

National Parks and Wildlife Service

Conservation Objectives Series

Lough Nageage SAC 002135



An Roinn Tithíochta,
Rialtais Áitiúil agus Oidhreachta
Department of Housing,
Local Government and Heritage

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Citation:

**NPWS (2021) Conservation Objectives: Lough Nageage SAC 002135. Version 1.
National Parks and Wildlife Service, Department of Housing, Local Government
and Heritage.**

**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*

002135 Lough Nageage SAC

1092 White-clawed Crayfish *Austropotamobius pallipes*

Supporting documents, relevant reports & publications

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

NPWS Documents

Year :	2009
Title :	Monitoring of white-clawed crayfish <i>Austropotamobius pallipes</i> in Irish lakes in 2007
Author :	O'Connor, W.; Hayes, G.; O'Keeffe, C.; Lynn, D.
Series :	Irish Wildlife Manuals, No. 37
<hr/>	
Year :	2010
Title :	A technical manual for monitoring white-clawed crayfish (<i>Austropotamobius pallipes</i>) in Irish lakes
Author :	Reynolds, J.; O'Connor, W.; O'Keeffe, C.; Lynn, D.
Series :	Irish Wildlife Manuals, No.45
<hr/>	
Year :	in prep.
Title :	Survey of the status of white-clawed crayfish, <i>Austropotamobius pallipes</i> , in designated SACs in 2017
Author :	Gammell, M.; McFarlane, A.; Brady, D.; O'Brien, J.; Mirimin, L.; Graham, C.; Lally, H.; Minto, C.; O'Connor, I.
Series :	Irish Wildlife Manuals

Other References

Year :	1992
Title :	Crayfish in Co. Donegal (H34)
Author :	Ffrench Mullen, P.; Lucey, J.
Series :	The Irish Naturalists' Journal, 24, 133-133

Spatial data sources

Year : 2021

Title : NPWS rare and threatened species database

GIS Operations : Dataset created from spatial references in database records. Expert opinion used as necessary to resolve any issues arising

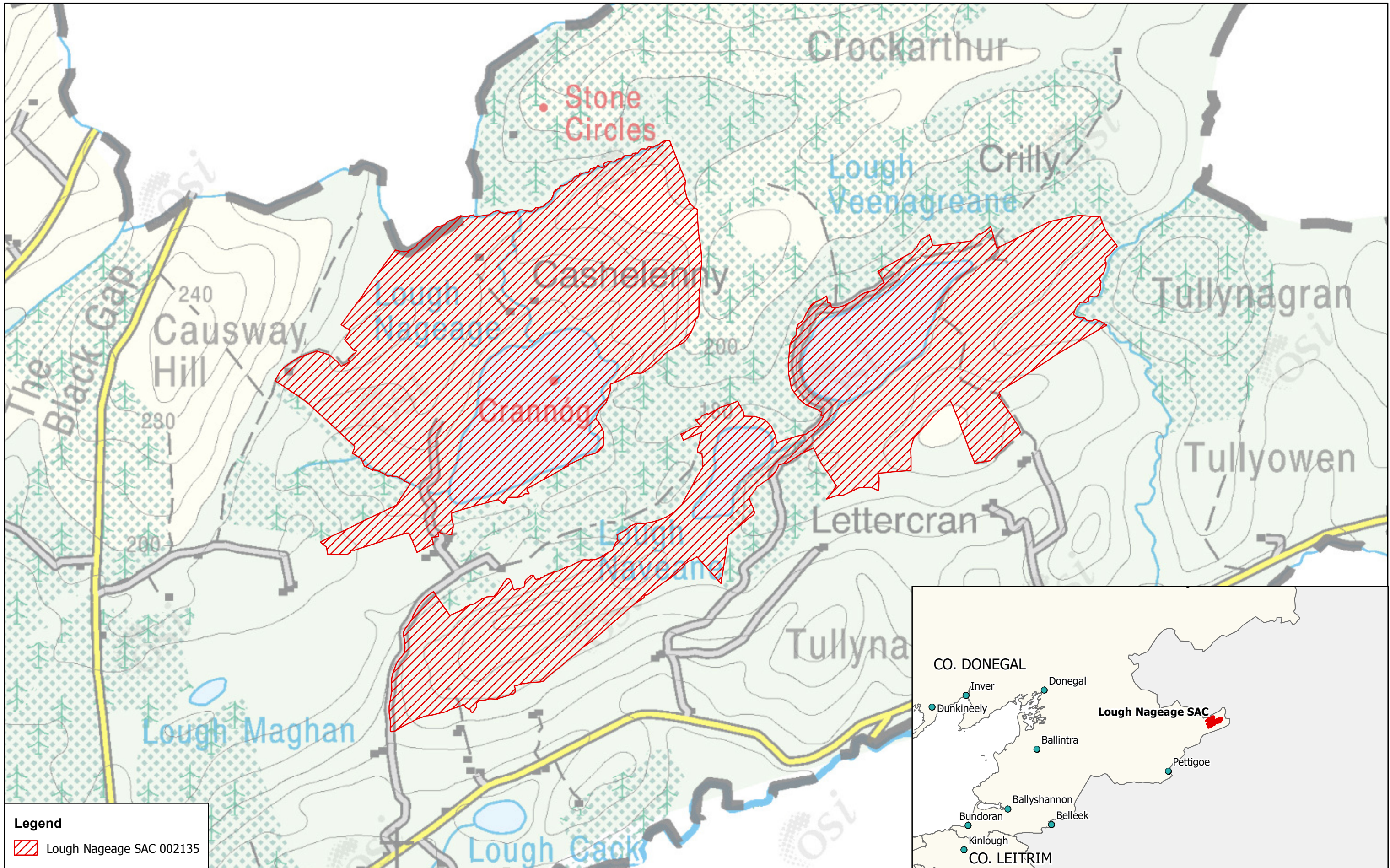
Used For : 1092 (map 2)


