

Appendix 2 – Conservation Objectives



National Parks and Wildlife Service

Conservation Objectives Series

The Gearagh SAC 000108



An Roinn Ealaíon, Oidhreachta,
Gnóthaí Réigiúnacha, Tuaithe agus Gaeltachta

Department of Arts, Heritage,
Regional, Rural and Gaeltacht Affairs



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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

000108	The Gearagh SAC
1355	Otter <i>Lutra lutra</i>
3260	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation
3270	Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation
91A0	Old sessile oak woods with <i>Q. petraea</i> and <i>Q. robur</i> in the British Isles
91E0	Alluvial forests with <i>Alnus glutinosa</i> and <i>Salix alba</i> (Alno-Padion, Alnion incanae, Salicion albae)

Supporting documents, relevant reports & publications

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

NPWS Documents

Year :	2006
Title :	Otter survey of Ireland 2004/2005
Author :	Bailey, M.; Rochford, J.
Series :	Irish Wildlife Manual No. 23
<hr/>	
Year :	2007
Title :	Supporting documentation for the Habitats Directive Conservation Status Assessment - backing documents. Article 17 forms and supporting maps
Author :	NPWS
Series :	Unpublished report to NPWS
<hr/>	
Year :	2008
Title :	National survey of native woodlands 2003-2008
Author :	Perrin, P.M.; Martin, J.; Barron, S.; O'Neill, F.H.; McNutt, K.E.; Delaney, A.
Series :	Unpublished report to NPWS
<hr/>	
Year :	2010
Title :	A provisional inventory of ancient and long-established woodland in Ireland
Author :	Perrin, P.M.; Daly, O.H.
Series :	Irish Wildlife Manual No. 46
<hr/>	
Year :	2013
Title :	National otter survey of Ireland 2010/12
Author :	Reid, N.; Hayden, B.; Lundy, M.G.; Pietravalle, S.; McDonald, R.A.; Montgomery, W.I.
Series :	Irish Wildlife Manual No. 76
<hr/>	
Year :	2013
Title :	Results of monitoring survey of old sessile oak woods and alluvial forests
Author :	O'Neill, F.H.; Barron, S.J.
Series :	Irish Wildlife Manual No. 71
<hr/>	
Year :	2016
Title :	The Gearagh SAC (site code: 108) Conservation objectives supporting document – 3260 and 3270 V1
Author :	NPWS
Series :	Conservation objectives supporting document

Other References

Year :	1982
Title :	Otter survey of Ireland
Author :	Chapman, P.J.; Chapman, L.L.
Series :	Unpublished report to Vincent Wildlife Trust
<hr/>	
Year :	1988
Title :	The Irish red data book 1. Vascular plants
Author :	Curtis, T.G.F; McGough, H.N.
Series :	Wildlife Service, Dublin

Year : 1991
Title : The spatial organization of otters (*Lutra lutra*) in Shetland
Author : Kruuk, H.; Moorhouse, A.
Series : Journal of Zoology, 224: 41-57

Year : 2002
Title : Reversing the habitat fragmentation of British woodlands
Author : Peterken, G.
Series : WWF-UK, London

Year : 2006
Title : Otters - ecology, behaviour and conservation
Author : Kruuk, H.
Series : Oxford University Press

Year : 2010
Title : Otter tracking study of Roaringwater Bay
Author : De Jongh, A.; O'Neill, L.
Series : Unpublished draft report to NPWS

Spatial data sources

Year :	2016
Title :	Internal NPWS data
GIS Operations :	Potential habitat distributions derived from OSi 1:5000 IG vector dataset within the SAC boundary. Expert opinion used as necessary to resolve any issues arising
Used For :	3260, 3270 (maps 2 and 3)
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Year :	2016
Title :	Internal NPWS data
GIS Operations :	Woodland within SAC boundary digitised using the OSi 1995 orthophotography as reference dataset. Expert opinion used as necessary to resolve any issues arising
Used For :	91A0 (map 4)
<hr/>	
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 :	91E0 (map 4)
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Conservation Objectives for : The Gearagh SAC [000108]

