

# National Parks and Wildlife Service

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## *Conservation Objectives Series*

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### Clyard Kettle-holes SAC 000480



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

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## Introduction

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats and Birds Directives and Special Areas of Conservation and Special Protection Areas are designated to afford protection to the most vulnerable of them. These two designations are collectively known as the Natura 2000 network.

European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the Natura 2000 network at favourable conservation condition. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

A site-specific conservation objective aims to define favourable conservation condition for a particular habitat or species at that site.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

### Notes/Guidelines:

1. The targets given in these conservation objectives are based on best available information at the time of writing. As more information becomes available, targets for attributes may change. These will be updated periodically, as necessary.
2. An appropriate assessment based on these conservation objectives will remain valid even if the targets are subsequently updated, providing they were the most recent objectives available when the assessment was carried out. It is essential that the date and version are included when objectives are cited.
3. Assessments cannot consider an attribute in isolation from the others listed for that habitat or species, or for other habitats and species listed for that site. A plan or project with an apparently small impact on one attribute may have a significant impact on another.
4. Please note that the maps included in this document do not necessarily show the entire extent of the habitats and species for which the site is listed. This should be borne in mind when appropriate assessments are being carried out.
5. When using these objectives, it is essential that the relevant backing/supporting documents are consulted, particularly where instructed in the targets or notes for a particular attribute.

## Qualifying Interests

*\* indicates a priority habitat under the Habitats Directive*

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000480      Clyard Kettle-holes SAC

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3180      Turloughs\*

7210      Calcareous fens with *Cladium mariscus* and species of the Caricion davallianae\*

## 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>	1979
<b>Title :</b>	A Preliminary Report on Areas of Scientific Interest in County Mayo
<b>Author :</b>	Goodwillie, R.N.
<b>Series :</b>	Unpublished report
<b>Year :</b>	2009
<b>Title :</b>	Ireland Red List No. 2: Non-marine molluscs
<b>Author :</b>	Byrne, A.; Moorkens, E.A.; Anderson, R.; Killeen, I.J.; Regan, E.C.
<b>Series :</b>	Ireland Red List series, NPWS
<b>Year :</b>	2010
<b>Title :</b>	Ireland Red List No. 4: Butterflies
<b>Author :</b>	Regan, E.C.; Nelson, B.; Aldwell, B.; Bertrand, C.; Bond, K.; Harding, J.; Nash, D.; Nixon, D.; Wilson, C.J.
<b>Series :</b>	Ireland Red List series, NPWS
<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>	2015
<b>Title :</b>	Summary of findings from the survey of potential turloughs 2015
<b>Author :</b>	O'Neill, F.H.; Martin, J.R.
<b>Series :</b>	Unpublished report to 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>	Conservation objectives supporting document: Turloughs* and Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidenton</i> p.p. vegetation
<b>Author :</b>	O Connor, Á.
<b>Series :</b>	Conservation objectives supporting document
<b>Year :</b>	in prep.
<b>Title :</b>	Scoping study and pilot survey of fens
<b>Author :</b>	O'Neill, F.H.; Perrin, P.M.; Denyer, J.; Martin, J.R.; Daly, O.H.; Brophy, J.T.
<b>Series :</b>	Irish Wildlife Manuals

### Other References

<b>Year :</b>	1999
<b>Title :</b>	Ballynacarragh, Kilmaine, Co. Mayo - localised flood relief work
<b>Author :</b>	ESB International
<b>Series :</b>	Unpublished preliminary report to the Office of Public Works

