Appendix 9.8

RELEVANT ENVIRONMENT AGENCY CORRESPONDENCE

creating a better place

Environment Agency

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Development Control
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UB8 1UW

Our ref: NE/2023/136465/01
Your ref: 2382/APP/2023/2906

Date: 12 January 2024

Dear Michael,

Hillingdon Water Sports Facility and Activity Centre, Broadwater Lake Moorhall Road Harefield, Uxbridge.

Redevelopment of the site to create the Hillingdon Watersports Facility and Activity Centre including demolition of existing Broadwater Lake Sailing Club (BSC) clubhouse at the north of the lake and erection of a building to be occupied by HOAC and BSC including changing facilities, meeting rooms, storage, Workshop and seasonal worker accommodation (sui generis), activity shelters; installation of pontoons and concrete slipways; boat shed; equipment storage huts (north of lake and at entrance); boat parking and racking areas; camping area; outdoor activity areas; ecological enhancement throughout the site; new pedestrian routes through the peninsula; landscaping including new woodland, dense vegetation screens and boundary treatment; new access and access road; localised dredging and land reclamation; relocation of existing sailing area and creation of floating and fixed islands within the lake; coach drop off and turning area; vehicle parking; cycle parking; and associated works..

Thank you for consulting us on the above application on 01 December 2023.

Environment Agency Position

The site of the proposed development of Hillingdon Watersports Facility and Activity Centre is located adjacent to the Main River Colne (chalk river) and modelled partially within fluvial flood zone 2 and partially within flood zones 3b, the functional floodplain.

The site is designated as a Sites of Special Scientific Interest (SSSI) and is rich in biodiversity with many protected and threatened species using it as their migratory route. The site further lies on a historic landfill, Broadwater Plant. In addition to this the site has aquifers, both superficial and bedrock. We have also identified the site to have abstraction licence points.

Given the above-mentioned factors, the proposed development lies in an environmentally sensitive and ecologically significant zone and as such it is our statutory responsibility to closely review the potential impacts of the enhancement and mitigation measures being proposed on the site.

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Based on the review of the documents submitted to us we have **4 objections** to the proposed planning application:

Objection 1: Inadequate flood risk assessment
Objection 2: More detailed consideration on the control of pollution is required, and parallel tracking is recommended.
Objection 3: Activity could cause unacceptable impacts to waterbodies in the River Basin Management Plan
Objection 4: Presence of legally protected species and/or priority species (principally those for which we have a lead role in protecting) and no/inadequate evidence that the risks have been assessed and addressed satisfactorily.

Objection 1: Inadequate flood risk assessment
In the absence of an acceptable flood risk assessment (FRA) we object to this application and recommend that planning permission is refused.

Reason(s)
The site lies partially within Flood Zone 3b, the functional floodplain, which is land defined by the planning practice guidance as an area intended to flood. And partially within Flood Zone 2.

The submitted FRA does not comply with the requirements for site-specific flood risk assessments, as set out in paragraphs 20 to 21 of the Flood Risk and Coastal Change section of the planning practice guidance. In particular, the flood risk assessment fails to demonstrate that the site will remain safe for its lifetime and that the proposed development will have finished floor levels 300mm above the 1% annual probability (1 in 100 year) plus an allowance for climate change flood level, which would prevent internal flooding and ensure the safety of the development's users.

Table 8.1 of the consultation response summary (Page 8) states that *"The Proposed Development would also not affect lake flood water storage capacity (only a 0.6 to 0.15cm increase in lake level within a 1 in 100 annual exceedance probability (AEP) fluvial event +20% climate change which is within the capacity of the lake). Please refer to Appendix 8.2: Flood Risk Assessment for further information*". These measurements currently reads as '6mm to 1.5mm' which seems incorrect and needs further clarity if this is metres or centimetres. We advise the applicant to verify these measurements.

