

# National Parks and Wildlife Service

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## *Conservation Objectives Series*

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### Maumturk Mountains SAC 002008



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

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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

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002008	Maumturk Mountains SAC
1106	Salmon <i>Salmo salar</i>
1833	Slender Naiad <i>Najas flexilis</i>
3110	Oligotrophic waters containing very few minerals of sandy plains ( <i>Littorelletalia uniflorae</i> )
4010	Northern Atlantic wet heaths with <del><i>Cladonia</i></del> <i>Cladonia</i>
4060	Alpine and Boreal heaths
7130	Blanket bogs (* if active bog)
7150	Depressions on peat substrates of the Rhynchosporion
8220	Siliceous rocky slopes with chasmophytic vegetation

**Please note that this SAC is adjacent to Lough Corrib SAC (000297), The Twelve Bens/Garraun Complex SAC (002031), Connemara Bog Complex SAC (002034), Lough Corrib SPA (004042) and Connemara Bog Complex SPA (004181). See map 2. The conservation objectives for this site should be used in conjunction with those for the adjacent sites as appropriate.**

## Supporting documents, relevant reports & publications

Supporting documents, NPWS reports and publications are available for download from: [www.npws.ie/Publications](http://www.npws.ie/Publications)

### NPWS Documents

<b>Year :</b>	1989
<b>Title :</b>	A survey to locate blanket bogs in Co. Galway. Part 2
<b>Author :</b>	Douglas, C.; Garvey, L.; Kelly, L.; O'Sullivan, A.
<b>Series :</b>	Unpublished report to the Wildlife Service
<b>Year :</b>	2012
<b>Title :</b>	Ireland Red List No. 8: Bryophytes
<b>Author :</b>	Lockhart, N.; Hodgetts, N.; Holyoak, D.
<b>Series :</b>	Ireland Red List series, NPWS
<b>Year :</b>	2013
<b>Title :</b>	The status of EU protected habitats and species in Ireland. Volume 2. Habitats assessments
<b>Author :</b>	NPWS
<b>Series :</b>	Conservation assessments
<b>Year :</b>	2014
<b>Title :</b>	Guidelines for a national survey and conservation assessment of upland vegetation and habitats in Ireland, Version 2.0
<b>Author :</b>	Perrin, P.M.; Barron, S.J.; Roche, J.R.; O'Hanrahan, B.
<b>Series :</b>	Irish Wildlife Manual No. 79
<b>Year :</b>	2015
<b>Title :</b>	Habitats Directive Annex I lake habitats: a working interpretation for the purposes of site-specific conservation objectives and Article 17 reporting
<b>Author :</b>	O Connor, Á.
<b>Series :</b>	Unpublished document by NPWS
<b>Year :</b>	2016
<b>Title :</b>	Ireland Red List No. 10: Vascular Plants
<b>Author :</b>	Wyse Jackson, M.; FitzPatrick, Ú.; Cole, E.; Jebb, M.; McFerran, D.; Sheehy Skeffington, M.; Wright, M.
<b>Series :</b>	Ireland Red Lists series, NPWS
<b>Year :</b>	2017
<b>Title :</b>	Maumturk Mountains SAC (site code: 2008) Conservation objectives supporting document-blanket bogs and associated habitats V1
<b>Author :</b>	NPWS
<b>Series :</b>	Conservation objectives supporting document
<b>Year :</b>	2017
<b>Title :</b>	Maumturk Mountains SAC (site code: 2008) Conservation objectives supporting document- <i>Najas flexilis</i> V1
<b>Author :</b>	NPWS
<b>Series :</b>	Conservation objectives supporting document

### Other References

<b>Year :</b>	1982
<b>Title :</b>	Eutrophication of waters. Monitoring assessment and control
<b>Author :</b>	OECD
<b>Series :</b>	OECD, Paris

<b>Year :</b>	1983
<b>Title :</b>	Flora of Connemara and the Burren
<b>Author :</b>	Webb, D.A.; Scannell, M.J.P.
<b>Series :</b>	Royal Dublin Society, Dublin and Cambridge University Press, Cambridge
<b>Year :</b>	1986
<b>Title :</b>	A survey of the flora of some mountain ranges in the west of Ireland
<b>Author :</b>	Roden, C.M.
<b>Series :</b>	The Irish Naturalists' Journal, 22: 52-59
<b>Year :</b>	2000
<b>Title :</b>	Colour in Irish lakes
<b>Author :</b>	Free, G.; Allott, N.; Mills, P.; Kennelly, C.; Day, S.
<b>Series :</b>	Verhandlungen Internationale Vereinigung für theoretische und angewandte Limnologie, 27: 2620-2623
<b>Year :</b>	2002
<b>Title :</b>	Deterioration of Atlantic soft water macrophyte communities by acidification, eutrophication and algalisation
<b>Author :</b>	Arts, G.H.P.
<b>Series :</b>	Aquatic Botany, 73: 373-393
<b>Year :</b>	2006
<b>Title :</b>	A reference-based typology and ecological assessment system for Irish lakes. Preliminary investigations. Final report. Project 2000-FS-1-M1 Ecological assessment of lakes pilot study to establish monitoring methodologies EU (WFD)
<b>Author :</b>	Free, G.; Little, R.; Tierney, D.; Donnelly, K.; Coroni, R.
<b>Series :</b>	EPA, Wexford
<b>Year :</b>	2008
<b>Title :</b>	Water Quality in Ireland 2004-2006
<b>Author :</b>	Clabby, K.J.; Bradley, C.; Craig, M.; Daly, D.; Lucey, J.; McGarrigle, M.; O'Boyle, S.; Tierney, D.; Bowman, J.
<b>Series :</b>	EPA, Wexford
<b>Year :</b>	2009
<b>Title :</b>	The identification, characterization and conservation value of isoetid lakes in Ireland
<b>Author :</b>	Free, G.; Bowman, J.; McGarrigle, M.; Little, R.; Coroni, R.; Donnelly, K.; Tierney, D.; Trodd, W.
<b>Series :</b>	Aquatic Conservation: Marine and Freshwater Ecosystems, 19(3): 264–273
<b>Year :</b>	2010
<b>Title :</b>	Water quality in Ireland 2007-2009
<b>Author :</b>	McGarrigle, M.; Lucey, J.; Ó Cinnéide, M.
<b>Series :</b>	EPA, Wexford
<b>Year :</b>	2013
<b>Title :</b>	A report on the aquatic macrophytes in 12 lakes along the Maam Cross to Ballynahinch Road
<b>Author :</b>	Roden, C.
<b>Series :</b>	Unpublished report to RPS Group
<b>Year :</b>	2015
<b>Title :</b>	Water quality in Ireland 2010-2012
<b>Author :</b>	Bradley, C.; Byrne, C.; Craig, M.; Free, G.; Gallagher, T.; Kennedy, B.; Little, R.; Lucey, J.; Mannix, A.; McCreesh, P.; McDermott, G.; McGarrigle, M.; Ní Longphuirt, S.; O'Boyle, S.; Plant, C.; Tierney, D.; Trodd, W.; Webster, P.; Wilkes, R.; Wynne, C.
<b>Series :</b>	EPA, Wexford

**Year :** 2016  
**Title :** The Status of Irish Salmon Stocks in 2015 with Precautionary Catch Advice for 2016  
**Author :** SSCS (Standing Scientific Committee on Salmon)  
**Series :** Independent Scientific Report to Inland Fisheries Ireland

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## Spatial data sources

**Year :** 2008  
**Title :** OSi 1:5000 IG vector dataset  
**GIS Operations :** WaterPolygons feature class clipped to the SAC boundary. Expert opinion used to identify Annex I habitat and to resolve any issues arising  
**Used For :** 3110 (map 3)

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**Year :** 2013  
**Title :** Najas flexilis data  
**GIS Operations :** Lake habitat for species clipped to SAC boundary  
**Used For :** 1833 (map 4)

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## Conservation Objectives for : Maumturk Mountains SAC [002008]

