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:

H3160 - Natural dystrophic lakes and ponds

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	**3160 - Natural dystrophic lakes and ponds**

2. Maps

2.1 Year or period	1983-2018
2.3 Distribution map	Yes
2.3 Distribution map Method used	Based mainly on extrapolation from a limited amount of data
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 Hughes M, Hornby DD, Bennion H, Kernan, M, Hilton J et al. (2004) The development of a GIS-based inventory of standing waters in Great Britain together with a risk-based prioritisation protocol. Water, Air and Soil Pollution: Focus 4:73-84. Williams, P., Biggs, J., Crowe, A., Murphy, J., Nicolet, P., Weatherby, A., Dunbar M., (2010) Ponds Report from 2007. CS Technical Report No. 7/07 Carvalho, L. and Moss, B. (1998) Lake SSSIs subject to eutrophication: environmental audit. English Nature Freshwater Series No. 3. Peterborough: English Nature. Environment Agency (2016) Water Framework Directive Surface Water Bodies in England: Classification Status and Objectives - Cycle 2, data from 2013 -2016 Natural England CMSi condition data Mainstone C.,& Burn A. (2011) Relationships between ecological objectives and associated decision-making under the Habitats and Water Framework Directives. Discussion paper, Natural England. Burgess, A, Goldsmith, B and Goodrich, S. (2014) Interpretation of Water Framework Directive Macrophyte Data for CSM Condition Assessment. Report to Natural England Hall, R. A. (2018) Explanatory notes for the standing water analysis and reporting for Article 17 round 4. Natural England paper. Scotland Previous report SCM Database Wales Baxter E, Stewart N. 2015. Macrophyte Survey of Welsh Lakes for Habitats Directive and Water Framework Directive Monitoring, 2014. NRW Evidence Report No: 52, 78pp. Bangor: Natural Resources Wales. Burgess A, Goldsmith B, Hatton-Ellis T. 2006. Site Condition Assessments of Welsh SAC and SSSI Standing Water Features. CCW Contract Science Report 705. Bangor, CCW. Burgess A, Goldsmith B, Hatton-Ellis T, Hughes M, Shilland E. 2009. CCW Standing Waters SSSI Monitoring 2007-08. CCW Contract Science Report 855. Bangor, Countryside Council for Wales.

