European Community Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC)

Fourth Report by the United Kingdom under Article 17

on the implementation of the Directive
from January 2013 to December 2018

Conservation status assessment for the habitat:

H7210 - Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*

UNITED KINGDOM

IMPORTANT NOTE - PLEASE READ

- The information in this document represents the UK Report on the conservation status of this habitat, submitted to the European Commission as part of the 2019 UK Reporting under Article 17 of the EU Habitats Directive.
- It is based on supporting information provided by the geographically-relevant Statutory Nature Conservation Bodies, which is documented separately.
- The 2019 Article 17 UK Approach document provides details on how this supporting information contributed to the UK Report and the fields that were completed for each parameter.
- The reporting fields and options used are aligned to those set out in the European Commission guidance.
- Maps showing the distribution and range of the habitat are included (where available).
- Explanatory notes (where provided) are included at the end. These provide additional audit trail information to that included within the UK assessments. Further underpinning explanatory notes are available in the related country-level and/or UK offshore-level reports.
- Some of the reporting fields have been left blank because either: (i) there was insufficient information to complete the field; and/or (ii) completion of the field was not obligatory.
- The UK-level reporting information for all habitats and species is also available in spreadsheet format.

Visit the JNCC website, https://jncc.gov.uk/article17, for further information on UK Article 17 reporting.

Report on the main results of the surveillance under Article 17 for Annex I habitat types (Annex D)

NATIONAL LEVEL

1. General information

1.1 Member State	**UK**
1.2 Habitat code	**7210 - Calcareous fens with Cladium mariscus and species of the Caricion dav**

2. Maps

2.1 Year or period	1985-2018
2.3 Distribution map	Yes
2.3 Distribution map Method used	Complete survey or a statistically robust estimate
2.4 Additional maps	No

BIOGEOGRAPHICAL LEVEL

3. Biogeographical and marine regions

3.1 Biogeographical or marine region where the habitat occurs	**Atlantic (ATL)**
3.2 Sources of information	England Shaw, S.C. & Tratt, R. (2015). Norfolk Valley Fens SAC. Review of current status, identification of remedies and investigations required. Volume 1. IPENS Technical Report, LIFE11NAT/UK/000384IPENS. Wheeler, B.D. & Shaw, S.C. (1992). Biological indicators of the dehydration and changes to East Anglian fens past and present. ENGLISH NATURE RESEARCH REPORTS No. 20 Diack, I.A. (2015) Natural England SSSI Notification Strategy: SSSI Notification Review and Guidance for Fens. Unpublished Report. Hajek, M, Jirousek, M., Navratilova, J., Horodyska, E., Peterka, T., Pleskova, Z.,Navratil, J., Hajkova, P.,& Hajek, T. (2015) Changes in the moss layer in Czech fens indicate early succession triggered by nutrient enrichment. Preslia 87: 279-301. Mainstone, C., Hall, R. & Diack, I. (2016). A narrative for conserving freshwater and wetland habitats in England. Natural England Research Reports No 064. Natural England (2015) Hydrological functioning theme plan. Restoring the hydrology of Natura 2000 terrestrial wetlands. Diack, I.A. (2017) FAVOURABLE CONSERVATION STATUS: ENGLAND CONTRIBUTION - H7230 ALKALINE FENS. Draft unpublished report. Tratt, R., Eades, P., Shaw, S., Wheeler, B. & Parnell, M. (2017) Development of Inventories for Annex 1 Wetland Habitats in England. Draft report to Natural England, Telford. OHES (2014) An Investigation into the Management of Catch Dykes in The Broads. Report to Natural England, Norwich OHES (2016) Remedial Works for the Catch Dykes at Ebb and Flow Marshes. Natural England Commissioned Report NECR239 http://1exagu1grkmq3k572418odoooym-wpengine.netdna-ssl.com/wp-content/uploads/2016/09/GFQC-DM-DG-Inspectors-decision-Catfield.pdf N2K Site Improvements Plans - http://publications.naturalengland.org.uk/category/5458594975711232 Wales Birch, K.S., Jones, P.S., Bosanquet, S.D.S, Reed, D.K & Turner, A.J. (in prep). Application of vegetation survey data for detailed planning and implementation of rich-fen restoration on Anglesey and Llyn, north-west Wales. In: Hanson, J.,