3260 Water courses of plain to montane levels with the *Ranunculus fluitantis* and *Callitriche-Batrachion* vegetation

To maintain the favourable conservation condition of Water courses of plain to montane levels with the *Ranunculus fluitantis* and *Callitriche-Batrachion* vegetation in The Gearagh SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Habitat area	Kilometres	Area stable or increasing, subject to natural processes	See the conservation objectives supporting document for Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation and Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidentium</i> p.p. vegetation for further details on all attributes and targets
Habitat distribution	Occurrence	No decline, subject to natural processes. See map 2 for potential distribution	See the conservation objectives supporting document for Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation and Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidentium</i> p.p. vegetation for further details on all attributes and targets
Hydrological regime: river flow	Metres per second	Maintain appropriate hydrological regime necessary to support the typical species and vegetation composition of the habitat	See the conservation objectives supporting document for Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation and Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidentium</i> p.p. vegetation for further details on all attributes and targets
Hydrological regime: groundwater discharge	Metres per second	Maintain appropriate groundwater contribution necessary to support the typical species and vegetation composition of the habitat	See the conservation objectives supporting document for Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation and Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidentium</i> p.p. vegetation for further details on all attributes and targets
Substratum: variety and extent	Hectares	Maintain variety and extent of substratum necessary to support the typical species and vegetation composition of the habitat	See the conservation objectives supporting document for Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation and Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidentium</i> p.p. vegetation for further details on all attributes and targets
Water quality: nutrients	µg/l P; mg/l N	Maintain the concentration of nutrients in the water column necessary to support the typical species and vegetation composition of the habitat	See the conservation objectives supporting document for Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation and Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidentium</i> p.p. vegetation for further details on all attributes and targets
Water quality: biological indicators	Various	Maintain good or high biological status necessary to support the typical species and vegetation composition of the habitat	See the conservation objectives supporting document for Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation and Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidentium</i> p.p. vegetation for further details on all attributes and targets
Vegetation composition: typical species	Occurrence	Maintain typical species in good condition, including appropriate distribution and abundance	See the conservation objectives supporting document for Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation and Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidentium</i> p.p. vegetation for further details on all attributes and targets

Vegetation composition: vegetation communities	Distribution	Maintain vegetation communities/ zonation/ mosaic characteristic of the site	See the conservation objectives supporting document for Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation and Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation for further details on all attributes and targets
Fringing habitats	Hectares	Maintain marginal fringing habitats that support the typical species and vegetation composition of the habitat	See the conservation objectives supporting document for Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation and Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation for further details on all attributes and targets. See also the conservation objective for 91E0
Floodplain connectivity	Hectares	Maintain floodplain connectivity necessary to support the typical species and vegetation composition of the habitat	See the conservation objectives supporting document for Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation and Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation for further details on all attributes and targets

Conservation Objectives for : The Gearagh SAC [000108]

3270 Rivers with muddy banks with *Chenopodium rubri* p.p. and *Bidention* p.p. vegetation

To maintain the favourable conservation condition of Rivers with muddy banks with *Chenopodium rubri* p.p. and *Bidention* p.p. vegetation in The Gearagh 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 fluctuations	See the conservation objectives supporting document for Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation and Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidention</i> p.p. vegetation for further details on all attributes and targets
Habitat distribution	Occurrence	No decline, subject to natural processes. See map 3 for potential distribution	See the conservation objectives supporting document for Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation and Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidention</i> p.p. vegetation for further details on all attributes and targets
Hydrological regime: groundwater contribution; flood duration, flood frequency, flood area and depth	Various	Maintain appropriate hydrological regime necessary to support the typical species and vegetation composition of the habitat	Hydrological regime is sub-divided into more detailed attributes in the conservation objective supporting document for Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation and Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidention</i> p.p. vegetation
Soil/substratum type: variety and extent	Hectares	Maintain variety and extent of substratum necessary to support the typical species and vegetation composition of the habitat	See the conservation objectives supporting document for Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation and Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidention</i> p.p. vegetation for further details on all attributes and targets
Soil/substratum nutrient status: nitrogen and phosphorus	N and P concentrations	Maintain nutrient status necessary to support the typical species and vegetation composition of the habitat	See the conservation objectives supporting document for Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation and Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidention</i> p.p. vegetation for further details on all attributes and targets
Physical structure: Bare ground	Presence	Maintain sufficient wet bare ground to support the typical species and vegetation composition of the habitat	See the conservation objectives supporting document for Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation and Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidention</i> p.p. vegetation for further details on all attributes and targets
Water quality: nutrients; phytoplankton biomass	Various	Maintain water quality necessary to support the typical species and vegetation composition of the habitat	Water quality is sub-divided into more detailed attributes in the conservation objective supporting document for Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation and Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidention</i> p.p. vegetation
Typical species	Presence	Maintain typical species in good condition, including appropriate distribution and abundance	See the conservation objectives supporting document for Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation and Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidention</i> p.p. vegetation for further details on all attributes and targets