1092 White-clawed Crayfish *Austropotamobius pallipes*

To maintain the favourable conservation condition of White-clawed Crayfish in Lough Nageage SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Distribution	Number of occupied 1km squares	No reduction from baseline. See map 2	White-clawed crayfish was first found in Lough Nageage in 1991 (Ffrench Mullen and Lucey, 1991). The species was subsequently found in Lough Veenagreane (O'Connor et al., 2009). There have been no records from Lough Naveane and the peaty nature of this lake suggests that it is not suitable for the species. O'Connor et al. (2009) reported crayfish in both Nageage and Veenagreane. Gammell et al. (in prep.) also found the species in Veenagreane but reported none in Nageage. However, this absence may be related to the timing of the survey (August). A similar negative result from a summer survey was reported by O'Connor et al. (2009); however, the species was found in a repeat survey of Lough Nageage later in the year also by O'Connor et al. (2009). In 2020 crayfish were reported from both Nageage and Veenagreane. The species is recorded from the following 1km squares H1673, H1772, H1774 and H1874
Population structure: recruitment	Percentage occurrence of juveniles and females with eggs	Juveniles and females with eggs in at least 50% of positive samples taken at appropriate time and methodology	See Reynolds et al. (2010) for further details. Gammell et al. (in prep.) found juveniles in Lough Veenagreane
Population size	Catch per unit effort	No reduction from baseline of 0.1	The CPUE figures are based on the figures in O'Connor et al. (2009) and Gammell et al. (in prep.) calculated for Lough Veenagreane. A CPUE for Lough Nageage was not calculated due to low numbers or absence in samples. This may be refined further with more detailed assessment of the stocks in both lakes. Gammell et al. (in prep.) assessed the population in Lough Veenagreane as having Low Population abundance grade
Negative indicator species	Occurrence	No non-indigenous crayfish species	Non-indigenous crayfish species (NICS) are identified as a major direct threat to the white-clawed crayfish (<i>Austropotamobius pallipes</i>) and as a disease vector, in particular crayfish plague (<i>Aphanomyces astaci</i>), which is fatal to white-clawed crayfish. Legislation has banned the import of the five most common NICS to Ireland (S.I. No. 354/2018)
Disease	Occurrence	No instances of disease	Crayfish plague, caused by the water-borne mould <i>Aphanomyces astaci</i> , is identified as major threat to the species in Ireland. Instances of crayfish plague have occurred in Ireland since 2015 causing local extinctions. There have been no confirmed or suspected outbreaks in this SAC
Water quality	Water chemistry measures	No decline	White-clawed crayfish is not considered very sensitive of water quality but the species is intolerant of low pH and poorest water quality and lack of calcareous influence. Baseline levels need to be determined for both lakes as neither is monitored for water quality. The visual assessment by O'Connor et al. (2009) was that Lough Nageage appeared slightly polluted and the substrate was covered with filamentous algae

Habitat quality: heterogeneity	Occurrence of positive habitat features	No decline from the baseline	White-clawed crayfish need high habitat heterogeneity. Larger crayfish must have stones to hide under, or an earthen bank in which to burrow. Hatchlings shelter in vegetation, gravel and among fine tree-roots. Smaller crayfish are typically found among weed and debris in shallow water. Larger juveniles in particular may also be found among cobbles and detritus such as leaf litter. These conditions and habitat features must be available on the whole length of occupied habitat. Gammell et al. (in prep.) scored the habitat heterogeneity and following this methodology the baseline score of 0.5 is set
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Legend
 Lough Nageage SAC 002135