Burgess A, Goldsmith B, Hatton-Ellis TW. 2013. Condition Assessments of Welsh SAC Lakes, 2007-2012. CCW Contract Science Report No. 983. Bangor, Countryside Council for Wales.
Evans CD, Monteith DT, Cooper DM. 2005. Long-term increases in surface water dissolved organic carbon: Observations, possible causes and environmental impacts. Environmental Pollution, 137, 55-71.
Goldsmith B, Bennion H, Hughes M, Jones V, Rose C, Simpson G. 2006. Integrating Habitats Directive and Water Framework Directive Monitoring: Baseline Survey of Natura 2000 Standing Water Habitats in Wales. CCW Contract Science Report 704. Bangor, Countryside Council for Wales.
Goldsmith B, Salgado, J, Shilland, J, Bennion, H, Yang, H & Turner, SD. 2014a. Biodiversity Action Plan Lakes Survey 2012-14. NRW Evidence Report No: 27, 171pp, Natural Resources Wales, Bangor
Goldsmith B, Shilland EM, Yang H, Shilland J, Salgado J & Turner SD. 2014b. Condition Assessment of Eight Standing Waters in Sites of Special Scientific Interest (SSSIs). NRW Evidence Report No: 29,147pp, Natural Resources Wales, Bangor.
Goldsmith B, Turner S, Shilland E, Goodrich S. 2016. Ecological Surveys of Welsh Lakes 2015. NRW Evidence Report No 145. 25 pp, Bangor: Natural Resources Wales.
Hatton-Ellis TW. 2014. Lake BAP Priority Areas in Wales - a strategic overview. Wales Biodiversity Partnership, Cardiff. Available online at http://www.biodiversitywales.org.uk/File/340/en-GB
Interagency Freshwater Group. 2015. Common Standards Monitoring Guidance for Freshwater Lakes. JNCC, Peterborough. Available online at http://jncc.defra.gov.uk/pdf/0315_CSM_Freshwater_lakes.pdf
Joint Nature Conservation Committee. 2007. Second Report by the UK under Article 17 on the implementation of the Habitats Directive from January 2001 to December 2006. Peterborough: JNCC. Available from: www.jncc.gov.uk/article17
Kernan M, Battarbee RW, Curtis CJ, Monteith DT, Shilland EM 2010. Recovery of lakes and streams in the UK from the effects of acid rain. UK Acid Waters Monitoring Network 20 Year Interpretative Report. Report to Defra. ISSN: 1366-7300. http://awmn.defra.gov.uk/resources/interpreports/20yearInterpRpt.pdf
Monteith DT, Stoddard JL, Evans CD, de Wit HA, Forsius M, Hogasen T, Wilander A, Skelkvale BL, Jeffries DS, Vuorenmaa J, Keller B, Kopacek J, Vesely J. 2007. Dissolved organic carbon trends resulting from changes in atmospheric deposition chemistry. Nature, 450, 537-540.
Natural Resources Wales. 2013. Habitat: H3160 - Natural dystrophic lakes and ponds. Available online at http://jncc.defra.gov.uk/pdf/Article17Consult_20131010/H3160_WALES.pdf
N.Ireland
JOINT NATURE CONSERVATION COMMITTEE 2005. Common Standards Monitoring (CSM). Joint Nature Conservation Committee, Peterborough. www.jncc.gov.uk/page-2217
PALMER, M.A., BELL, S.L. & BUTTERFIELD, I. 1992. A botanical classification of standing waters in Britain: applications for conservation and monitoring. Aquatic Conservation: Marine and Freshwater Ecosystems 2: 125 - 143.
PALMER, M.A. & ROY, D.B. 2001a. A method for estimating the extent of standing fresh waters of different trophic states in Great Britain. Aquatic Conservation: Marine and Freshwater Ecosystems, 11, 199-216. http://www3.interscience.wiley.com/cgi-bin/abstract/83502064/START
PALMER, M.A. & ROY, D.B. 2001b.
Second Report by the United Kingdom under Article 17 on the implementation of

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the Directive from January 2001 to December 2006
WILLIAMS, J.M. (ed.) 2006. Common Standards Monitoring for Designated Sites: First Six Year Report. Joint Nature Conservation Committee, Peterborough. http://www.jncc.gov.uk/page-3520
WOLFE-MURPHY, S.A., LAWRIE, E.W., SMITH, S.J. & GIBSON, C.E. 1992. Northern Ireland Lakes Survey. Unpublished report to Northern Ireland Department of Environment, Belfast. ENSIS Ltd (
ENSIS Ltd (Environmental Science Services) Goldsmith, B., Davidson, T. A., Burgess, A., Hughes, M., Madgwick, G., Rawcliffe, R., Rippey, B. & Tyler, J., December 2008 Condition Assessments of Standing Water Features in SACs and ASSIs: Northern Ireland. Final Report to Northern Ireland Environment Agency.
POND CONSERVATION Helen Keeble, Penny Williams, Jeremy Biggs & Neil Reid, 2009, Important Areas for Ponds (IAPs) and other small waterbodies in Northern Ireland, NIEA Research and Development Series 11/5.
MC ELARNEY, Y.R. FOY, R.H. PARK, R. ANDERSON, N.J. PLA-RABES, S.RASMUSSEN,P.O'DEA, P.ENGSTOM,D.R. & MCGOWAN, S. 2009. A framework for the management of forest inpacts on upland lakes INTERREG - Project 20274
MC ELARNEY, Y.R. FOY, R. ANDERSON, S. & RASMUSSEN, P. 2010. Response of aquatic macrophytes in Northern Ireland softwater lakes to forestry management; eutrophication and dissolved organic carbon. Aquatic Botany AQBOT - 2335. www.elsevier.com/locate/aquabot. Northern Ireland Environment Agency unpublished survey and monitoring data 2000-2012.
Third Report by the United Kingdom under Article 17 on the implementation of the Directive from January 2007 to December 2012. Printed on 06/11/2013 Page 5
JNCC Common Standards Monitoring Guidance for Freshwater Habitats and Species, Rivers and Lakes guidance updated September 2016 and March 2015 respectively, ISSN 1743-8160 jnccdefra.gov.uk/page - 2231
Goldsmith, B., Dowman, S., Goodrich, S., Shilland, E. & Shilland, J. (2015) DOE NIEA Standing Fresh Water Monitoring of Special Areas of Conservation (SAC) and Areas Special Scientific Interest (ASSI) (Second Round). P_12324. ECRC (Environmental Change Research Centre) Research Report 168.
Air Pollution Information System (APIS). Http://.apis.ac.uk
Committee on Climate Change. 2017. UK Climate Change Risk Assessment (CCRAR) Evidence Report, Summary for Northern Ireland. Https://www.theecc.gov.uk