### 3110 Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)

To maintain the favourable conservation condition of Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) in Maumturk Mountains 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	Lake habitat 3110 is considered likely to occur in Loughs Shindilla, Loughanillaun, Maumwee and others in Maumturk Mountains SAC. In line with Article 17 reporting (NPWS, 2013), all lakes larger than 1ha were mapped as potential 3110 (see map 3). Lake habitat 3130 may also occur in lakes on marble formations, such as Loughs Lehanagh and Derryneen, both of which have slender naiad ( <i>Najas flexilis</i> ), a characteristic species of lake habitat 3130. Two measures of extent should be used: 1. the area of the lake itself and; 2. the extent of the vegetation communities/zones that typify the habitat. Further information relating to all attributes is provided in the lake habitats supporting document for the purposes of site-specific conservation objectives and Article 17 reporting (O Connor, 2015)
Habitat distribution	Occurrence	No decline, subject to natural processes	As noted above, habitat 3110 is likely to be widespread in lakes in the SAC, and all lakes larger than 1ha have been mapped as potential 3110 (see map 3)
Typical species	Occurrence	Typical species present, in good condition, and demonstrating typical abundances and distribution	For lists of typical plant species, see the Article 17 habitat assessment for 3110 (NPWS, 2013) and the lake habitats supporting document (O Connor, 2015). Environmental Protection Agency (EPA) biologists have recorded waterwort ( <i>Elatine hexandra</i> ), pipewort ( <i>Eriocaulon aquaticum</i> ), quillwort ( <i>Isoetes lacustris</i> ), bulbous rush ( <i>Juncus bulbosus</i> ), shoreweed ( <i>Littorella uniflora</i> ), water lobelia ( <i>Lobelia dortmanna</i> ), alternate water-milfoil ( <i>Myriophyllum alterniflorum</i> ), broad-leaved pondweed ( <i>Potamogeton natans</i> ) and bladderwort ( <i>Utricularia</i> sp.) in Loughs Loughanillaun, Maumwee and Shindilla. See the Maumturk Mountains SAC conservation objectives supporting document for slender naiad ( <i>Najas flexilis</i> ) (1833) for information on Lehanagh and Derryneen Loughs. See also Webb and Scannell (1983)
Vegetation composition: characteristic zonation	Occurrence	All characteristic zones should be present, correctly distributed and in good condition	Further work is necessary to describe the characteristic zonation and other spatial patterns in lake habitat 3110 (see O Connor, 2015)
Vegetation distribution: maximum depth	Metres	Maintain maximum depth of vegetation, subject to natural processes	The maximum depth of vegetation is likely to be specific to the lake shoreline in question. Further work is necessary to develop indicative targets for lake habitat 3110. See the slender naiad ( <i>Najas flexilis</i> ) supporting document for information on Lehanagh and Derryneen Loughs. Loughanillaun ('Anillaun'), Maumwee and Shindilla Loughs are Water Framework Directive (WFD) monitoring lakes and information on vegetation depth may be available from the EPA
Hydrological regime: water level fluctuations	Metres	Maintain appropriate natural hydrological regime necessary to support the habitat	Fluctuations in lake water level are typical in Ireland, but can be amplified by activities such as abstraction and drainage. Increased water level fluctuations can increase wave action, up-root vegetation, increase turbidity, alter the substratum and lead to release of nutrients from the sediment. The hydrological regime of the lakes must be maintained so that the area, distribution and depth of the lake habitat and its constituent/characteristic vegetation zones and communities are not reduced

Lake substratum quality	Various	Maintain appropriate substratum type, extent and chemistry to support the vegetation	Research is required to further characterise the substratum types (particle size and origin) and substratum quality (notably pH, calcium, iron and nutrient concentrations) favoured by each of the five Annex I lake habitats in Ireland. It is likely that lake habitat 3110 is associated with a range of nutrient-poor substrates, from stones, cobble and gravel, through sands, silt, clay and peat. Substratum particle size is likely to vary with depth and along the shoreline within a single lake
Water quality: transparency	Metres	Maintain appropriate Secchi transparency. There should be no decline in Secchi depth/transparency	Transparency relates to light penetration and, hence, to the depth of colonisation of vegetation. It can be affected by phytoplankton blooms, water colour and turbidity. Specific targets have yet to be established for lake habitat 3110 (O Connor, 2015). Habitat 3110 is associated with very clear water. The OECD fixed boundary system set transparency targets for oligotrophic lakes of $\geq 6\text{m}$ annual mean Secchi disk depth, and $\geq 3\text{m}$ annual minimum Secchi disk depth. Free et al. (2009) found high isoetid abundance in lakes with Secchi depths of more than 3m. Maumwee Lough had transparency of 7.1m in 2007 (McGarrigle et al., 2010)
Water quality: nutrients	$\mu\text{g/l P}$ ; $\text{mg/l N}$	Maintain/restore the concentration of nutrients in the water column to sufficiently low levels to support the habitat and its typical species	As a nutrient-poor habitat, oligotrophic and WFD 'high' status targets apply. Where a lake has nutrient concentrations that are lower than these targets, there should be no decline within class, i.e. no upward trend in nutrient concentrations. For lake habitat 3110, annual average total phosphorus (TP) concentration should be $\leq 10\mu\text{g/l TP}$ , average annual total ammonia concentration should be $\leq 0.040\text{mg/l N}$ and annual 95th percentile for total ammonia should be $\leq 0.090\text{mg/l N}$ . See also The European Communities Environmental Objectives (Surface Waters) Regulations 2009. Loughs Maumwee and Loughanillaun were at high nutrient status in the 2007-09 and 2010-12 reporting periods, however, Shindilla Lough exceeded the TP target in 2004-06 and 2007-09 (Clabby et al., 2008; McGarrigle et al., 2010; Bradley et al., 2015)
Water quality: phytoplankton biomass	$\mu\text{g/l Chlorophyll } a$	Maintain/restore appropriate water quality to support the habitat, including high chlorophyll <i>a</i> status	Oligotrophic and WFD 'high' status targets apply to lake habitat 3110. Where a lake has a chlorophyll <i>a</i> concentration that is lower than this target, there should be no decline within class, i.e. no upward trend in phytoplankton biomass. The average growing season (March-October) chlorophyll <i>a</i> concentration must be $< 5.8\mu\text{g/l}$ . The annual average chlorophyll <i>a</i> concentration should be $< 2.5\mu\text{g/l}$ and the annual peak chlorophyll <i>a</i> concentration should be $\leq 8.0\mu\text{g/l}$ . See also The European Communities Environmental Objectives (Surface Waters) Regulations 2009. Loughanillaun, Maumwee and Shindilla Loughs were oligotrophic in 2004-06 (Clabby et al., 2008) and had high chlorophyll <i>a</i> status in 2007-09 (McGarrigle et al., 2010), however, Loughanillaun declined to good chlorophyll <i>a</i> status in 2010-12 (Bradley et al., 2015)
Water quality: phytoplankton composition	EPA phytoplankton composition metric	Maintain/restore appropriate water quality to support the habitat, including high phytoplankton composition status	The EPA has developed a phytoplankton composition metric for nutrient enrichment of Irish lakes. As for other water quality indicators, lake habitat 3110 requires WFD high status. Phytoplankton composition was high at Maumwee Lough and good at Shindilla Lough in 2010-12 (Bradley et al., 2015)

Water quality: attached algal biomass	Algal cover and EPA phytobenthos metric	Maintain trace/absent attached algal biomass (<5% cover) and high phytobenthos status	Nutrient enrichment can favour epiphytic and epipelic algae that can out-compete the submerged vegetation. The cover abundance of attached algae in lake habitat 3110 should, therefore, be trace/absent (<5% cover). EPA phytobenthos can be used as an indicator of changes in attached algal biomass. As for other water quality indicators, lake habitat 3110 requires high phytobenthos status. Phytobenthos status was high at Maumwee and Shindilla Loughs in 2010-12 (Bradley et al., 2015)
Water quality: macrophyte status	EPA macrophyte metric (The Free Index)	Maintain high macrophyte status	Nutrient enrichment can favour more competitive submerged macrophyte species that out-compete the typical and characteristic species for the lake habitat. The EPA monitors macrophyte status for WFD purposes using the 'Free Index'. The target for lake habitat 3110 is high status or an Ecological Quality Ratio (EQR) for lake macrophytes of $\geq 0.90$ , as defined in Schedule Five of the European Communities Environmental Objectives (Surface Waters) Regulations 2009. All three monitored lakes had high macrophyte status in 2007-09 and 2010-12 (McGarrigle et al., 2010; Bradley et al., 2015)
Acidification status	pH units; mg/l	Maintain appropriate water and sediment pH, alkalinity and cation concentrations to support the habitat, subject to natural processes	Acidification can impact on species abundance and composition in soft water lake habitats. In Europe, acidification of isoetid lakes can lead to loss of isoetids and dominance by submerged <i>Sphagnum</i> mosses and <i>Juncus bulbosus</i> (Arts, 2002). The specific requirements of lake habitat 3110, in terms of water and sediment pH, alkalinity and cation concentration, have not been determined. For lake habitat 3110, and adopting a precautionary approach based on Arts (2002), minimum pH should not be <5.5 pH units. Maximum pH should be <9.0 pH units, in line with the surface water standards established for soft waters (where water hardness is $\leq 100$ mg/l calcium carbonate). See Schedule Five of the European Communities Environmental Objectives (Surface Waters) Regulations 2009. All three monitored lakes passed in 2007-09 and 2010-12 (McGarrigle et al., 2010; Bradley et al., 2015). Maumwee Lough is an acid sensitive water monitoring site
Water colour	mg/l PtCo	Maintain/restore appropriate water colour to support the habitat	Increased water colour and turbidity decrease light penetration and can reduce the area of available habitat for lake macrophytes, particularly at the lower euphotic depths. The primary source of increased water colour in Ireland is disturbance to peatland. No habitat-specific or national standards for water colour currently exist. Studies have shown median colour concentrations in Irish lakes of 38mg/l PtCo (Free et al., 2000) and 33mg/l PtCo (Free et al., 2006). It is likely that the water colour in all Irish lake habitats would naturally be <50mg/l PtCo. Water colour can be very low (<20mg/l PtCo or even <10mg/l PtCo) in lake habitat 3110, where the peatland in the lake's catchment is intact. Free et al. (2006) reported colour of 20mg/l PtCo in Loughanillaun, 26mg/l PtCo in Maumwee and 27mg/l PtCo in Shindilla Lough
Dissolved organic carbon (DOC)	mg/l	Maintain/restore appropriate organic carbon levels to support the habitat	Dissolved (and particulate) organic carbon (OC) in the water column is linked to water colour and acidification (organic acids). Increasing DOC in water has been documented across the Northern Hemisphere, including afforested peatland catchments in Ireland. Damage and degradation of peatland, leading to decomposition of peat is likely to be the predominant source of OC in Ireland. OC in water promotes decomposition by fungi and bacteria that, in turn, releases dissolved nutrients. The increased biomass of decomposers can also impact directly on the characteristic lake communities through shading, competition, etc.