The assessment of flood risk states that the water level remains within the capacity of the lake. We would need the applicant to demonstrate that the proposed increase in flood risk would not overtop the natural high ground and enter the river Colne in a 1 in 100 flood event + 20% allowance for climate change flood event. The applicant needs to provide topographic levels of the natural high ground in conjunction with the levels in the lake. Additionally, the FRA will need to consider the impact of the river Colne flooding into the lake during a range of flood events as modelling suggests that flood water could overtop the bank and high ground.

Please note that as it stands, we would deem the new peninsula to be FZ3b unless an evidence review request (formally known as a flood map challenge) is raised with us. This may need to be considered for the future. This cannot be requested prior to construction and will require topographical surveys.

In accordance with the National Planning Policy Guidance, only development classed as Water Compatible or Essential Infrastructure will be permissible within Flood Zone 3b

– subject to the Exceptions Test. Further, Hillingdon Local Plan (Adopted Plan 2012) Policy EM6:Flood Risk Management states that the Council will require new development to be directed away from Flood Zones 2 and 3 in accordance with the principles of the National Planning Policy Framework (NPPF).

Overcoming our objection
To overcome our objection, the applicant should submit a revised FRA to demonstrate that the proposed development will not pose a risk to life and/or property on or off site. This can be achieved through demonstrating that raised finished flood levels, as outlined above, can be provided to prevent internal flooding of the development and damage to people and property.

We note that the new land of the peninsula is proposed to be set at a minimum of 37.89 m AOD. Given that the peninsula is being re developed and reprofiled , we suggest that the ground level is set higher than this level to account for freeboard. The proposed development has the opportunity to raise both ground level and finished floor levels to negate flood risk to the building on the peninsula. For finished floor levels the applicant will need to demonstrate a freeboard of 300mm above the 1 in 100 + 20% CC flood level.

Please be aware that any built development within the floodplain (1% annual probability, plus an allowance for climate change, flood extent) will only be considered acceptable if it can be compensated for on a volume-for-volume and level-for-level basis; however, this requires an available area of land on the edge of the floodplain to be viable.

If this cannot be achieved, we are likely to maintain our objection.

Further information can be found in the document 'Improving the flood performance of new buildings' at: https://www.gov.uk/government/publications/flood-resilientconstruction-of-new-buildings

Additional guidance can be found in the Environment Agency Publication 'Prepare your property for flooding', which can be found at https://www.gov.uk/government/publications/prepare-your-property-for-flooding

Objection 2: More detailed consideration on the control of pollution is required, and parallel tracking is recommended as appropriate.
The proposed development will require a permit under the Environmental Permitting Regulations (England and Wales) 2016. We do not have enough information to know if the development can meet our requirements to prevent, minimise and/or control pollution. We therefore recommend that planning permission is refused.

Reason
The development involves the deposit of waste or the disturbance of the existing landfill and so it must comply with the landfill directive (if relevant) and Environmental Permitting Regulations.

To reduce the risks to people and the environment and obtain a permit, the suitability of the location with respect to the protection of groundwater will need to be considered, the design and/or layout of the buildings may need to change and include abatement technology to reduce the impact of the development beyond Best Available Techniques (BAT). In particular, mitigation is likely to be required to control Air Quality impacts, surface water runoff and the squeezing out of leachate from the underlying landfill, therefore may require a leachate extraction and treatment plant incorporated into the

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development to protect groundwater.

This objection is supported by paragraph 188 of the National Planning Policy Framework, which recognises that planning and pollution control are separate, but complementary, regimes. Planners should consider the acceptability of the proposed use of land and the impacts of that use, but not the control of processes and emissions that will be covered by a permit.

Overcoming our objection
The applicant must gather evidence and submit information as advised above. We recommend that the applicant considers parallel tracking the planning and permit applications as this can help identify and resolve any issues at the earliest opportunity. Parallel tracking can also prevent the need for post-permission amendments to the planning application. We would welcome a joint discussion with the applicant and planning authority to discuss this further.

