# **National Parks and Wildlife Service**

## **Conservation Objectives Series**

## Philipston Marsh SAC 001847



12 Jan 2018 Version 1 Page 1 of 7



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### Citation:

NPWS (2018) Conservation Objectives: Philipston Marsh SAC 001847. Version 1. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht.

Series Editor: Rebecca Jeffrey ISSN 2009-4086

12 Jan 2018 Version 1 Page 2 of 7

### 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.

12 Jan 2018 Version 1 Page 3 of 7

### Qualifying Interests

\* indicates a priority habitat under the Habitats Directive

001847 Philipston Marsh SAC

7140 Transition mires and quaking bogs

12 Jan 2018 Version 1 Page 4 of 7

### Supporting documents, relevant reports & publications

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

#### **NPWS Documents**

**Year**: 1992

Title: A report on the wetland vegetation of the Mulkear River catchment, Cos Limerick and Tipperary

Author: Lockhart, N.D.

Series: Unpublished report to NPWS

Year: 2012

Title: Ireland Red List No. 8: Bryophytes

Author: Lockhart, N.; Hodgetts, N.; Holyoak, D.

Series: Ireland Red List series, NPWS

Year: 2013

Title: The status of EU protected habitats and species in Ireland. Volume 2. Habitats assessments

Author: NPWS

Series: Conservation assessments

Year: 2013

Title: Conservation status assessments for three fen habitat types - 7230, 7210 and 7140

Author: Kimberley, S.

Series: Unpublished report to NPWS

Year: 2014

Title: Guidelines for a national survey and conservation assessment of upland vegetation and

habitats in Ireland, Version 2.0

Author: Perrin, P.M.; Barron, S.J.; Roche, J.R.; O'Hanrahan, B.

Series: Irish Wildlife Manual No. 79

**Year:** 2016

Title: Ireland Red List No. 10: Vascular Plants

Author: Wyse Jackson, M.; FitzPatrick, Ú.; Cole, E.; Jebb, M.; McFerran, D.; Sheehy Skeffington, M.;

Wright, M.

Series: Ireland Red Lists series, NPWS

### **Other References**

Year: 2004

Title: Common Standards Monitoring guidance for lowland wetland habitats

Author: JNCC

Series: Joint Nature Conservation Committee, Peterborough

Year: 2011

Title: Review and revision of empirical critical loads and dose-response relationships. Proceedings

of an expert workshop, Noordwijkerhout, 23-25 June 2010

Author: Bobbink, R.; Hettelingh, J.P.

Series: RIVM report 680359002, Coordination Centre for Effects, National Institute for Public Health

and the Environment (RIVM)

12 Jan 2018 Version 1 Page 5 of 7

### **Conservation Objectives for: Philipston Marsh SAC [001847]**

### 7140 Transition mires and quaking bogs

To maintain the favourable conservation condition of Transition mires and quaking bogs in Philipston Marsh 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	Transition mires and quaking bogs has not been mapped in detail for Philipston Marsh SAC and thus the total area of the qualifying habitat in the SAC is unknown. Philipston Marsh SAC supports an important, though small, example of transition mire in the Mulkear River catchment, a region in which the habitat is rare. It occurs as a distinct habitat within the SAC and also in mosaic with alkaline fen and in association with reed swamp and ombrotrophic vegetation (NPWS internal files)
Habitat distribution	Occurrence	No decline, subject to natural processes	See the notes on 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. However, nitrogen deposition is noted as being relevant to this habitat in NPWS (2013). See also Bobbink and Hettelingh (2011)
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 - water levels	Centimetres; duration of water levels	Maintain appropriate water levels necessary to support the natural structure and functioning of the habitat	Maintenance of a permanently high water level, remaining close to the peat surface all year, with water level fluctuations within natural ranges, is required for this wetland habitat. See Kimberley (2013)
Ecosystem function: hydrology - flow patterns	Flow direction	Maintain appropriate topography and water movement regime necessary to support the natural structure and functioning of the habitat	Maintenance, both within and surrounding the habitat, of topography and flow patterns within natural ranges is essential in order to ensure the hydrological integrity of this wetland habitat. A calcareous spring at the base of a gentle slope, clost to the eastern boundary, flushes the southern part of the SAC with calcarous groundwater (Lockhart, 1992; NPWS internal files)
Ecosystem function: water quality	Water chemistry measures	Maintain appropriate water quality to support the natural structure and functioning of the habitat	The surface water conditions necessary to maintain transition mires range from acidic to slightly baserich. The vegetation typically has intimate mixtures of species considered to be acidophile and others considered calciphile. In other cases, these intermediate properties may reflect the actual process of succession, as peat accumulates in groundwater-fed fen or open water to produce rainwater-fed bog isolated from groundwater influence. The calcareous nature of the spring in the SAC is due to the extensive limestone aquifer within the region (NPWS internal files)
Community diversity	Abundance of variety of vegetation communities	Maintain variety of vegetation communities, subject to natural processes	The entire diversity of transition mire vegetation communities in this SAC is unknown. Information or vegetation communities associated with this habitat in the uplands is presented in Perrin et al. (2014)

12 Jan 2018 Version 1 Page 6 of 7

Vegetation composition: typical vascular plants and bryophytes	Percentage cover at a representative number of 2m x 2m monitoring stops	Maintain adequate cover of typical vascular plant and bryophyte species	For lists of typical plant species see the Article 17 conservation status assessment for transition mires and quaking bogs (NPWS, 2013) and the fen habitats supporting document (Kimberley, 2013). See also Perrin et al. (2014) and JNCC (2004). In this SAC, typical vascular plant species recorded in the habitat include lesser tussock-sedge ( <i>Carex diandra</i> ), common sedge ( <i>C. nigra</i> ), bottle sedge ( <i>C. rostrata</i> ), bogbean ( <i>Menyanthes trifoliata</i> ) and marsh lousewort ( <i>Pedicularis palustris</i> ). Bryophytes recorded in the habitat in the SAC include <i>Campylium stellatum, Scorpidium revolvens, Ctenidium molluscum, Fissidens adianthoides, Philonotis calcarea</i> and <i>Palustriella commutata</i> (Lockhart, 1992; NPWS internal files)
Vegetation composition: native negative indicator species	Percentage cover at a representative number of 2m x 2m monitoring stops	Native negative indicator species at insignificant levels	Negative indicators include species not characteristic of the habitat and species indicative of undesirable impacts such as overgrazing, undergrazing, nutrient enrichment, agricultural improvement or impacts on hydrology. Native negative indicator species that could suggest drying out include ling ( <i>Calluna vulgaris</i> ) and birch ( <i>Betula pubescens</i> )
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). 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. Giant hogweed ( <i>Heracleum mantegazzianum</i> ) has been recorded in the SAC (NPWS internal files)
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). Drainage can result in loss of characteristic species and transition to drier habitats
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 not more than 10%	Attribute and target based on Perrin et al. (2014). Disturbance can include hoof marks, wallows, human foot prints, vehicle and machinery tracks. Excessive disturbance can result in loss of characteristic species and presage erosion for peatlands
Indicators of local distinctiveness	Occurrence and population size	population sizes of rare, threatened or scarce	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). Species found in the habitat in the SAC that are regionally uncommon include broad-leaved cottongrass ( <i>Eriophorum latifolium</i> ), marsh helleborine ( <i>Epipactis palustris</i> ) and fen bedstraw ( <i>Galium uliginosum</i> ). The bryophytes listed above are largely confined to Philipston Marsh SAC within the Mulkear River catchment (Lockhart, 1992; NPWS internal files)

12 Jan 2018 Version 1 Page 7 of 7