Turbidity	Nephelometric turbidity units/ mg/l SS/ other appropriate units	Maintain appropriate turbidity to support the habitat	Turbidity can significantly affect the quantity and quality of light reaching rooted and attached vegetation and can, therefore, impact on lake habitats. The settlement of higher loads of inorganic or organic material on lake vegetation communities may also have impacts on sensitive, delicate species. Turbidity can increase as a result of re-suspension of material within the lake, higher loads entering the lake, or eutrophication. Turbidity measurement and interpretation is challenging. As a result, it is likely to be difficult to set habitat-specific targets for turbidity in lakes
Fringing habitat: area and condition	Hectares	Maintain the area and condition of fringing habitats necessary to support the natural structure and functioning of habitat 3110	Most lake shorelines have fringing habitats of reedswamp, other swamp, fen, marsh or wet woodland that intergrade with and support the structure and functions of the lake habitat. In Maumturk Mountains SAC, active blanket bog and heath communities are likely to dominate lake shorelines. Transition mire, fen, flush and grassland may also occur. Fringing habitats are dependent on the lake, particularly its water levels, and support wetland communities and species of conservation concern. Many of the fringing wetland habitats support higher invertebrate and plant species richness than the lake habitats themselves

## Conservation Objectives for : Maumturk Mountains SAC [002008]

### 4010 Northern Atlantic wet heaths with *Erica tetralix*

**To restore the favourable conservation condition of Northern Atlantic wet heaths with *Erica tetralix* in Maumturk Mountains 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	Northern Atlantic wet heaths with <i>Erica tetralix</i> has not been mapped in detail for Maumturk Mountains SAC, but from current available data the total area of the qualifying habitat is estimated to be approximately 4,460ha, covering 33% of the SAC (NPWS internal files). Further details on this and the following attributes can be found in the Maumturk Mountains SAC conservation objectives supporting document for blanket bogs and associated habitats
Habitat distribution	Occurrence	No decline, subject to natural processes	The habitat occurs on the lower slopes of the mountains and in other areas with gentle/moderately sloping ground in the SAC. It occurs in association with other habitats including blanket bog, dry heath and upland grassland (NPWS internal files). Further information can be found within NPWS internal files and the blanket bogs and associated habitats supporting document
Ecosystem function: soil nutrients	Soil pH and appropriate nutrient levels at a representative number of monitoring stops	Maintain soil nutrient status within natural range	See the blanket bogs and associated habitats supporting document for further details
Community diversity	Abundance of variety of vegetation communities	Maintain variety of vegetation communities, subject to natural processes	The diversity of wet heath communities within this SAC is unknown. Further information on vegetation communities associated with this habitat is presented in Perrin et al. (2014)
Vegetation composition: cross-leaved heath	Occurrence within 20m of a representative number of monitoring stops	Cross-leaved heath ( <i>Erica tetralix</i> ) present within a 20m radius of each monitoring stop	Attribute and target based on Perrin et al. (2014)
Vegetation composition: positive indicator species	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of positive indicator species at least 50%	Attribute and target based on Perrin et al. (2014), where the list of positive indicator species for this habitat is also presented
Vegetation composition: lichens and bryophytes	Percentage cover at a representative number of 2m x 2m monitoring stops	Total cover of <i>Cladonia</i> and <i>Sphagnum</i> species, <i>Racomitrium lanuginosum</i> and pleurocarpous mosses at least 10%	Attribute and target based on Perrin et al. (2014)
Vegetation composition: ericoid species and crowberry	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of ericoid species and crowberry ( <i>Empetrum nigrum</i> ) at least 15%	Attribute and target based on Perrin et al. (2014)
Vegetation composition: dwarf shrub species	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of dwarf shrubs less than 75%	Attribute and target based on Perrin et al. (2014)
Vegetation composition: negative indicator species	Percentage cover at a representative number of 2m x 2m monitoring stops	Total cover of negative indicator species less than 1%	Attribute and target based on Perrin et al. (2014), where the list of negative indicator species for this habitat is also presented
Vegetation composition: non-native species	Percentage cover at, and in local vicinity of, a representative number of 2m x 2m monitoring stops	Cover of non-native species less than 1%	Attribute and target based on Perrin et al. (2014)
Vegetation composition: native trees and shrubs	Percentage cover in local vicinity of a representative number of monitoring stops	Cover of scattered native trees and shrubs less than 20%	Attribute and target based on Perrin et al. (2014)

Vegetation composition: bracken	Percentage cover in local vicinity of a representative number of monitoring stops	Cover of bracken ( <i>Pteridium aquilinum</i> ) less than 10%	Attribute and target based on Perrin et al. (2014)
Vegetation composition: soft rush	Percentage cover in local vicinity of a representative number of monitoring stops	Cover of soft rush ( <i>Juncus effusus</i> ) less than 10%	Attribute and target based on Perrin et al. (2014)
Vegetation structure: <i>Sphagnum</i> condition	Condition at a representative number of 2m x 2m monitoring stops	Less than 10% of the <i>Sphagnum</i> cover is crushed, broken and/or pulled up	Attribute and target based on Perrin et al. (2014)
Vegetation structure: signs of browsing	Percentage of shoots browsed at a representative number of 2m x 2m monitoring stops	Less than 33% collectively of the last complete growing season's shoots of ericoids, crowberry ( <i>Empetrum nigrum</i> ) and bog-myrtle ( <i>Myrica gale</i> ) showing signs of browsing	Attribute and target based on Perrin et al. (2014)
Vegetation structure: burning	Occurrence in local vicinity of a representative number of monitoring stops	No signs of burning in sensitive areas, into the moss, liverwort or lichen layer or exposure of peat surface due to burning	Attribute and target based on Perrin et al. (2014), where the list of sensitive areas for this habitat is also presented
Physical structure: disturbed bare ground	Percentage cover at, and in local vicinity of, a representative number of 2m x 2m monitoring stops	Cover of disturbed bare ground less than 10%	Attribute and target based on Perrin et al. (2014)
Physical structure: drainage	Percentage area in local vicinity of a representative number of monitoring stops	Area showing signs of drainage from heavy trampling, tracking or ditches less than 10%	Attribute and target based on Perrin et al. (2014)
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 listed in the Flora (Protection) Order, 2015 (FPO) and/or the red data lists (Lockhart et al., 2012; Wyse Jackson et al., 2016). There are recent records for the FPO listed and Vulnerable marsh clubmoss ( <i>Lycopodiella inundata</i> ) (Wyse Jackson et al., 2016) from wet heath habitat along the shores of Maumwee Lough at Lackavrea (O. Daly, pers. comm.)