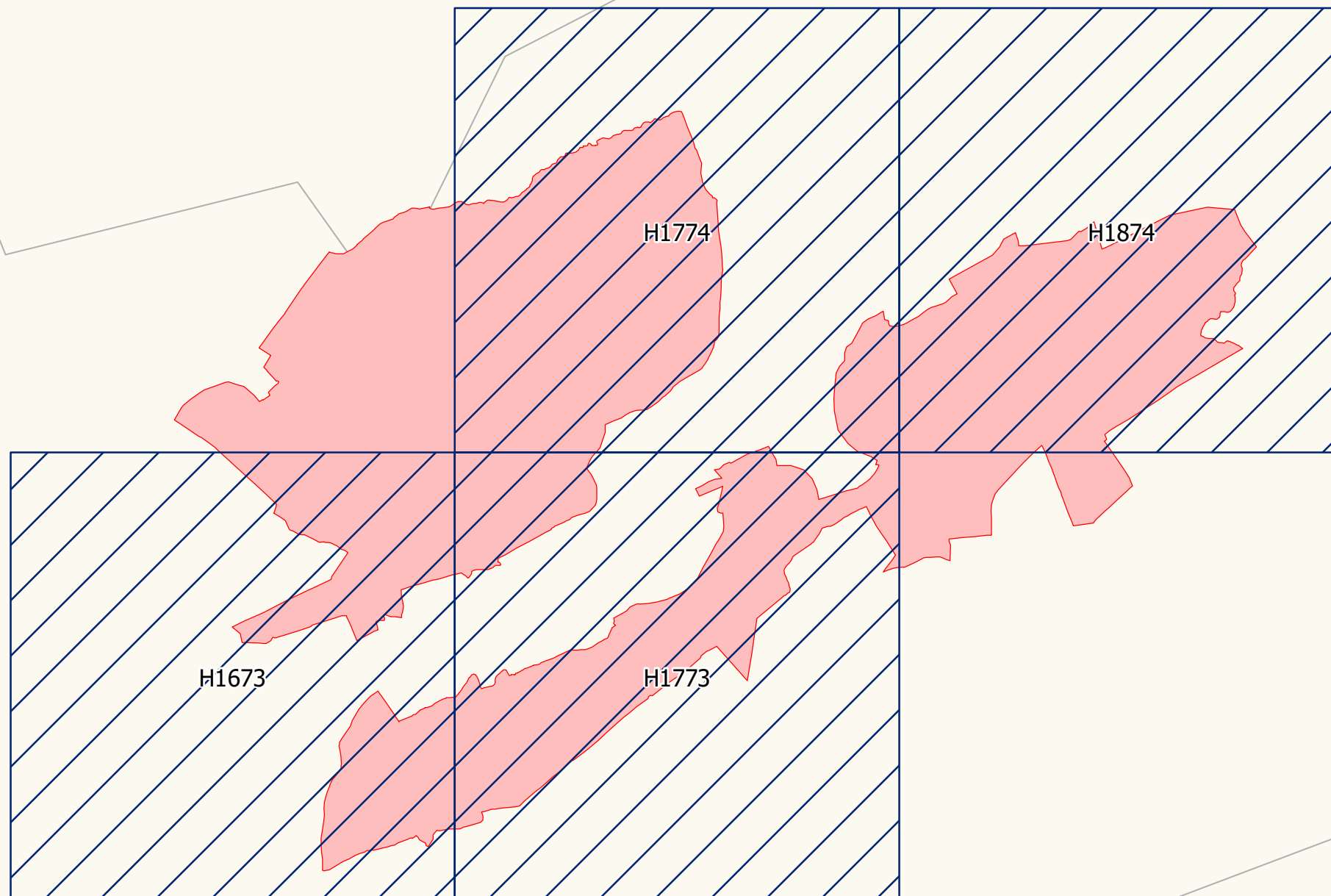
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 Department of Housing, Local Government and Heritage

**MAP 1:
 LOUGH NAGEAGE SAC
 CONSERVATION OBJECTIVES
 SAC DESIGNATION**
 Map to be read in conjunction with the NPWS Conservation Objectives Document




**SITE CODE:
 SAC 002135; version 3.03.
 CO. DONEGAL**
 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 garshuíomhach ginearálta. Féadfar athbheithithe a déanamh ar theorainneacha na gceantar comharthaith. Suirbhéarachta Ordonáis na hÉireann Ceadúnas Uimh OSI-NMA-014. © Suirbhéarachta Ordonáis na hÉireann Rialtas na hÉireann


Date: February 2021



Legend

-  1092 White-clawed crayfish *Austropotamobius pallipes* 1km grid squares
-  Lough Nageage SAC 002135
-  OSi Discovery Series County Boundary

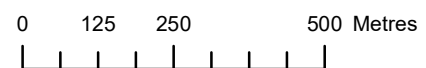


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**MAP 2:
LOUGH NAGEAGE SAC
CONSERVATION OBJECTIVES
WHITE-CLAWED CRAYFISH**

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

**SITE CODE:
SAC 002135; version 3.03.
CO. DONEGAL**



The mapped boundaries are of an indicative and general nature only. Boundaries of designated areas are subject to revision.
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Date: March 2021