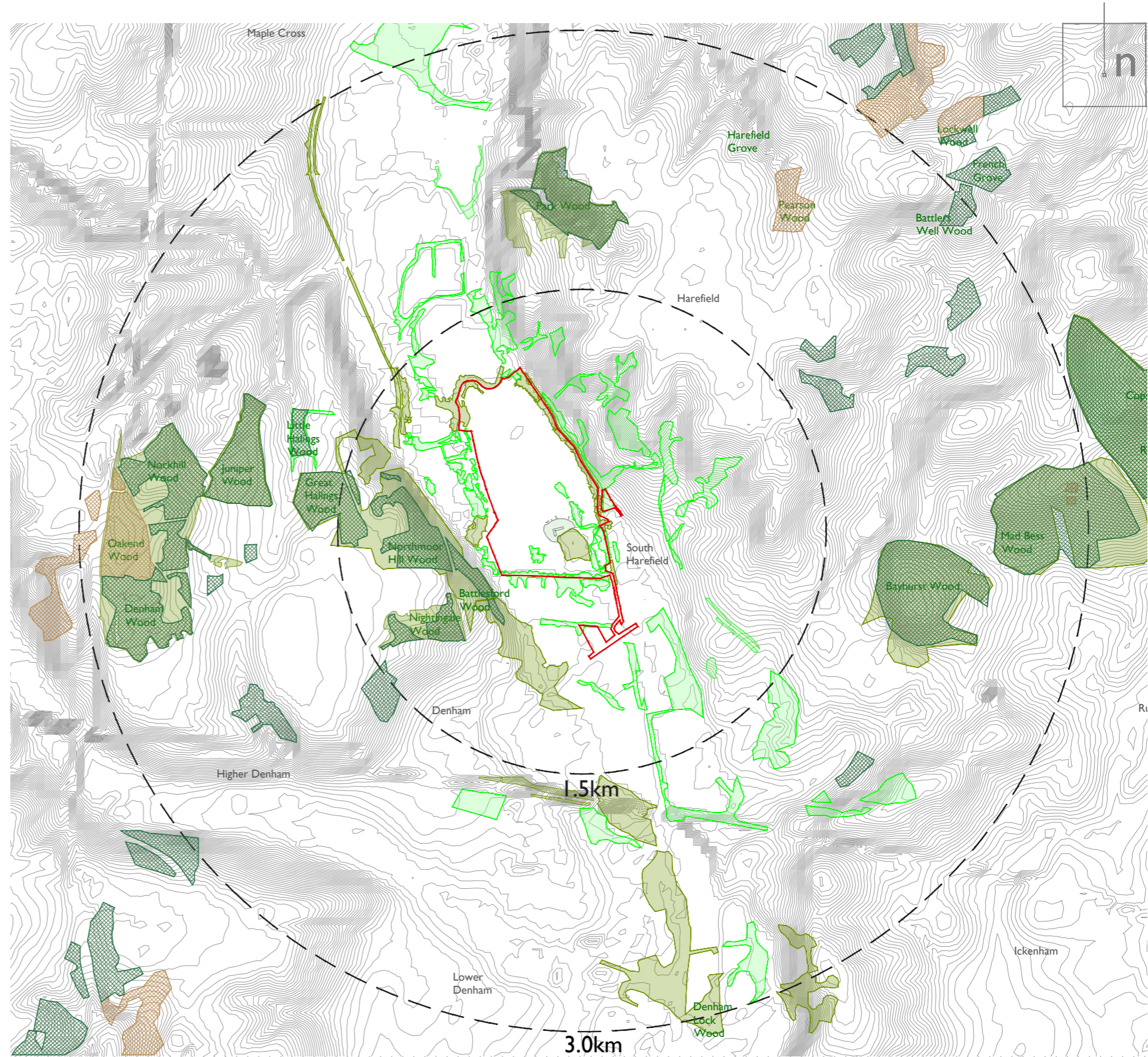
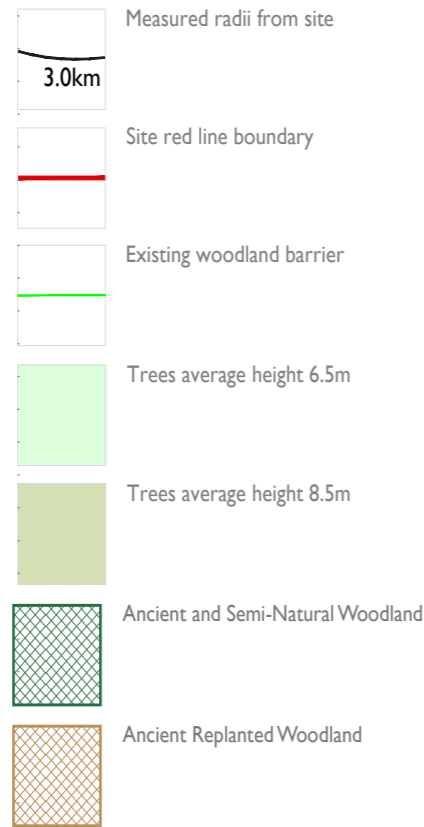