## Conservation Objectives for : Maumturk Mountains SAC [002008]

### 4060 Alpine and Boreal heaths

**To restore the favourable conservation condition of Alpine and Boreal heaths in Maumturk Mountains 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	Alpine and Boreal heaths habitat has not been mapped in detail for Maumturk Mountains SAC but from current available data the total area of the qualifying habitat is estimated to be approximately 1,301ha, covering 10% of the SAC (NPWS internal files). Further details on this and the following attributes can be found in the Maumturk Mountains SAC conservation objectives supporting document for blanket bogs and associated habitats
Habitat distribution	Occurrence	No decline, subject to natural processes	The habitat occurs on summits and ridges within the SAC. Examples are present at Knocknahillion and on a hill west of Corcogemore (NPWS internal files). Further information can be found within NPWS internal files and the blanket bogs and associated habitats supporting document
Ecosystem function: soil nutrients	Soil pH and appropriate nutrient levels at a representative number of monitoring stops	Maintain soil nutrient status within natural range	See the blanket bogs and associated habitats supporting document for further details
Community diversity	Abundance of variety of vegetation communities	Maintain variety of vegetation communities, subject to natural processes	The diversity of Alpine and Boreal heath communities within this SAC is unknown. Further information on vegetation communities associated with this habitat is presented in Perrin et al. (2014)
Vegetation composition: lichens and bryophytes	Number of species at a representative number of 2m x 2m monitoring stops	Number of bryophyte or non-crustose lichen species present at each monitoring stop is at least three	Attribute and target based on Perrin et al. (2014)
Vegetation composition: positive indicator species	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of positive indicator species at least 66%	Attribute and target based on Perrin et al. (2014), where the list of positive indicator species for this habitat is also presented
Vegetation composition: dwarf shrub species	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of dwarf shrub species at least 10%	Attribute and target based on Perrin et al. (2014)
Vegetation composition: negative indicator species	Percentage cover at a representative number of 2m x 2m monitoring stops	Total cover of negative indicator species less than 10%	Attribute and target based on Perrin et al. (2014), where the list of negative indicator species for this habitat 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 less than 1%	Attribute and target based on Perrin et al. (2014)
Vegetation structure: signs of grazing	Percentage of leaves grazed at a representative number of 2m x 2m monitoring stops	Less than 10% collectively of the live leaves of specific graminoids showing signs of grazing	Attribute and target based on Perrin et al. (2014). See the blanket bogs and associated habitats supporting document for the list of specific graminoids
Vegetation structure: signs of browsing	Percentage of shoots browsed at a representative number of 2m x 2m monitoring stops	Less than 33% collectively of the last complete growing season's shoots of ericoids and crowberry ( <i>Empetrum nigrum</i> ) showing signs of browsing	Attribute and target based on Perrin et al. (2014)
Vegetation structure: burning	Occurrence in local vicinity of a representative number of monitoring stops	No signs of burning within the habitat	Attribute and target based on Perrin et al. (2014)

Physical structure: disturbed bare ground	Percentage cover at, and in local vicinity of, a representative number of 2m x 2m monitoring stops	Cover of disturbed bare ground less than 10%	Attribute and target based on Perrin et al. (2014)
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 and no decline in status of hepatic mats associated with this habitat	This includes species listed in the Flora (Protection) Order, 2015 and/or the red data lists (Lockhart et al., 2012; Wyse Jackson et al., 2016). The Near Threatened alpine clubmoss ( <i>Diphasiastrum alpinum</i> ) (Wyse Jackson et al., 2016) was recorded from this habitat. Further information can be found in Roden (1986)

## Conservation Objectives for : Maumturk Mountains SAC [002008]

### 7130 Blanket bogs (\* if active bog)

**To restore the favourable conservation condition of Blanket bogs (\* if active bog) in Maumturk Mountains 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	Blanket bog has not been mapped in detail for Maumturk Mountains SAC, but from current available data the total area of the qualifying habitat is estimated to be approximately 1,926ha, covering 14% of the SAC (NPWS internal files). Further details on this and the following attributes can be found in the Maumturk Mountains SAC conservation objectives supporting document for blanket bogs and associated habitats
Habitat distribution	Occurrence	No decline, subject to natural processes	The habitat typically occurs in areas of lower ground along the western, eastern and south-eastern sections of the SAC. An excellent example of this habitat type is found at Caher (Douglas et al., 1989; NPWS internal files). Further information can be found within Douglas et al. (1989), NPWS internal files and the blanket bogs and associated habitats supporting document
Ecosystem function: soil nutrients	Soil pH and appropriate nutrient levels at a representative number of monitoring stops	Maintain soil nutrient status within natural range	See the blanket bogs and associated habitats supporting document for further details
Ecosystem function: peat formation	Active blanket bog as a proportion of the total area of Annex I blanket bog habitat	At least 99% of the total Annex I blanket bog area is active	See the blanket bogs and associated habitats supporting document for further details
Ecosystem function: hydrology	Flow direction, water levels, occurrence of drains and erosion gullies	Natural hydrology unaffected by drains and erosion	Further details and a brief discussion of restoration potential is presented in the blanket bogs and associated habitats supporting document
Community diversity	Abundance of variety of vegetation communities	Maintain variety of vegetation communities, subject to natural processes	A variety of blanket bog vegetation communities have been recorded in this SAC (Douglas et al., 1989; NPWS internal files), three of which correspond to communities recorded in the National Survey of Upland Habitats and listed in the provisional list of vegetation communities described in Perrin et al. (2014). Further information on vegetation communities associated with this habitat is presented in Perrin et al. (2014)
Vegetation composition: positive indicator species	Number of species at a representative number of 2m x 2m monitoring stops	Number of positive indicator species present at each monitoring stop is at least seven	Attribute and target based on Perrin et al. (2014), where the list of positive indicator species for this habitat is also presented
Vegetation composition: lichens and bryophytes	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of bryophytes or lichens, excluding <i>Sphagnum fallax</i> , at least 10%	Attribute and target based on Perrin et al. (2014)
Vegetation composition: potential dominant species	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of each of the potential dominant species less than 75%	Attribute and target based on Perrin et al. (2014). See the blanket bogs and associated habitats supporting document for the list of potential dominant species
Vegetation composition: negative indicator species	Percentage cover at a representative number of 2m x 2m monitoring stops	Total cover of negative indicator species less than 1%	Attribute and target based on Perrin et al. (2014), where the list of negative indicator species for this habitat is also presented
Vegetation composition: non-native species	Percentage cover at, and in local vicinity of, a representative number of 2m x 2m monitoring stops	Cover of non-native species less than 1%	Attribute and target based on Perrin et al. (2014)

Vegetation composition: native trees and shrubs	Percentage cover in local vicinity of a representative number of monitoring stops	Cover of scattered native trees and shrubs less than 10%	Attribute and target based on Perrin et al. (2014)
Vegetation structure: <i>Sphagnum</i> condition	Condition at a representative number of 2m x 2m monitoring stops	Less than 10% of the <i>Sphagnum</i> cover is crushed, broken and/or pulled up	Attribute and target based on Perrin et al. (2014)
Vegetation structure: signs of browsing	Percentage of shoots browsed at a representative number of 2m x 2m monitoring stops	Last complete growing season's shoots of ericoids, crowberry ( <i>Empetrum nigrum</i> ) and bog-myrtle ( <i>Myrica gale</i> ) showing signs of browsing collectively less than 33%	Attribute and target based on Perrin et al. (2014)
Vegetation structure: burning	Occurrence in local vicinity of a representative number of monitoring stops	No signs of burning in sensitive areas, into the moss, liverwort or lichen layer or exposure of peat surface due to burning	Attribute and target based on Perrin et al. (2014), where the list of sensitive areas for this habitat is also presented
Physical structure: disturbed bare ground	Percentage cover at, and in local vicinity of, a representative number of 2m x 2m monitoring stops	Cover of disturbed bare ground less than 10%	Attribute and target based on Perrin et al. (2014)
Physical structure: drainage	Percentage area in local vicinity of a representative number of monitoring stops	Area showing signs of drainage from heavy trampling, tracking or ditches less than 10%	Attribute and target based on Perrin et al. (2014)
Physical structure: erosion	Percentage area in local vicinity of a representative number of monitoring stops	Less than 5% of the greater bog mosaic comprises erosion gullies and eroded areas	Attribute and target based on Perrin et al. (2014)
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 and no decline in status of hepatic mats associated with this habitat	This includes species listed in the Flora (Protection) Order, 2015 (FPO) and/or the red data lists (Lockhart et al., 2012; Wyse Jackson et al., 2016). The Near Threatened brown beak-sedge ( <i>Rhynchospora fusca</i> ) (Wyse Jackson et al., 2016) has been recorded from blanket bog in the SAC (NPWS internal files). The FPO listed and Vulnerable marsh clubmoss ( <i>Lycopodiella inundata</i> ) and the FPO listed and Near Threatened slender cottongrass ( <i>Eriophorum gracile</i> ) (Wyse Jackson et al., 2016) have been recorded within the SAC (NPWS internal files), but these species cannot be assigned specifically to blanket bog

