

HWSFAC BROADWATER LAKE

- Site Boundary
- Target Notes

Habitats

- r1 - Standing open water and canals
- u1b - Developed land; sealed surface
- u1b5 - Buildings
- u1c - Artificial unvegetated; unsealed surface
- w1d - Wet woodland
- w1f - Lowland mixed deciduous woodland

Secondary Codes:

- 11 - Scattered trees
- 17 - Ruderal/ephemeral
- 164 - Wet moss lawns

Target Notes:

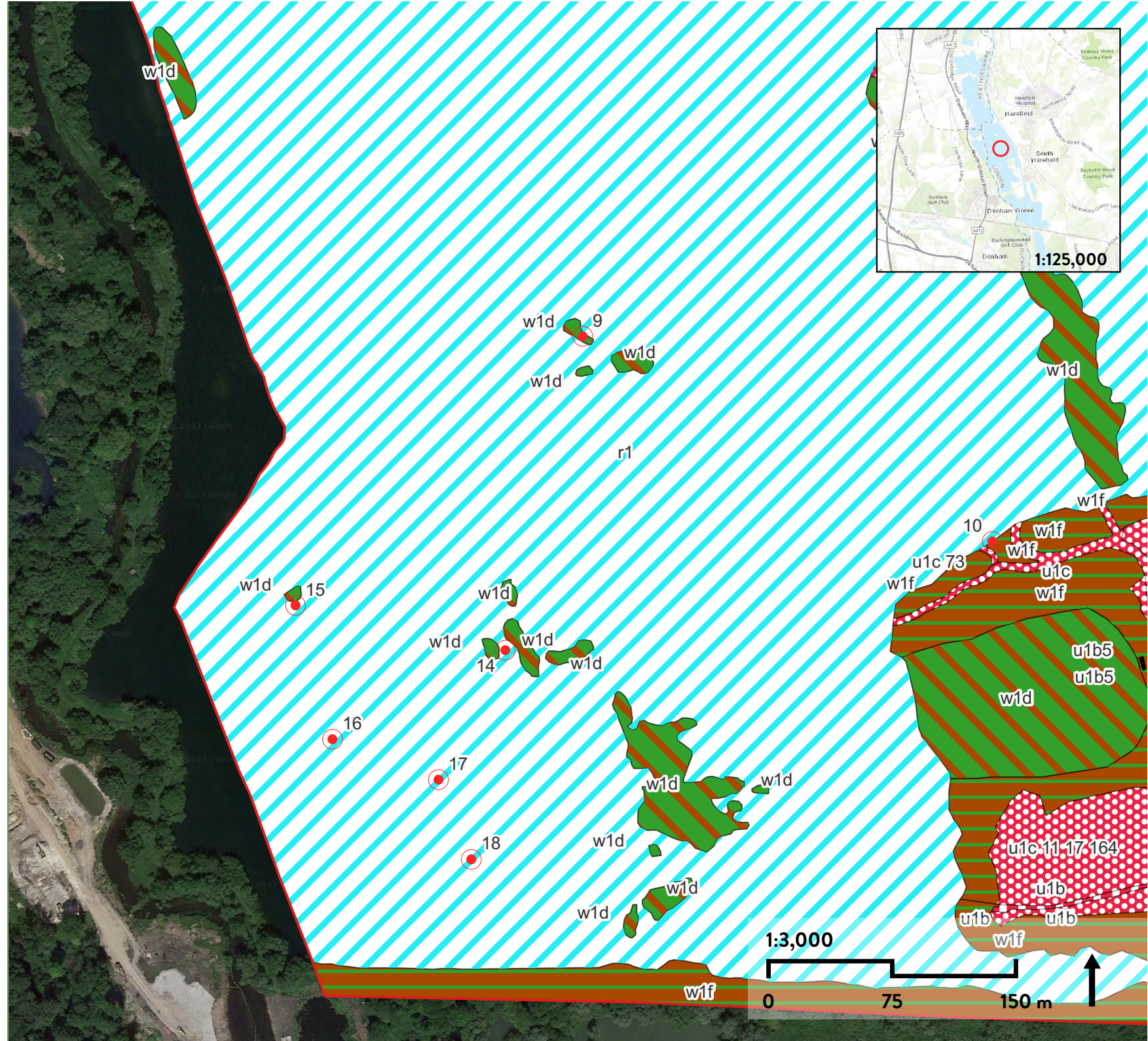
- 9 - Cormorant island
- 10 - Japanese knotweed
- 14 - Custer of trees, substrate not visible underneath; Cormorant island
- 15 - Tern raft
- 16 - Tern raft
- 17 - Tern raft
- 18 - Tern raft

Title: Baseline Habitat Map, Map 5

Drawn by: AH
Date: 02/10/2023

Reviewed by: SH
Date: 02/10/2023

Project number: 552023
Sources: ESRI World Topo, Google Satellite Imagery



APPENDIX C LAKE CONDITION ASSESSMENT

The Freshwater Biological Association 'Habitat Naturalness Assessment' is used to assess the condition of lakes. Scores for four attributes (physical, hydrological, chemical, and biological naturalness) are averaged to generate an overall 'habitat naturalness assessment score' which can then be translated into a condition score for use in the DEFRA Biodiversity Metric (see below). There are other elements considered in the lake naturalness assessment, but these are not included when calculating the condition assessment score.