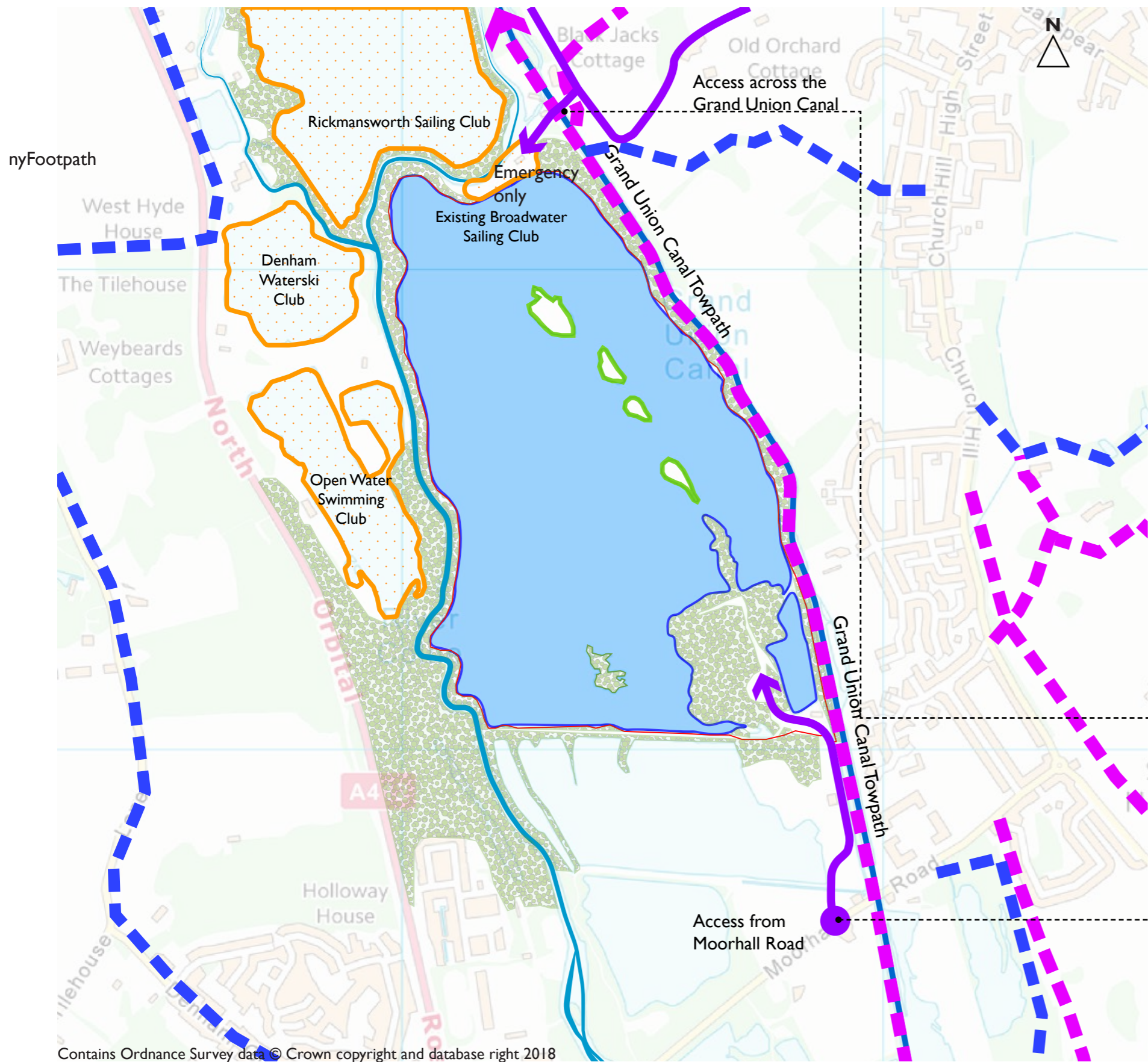


**The valley bottom surrounding the application site is predominantly wooded.**

This combines with the adjacent valley sides, tributary valley, undulating farmlands to the east and west which possess many broadleaved woodland blocks and belts which are generally connected with hedgerows so as create a broader landscape pattern rich with trees and often enclosed as a result. This pattern includes woodland and tree planting associated with a number of golf courses in the area.

Findings of the Arboricultural Survey follow in this report.





Contains Ordnance Survey data © Crown copyright and database right 2018

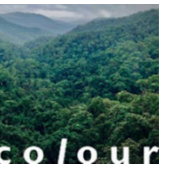
- 1. There are no Public Rights of Way within the site
- 2. The Grand Union Canal towpath runs along the eastern boundary and a number of footpaths on each valley side. Potential impacts upon these are minimal and assessed as part of the supporting LVIA
- 3. Recreation throughout the Colne Valley area locally includes a number of water activities such as open water swimming, waterskiing, sailing and rowing