<b>Year :</b>	2000
<b>Title :</b>	Flood relief scheme at Ballynacarragh, Kilmaine, Co. Mayo. Control of Thomastown Turlough
<b>Author :</b>	Goodwillie, R.
<b>Series :</b>	A report for Engineering Services Division, Office of Public Works
<b>Year :</b>	2005
<b>Title :</b>	Guidance on the Pressures and Impacts on Groundwater Dependent Terrestrial Ecosystems. Risk Assessment Sheet GWDTERA2a - Turloughs
<b>Author :</b>	Working Group on Groundwater (Turlough sub-committee)
<b>Series :</b>	Water Framework Directive Pressures and Impact Assessment Methodology - Guidance Document No. GW9
<b>Year :</b>	2009
<b>Title :</b>	Teagasc EPA soil and subsoils mapping project-final report. Volume II
<b>Author :</b>	Fealy, R. M.; Green, S.; Loftus, M.; Meehan, R.; Radford, T.; Cronin, C.; Bulfin, M.
<b>Series :</b>	Teagasc, Dublin
<b>Year :</b>	2011
<b>Title :</b>	The Fen Management Handbook
<b>Author :</b>	McBride, A.; Diack, I.; Droy, N.; Hamill, B.; Jones, P.; Schutten, J.; Skinner, A.; Street, M. (eds.)
<b>Series :</b>	Scottish Natural Heritage, Perth
<b>Year :</b>	2014
<b>Title :</b>	Interim classification, harmonisation and generalisation of county soil maps of Ireland. Irish soil information system final technical report 1
<b>Author :</b>	Jones, R.J.A.; Hannam, J.A.; Palmer, R.C.; Truckell, I.G.; Creamer, R.E.; McDonald, E.
<b>Series :</b>	Report for the EPA prepared by Teagasc and Cranfield University
<b>Year :</b>	2014
<b>Title :</b>	Establishment of groundwater source protection zones, Kilmaine Public Water Supply Scheme
<b>Author :</b>	Kelly, C.; Moe, H.; Smietanka, M.; Drew, D.; Hickey, C.
<b>Series :</b>	Report for the EPA

## Spatial data sources

<b>Year :</b>	2021
<b>Title :</b>	Goodwillie (2000) Flood relief scheme at Ballynacarragh, Kilmaine, Co. Mayo
<b>GIS Operations :</b>	Map from report georectified and digitised; combined with GSI and OSi data; polygons with common boundaries merged. Clipped to SAC boundary. Expert opinion used as necessary to resolve any issues arising
<b>Used For :</b>	3180 (map 2)
<hr/>	
<b>Year :</b>	2021
<b>Title :</b>	GSI historic groundwater flood mapping dataset
<b>GIS Operations :</b>	Dataset combined with Goodwillie (2000) and OSi data; polygons with common boundaries merged. Clipped to SAC boundary. Expert opinion used as necessary to resolve any issues arising
<b>Used For :</b>	3180 (map 2)
<hr/>	
<b>Year :</b>	2021
<b>Title :</b>	OSi Prime 2 water polygon file
<b>GIS Operations :</b>	Dataset combined with Goodwillie (2000) and GIS data; polygons with common boundaries merged. Clipped to SAC boundary. Expert opinion used as necessary to resolve any issues arising
<b>Used For :</b>	3180 (map 2)
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## Conservation Objectives for : Clyard Kettle-holes SAC [000480]