Vegetation composition: vegetation zonation	Distribution	Maintain vegetation zonation/mosaic characteristic of the site	See the conservation objectives supporting document for Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation and Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation for further details on all attributes and targets
Fringing habitats	Hectares	Maintain marginal fringing habitats that support the typical species and vegetation composition of the habitat	See the conservation objectives supporting document for Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation and Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation for further details on all attributes and targets
Floodplain connectivity	Hectares	Maintain floodplain connectivity necessary to support the typical species and vegetation composition of the habitat	See the conservation objectives supporting document for Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation and Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation for further details on all attributes and targets

Conservation Objectives for : The Gearagh SAC [000108]

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

To maintain the favourable conservation condition of Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles in The Gearagh 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. See map 4	Old oak woodland occurs on a steep rocky south-facing slope above Toon Bridge. The habitat has not been surveyed in detail for The Gearagh SAC, but from current available data the area of Toon Bridge Wood has been mapped as 10.4ha (NPWS internal files)
Habitat distribution	Occurrence	No decline. See map 4	See note on area above
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	Attribute and target based on Perrin et al. (2008)
Woodland structure: community diversity and extent	Hectares	Maintain diversity and extent of community types	Attribute and target based on Perrin et al. (2008)
Woodland structure: natural regeneration	Seedling: sapling: pole ratio	Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy	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 ³ per hectare; number per hectare	At least 30m ³ /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 (see Perrin and Daly, 2010), archaeological and geological features as well as red-data and other rare or localised species
Vegetation composition: native tree cover	Percentage	No decline. Native tree cover not less than 95%	Species reported in NPWS internal files
Vegetation composition: typical species	Occurrence	A variety of typical native species present, depending on woodland type, including oak (<i>Quercus petraea</i>) and birch (<i>Betula pubescens</i>)	Species reported include oak, birch, hazel (<i>Corylus avellana</i>), ash (<i>Fraxinus excelsior</i>), rowan (<i>Sorbus aucuparia</i>), hawthorn (<i>Crataegus monogyna</i>), holly (<i>Ilex aquifolium</i>) and typical ground flora species (NPWS internal files)
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>)

Conservation Objectives for : The Gearagh SAC [000108]

91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae)

To maintain the favourable conservation condition of Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae)* in The Gearagh 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 101.2ha for site surveyed. See map 4	Alluvial forest was surveyed in The Gearagh SAC by Perrin et al. (2008) as part of the National Survey of Native Woodlands (NSNW) - site code 1317. The minimum area based on this survey is 101.2ha. Habitat 91E0 in The Gearagh SAC was also included in a national monitoring survey (O'Neill and Barron, 2013). Map 4 shows areas of woodland, including the area classified as 91E0 (101.2ha). NB: further unsurveyed areas may be present within the SAC
Habitat distribution	Occurrence	No decline. Surveyed location shown on map 4	Distribution based on Perrin et al. (2008). N.B. Further unsurveyed areas may be present within the SAC
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)
Woodland structure: community diversity and extent	Hectares	Maintain diversity and extent of community types	Described in Perrin et al. (2008). See also the conservation objectives for 3260 and 3270. particularly in relation to transitions to aquatic habitats
Woodland structure: natural regeneration	Seedling:sapling:pole ratio	Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy	Alder (<i>Alnus glutinosa</i>) and oak (<i>Quercus</i> spp.) tend to regenerate poorly. Ash (<i>Fraxinus excelsior</i>) often regenerates in large numbers although few seedlings reach pole size
Hydrological regime: flooding depth/height of water table	Metres	Appropriate hydrological regime necessary for maintenance of alluvial vegetation	Periodic flooding is essential to maintain alluvial woodlands along river flood plains, but not for woodland around springs/seepage areas
Woodland structure: dead wood	m ³ per hectare; number per hectare	At least 30m ³ /ha of fallen timber greater than 10cm diameter; 30snags/ha; both categories should include stems greater than 40cm diameter (greater than 20cm diameter in the case of alder (<i>Alnus glutinosa</i>))	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, archaeological and geological features as well as red-data and other rare or localised species. Notably, bird cherry (<i>Prunus padus</i>), listed as Near Threatened (Curtis and McGough, 1988), has also been reported from this habitat (NPWS internal files). Perrin and Daly (2010) list The Gearagh (NSNW site code 1317) as being "possible ancient woodland"
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 A variety of typical native species present, including oak (<i>Quercus</i> spp.), ash (<i>Fraxinus excelsior</i>), birch (<i>Betula pubescens</i>), alder (<i>Alnus glutinosa</i>) and willows (<i>Salix</i> spp.)	Species reported in Perrin et al. (2008) and NPWS internal files
Vegetation composition: negative indicator species	Occurrence	Negative indicator species, particularly non-native invasive species, absent or under control	Sycamore (<i>Acer pseudoplatanus</i>) occurs in this habitat and Indian balsam (<i>Impatiens glandulifera</i>) has also been reported (NPWS internal files)