4. Range

4.1 Surface area (in km²)	50246.28	
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
4.9 Long-term trend Method used		
4.10 Favourable reference range	a) Area (km²)	50246.28
	b) Operator	
	c) Unknown	No
	d) Method	The FRR is approximately equal to the current range area. The FRR value has been updated to take account of

improved information on the habitat range. 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	Improved knowledge/more accurate data The change is mainly due to: Improved knowledge/more accurate data
4.12 Additional information	

5. Area covered by habitat

5.1 Year or period	1983-2017			
5.2 Surface area (in km²)	a) Minimum	b) Maximum	c) Best single value	22.74
5.3 Type of estimate	Minimum			
5.4 Surface area Method used	Based mainly on expert opinion with very limited data			
5.5 Short-term trend Period	2007-2018			
5.6 Short-term trend Direction	Stable (0)			
5.7 Short-term trend Magnitude	a) Minimum	b) Maximum	c) Confidence interval	
5.8 Short-term trend Method used	Based mainly on expert opinion with very limited 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	More than (>)		
	c) Unknown	No		
	d) Method	The FRA has been changed to not more than 10% above the current area, because the current habitat area is considered to be insufficient mainly because of the loss of dystrophic pools on upland moorland due to widespread drainage. An FRA operator has been used as it is not clear what the exact area of the FRA is.		
5.14 Change and reason for change in surface area of range	Improved knowledge/more accurate data The change is mainly due to: Improved knowledge/more accurate data			
5.15 Additional information				

6. Structure and functions

6.1 Condition of habitat	a) Area in good condition (km²)	Minimum	9.65	Maximum
	b) Area in not-good condition (km²)	Minimum	12.47	Maximum
	c) Area where condition is not known (km²)	Minimum	0.61	Maximum
6.2 Condition of habitat Method used	Based mainly on extrapolation from a limited amount of data			

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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	Stable (0)
6.5 Short-term trend of habitat area in good condition Method used	Based mainly on expert opinion with very limited data
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	There is insufficient information to report on the maximum area of habitat in unfavourable (not good) condition. Nevertheless, based on the area that has been assessed, 56% of the habitat is in unfavourable condition.

7. Main pressures and threats

7.1 Characterisation of pressures/threats

Pressure	Ranking
Intensive grazing or overgrazing by livestock (A09)	M
Conversion to forest from other land uses, or afforestation (excluding drainage) (B01)	M
Sports, tourism and leisure activities (F07)	M
Problematic native species (I04)	M

Threat	Ranking
Intensive grazing or overgrazing by livestock (A09)	M
Conversion to forest from other land uses, or afforestation (excluding drainage) (B01)	M
Clear-cutting, removal of all trees (B09)	M
Forestry activities generating pollution to surface or ground waters (B23)	M
Sports, tourism and leisure activities (F07)	M
Problematic native species (I04)	M
Droughts and decreases in precipitation due to climate change (N02)	M

7.2 Sources of information

7.3 Additional information

8. Conservation measures

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		

Reduce diffuse pollution to surface or ground waters from agricultural activities (CA11)
Prevent conversion of (semi-) natural habitats into forests and of (semi-)natural forests into intensive forest plantation (CB01)
Reduce diffuse pollution to surface or ground waters from forestry activities (CB10)
Habitat restoration/creation from resources, exploitation areas or areas damaged due to installation of renewable energy infrastructure (CC07)
Management of problematic native species (CI05)
Implement climate change adaptation measures (CN02)

8.6 Additional information

9. Future prospects

9.1 Future prospects of parameters	a) Range	Good
	b) Area	Poor
	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 Overall stable	

10. Conclusions

10.1. Range	Favourable (FV)
10.2. Area	Unfavourable - Inadequate (U1)
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	Stable (=)
10.7 Change and reasons for change in conservation status and conservation status trend	a) Overall assessment of conservation status Genuine change The change is mainly due to: Genuine change b) Overall trend in conservation status No change The change is mainly due to:
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 stable; and (ii) the current Area is not 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 poor; 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 - stable, and Structure and functions - stable.
The Overall assessment of Conservation Status has changed between 2013 and 2019 because the conclusions for Structure and functions and Future Prospects have changed from Favourable to Unfavourable-bad.