### 3180 Turloughs\*

**To maintain the favourable conservation condition of Turloughs\* in Clyard Kettle-holes 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	Studies carried out at Clyard Kettle-holes SAC include Goodwillie (1979), ESB International (1999), Goodwillie (2000), Kelly et al. (2014), and O'Neill and Martin (2015). Kelly et al. (2014) surveyed the hydrology of the area for the Kilmaine Public Water Supply Scheme. O'Neill and Martin (2015) visited the two turloughs in the centre of the complex in Coolisduff. There are four turloughs within this SAC, Thomastown to the north, Coolisduff A (east) and Coolisduff B (west) in the centre, and Ballywalter to the south. However, detailed mapping of the turloughs' extent within the SAC has not been undertaken. The turlough area within the SAC has been estimated as 79ha based on Goodwillie (2000), GSI flood mapping and OSi mapping. See map 2 for estimated extent. See O Connor (2017) for information on all attributes and targets
Habitat distribution	Occurrence	No decline, subject to natural processes	As noted above, there are four turloughs within this SAC. See map 2
Hydrological regime	Various	Maintain appropriate natural hydrological regime necessary to support the natural structure and functioning of the habitat	Hydrological regime is sub-divided into more detailed attributes (groundwater contribution, flood duration, frequency, area and depth, and permanently flooded/wet areas) and targets in O Connor (2017). NPWS internal files note that for Clyard Kettle-holes SAC, while water levels fluctuate and most of the small lakes and ponds dry out entirely or largely in summer, the natural drainage pattern is not fully understood owing to underground drainage features. It appears some drainage is southwards, towards Ballynacarragh. NPWS internal files also note that in Coolisduff townland, the turlough drains to a swallow hole in the north-west corner. Kelly et al. (2014) identified several swallow holes in the area, including one each at the Thomastown and Coolisduff (west) turloughs, and two at Coolisduff (east) turlough, one in the main basin and one in the flood zone to the south. Recent water level observations indicate that Thomastown Turlough responds rapidly to rainfall (Kelly et al., 2014)
Soil type	Hectares	Maintain variety, area and extent of soil types necessary to support turlough vegetation and other biota	The Teagasc/EPA soils map by Fealy et al. (2009) classified the soils of the turloughs as predominantly basic, shallow, well-drained mineral soils over calcareous bedrock, with the basins of the Thomastown and eastern Coolisduff turloughs composed of a marly substrate and the Ballywalter basin composed of basin peat. Jones et al. (2014) in a later soil survey classified the majority of the soils in and around the turloughs as well-drained fine loamy soil over limestone bedrock
Soil nutrient status: nitrogen and phosphorus	N and P concentration in soil	Maintain nutrient status appropriate to soil types and vegetation communities	See O Connor (2017) for information on all attributes and targets
Physical structure: bare ground	Presence	Maintain sufficient wet bare ground, as appropriate	See O Connor (2017) for information on all attributes and targets
Chemical processes: calcium carbonate deposition and concentration	Calcium carbonate deposition rate/soil concentration	Maintain appropriate calcium carbonate deposition rate and concentration in soil	NPWS internal files note that in one of the turloughs in Coolisduff townland, the inundated vegetation receives a heavy coating of calcium carbonate