Conservation Objectives for : The Gearagh SAC [000108]

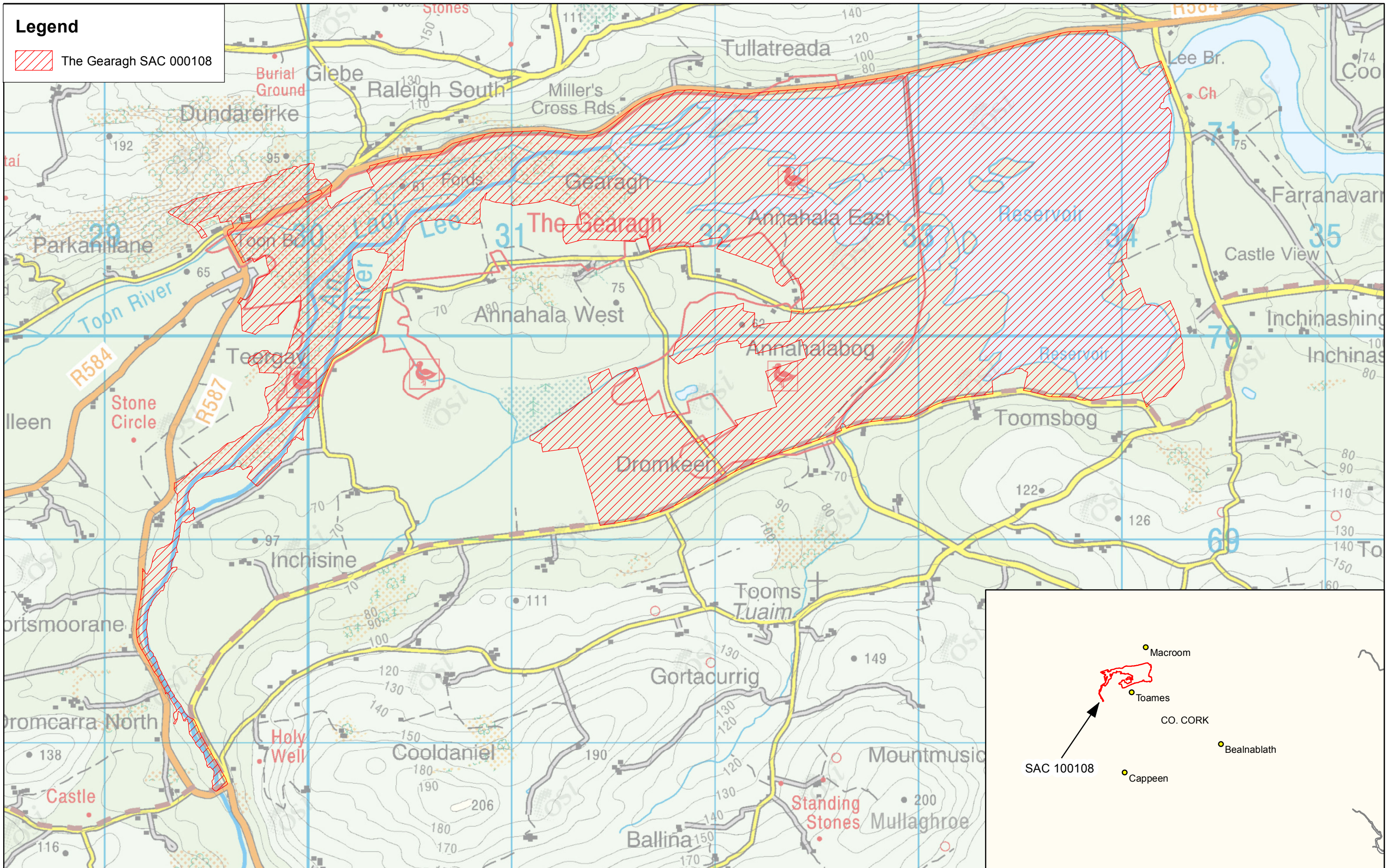
1355 Otter *Lutra lutra*

To maintain the favourable conservation condition of Otter in The Gearagh SAC, which is defined by the following list of attributes and targets:




Attribute	Measure	Target	Notes
Distribution	Percentage positive survey sites	No significant decline	Measure based on standard otter survey technique. Favourable Conservation Status (FCS) target, based on 1980/81 survey findings, is 88% in SACs. Current range is estimated at 93.6% (Reid et al., 2013)
Extent of terrestrial habitat	Hectares	No significant decline. Area mapped and calculated as 23.7ha along river banks/lake shoreline/around ponds and 62.3ha of wet woodland, giving a total of 86.0ha	No field survey. Areas mapped to include 10m terrestrial buffer along lake shoreline and river banks identified as critical for otters (NPWS, 2007). Also included is the entire area of wet woodland that occurs on islands where the River Lee main channel breaks into a complex and dynamic network of channels. All of this area is considered to be suitable otter habitat
Extent of freshwater (river) habitat	Kilometres	No significant decline. Length mapped and calculated as 10.6km	No field survey. River length calculated on the basis that otters will utilise freshwater habitats from estuary to headwaters (Chapman and Chapman, 1982). This SAC contains a dynamic network of inter-connected rivers and streams that are used by otter, however, this network has not been digitised. Such channels are included in the calculations for wet woodland area in the attribute above. The river length calculated and used in this target reflects only the main channel length as described in the OSI discovery datasets
Extent of freshwater (lake) habitat	Hectares	No significant decline. Area mapped and calculated as 129.5ha	No field survey. Area mapped based on evidence that otters tend to forage within 80m of the shoreline (NPWS, 2007)
Couching sites and holts	Number	No significant decline	Otters need lying up areas throughout their territory where they are secure from disturbance (Kruuk, 2006; Kruuk and Moorhouse, 1991)
Fish biomass available	Kilograms	No significant decline	Broad diet that varies locally and seasonally, but dominated by fish, in particular salmonids, eels and sticklebacks in freshwater (Bailey and Rochford, 2006)
Barriers to connectivity	Number	No significant increase	Otters will regularly commute across stretches of open water up to 500m e.g. between the mainland and an island; between two islands; across an estuary (De Jongh and O'Neill, 2010). It is important that such commuting routes are not obstructed. Given the dimensions of the lake in this SAC, all open water should be considered as providing potential commuting routes