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4. Range

4.1 Surface area (in km²)	6589.38	
4.2 Short-term trend Period	2007-2018	
4.3 Short-term trend Direction	Stable (0)	
4.4 Short-term trend Magnitude	a) Minimum	b) Maximum
4.5 Short-term trend Method used	Based mainly on extrapolation from a limited amount of data	
4.6 Long-term trend Period		
4.7 Long-term trend Direction		
4.8 Long-term trend Magnitude	a) Minimum	b) Maximum

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4.9 Long-term trend Method used		
4.10 Favourable reference range	a) Area (km²)	6589.38
	b) Operator	
	c) Unknown	No
	d) Method	The FRR is approximately equal to the current range area. The approach taken to set the FRR is explained in the 2007 and 2013 UK Article 17 habitat reports (see http://jncc.defra.gov.uk/page-4064 and http://jncc.defra.gov.uk/page-6563).
4.11 Change and reason for change in surface area of range	No change	
	The change is mainly due to:	
4.12 Additional information		

5. Area covered by habitat

5.1 Year or period	1985-2018		
5.2 Surface area (in km²)	a) Minimum	b) Maximum	c) Best single value 6.558
5.3 Type of estimate	Best estimate		
5.4 Surface area Method used	Complete survey or a statistically robust estimate		
5.5 Short-term trend Period	2007-2018		
5.6 Short-term trend Direction	Increasing (+)		
5.7 Short-term trend Magnitude	a) Minimum	b) Maximum	c) Confidence interval
5.8 Short-term trend Method used	Based mainly on extrapolation from a limited amount of data		
5.9 Long-term trend Period			
5.10 Long-term trend Direction			
5.11 Long-term trend Magnitude	a) Minimum	b) Maximum	c) Confidence interval
5.12 Long-term trend Method used			
5.13 Favourable reference area	a) Area (km²)		
	b) Operator	Much more than (>>)	
	c) Unknown	No	
	d) Method	The FRA is more than 10% above the current area. An FRA operator has been used as it is not clear what the exact area of the FRA is. The approach taken to set the FRA is explained in the 2007 and 2013 UK Article 17 habitat reports (see http://jncc.defra.gov.uk/page-4064 and http://jncc.defra.gov.uk/page-6563).	
5.14 Change and reason for change in surface area of range	No change		
	The change is mainly due to:		
5.15 Additional information			

6. Structure and functions

6.1 Condition of habitat	a) Area in good condition (km²)	Minimum 1.673	Maximum 4.083
	b) Area in not-good condition (km²)	Minimum 2.103	Maximum 4.323

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	c) Area where condition is not known (km²)	Minimum 0.012	Maximum 0.922	
6.2 Condition of habitat Method used	Complete survey or a statistically robust estimate			
6.3 Short-term trend of habitat area in good condition Period	2007-2018			
6.4 Short-term trend of habitat area in good condition Direction	Increasing (+)			
6.5 Short-term trend of habitat area in good condition Method used	Complete survey or a statistically robust estimate			
6.6 Typical species	Has the list of typical species changed in comparison to the previous reporting period?			No
6.7 Typical species Method used				
6.8 Additional information				

7. Main pressures and threats

7.1 Characterisation of pressures/threats

Pressure	Ranking
Abandonment of grassland management (e.g. cessation of grazing or mowing) (A06)	H
Agricultural activities generating diffuse pollution to surface or ground waters (A26)	H
Mixed source air pollution, air-borne pollutants (J03)	M
Abstraction from groundwater, surface water or mixed water (K01)	H
Drainage (K02)	H
Modification of hydrological flow (K04)	H
Sea-level and wave exposure changes due to climate change (N04)	M