- 4. This is an area of recreation with adjacent watersports facilities
- 5. The only access to the site currently is a single lane road, leading into the site from Moorhall Road
- 6. The road access is currently shared with an aggregate processing plant located on the shoreline to the southern lake of the site.
- 7. The sign along at the junction of Moorhall Road is the only current indication of Broadwater Sailing Club on a seemingly industrial road

Access route for existing Broadwater Sailing Club; Access road crosses over Grand Union Canal

Current access for vehicles and pedestrians from Moorhall Road

**Key**

- Footpath
- Recreational route
- Access route to site



The site is within the Colne Valley Regional Park, the purpose of which is to promote public enjoyment of the landscape, with biodiversity and access central to this.

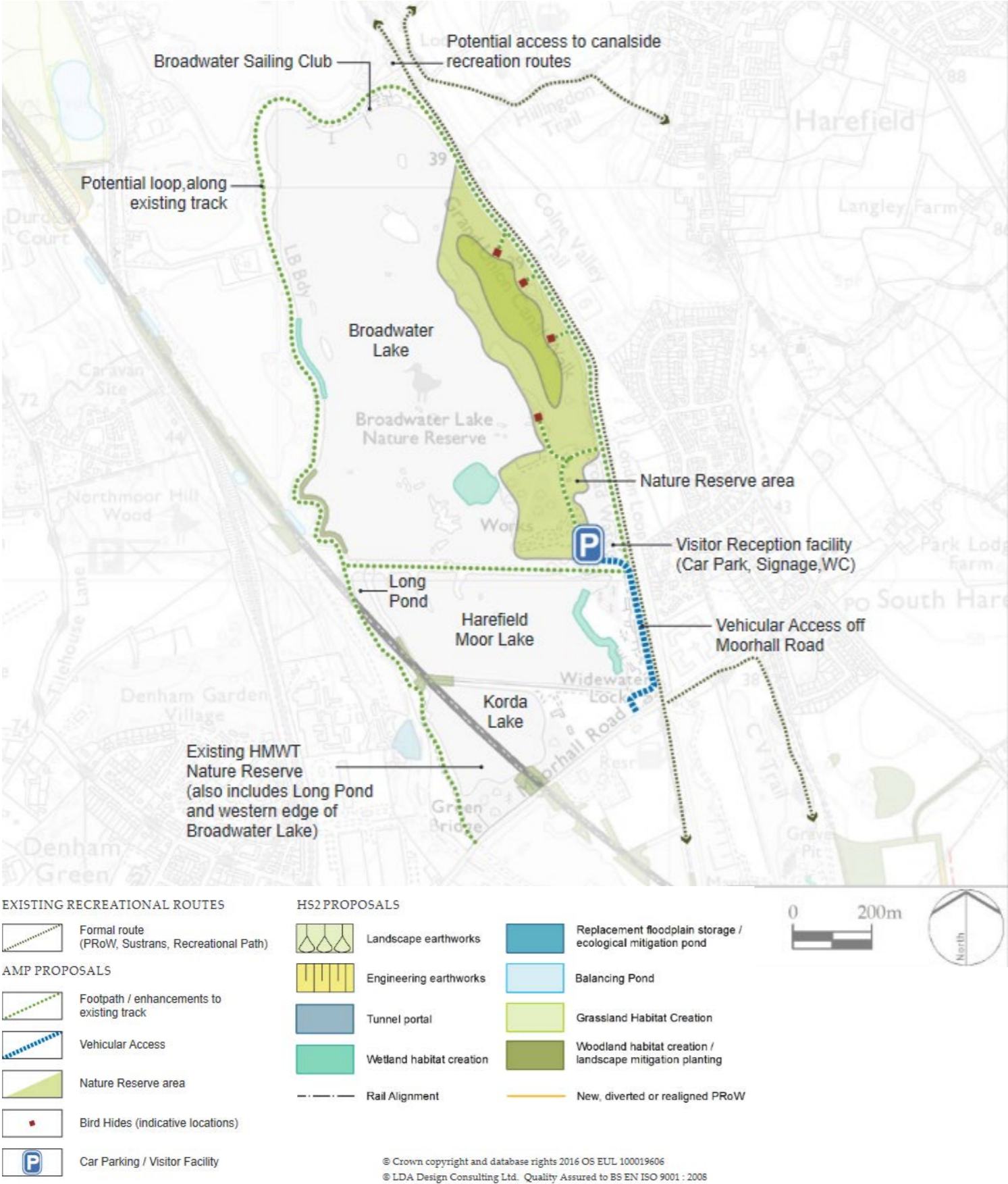
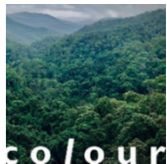
Left to right, please refer to:

<https://www.colnevalleypark.org.uk/wp-content/uploads/2020/01/CVP-Visitor-Guide-Map-2020.pdf>

<https://www.colnevalleypark.org.uk/wp-content/uploads/2019/04/HMSTfactsheetBroadwaterLake.pdf>

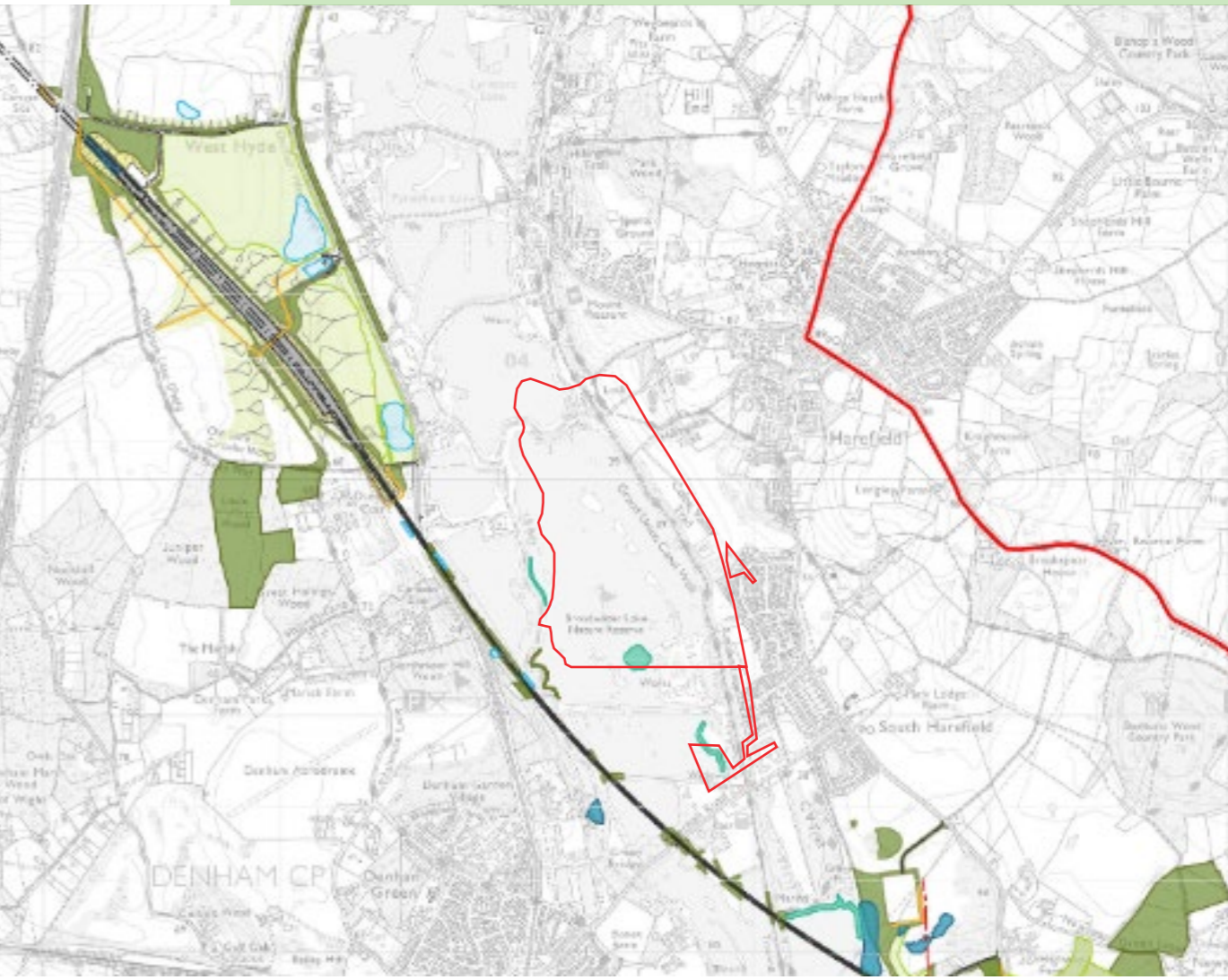
Site

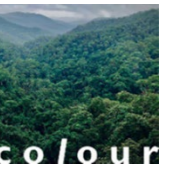




Of major influence within this landscape is the ongoing HS2 construction works and future operations.

1. The HS2 development was the catalyst for HWSF moving to Broadwater Lakes
2. The HS2 viaduct will skirt the South West corner of the site, going through the Broadwater Lakes Nature Reserve (Korda Lake)
3. Multiple ecological mitigation elements are listed in the HS2 development plan, including proposed implementation within the Broadwater Lakes site