## Conservation Objectives for : Maumturk Mountains SAC [002008]

### 7150 Depressions on peat substrates of the Rhynchosporion

**To restore the favourable conservation condition of Depressions on peat substrates of the Rhynchosporion in Maumturk Mountains 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	Depressions on peat substrates of the Rhynchosporion has not been mapped in detail for Maumturk Mountains SAC and thus the total area of the qualifying habitat in the SAC is unknown. Further details on this and the following attributes can be found in the Maumturk Mountains SAC conservation objectives supporting document for blanket bogs and associated habitats
Habitat distribution	Occurrence	No decline, subject to natural processes	The habitat is documented to occur amongst wet areas in lowland blanket bog in the SAC. The best examples of this habitat occur at Caher and to the south-east of Maam bridge (Douglas et al., 1989; NPWS internal files). Further information can be found within Douglas et al. (1989), NPWS internal files and the blanket bogs and associated habitats supporting document
Ecosystem function: soil nutrients	Soil pH and appropriate nutrient levels at a representative number of monitoring stops	Maintain soil nutrient status within natural range	See the blanket bogs and associated habitats supporting document for further details
Vegetation composition: positive indicator species	Number of species at a representative number of 2m x 2m monitoring stops	Number of positive indicator species at each monitoring stop is at least five	Attribute and target based on Perrin et al. (2014), where the list of positive indicator species for this habitat is also presented
Vegetation composition: <i>Rhynchospora</i> spp.	Percentage cover at a representative number of 2m x 2m monitoring stops	Total cover of white beaked sedge ( <i>Rhynchospora alba</i> ) and brown beaked sedge ( <i>R. fusca</i> ) at least 10%	Attribute and target based on Perrin et al. (2014)
Vegetation composition: potential dominant species	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of each of the potential dominant species individually less than 35%	Attribute and target based on Perrin et al. (2014). See the blanket bogs and associated habitats supporting document for the list of potential dominant species
Vegetation composition: negative indicator species	Percentage cover at a representative number of 2m x 2m monitoring stops	Total cover of negative indicator species less than 1%	Attribute and target based on Perrin et al. (2014), where the list of negative indicator species for this habitat is also presented
Vegetation composition: non-native species	Percentage cover at, and in local vicinity of, a representative number of 2m x 2m monitoring stops	Cover of non-native species less than 1%	Attribute and target based on Perrin et al. (2014)
Vegetation composition: native trees and shrubs	Percentage cover in local vicinity of a representative number of monitoring stops	Cover of scattered native trees and shrubs less than 10%	Attribute and target based on Perrin et al. (2014)
Vegetation structure: <i>Sphagnum</i> condition	Condition at a representative number of 2m x 2m monitoring stops	Less than 10% of the <i>Sphagnum</i> cover is crushed, broken and/or pulled up	Attribute and target based on Perrin et al. (2014)
Vegetation structure: signs of browsing	Percentage of shoots browsed at a representative number of 2m x 2m monitoring stops	Last complete growing season's shoots of ericoids, crowberry ( <i>Empetrum nigrum</i> ) and bog-myrtle ( <i>Myrica gale</i> ) showing signs of browsing collectively less than 33%	Attribute and target based on Perrin et al. (2014)

Vegetation structure: burning	Occurrence in local vicinity of a representative number of monitoring stops	No signs of burning in sensitive areas, into the moss, liverwort or lichen layer or exposure of peat surface due to burning	Attribute and target based on Perrin et al. (2014), where the list of sensitive areas for this habitat is also presented
Physical structure: disturbed bare ground	Percentage cover at, and in local vicinity of, a representative number of 2m x 2m monitoring stops	Cover of disturbed bare ground less than 10%	Attribute and target based on Perrin et al. (2014)
Physical structure: drainage	Percentage area in local vicinity of a representative number of monitoring stops	Area showing signs of drainage from heavy trampling, tracking or ditches less than 10%	Attribute and target based on Perrin et al. (2014)
Physical structure: erosion	Percentage area in local vicinity of a representative number of monitoring stops	Less than 5% of the greater bog mosaic comprises erosion gullies and eroded areas	Attribute and target based on Perrin et al. (2014)
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 listed in the Flora (Protection) Order, 2015 (FPO) and/or the red data lists (Lockhart et al., 2012; Wyse Jackson et al., 2016). The Near Threatened brown beak-sedge ( <i>Rhynchospora fusca</i> ) and the FPO listed and Vulnerable marsh clubmoss ( <i>Lycopodiella inundata</i> ) (Wyse Jackson et al., 2016) have been recorded from the SAC (NPWS internal files), but these species cannot be assigned specifically to this habitat

## Conservation Objectives for : Maumturk Mountains SAC [002008]

### 8220 Siliceous rocky slopes with chasmophytic vegetation

**To restore the favourable conservation condition of Siliceous rocky slopes with chasmophytic vegetation in Maumturk Mountains 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	Siliceous rocky slopes with chasmophytic vegetation has not been mapped in detail for Maumturk Mountains SAC, but from current available data the total area of the qualifying habitat is estimated to be approximately 202ha, covering c.1% of the SAC (NPWS internal files). Further details on this and the following attributes can be found in the Maumturk Mountains SAC conservation objectives supporting document for blanket bogs and associated habitats
Habitat distribution	Occurrence	No decline, subject to natural processes	The habitat is present amongst the steep slopes and corries of the Maumturk Mountains, Teernakill South, Lackavrea and Knocknagur (NPWS internal files). Further information can be found within NPWS internal files and the blanket bogs and associated habitats supporting document
Ecosystem function: soil nutrients	Soil pH and appropriate nutrient levels at a representative number of monitoring stops	Maintain soil nutrient status within natural range	See the blanket bogs and associated habitats supporting document for further details
Vegetation composition: positive indicator species	Number of species in local vicinity of a representative number of monitoring stops	At least one positive indicator species present in vicinity of each monitoring stop	Attribute and target based on Perrin et al. (2014). The list of positive indicator species for this habitat is also presented in Perrin et al. (2014) and is the same as for 8110 Siliceous screes
Vegetation composition: non-native species	Percentage cover in local vicinity of a representative number of monitoring stops	Proportion of vegetation composed of non-native species less than 1%	Attribute and target based on Perrin et al. (2014)
Vegetation composition: bracken, native trees and shrubs	Percentage cover in local vicinity of a representative number of monitoring stops	Total cover of bracken ( <i>Pteridium aquilinum</i> ), native trees and shrubs less than 25%	Attribute and target based on Perrin et al. (2014)
Vegetation structure: grazing and browsing	Percentage of leaves/shoots grazed/browsed in local vicinity of a representative number of monitoring stops	Live leaves of forbs and shoots of dwarf shrubs showing signs of grazing or browsing collectively less than 50%	Attribute and target based on Perrin et al. (2014)
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 and no decline in status of hepatic mats associated with this habitat	This includes species listed in the Flora (Protection) Order, 2015 and/or the red data lists (Lockhart et al., 2012; Wyse Jackson et al., 2016). The Near Threatened beech fern ( <i>Phegopteris connectilis</i> ) (Wyse Jackson et al., 2016) has been recorded within the SAC (NPWS internal files), but this species cannot be assigned specifically to this habitat

## Conservation Objectives for : Maumturk Mountains SAC [002008]

### 1106 Salmon *Salmo salar*

To maintain the favourable conservation condition of Atlantic Salmon in Maumturk Mountains SAC, which is defined by the following list of attributes and targets:

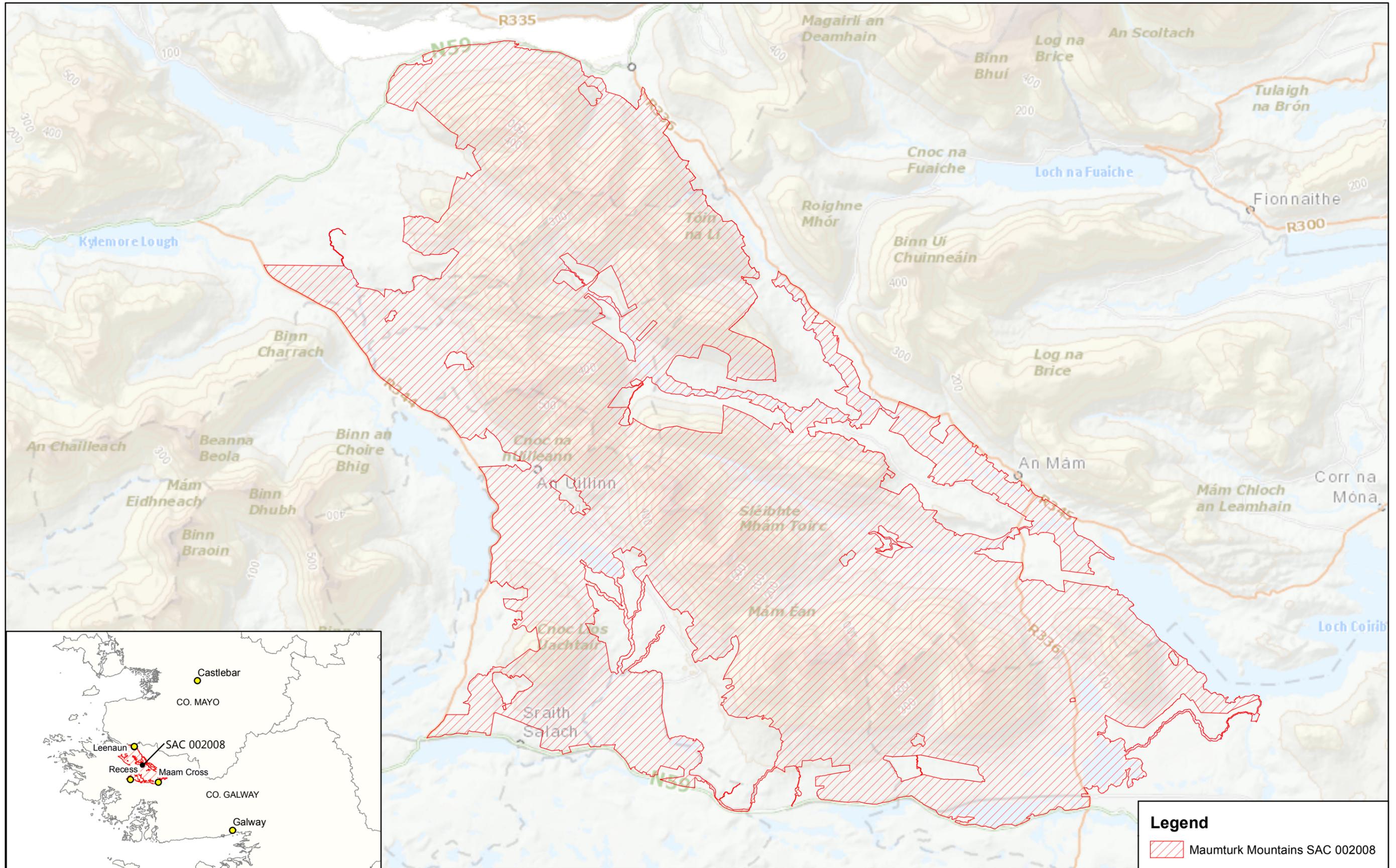
Attribute	Measure	Target	Notes
Distribution: extent of anadromy	Percentage of river accessible	100% of river channels down to second order accessible from estuary	Artificial barriers block salmon's upstream migration, thereby limiting species to lower stretches and restricting access to spawning areas
Adult spawning fish	Number	Conservation limit (CL) for each system consistently exceeded	A conservation limit (CL) is defined by the North Atlantic Salmon Conservation Organisation (NASCO) as "the spawning stock level that produces long-term average maximum sustainable yield as derived from the adult to adult stock and recruitment relationship". The target is based on the Standing Scientific Committee on Salmon (SSCS) annual model output of CL attainment levels. See SSCS (2016). Attainment of CL estimates are derived from direct counts of adults (rod catch, fish counter) or indirectly by fry abundance counts. Rivers in the Corrib catchment are currently achieving CL
Salmon fry abundance	Number of fry/5 minutes electrofishing	Maintain or exceed 0+ fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry/5 minutes sampling	The target is the threshold value for rivers currently exceeding their conservation limit (CL)
Out-migrating smolt abundance	Number	No significant decline	Smolt abundance can be negatively affected by a number of impacts such as estuarine pollution, predation and sea lice ( <i>Lepeophtheirus salmonis</i> )
Number and distribution of redds	Number and occurrence	No decline in number and distribution of spawning redds due to anthropogenic causes	Salmon spawn in clean gravels
Water quality	EPA Q value	At least Q4 at all sites sampled by EPA	Q values based on triennial water quality surveys carried out by the Environmental Protection Agency (EPA)

## Conservation Objectives for : Maumturk Mountains SAC [002008]

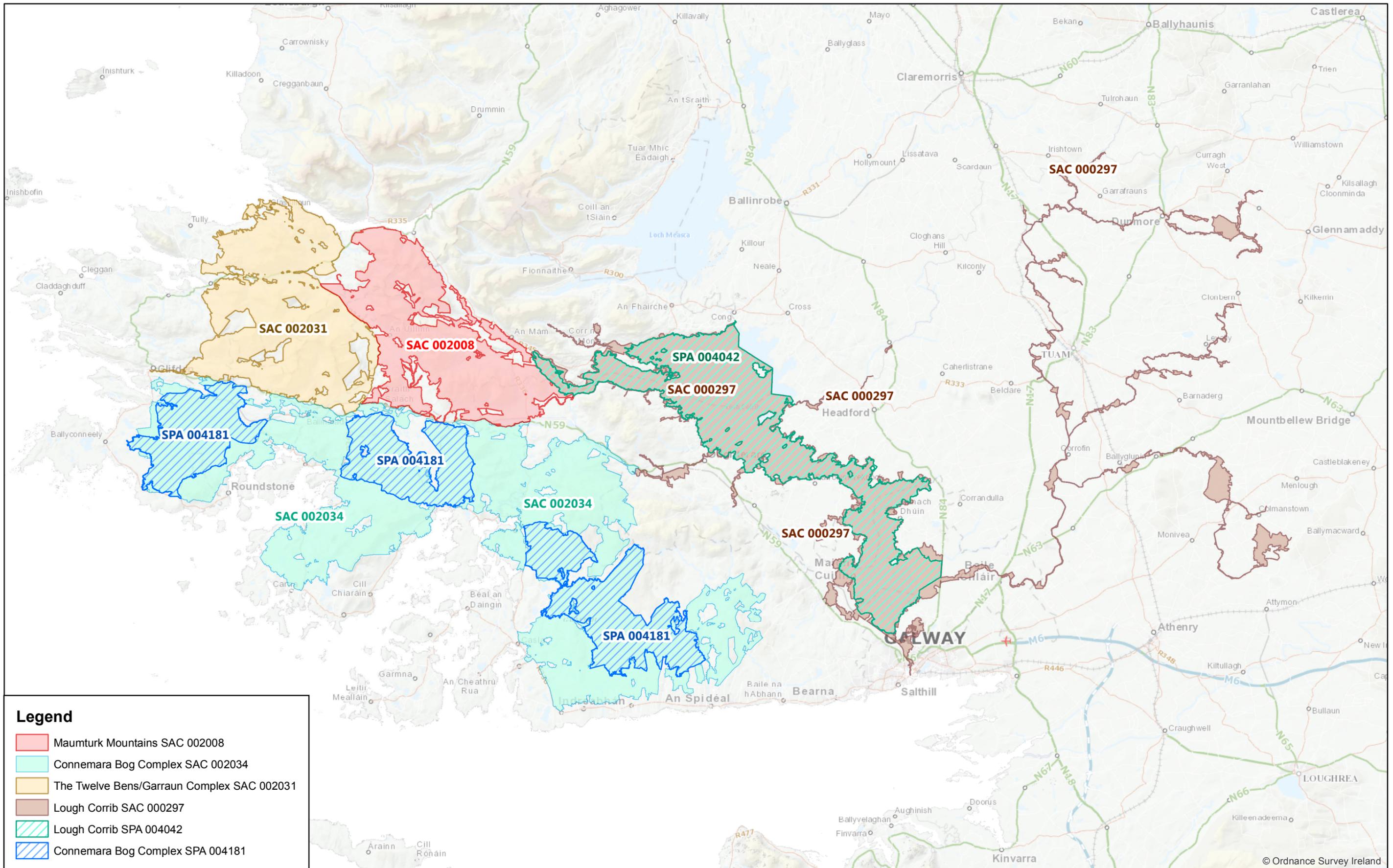
### 1833 Slender Naiad *Najas flexilis*

**To maintain the favourable conservation condition of Slender Naiad in Maumturk Mountains SAC, which is defined by the following list of attributes and targets:**