Active peat formation	Flood duration	Maintain active peat formation	Soil maps by Fealy et al. (2009) indicate that raised bog peat (basin peat) is present at Ballywalter turlough
Water quality	Various	Maintain appropriate water quality to support the natural structure and functioning of the habitat	Water quality is sub-divided into more detailed attributes (nutrients, colour, phytoplankton and epiphyton biomass) and targets in O Connor (2017). See also The European Communities Environmental Objectives (Surface Waters) (Amendment) Regulations 2019. The Working Group on Groundwater (Turlough sub-committee) (2005) describe the current trophic sensitivity of Thomastown Turlough as medium, but the natural trophic sensitivity of the turloughs in this SAC is currently unknown. At a minimum, however, turloughs in the SAC should have a target of $\leq 20\mu\text{g/l}$ total phosphorus and trace/absent epiphyton as algal mats (<2% cover) to reach favourable condition
Vegetation composition: area of vegetation communities	Hectares	Maintain area of sensitive and high conservation value vegetation communities/units	NPWS internal files note the presence of <i>Cladium</i> fen (Annex I priority habitat 7210) within the Coolisduff turlough/Clyard area. O'Neill and Martin (2015) described fen-type <i>Molinia</i> meadow vegetation (Annex I habitat 6410) in and adjacent to the eastern Coolisduff turlough. Goodwillie (2000) described a number of communities at Thomastown Turlough, from damp grassland with <i>Agrostis stolonifera</i> , <i>Ranunculus repens</i> and <i>Calliergonella cuspidata</i> , to more species-rich grassland with <i>Carex</i> spp., <i>Filipendula ulmaria</i> and <i>Potentilla anserina</i> . Goodwillie (2000) also noted several aquatic communities, one with <i>Chara</i> sp., <i>Littorella uniflora</i> , <i>Baldellia ranunculoides</i> and other aquatic macrophytes; another with <i>Equisetum fluviatile</i> , <i>Callitriche</i> sp., <i>Hippuris vulgaris</i> and <i>Sparganium erectum</i> suggesting semi-permanent water
Vegetation composition: vegetation zonation	Distribution	Maintain vegetation zonation/mosaic characteristic of the turlough	O'Neill and Martin (2015) described zonation in the eastern Coolisduff turlough, with a <i>Molinia caerulea-Carex panicea</i> community grading into fen ( <i>Carex nigra-Potentilla anserina-Hydrocotyle vulgaris</i> ) and then to an aquatic macrophyte community ( <i>Schoenoplectus lacustris-Menyanthes trifoliata</i> or <i>Carex rostrata-Equisetum fluviatile</i> ). The western Coolisduff turlough displayed minimal zonation, with a grass-forb sward of <i>Potentilla anserina-Filipendula ulmaria</i> dominating. Goodwillie (2000) described zonation at Thomastown Turlough, grading from damp grassland in the south, to more species-rich sward in the north with <i>Carex</i> spp., <i>Filipendula ulmaria</i> and <i>Potentilla anserina</i> . Goodwillie (2000) also described wetter communities with <i>Eleocharis palustris</i> and <i>Scorpidium revolvens</i> , grading to a pond-type community including <i>Chara</i> sp. and <i>Littorella uniflora</i>
Vegetation structure: sward height	Centimetres	Maintain sward heights appropriate to the vegetation unit, and a variety of sward heights across the turlough	O'Neill and Martin (2015) noted cattle grazing in the eastern Coolisduff turlough, and grazing by cattle, sheep and horses in the western Coolisduff turlough. Goodwillie (2000) recorded intensive sheep grazing at Thomastown Turlough
Typical species	Presence	Maintain typical species within the turlough	Typical species is sub-divided into more detailed attributes (terrestrial, wetland and aquatic plants, invertebrates and birds) and targets in O Connor (2017). According to Goodwillie (2000) Thomastown Turlough supported locally important numbers of wintering waterfowl as well as nesting lapwing and snipe
Fringing habitats: area	Hectares	Maintain marginal fringing habitats that support turlough vegetation, invertebrate, mammal and/or bird populations	Clyard Kettle-holes are of high conservation importance for their mosaic of Annex I and other habitats, particularly the transitions and gradations between habitats, e.g. between turloughs and fen communities. Also see the conservation objective for Annex I habitat 7210 in this volume

Vegetation structure: turlough woodland

Species diversity and woodland structure

Maintain appropriate turlough woodland diversity and structure

*Rhamnus cathartica* scrub woodland with *Euonymus europaeus*, *Viburnum opulus* and *Rubus caesius* was described by Goodwillie (2000) at the north-west corner of Thomastown Turlough