Threat	Ranking
Abandonment of grassland management (e.g. cessation of grazing or mowing) (A06)	H
Agricultural activities generating diffuse pollution to surface or ground waters (A26)	H
Mixed source air pollution, air-borne pollutants (J03)	M
Abstraction from groundwater, surface water or mixed water (K01)	H
Drainage (K02)	H
Modification of hydrological flow (K04)	H
Sea-level and wave exposure changes due to climate change (N04)	M

7.2 Sources of information

7.3 Additional information

8. Conservation measures

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8.1 Status of measures	a) Are measures needed?	Yes
	b) Indicate the status of measures	Measures identified and taken
8.2 Main purpose of the measures taken		Restore the habitat of the species (related to 'Habitat for the species')
8.3 Location of the measures taken		Both inside and outside Natura 2000
8.4 Response to the measures		Medium-term results (within the next two reporting periods, 2019-2030)
8.5 List of main conservation measures		

Adapt mowing, grazing and other equivalent agricultural activities (CA05)

Reduce diffuse pollution to surface or ground waters from agricultural activities (CA11)

Reduce/eliminate air pollution from agricultural activities (CA12)

Adapt/change forest management and exploitation practices (CB05)

Habitat restoration/creation from resources, exploitation areas or areas damaged due to installation of renewable energy infrastructure (CC07)

Manage water abstraction for public supply and for industrial and commercial use (CF11)

Restore habitats impacted by multi-purpose hydrological changes (CJ03)

8.6 Additional information

9. Future prospects

9.1 Future prospects of parameters	a) Range	Good
	b) Area	Bad
	c) Structure and functions	Bad
9.2 Additional information		Future trend of Range is Overall stable; Future trend of Area is Overall stable; and Future trend of Structure and functions is Negative - slight/moderate deterioration

10. Conclusions

10.1. Range	Favourable (FV)
10.2. Area	Unfavourable - Bad (U2)
10.3. Specific structure and functions (incl. typical species)	Unfavourable - Bad (U2)
10.4. Future prospects	Unfavourable - Bad (U2)
10.5 Overall assessment of Conservation Status	Unfavourable - Bad (U2)
10.6 Overall trend in Conservation Status	Improving (+)
10.7 Change and reasons for change in conservation status and conservation status trend	a) Overall assessment of conservation status No change The change is mainly due to: b) Overall trend in conservation status No change The change is mainly due to:

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10.8 Additional information	Conclusion on Range reached because: (i) the short-term trend direction in Range surface area is stable; and (ii) the current Range surface area is approximately equal to the Favourable Reference Range. Conclusion on Area covered by habitat reached because: (i) the short-term trend direction in Area is increasing; and (ii) the current Area is more than 10% below the Favourable Reference Area. Conclusion on Structure and functions reached because habitat condition data indicates that more than 25% of the habitat is in unfavourable (not good) condition. Conclusion on Future prospects reached because: (i) the Future prospects for Range are good; (ii) the Future prospects for Area covered by habitat are bad; and (iii) the Future prospects for Structure and functions are bad. Overall assessment of Conservation Status is Unfavourable-bad because one or more of the conclusions is Unfavourable-bad. Overall trend in Conservation Status is based on the combination of the short-term trends for Range - stable, Area covered by habitat - increasing, and Structure and functions - increasing.

11. Natura 2000 (pSCIs, SCIs, SACs) coverage for Annex I habitat types

11.1 Surface area of the habitat type inside the pSCIs, SCIs and SACs network (in km² in biogeographical/ marine region)	a) Minimum b) Maximum c) Best single value 6.081
11.2 Type of estimate	Best estimate
11.3 Surface area of the habitat type inside the network Method used	Complete survey or a statistically robust estimate
11.4 Short-term trend of habitat area in good condition within the network Direction	Increasing (+)
11.5 Short-term trend of habitat area in good condition within network Method used	Complete survey or a statistically robust estimate
11.6 Additional information	