Further guidance can be found at https://www.gov.uk/government/collections/risk-assessments-for-specific-activities-environmental-permits

Objection 3: Activity could cause unacceptable impacts to waterbodies in the River Basin Management Plan
The submitted proposal does not demonstrate that Water Framework Directive requirements have been taken into account. We object to this development as it may cause deterioration of, or jeopardise the attainment of good ecological potential of Broadwater Lake (GB30641907). We will maintain our objection until the applicant has provided evidence to show that the risks posed by the development can be mitigated or removed.

Reasons
Based on the information submitted, there is a significant risk that the development will:

- cause deterioration of the water body status
- prevent achievement of water body objective to achieve good ecological potential.

The Environment Agency has concerns for the following hydromorphological and biotic pressures to Broadwater Lake water body (GB30641907) with this development:

Direct pressure

- Recreational activity can result in trample and damage to macrophytes.
- Dredging will result in the removal of phytobenthos and sediment-dwelling invertebrates (also potentially macroalgae and fish).
- Loss of open water habitat can trigger the removal of habitat for fish, invertebrates and macrophytes.

Indirect pressures

- Dredging will impact phytoplankton, phytobenthos and macrophytes by altering turbidity and therefore light availability.
- Recreation activities will increase disturbance along shorelines that can lead to increased bank erosion and increased concentration of suspended sediment, reducing light availability and impacting water quality, phytoplankton, phytobenthos and macrophytes. Further, increased sedimentation will impact phytobenthos, macroinvertebrates and fish eggs.

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The Water Framework Directive (WFD) Assessment suggests that some of the proposed activities from this development have been assessed to conclude there is 'not significant residual risk' to the quality elements assessed under WFD. Each of the assessed activities have suggested mitigation to reduce the risk of deterioration to water body status, however, **we do not believe these risks are adequately mitigated for.** Please see our detailed comments below:

- This development proposes to significantly increase recreational use of Broadwater Lake which is designated as an artificial water body for recreation purposes. There is a need to ensure the impact of these proposed activities prevent deterioration and are appropriately mitigated to support this water body in achieving **Good Ecological Potential**.
  The current proposal does not adequately mitigate for the impact of this increased recreational activity. Therefore the development does not protect Broadwater Lake from deterioration or from the intensification of recreational activities and does not demonstrate compliance with the statutory objectives of the Water Framework Directive to achieve Good Ecological Potential by 2027.

- Section 5 of the *WFD Compliance Assessment* identifies mitigation for potential impacts to the hydromorphology quality element at Broadwater Lake for the following activities:
  - Changes in quantity and dynamics of water flow in the lake; river connectivity; depth, area and volume variation; structure and substrate of lakebed and banks; and structure of marginal zone,
  - Physical damage from recreation,
  - Change in lake shore form and structure.

  The proposed mitigation includes floating reedbeds (1325m^2) and concrete caissons (8540m^2) ('submerged and filled with silt / substrate and planted with vegetation'). We do not believe that these hard-engineered solutions would adequately restore natural lake edge habitat and are likely going to negatively impact the site.
  The WFD Assessment does not justify these methods over the use of a more natural solution, such as regrading, using silt/substrate to build up the lake edges, natural colonisation of the margins, or assisted regeneration through planting and tree works. Additionally, the floating reedbeds have been proposed to mitigate for the impacts to the features of the SSSI (wintering birds) and provide replacement nesting opportunities and **not** to address the impacts to WFD. These would not be considered appropriate mitigation under WFD, as they do not directly address the activities which are causing a risk of deterioration under WFD.

  Further mitigation listed in the WFD table suggests that increasing the lake depth will help reduce wave erosion risk: '*The construction of islands and increased depth and volume below sailing boats will reduce the effect of wash and wind generated waved on bank erosion, also reduced though programmes of re-vegetation*.' However, the deeper the water, the greater the potential for wave energy. We therefore suggest that dredging of the lake is not referred to as mitigation for this activity and instead a receptor. Dredging should be considered as a risk to WFD with mitigation proposed to limit damage.