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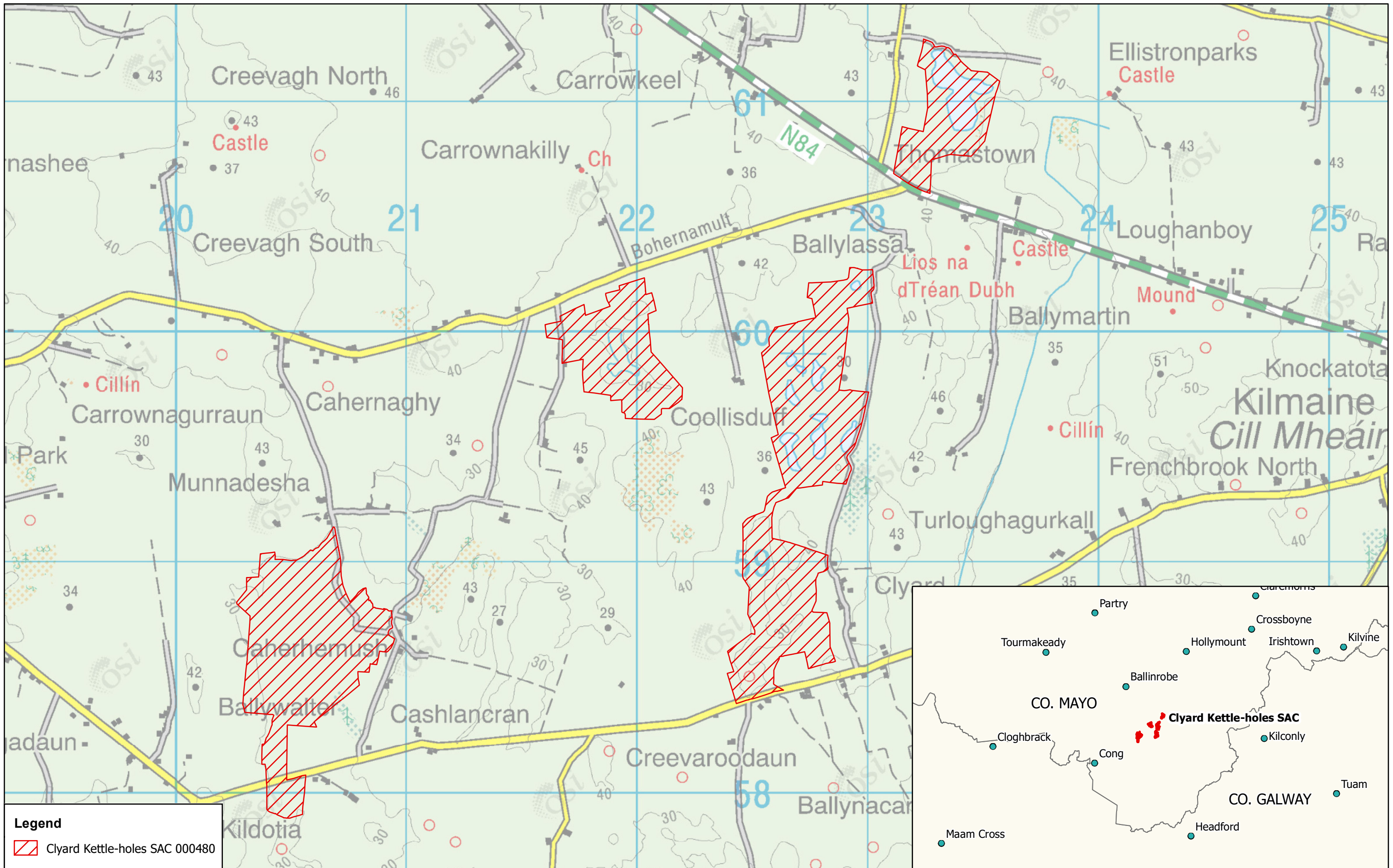
## Conservation Objectives for : Clyard Kettle-holes SAC [000480]