Attribute	Measure	Target	Notes
Population extent	Hectares; distribution	No change to the spatial extent of <i>Najas flexilis</i> within Loughs Lehanagh and Derrynreen, subject to natural processes. See map 4 for known locations	The selection of Maumturk Mountains SAC for <i>Najas flexilis</i> (slender naiad) was based on its presence in Lehanagh Lough. In 2013, Dr Cilian Roden discovered a small population in Derrynreen Lough in the SAC (Roden, 2013). It is possible that the species occurs in other lakes within the SAC. See the Maumturk Mountains SAC conservation objectives supporting document for <i>Najas flexilis</i> for further details
Population depth	Metres	No change to the depth range of <i>Najas flexilis</i> within each lake, subject to natural processes	See the <i>Najas flexilis</i> supporting document for further details
Population viability	Plant traits	No decline in plant fitness, subject to natural processes	See the <i>Najas flexilis</i> supporting document for further details
Population abundance	Square metres	No change to the cover abundance of <i>Najas flexilis</i> , subject to natural processes	See the <i>Najas flexilis</i> supporting document for further details
Species distribution	Occurrence	No decline, subject to natural processes	See the <i>Najas flexilis</i> supporting document for further details
Habitat extent	Hectares	No decline, subject to natural processes	See the <i>Najas flexilis</i> supporting document for further details
Hydrological regime: water level fluctuations	Metres	Maintain appropriate natural hydrological regime necessary to support the habitat for the species	See the <i>Najas flexilis</i> supporting document for further details
Lake substratum quality	Various	Maintain appropriate substratum type, extent and chemistry to support the populations of the species	See the <i>Najas flexilis</i> supporting document for further details
Water quality	Various	Maintain appropriate water quality to support the populations of the species	See the <i>Najas flexilis</i> supporting document for further details
Acidification status	pH units; mg/l	Maintain appropriate water and sediment pH, alkalinity and cation concentrations to support the populations of <i>Najas flexilis</i> , subject to natural processes	See the <i>Najas flexilis</i> supporting document for further details
Water colour	mg/l PtCo	Maintain appropriate water colour to support the populations of <i>Najas flexilis</i>	See the <i>Najas flexilis</i> supporting document for further details
Associated species	Species composition and abundance	Maintain appropriate associated species and vegetation communities to support the populations of <i>Najas flexilis</i>	See the <i>Najas flexilis</i> supporting document for further details
Fringing habitat: area and condition	Hectares	Maintain the area and condition of fringing habitats necessary to support the populations of <i>Najas flexilis</i>	See the <i>Najas flexilis</i> supporting document for further details



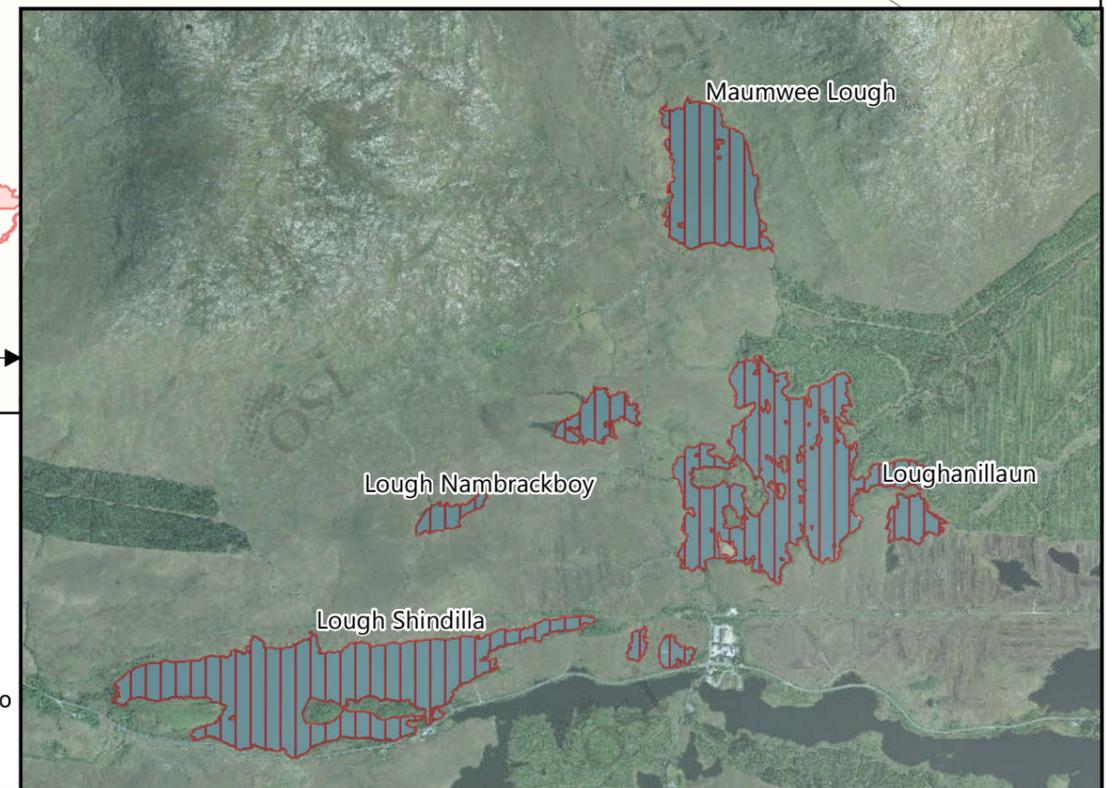
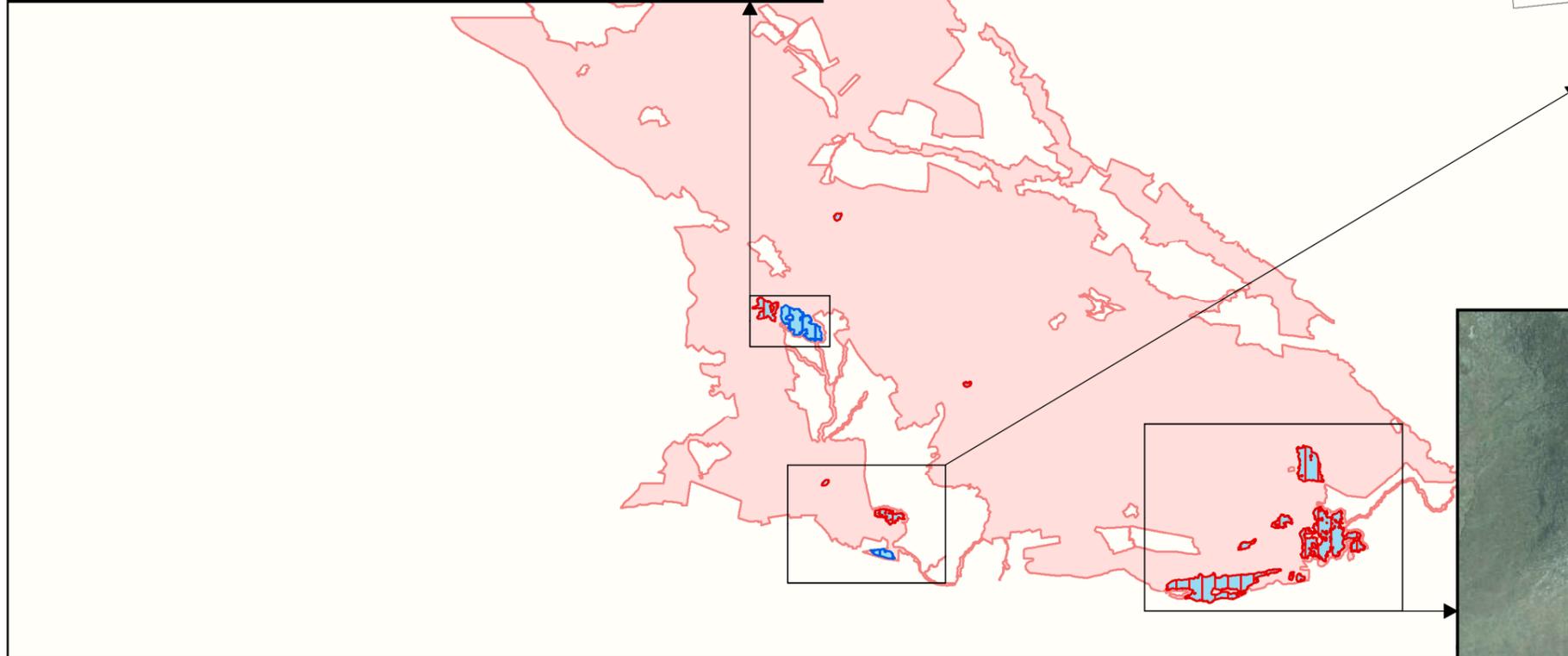
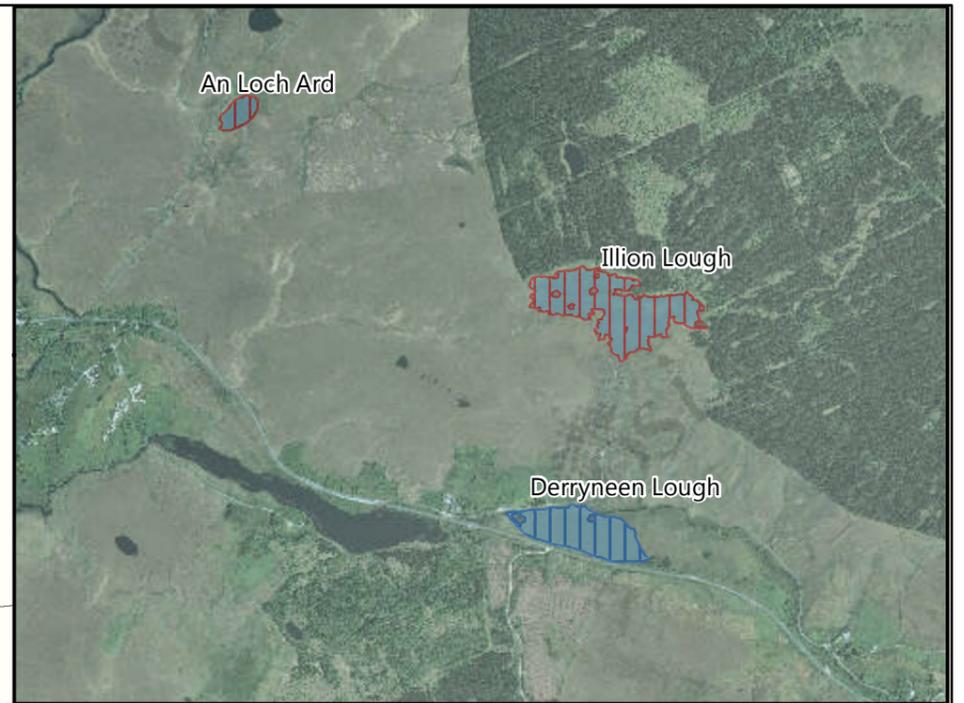
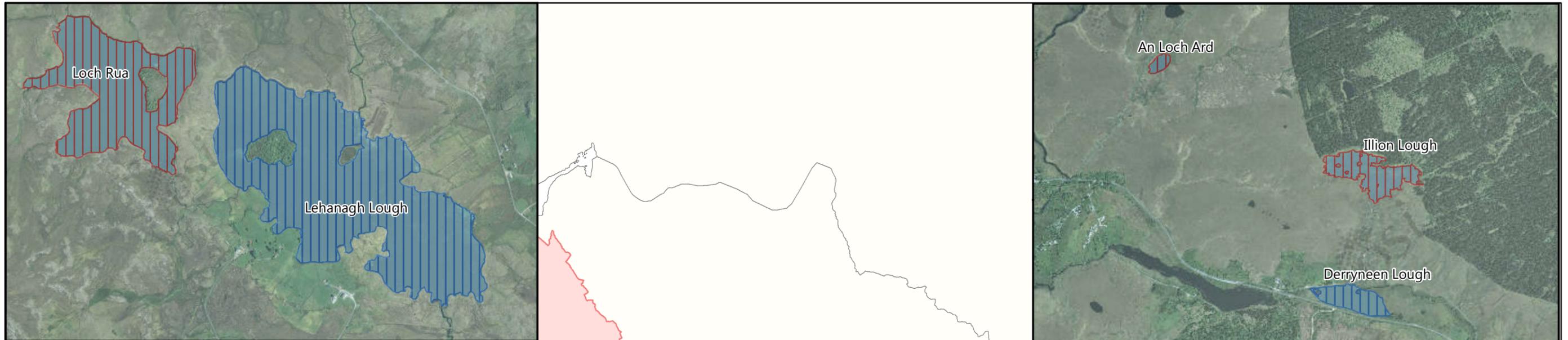
**Legend**  
 Maumturk Mountains SAC 002008



