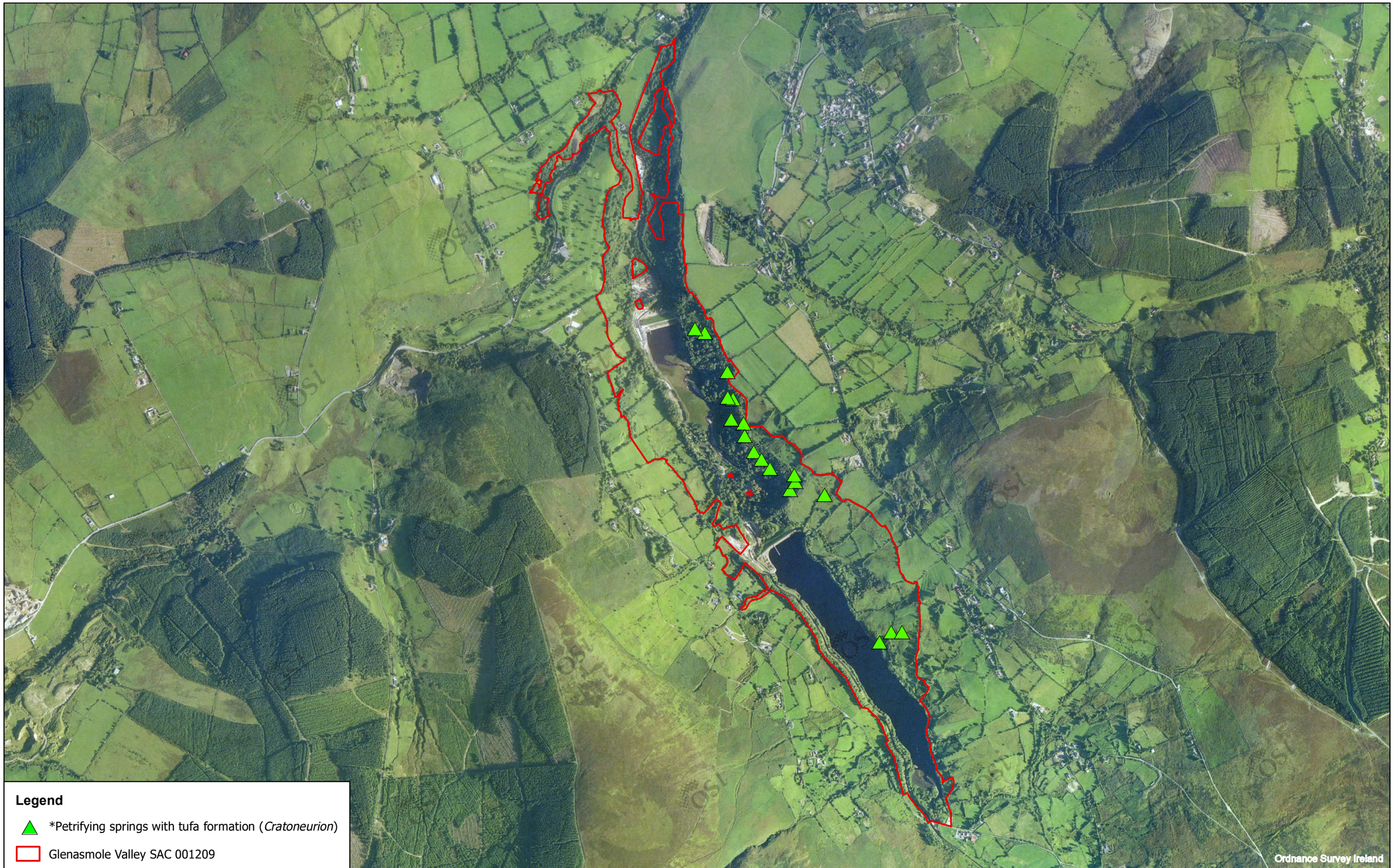
Map to be read in conjunction with the NPWS Conservation Objectives Document

SITE CODE:
SAC 001209; version 3.02
CO. DUBLIN

0 125 250 500 Metres

N

Date: December 2021



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MAP 4:
GLENASMOLE VALLEY SAC
CONSERVATION OBJECTIVES
PETRIFYING SPRINGS

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

SITE CODE:
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0 125 250 500 Metres

N

Date: December 2021