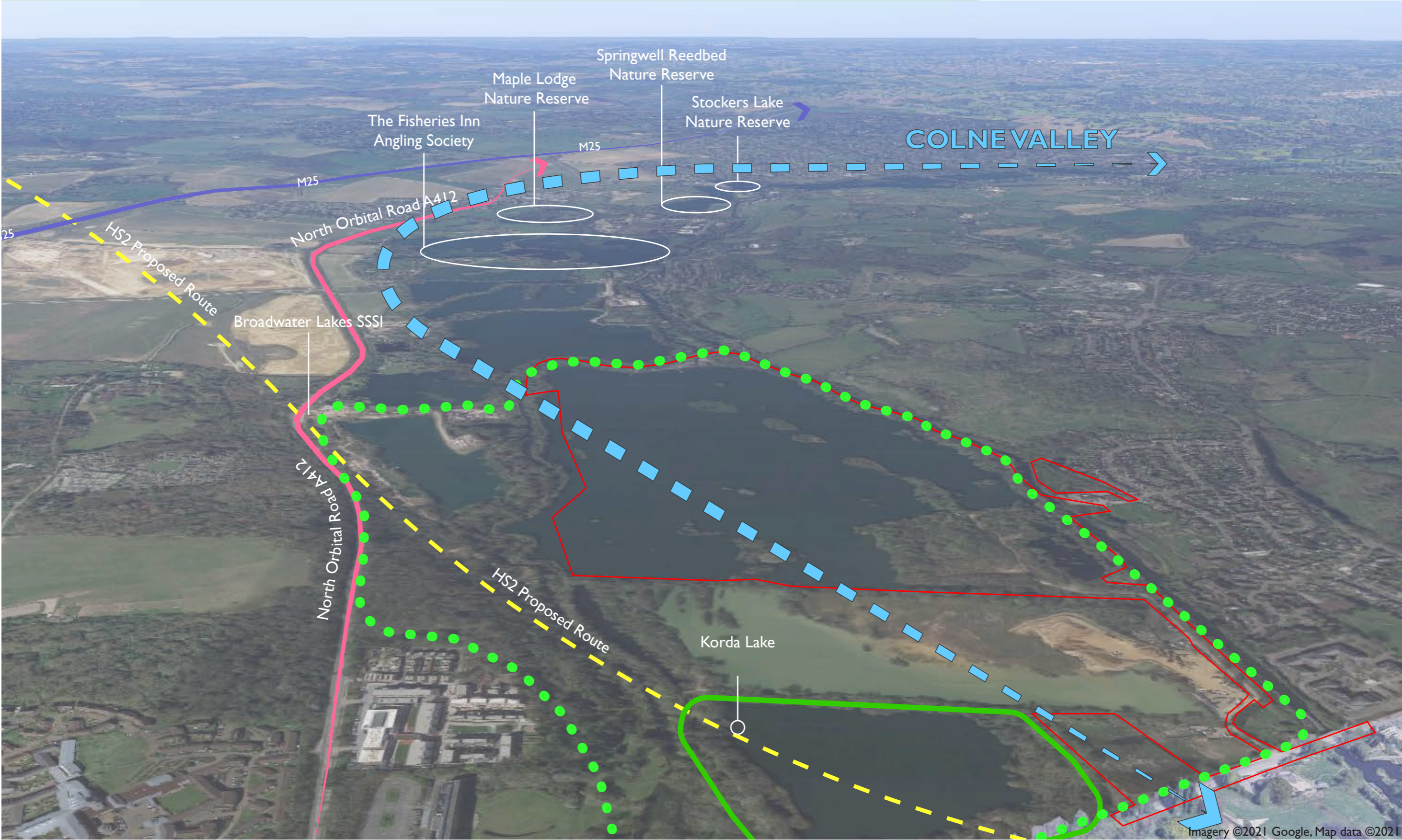


1. The site sits within the Colne valley, bounded by the Grand Union Canal to the East and the naturally flowing River Colne to the West
2. The SSSI boundary encapsulates the whole of the Broadwater Lakes Site
3. The main land element protrudes into the lake, which has scattered islands throughout (which aren't part of the HWSF plans)



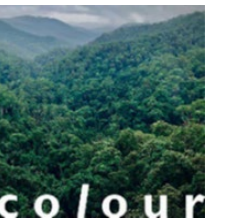


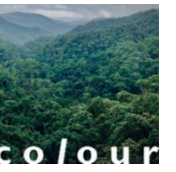
- 1. The site is almost entirely surrounded by mature vegetation
- 2. Within the Broadwater Lakes SSSI, conservation of wildlife is vital to this proposal within the Colne Valley



3.

THE SITE





The proposed site is set within the Broadwater Lakes Nature Reserve, a SSSI, and the current home to the Broadwater Lakes Sailing Club.

The main potentially usable land mass of the application site is a peninsula of land connected by a narrow neck of land to the south within Broadwater Lake.