**Legend**

- Maumturk Mountains SAC 002008
- Connemara Bog Complex SAC 002034
- The Twelve Bens/Garraun Complex SAC 002031
- Lough Corrib SAC 000297
- Lough Corrib SPA 004042
- Connemara Bog Complex SPA 004181

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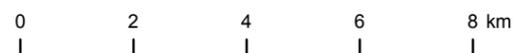


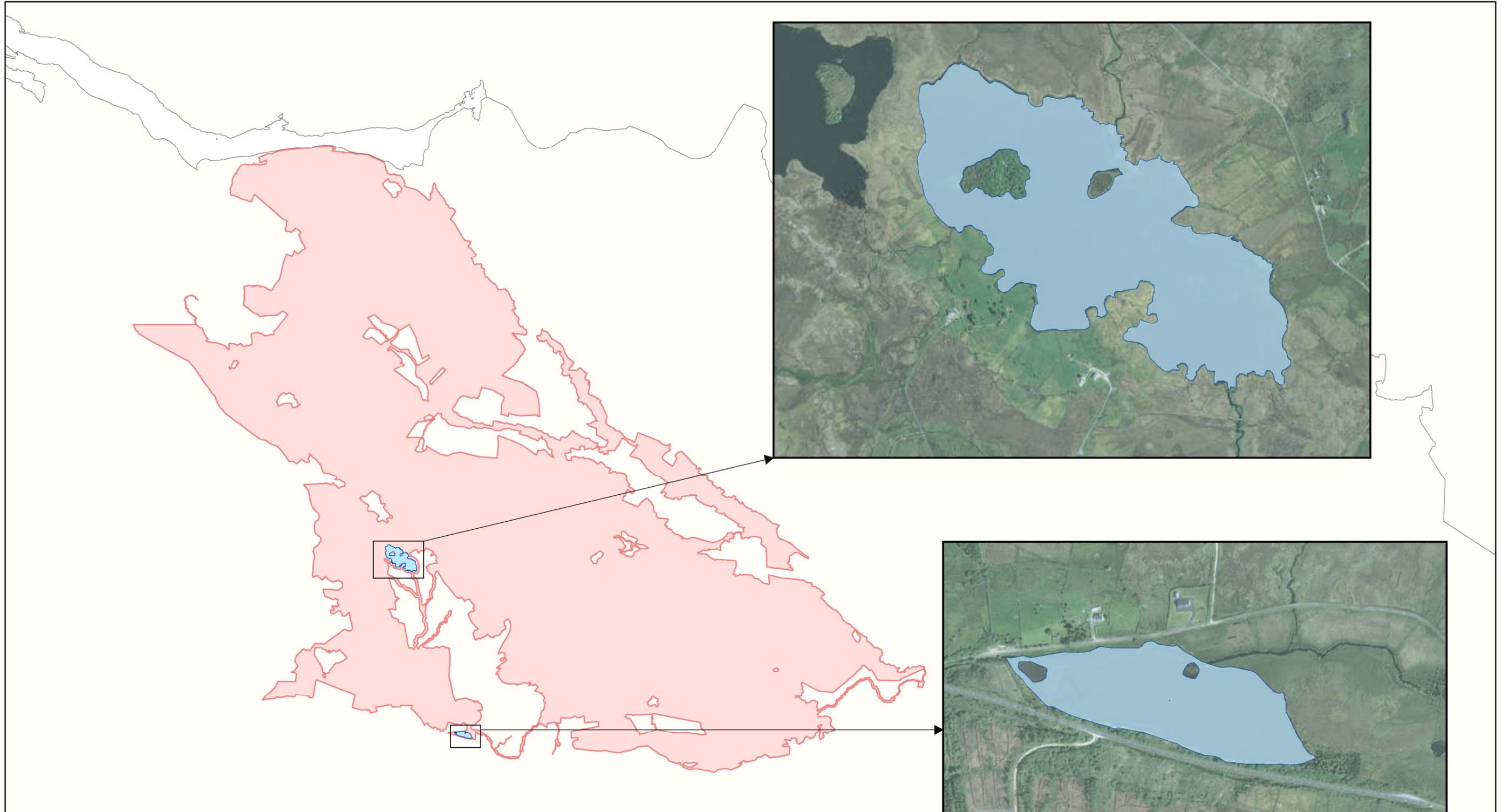
**Legend**

-  Maumturk Mountains SAC 002008
-  OSi Discovery Series County Boundary

**Indicative Lake Habitats**

-  Potential 3110 Potential oligotrophic waters containing very few minerals of sandy plains: *Littorelletalia uniflorae*
-  Potential 3110 / Potential 3130\* Potential oligotrophic waters containing very few minerals of sandy plains: *Littorelletalia uniflorae* / Potential oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletalia uniflorae* and/or of the *Isoëto-Nanojuncetea*  
\*Habitat 3130 not a qualifying interest





**Legend**

- 1833 Slender Naiad *Najas flexilis*
- Maumturk Mountains SAC 002008
- OSi Discovery Series County Boundary