12. Complementary information

12.1 Justification of % thresholds for trends	
12.2 Other relevant information	

Distribution Map

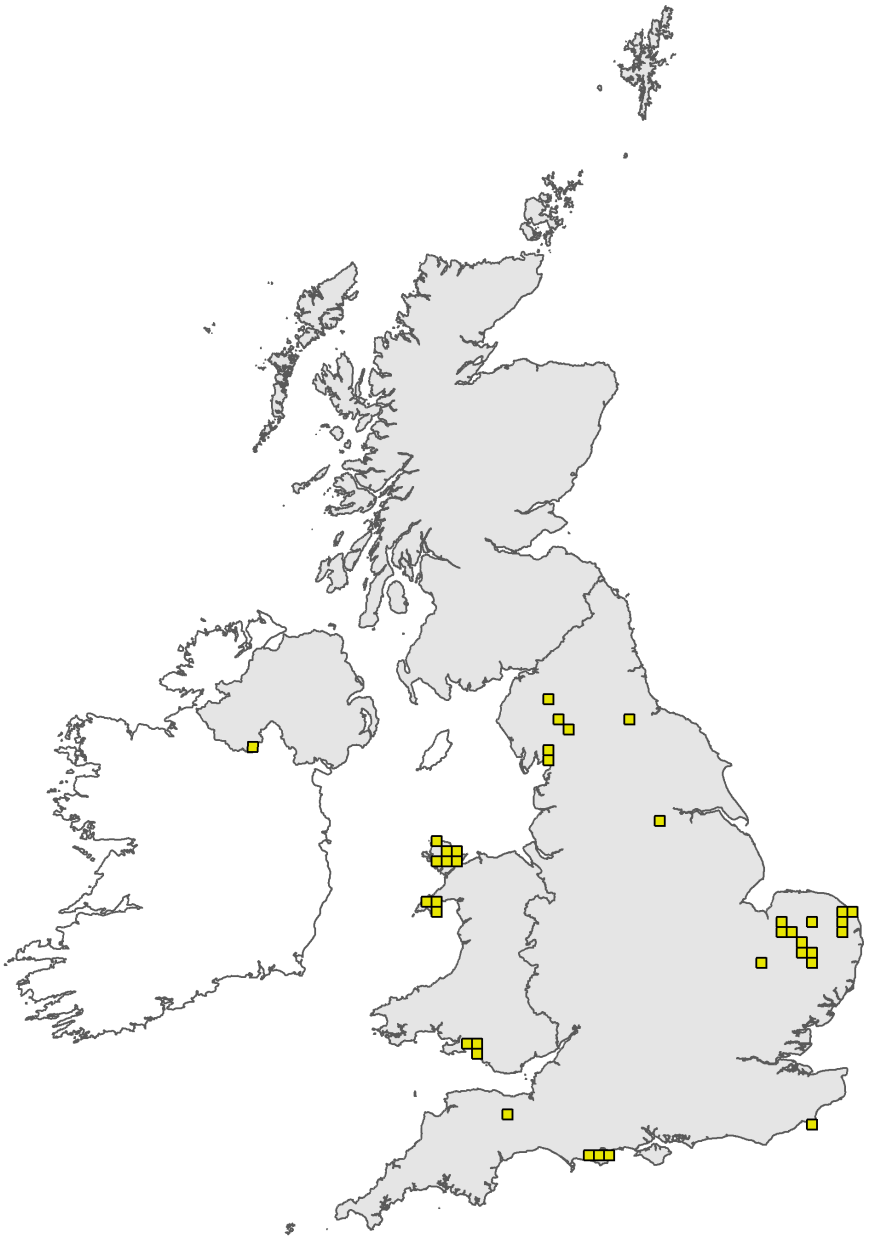

Figure 1: UK distribution map for H7210 - Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

The 10km grid square distribution map is based on available habitat records which are considered to be representative of the distribution within the current reporting period. For further details see the 2019 Article17 UK Approach document.

Range Map

Figure 2: UK range map for H7210 - Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

The range map has been produced by applying a bespoke range mapping tool for Article 17 reporting (produced by JNCC) to the 10km grid square distribution map presented in Figure 1. The alpha value for this habitat was 25km. For further details see the 2019 Article 17 UK Approach document.