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 9.734
11.2 Type of estimate	Minimum
11.3 Surface area of the habitat type inside the network Method used	Based mainly on extrapolation from a limited amount of data
11.4 Short-term trend of habitat area in good condition within the network Direction	Stable (0)
11.5 Short-term trend of habitat area in good condition within network Method used	Based mainly on extrapolation from a limited amount of data
11.6 Additional information	

12. Complementary information

12.1 Justification of % thresholds for trends	
12.2 Other relevant information	

Distribution Map

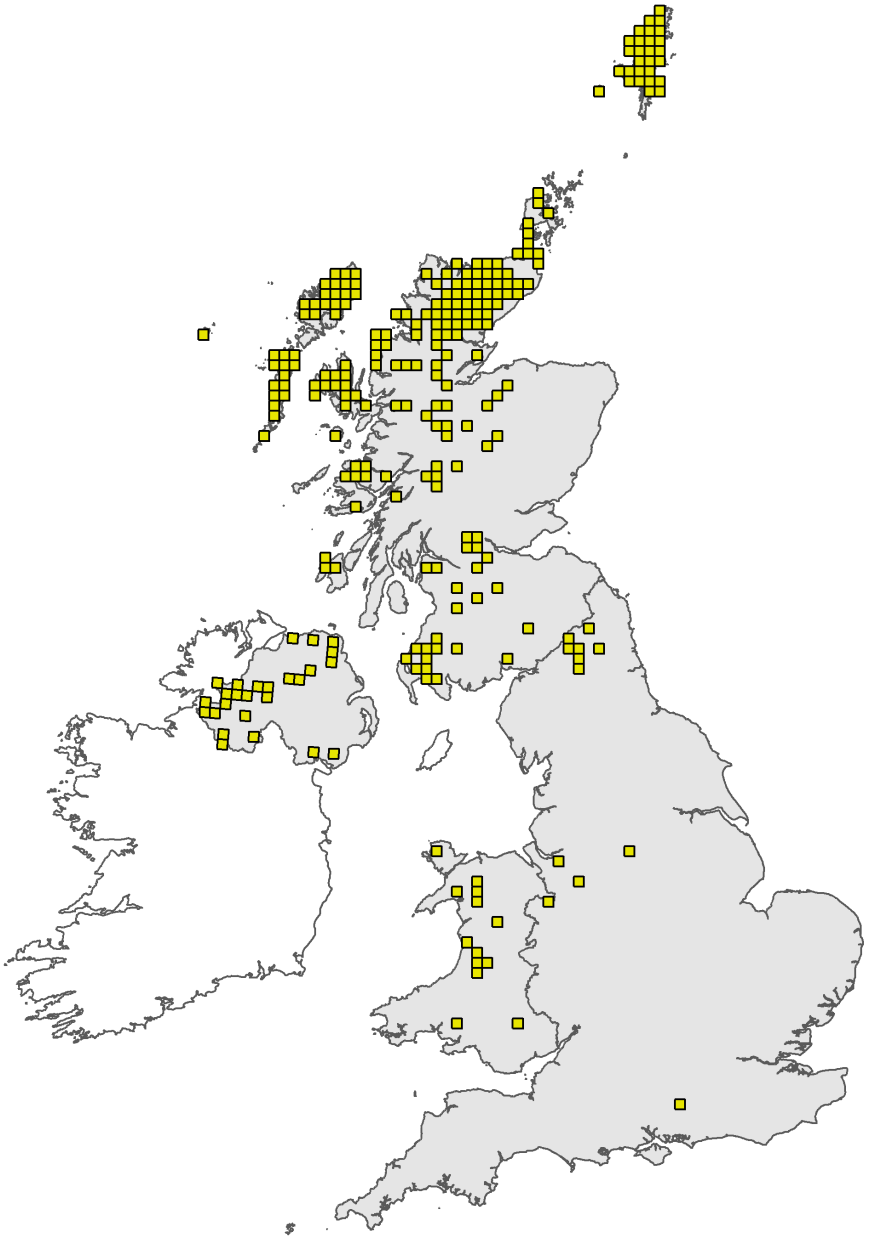

Figure 1: UK distribution map for H3160 - Natural dystrophic lakes and ponds. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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