### 7210 Calcareous fens with *Cladium mariscus* and species of the Caricion davallianae\*


To maintain the favourable conservation condition of Calcareous fens with *Cladium mariscus* and species of the Caricion davallianae\* in Clyard Kettle-holes 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	Calcareous fens with <i>Cladium mariscus</i> and species of the Caricion davallianae* has not been mapped in detail for Clyard Kettle-holes SAC and thus the total area of the priority qualifying habitat in the SAC is unknown. However, it is documented that a series of small lakes within the Coollisduff turlough/Clyard area support <i>Cladium</i> fen and, while the extent of the fen is small, it is typical of the habitat. The habitat occurs in mosaic with common reed ( <i>Phragmites australis</i> ) swamp vegetation and fen/marsh wetland habitats in the SAC (Goodwillie, 1979; NPWS internal files)
Habitat distribution	Occurrence	No decline, subject to natural processes	See the notes for Habitat area above
Ecosystem function: soil nutrients	Soil pH and appropriate nutrient levels at a representative number of monitoring stops	Maintain soil pH and nutrient status within natural ranges	Relevant nutrients and their natural ranges are yet to be defined. Increased nutrients can lead to changes in plant and invertebrate species through competition and subsequent structural changes to micro-habitat. These nutrients favour growth of grass rather than forbs and mosses and leads to a higher and denser sward
Ecosystem function: peat formation	Percentage cover of peat-forming vegetation and water table levels	Maintain active peat formation, where appropriate	In order for peat to form, water levels need to be slightly below or above the soil surface for c.90% of the time
Ecosystem function: hydrology - groundwater levels	Water levels (centimetres); duration of levels; hydraulic gradients; water supply levels	Maintain, or where necessary restore, appropriate natural hydrological regimes necessary to support the natural structure and functioning of the habitat	Fen habitats require high groundwater levels (i.e. water levels at or above the ground surface) for a large proportion of the calendar year (i.e. duration of mean groundwater level). Fen groundwater levels are controlled by regional groundwater levels in the contributing catchment area (which sustain the hydraulic gradients of the fen groundwater table). Regional abstraction of groundwater may affect fen groundwater levels
Ecosystem function: hydrology - surface water flow	Drain density and form	Maintain, or where necessary restore, as close as possible to natural or semi-natural, drainage conditions	Drainage, either within or surrounding the fen habitat, can result in the drawdown of the alkaline fen groundwater table. The depth, geometry and density of drainage (hydromorphology) will indicate the scale and impact on fen hydrology. Drainage can result in loss of characteristic species and transition to drier habitats
Ecosystem function: water quality	Various	Maintain appropriate water quality, particularly pH and nutrient levels, to support the natural structure and functioning of the habitat	Fens receive natural levels of nutrients (e.g. iron, magnesium and calcium) from water sources. However, they are generally poor in nitrogen and phosphorus, with the latter tending to be the limiting nutrient under natural conditions. Water supply should be also relatively calcium-rich
Vegetation composition: fen variant versus swamp variant	Percentage cover within the site	Maintain, or where necessary restore, appropriate cover of fen variant of <i>Cladium</i> fen	O'Neill et al. (in prep.) describe two variants of 7210: 1) a species-rich, open sward and 2) a less species-rich, closed sward <i>Cladium</i> swamp. Cover of <i>Cladium mariscus</i> in wetlands is related to habitat management, and mowing and grazing will reduce the dominance of <i>C. mariscus</i> and favour secondary vegetation (e.g. alkaline fen) (O'Neill et al., in prep.). The more species rich version of <i>Cladium</i> fen (higher ecological value systems) is the most desirable option in most sites
Vegetation composition: brown mosses	Percentage cover at a representative number of monitoring stops	Maintain adequate cover of typical brown moss species	For lists of typical bryophyte species, including high quality indicator species, see O'Neill et al. (in prep.)