Details of the methodology for assessing naturalness of lakes are available at:

<http://priorityhab.wpengine.com/contribute/>

The key documents are:

<http://priorityhabitats.org/wp-content/uploads/Lake-Naturalness-Assessment-Guidance-3.pdf>

<http://priorityhabitats.org/wp-content/uploads/Lakes-print-out-naturalness-form-2.pdf>

<http://priorityhab.wpengine.com/wp-content/uploads/Annex-II-Physical-Naturalness-Photographs.pdf>

<http://priorityhab.wpengine.com/wp-content/uploads/Annex-II-Physical-Naturalness-Photographs.pdf>

<http://priorityhab.wpengine.com/wp-content/uploads/Annex-IV-Chemical-Naturalness.pdf>

<http://priorityhab.wpengine.com/wp-content/uploads/Annex-V-Plant-Functional-Group-pictures.pdf>

<http://priorityhabitats.org/wp-content/uploads/Annex-VI-Further-Species-Recording-1.pdf>

Table C.1 Condition assessment result and associated scores.

Condition Assessment Result	Condition Assessment Score
1 Natural	Good (3)
2	Fairly good (2.5)
3	Moderate (2)
4	Fairly poor (1.5)
5 Least natural	Poor (1)

Table C.2 Broadwater Lake condition assessment

Criterion	Score 1=best 5=worst	Comment	Improvement Target
Physical naturalness	5	Least natural – steep sides, no real natural-type bank habitats just willow trees, only riparian vegetation is at the bottom of the bank in limited locations.	Target for 4 – added islands, changed topography to increase shallowness and depth, greater areas of macrophytes.
Hydrological naturalness	1	The lake is fed from springs arising from the underlying chalk aquifer and is in continuity with groundwater. During flow events, the waters of the River Colne seep through natural gravels into the lake. No other inputs are known or suspected.	No improvement possible.
Chemical naturalness	3	In summer the water is green, with sparse submerged plants in shallow areas only. Plants below 3m depth are dead in summer. Visibility was reduced in August 2023 to the top 50cm.	Target for 2 – aim to reduce nutrient concentrations within the lake and thereby reduce algal content of water to increase clarity. Achieved through higher percentage of macrophytes on floating islands, emergent beds and aquatic planting on coir mattresses. Long term water quality monitoring (temperature, DO, turbidity) to set targets for improvement and monitor progress. Studies of zoo / phytoplankton, manipulation of biofauna over 10+ years. Other measures that may generate improvements are pumps for water circulation of isolated areas, and solar pumps / bubblers for increased dissolved oxygen (DO) during hot summers.
Biological naturalness	2	Scores 1 for plants as only non-native is Elodea. Plants found were Lemna minor, a Potemageton sp, and filamentous	No target set. Eradication of non-natives would be unlikely to be achieved, and an improvement relative to the current score may be

Criterion	Score 1=best 5=worst	Comment	Improvement Target
		algae. These are typical of lower status sites and associated with elevated nutrient concentrations. Scores 2 for non-native fauna, as there are signal crayfish and carp, but they don't appear to cause obvious detrimental signs of impacts to water quality.	impossible. Further surveys and monitoring would be required to reassess the potential for improvements to be made.
Total	12		10
Average	3	3 = Moderate Condition	2.25 = Fairly Good

REFERENCES

- ¹ [National Planning Policy Framework - Guidance - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/national-planning-policy-framework-guidance)
- ² Drewitt, A.L., Whitehead, S. and Cohen, S. 2023. *Guidelines for the Selection of Biological SSSIs. Part 2: Detailed Guidelines for Habitats and Species Groups. Chapter 17 Birds (version 1.2).* Joint Nature Conservation Committee, Peterborough.
- ³ SSSI details and current condition status: [SSSI detail \(naturalengland.org.uk\)](https://naturalengland.org.uk/sssIs)
- ⁴ GOV.UK. (2021). *Environment Act 2021*. Available at: <https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted>
- ⁵ HM Government, (1981); *Part I and Part II of Wildlife and Countryside Act (as amended)*. HMSO
- ⁶ HM Government, (2017); *The Conservation of Habitats and Species Regulations 2017*. Statutory Instrument 2017 no. 490 *Wildlife Countryside*. OPSI
- ⁷ HM Government, (2000); *The Countryside and Rights of Way Act*. HMSO
- ⁸ HM Government, (2006); *Natural Environment and Rural Communities Act 2006*. HMSO
- ⁹ CEC (Council of the European Communities), (1979); *Convention on the Conservation of European Wildlife and Natural Habitats (Bern, 19.IX.1979)*. EC
- ¹⁰ UK Biodiversity Action Plan (2007). *UKBAP Priority Species and Habitats*. <http://www.ukbap.org.uk/newprioritylist.aspx>
- ¹¹ JNCC and Defra (on behalf of the Four Countries' Biodiversity Group) (2012). *UK Post-2010 Biodiversity Framework*. July 2012. Available from: <http://jncc.defra.gov.uk/page-6189>
- ¹² Defra (2011). *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*
- ¹³ Convention on Biological Diversity (CBD) (2010). *Decision X/2 Strategic Plan for Biodiversity 2011-2020, including Aichi Biodiversity Targets*. Available at <https://www.cbd.int/decision/cop/?id=12268>
- ¹⁴ European Commission (2012). *Our life insurance, our natural capital: an EU biodiversity strategy to 2020*. European Parliament resolution of 20 April 2012 (2011/2307(INI)).
- ¹⁵ GOV.UK. (2021). *National Planning Policy Framework*. [online] Available at: <https://www.gov.uk/government/publications/national-planning-policy-framework--2>
- ¹⁶ Greater London Authority (2021) *The London Plan: The Spatial Development Strategy for Greater London (GLA)*
- ¹⁷ Greater London Authority (2018). *London Environment Strategy 2018*. London: Greater London Authority.