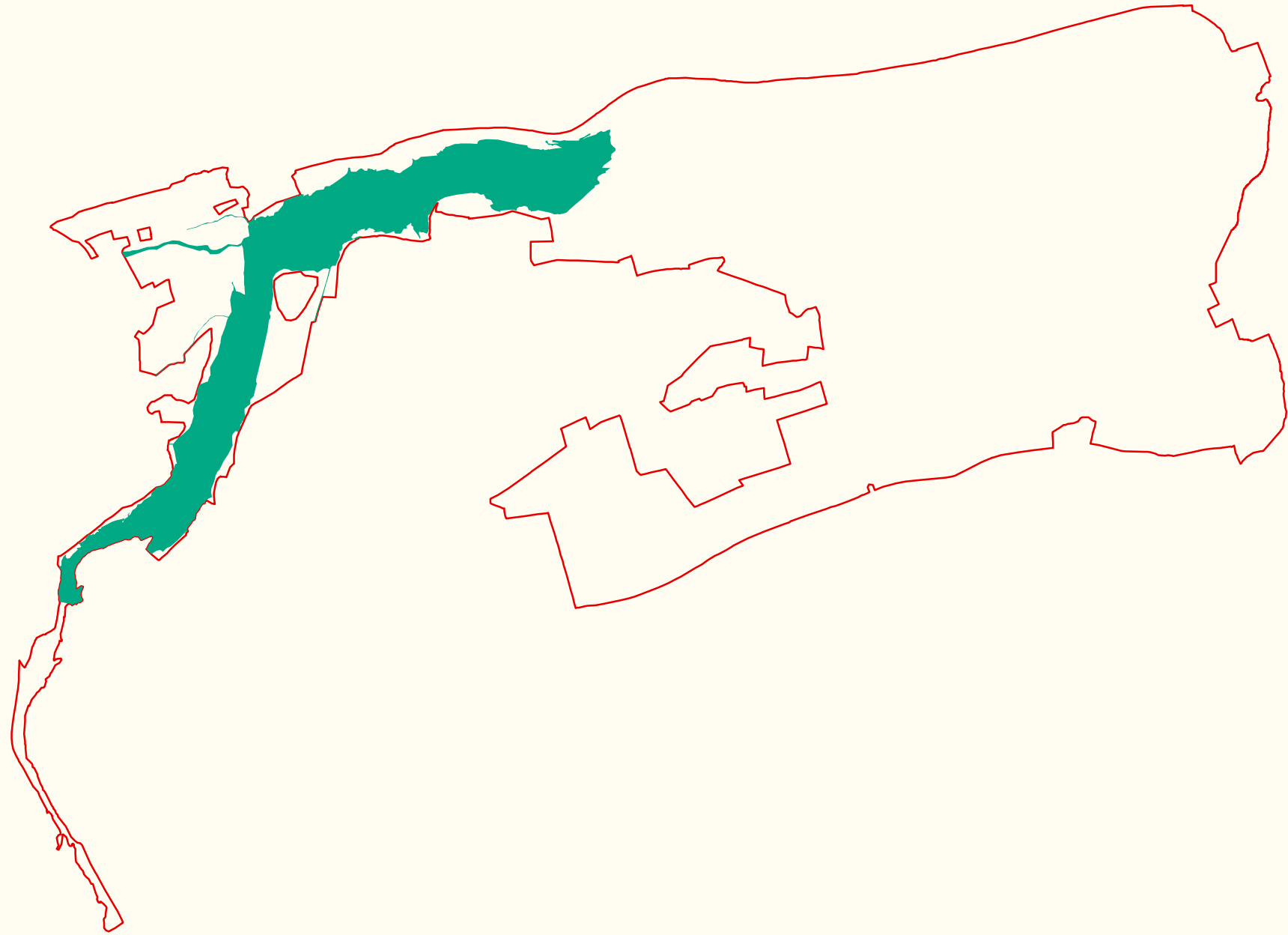
Legend

 The Gearagh SAC 000108



Legend

-  The Gearagh SAC 000108
-  3260 Water courses of plain to montane levels with the *Ranunculus fluitantis* and *Callitriche-Batrachion* vegetation
-  OSi Discovery Series County Boundaries

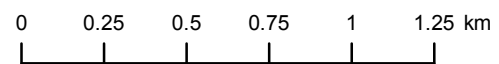


An Roinn Ealaíon, Oidhreacht,
Grótháil Réigiúnacha, Tuaithe agus Gaeltachta
Department of Arts, Heritage,
Regional, Rural and Gaeltacht Affairs