Vegetation composition: typical vascular plants	Percentage cover at a representative number monitoring stops	Maintain adequate cover of typical vascular plant species	For lists of typical vascular plant species for the different vegetation communities, including high quality indicators, see O'Neill et al. (in prep.). Typical species recorded in the habitat in the SAC include great fen-sedge ( <i>Cladium mariscus</i> ), black bog-rush ( <i>Schoenus nigricans</i> ), common reed ( <i>Phragmites australis</i> ) and slender sedge ( <i>Carex lasiocarpa</i> ) (NPWS internal files)
Vegetation composition: native negative indicator species	Percentage cover at a representative number of monitoring stops	Cover of native negative indicator species at insignificant levels	Negative indicators include species not characteristic of the habitat and species indicative of undesirable activities such as overgrazing, undergrazing, nutrient enrichment, agricultural improvement or impacts on hydrology. See O'Neill et al. (in prep.)
Vegetation composition: non-native species	Percentage cover at, and in local vicinity of, a representative number of monitoring stops	Cover of non-native species less than 1%	Attribute and target based on O'Neill et al. (in prep.). Non-native species can be invasive and have deleterious effects on native vegetation. A low target is set as non-native species can spread rapidly and are most easily dealt with when still at lower abundances
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 O'Neill et al. (in prep.). Scrub and trees will tend to invade if fen conditions become drier
Vegetation composition: algal cover	Percentage cover at, and in local vicinity of, a representative number of monitoring stops	Cover of algae less than 2%	Attribute and target based on O'Neill et al. (in prep.). Algal cover is indicative of nutrient enrichment from multiple sources (McBride et al., 2011)
Vegetation structure: vegetation height	Percentage cover at a representative number of monitoring stops	At least 50% of the live leaves/flowering shoots are more than 5cm above ground surface	Attribute and target based on O'Neill et al. (in prep.). While grazing may be appropriate in this habitat, excessive grazing can reduce the ability of plant species to regenerate reproductively and maintain species diversity, especially if flowering shoots are cropped during the growing season
Physical structure: disturbed bare ground	Percentage cover at, and in local vicinity of, a representative number of monitoring stops	Cover of disturbed bare ground not more than 10%	Attribute and target based on O'Neill et al. (in prep.). While grazing may be appropriate in this habitat, excessive areas of disturbed bare ground may develop due to unsuitable grazing regimes. Disturbance can include hoof marks, wallows, human footprints, vehicle and machinery tracks. Excessive disturbance can result in loss of characteristic species
Physical structure: tufa formations	Percentage cover in local vicinity of a representative number of monitoring stops	Disturbed proportion of vegetation cover where tufa is present is less than 1%	Attribute and target based on O'Neill et al. (in prep.)
Indicators of local distinctiveness	Occurrence and population size	No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat; maintain features of local distinctiveness, subject to natural processes	This includes species on the Flora (Protection) Order, 2015 and/or Red Lists (Byrne et al., 2009; Regan et al., 2010; Lockhart et al., 2012; Wyse Jackson et al., 2016, etc.)
Transitional areas between fen and adjacent habitats	Hectares; distribution	Maintain/restore adequate transitional areas to support/protect the <i>Cladium</i> fen habitat and the services it provides	In many cases, fens transition to other wetland habitats. It is important that the transitional areas between <i>Cladium</i> fen and other habitats are maintained in as natural condition as possible in order to protect the functioning of the fen