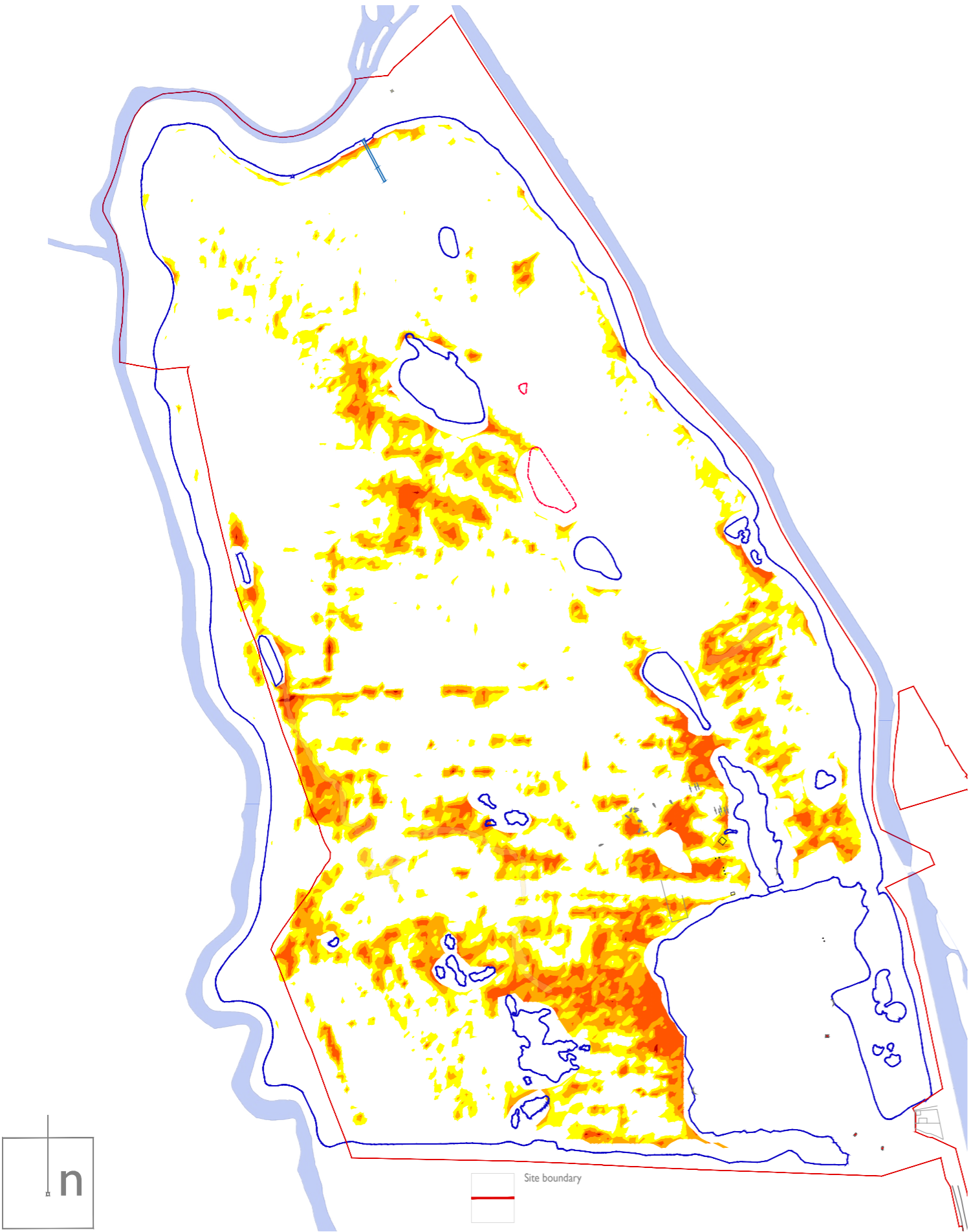
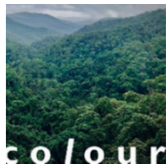
The majority of the lake's shore, other than a section to the southwest is also included within the application site as are a number of islands.



Proposed activity on site is focussed on the peninsula which can currently be understood as a number of character areas :

1. Linear northern island currently connected by poor condition bridge;
2. Potential reclaimed land so as to avoid areas of ecological value, provide ecological mitigation and create new habitats;
3. Northern shoreline with groups of broadleaved trees and
4. Wet woodland to be avoided
5. Scattered Birch in semi-clearing on existing concrete
6. Native woodland edge to southern 'Heron' inlet
7. Remnant concrete surface with Buddleia in the process of being thinned
8. Arrival clearing
9. Arrival woodland
10. Quicksand outwith the site boundary










Understanding water depth has been critical to developing the ecological, recreational and landscape masterplan.

A bathymetric survey was therefore undertaken in that :

- Water that is 2m or deeper is optimal for sailing and rowing;
- In addition this also reduces the risk of Summer algal blooms and therefore the amount of water quality management required;
- Land created for ecologically mitigating islands and the main operational uses was guided towards shallower water;
- Working in shallower water eases logistics through minimising the amount of material required so as to reduce energy requirements, duration of construction and cost.

Lake bed level	Winter water depth	Summer water depth
 36.5m	0.96m	0.64m
 36.0m	1.46m	1.14m
 35.5m	1.96m	1.64m
 35.0m	2.46m	2.14m
 <35m	>2.46m	>2.14m

- Note:**
1. Calculations are based on an average winter/summer water level provided by the surveyor (refer dwg 32578BWLS-01-05)
  2. Minimum 2m water depth is preferable for sailing and water activities to minimise algal blooms in summer
  3. It was not possible to carry out a survey around the islands, but it is assumed that the water level is less than half a meter