**MAP 2:
THE GEARAGH SAC
CONSERVATION OBJECTIVES
POTENTIAL DISTRIBUTION OF
WATER COURSES OF PLAIN TO
MONTANE LEVELS**

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

**SITE CODE:
SAC 000108; version 3.
CO. CORK**






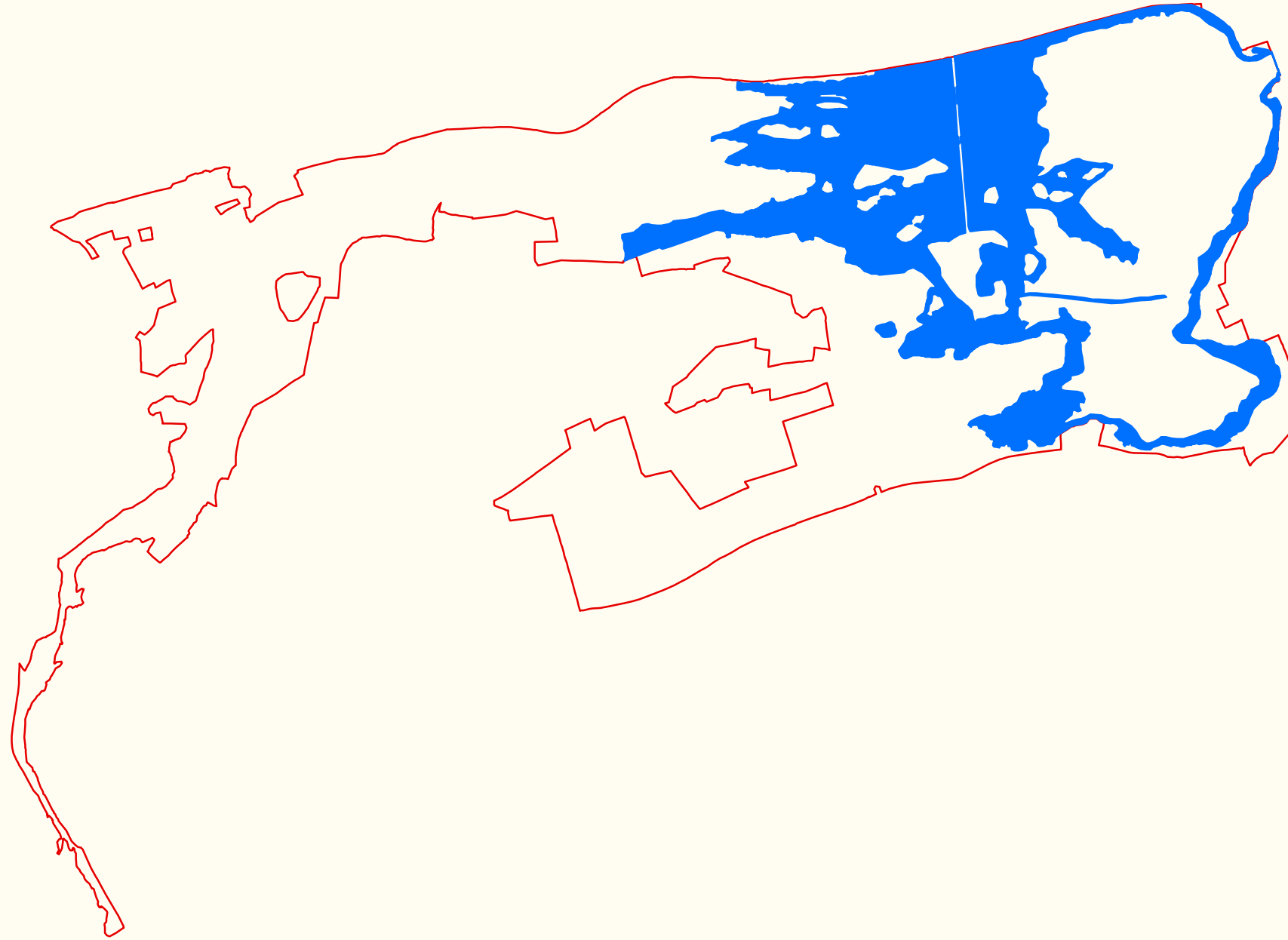
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**Map Version 1
Date: Aug 2016**

Legend

-  The Gearagh SAC 000108
-  3270 Rivers with muddy banks with *Chenopodium rubri p.p.* and *Bidention p.p.* vegetation
-  OSi Discovery Series County Boundaries

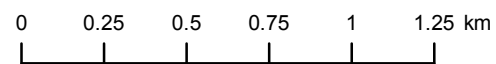


An Roinn Ealaíon, Oidhreacht,
Grótháil Réigiúnacha, Tuaithe agus Gaeltachta
Department of Arts, Heritage,
Regional, Rural and Gaeltacht Affairs

**MAP 3:
THE GEARAGH SAC
CONSERVATION OBJECTIVES
POTENTIAL DISTRIBUTION OF
RIVERS WITH MUDDY BANKS**

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

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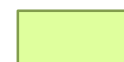



**Map Version 1
Date: Aug 2016**

Legend

 The Gearagh SAC 000108

Annex I Woodland Habitats

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

 91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)