**Legend**

 Cilyard Kettle-holes SAC 000480


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

**MAP 1:  
 CLYARD KETTLE-HOLES SAC  
 CONSERVATION OBJECTIVES  
 SAC DESIGNATION**

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

**SITE CODE:  
 SAC 000480; version 3.01.  
 CO. MAYO**

0 125 250 500 Metres



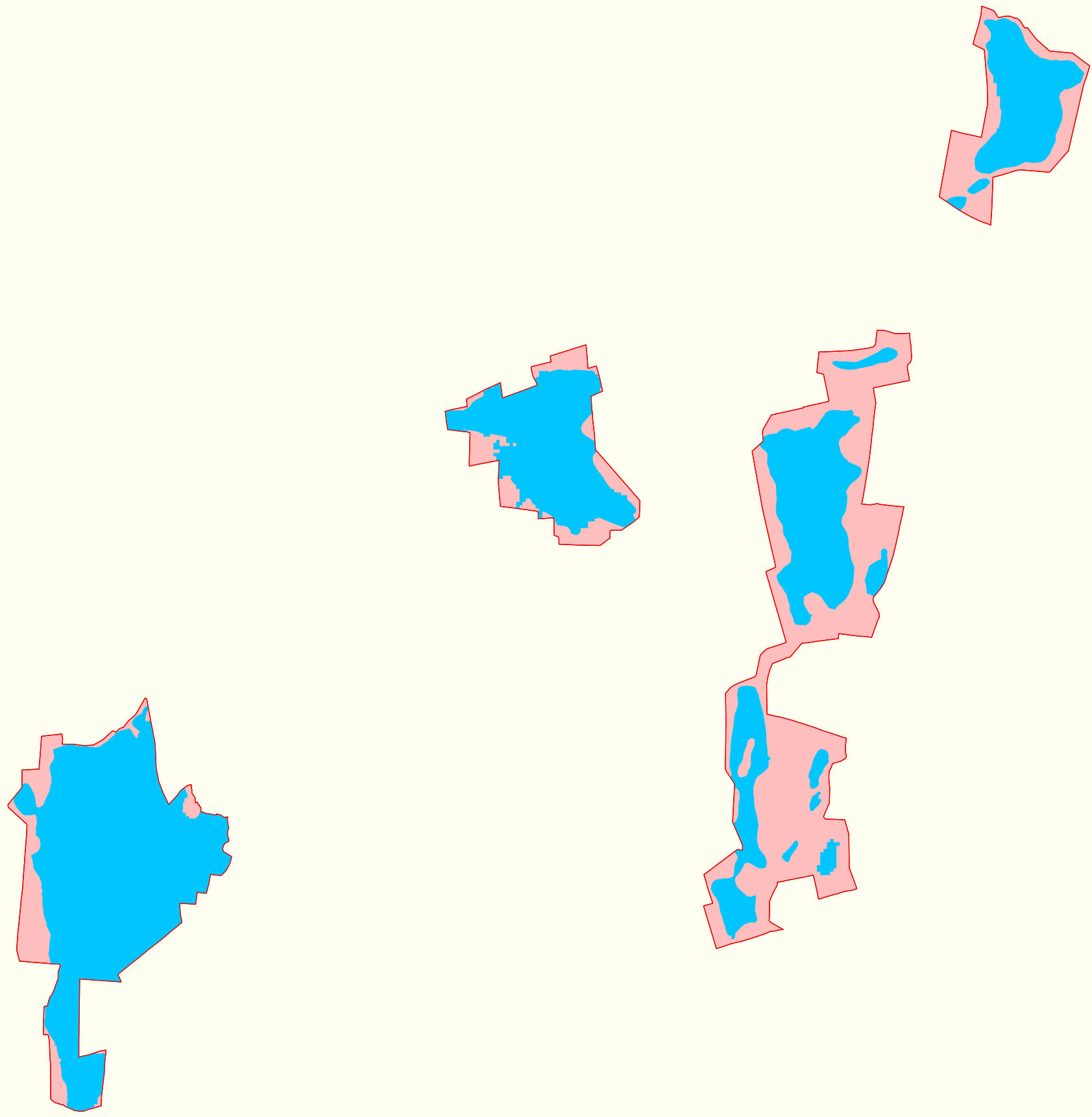
The mapped boundaries are of an indicative and general nature only. Boundaries of designated areas are subject to revision.  
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Níl sna teorainneacha ar na léarscáilleana ach nod garshuíomhach ginearálta. Féadfar athbhreithnithe a déanamh ar theorainneacha na gceantar comharthaith. Suirbhéarachta Ordonáis na hÉireann Ceadúnas Uimh OSI-NMA-014. © Suirbhéarachta Ordonáis na hÉireann Rialtas na hÉireann

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Date: May 2021



**Legend**

- Potential turlough habitat
- Clyard Kettle-holes SAC 000480

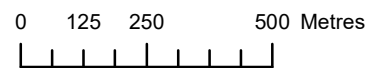


**An Roinn Tithíochta,  
Rialtais Áitiúil agus Oidhreacht**  
Department of Housing,  
Local Government and Heritage

**MAP 2:  
CLYARD KETTLE-HOLES SAC  
CONSERVATION OBJECTIVES  
TURLOUGHs**

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

**SITE CODE:  
SAC 000480; version 3.01.  
CO. MAYO**



The mapped boundaries are of an indicative and general nature only. Boundaries of designated areas are subject to revision.  
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Níl sna teorainneacha ar na léarscáileanna ach nod garshuíomhach ginearálta. Féadfar athbheithníthe a déanamh ar theorainneacha na gceantar comharthaithe. Suirbhéarachta Ordonáis na hÉireann Ceadúnas Uimh OSI-NMA-014. © Suirbhéarachta Ordonáis na hÉireann Rialtas na hÉireann

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**Date: May 2021**