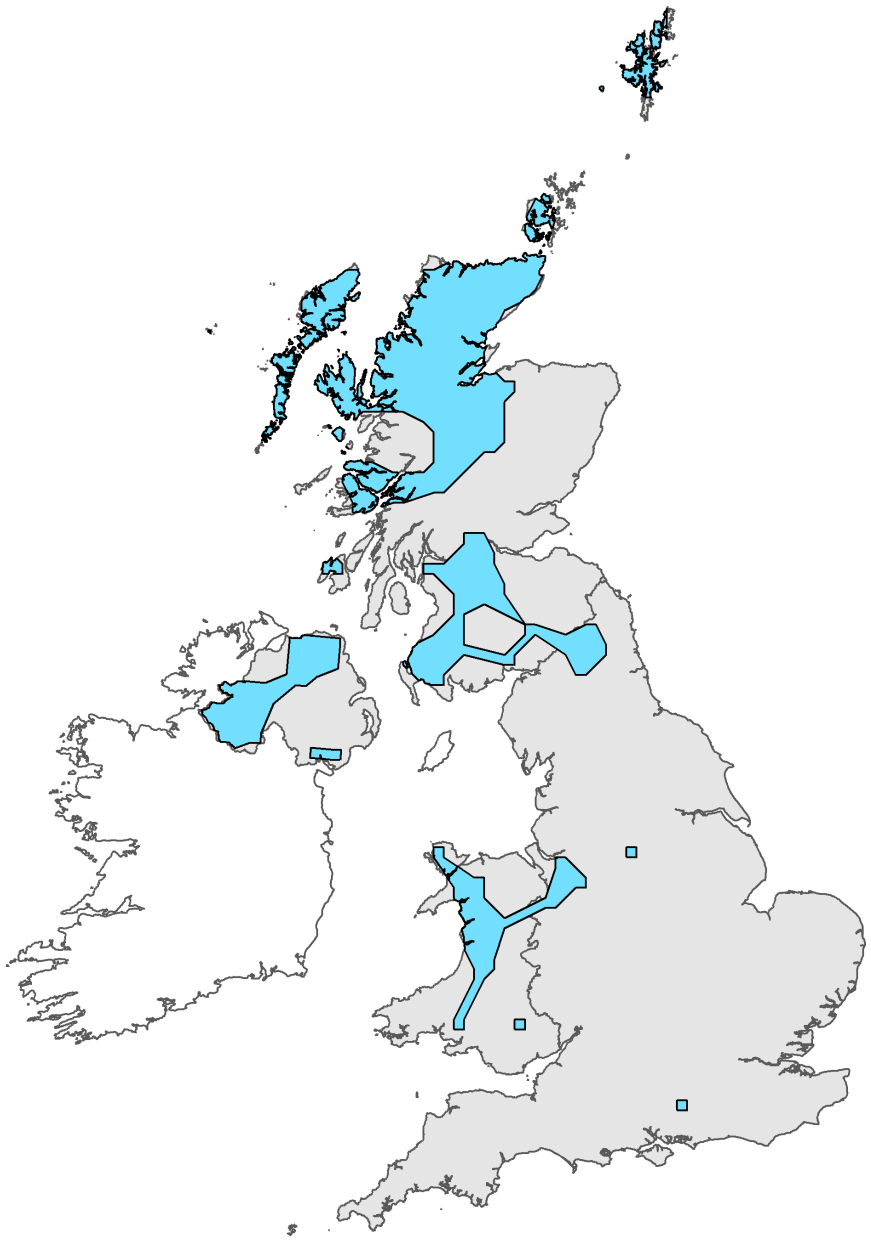

Figure 2: UK range map for H3160 - Natural dystrophic lakes and ponds. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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.