- Dredging can affect the water environment by altering flow regimes, releasing contaminants accrued within the sediment, and create smothering effects, thereby damaging benthic habitats and fish populations. The dredging operations required as part of this proposal are highlighted as posing a high risk to the

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surface water quality within the WFD Risk Assessment table, which will therefore impact fish and eel populations within the lake.
We do not believe turbidity curtains will provide sufficient mitigation to prevent water quality deterioration in both the short and long-term operation of the site. Additionally, further information on turbidity screen arrangements is required to ensure fish and eels will not be negatively impacted during dredging operations.

- The proposed dredging is likely to impact on the hydromorphology quality element by causing damage to the lakebed structure. ES Volume 1 Chapter 6 Construction, 6.4.24 suggests that the majority of sediments to be removed will be compacted gravels, overlain with silt although this will likely remain in place. This represents a significant change to lake bed structure. Changes to lakebed may impact residence time, lake depth variation, structure and substrate of the lakebed, structure and condition of the lake shore with subsequent impacts to water quality (changes in thermal conditions and nutrient conditions). No adequate mitigation has been suggested to address this impact.

- We do not currently monitor ecology at Broadwater Lake. Therefore, we are aware this Assessment is missing reference to empirically gathered ecological data and must make use of relevant, recent scientific literature to consider the impacts of the proposal.

- There is the omission of an assessment of the cumulative impacts of each activity to the WFD quality elements. For example, currently the WFD Assessment does not measure and mitigate for the cumulative cross pressure caused by recreational water-based activities.

- The proposed area of reclaimed land indicates a significant loss of open water habitat and lake shoreline habitat without adequate mitigation or compensation. This activity risks deterioration to the hydromorphology quality element (through changes to residence time, lake depth variation, structure and substrate of the lakebed, structure and condition of the lake shore) and water quality (changes in thermal conditions and nutrient conditions)). Current proposals highlighted in the Mitigation and Ecological Management Plan Volume 1 Part 1, Table 4.3 do not provide adequate mitigation for this risk, due to the reliance on highly engineered solutions.

- There is no information regarding the risk to juvenile fish and eel populations as a result of the proposed water recirculation and pumping system (drawing no. HWSFAC-COL-00-XX-DR-L-1010). This proposal has the potential to directly impact on juvenile fish and eel populations through physical damage to individuals, therefore impacting on the biological quality element. No mitigation measures have been identified to address this risk.

The Thames River Basin Management Plan (RBMP) sets out the environmental objectives for the river basin district, including statutory objectives for water bodies and protected areas. It also includes a summary programme of measures required to achieve these objectives.

Under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (WFD Regulations), Regulation 33, public bodies must have regard to the relevant RBMP in exercising their functions which affect a river basin district.

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This objection is supported by paragraph 170 of the National Planning Policy Framework (NPPF), which recognises that the planning system should enhance the environment by preventing development from contributing to, or being put at unacceptable risk from, water pollution. The WFD Regulations also require that all water bodies are protected from deterioration and pollution. If a significant risk of water pollution from a development cannot be avoided or adequately mitigated, planning permission should be refused.

Furthermore, Policy EM3: Blue Ribbon Network in the Hillingdon Local Plan (Adopted Plan 2012) states that the Council will continue to promote and contribute to the positive enhancement of the strategic river and canal corridors and the associated wildlife and habitats through the Biodiversity Action Plan and the Thames River Basin Management Plan, and developer contributions where appropriate.

Overcoming our objection
In order to overcome this objection an alternative scheme should be provided that meets the requirements of the RBMP.

We require an updated WFD Assessment to address all impacts of the development, as identified above including an assessment of the cumulative impacts - and appropriate mitigation measures for the identified impacts.
Currently the assessment focuses on short-term construction impacts and there is no assessment of the operational changes and how they may impact over a longer timeframe.

Objection 4: Presence of legally protected species and/or priority species (principally those for which we have a lead role in protecting) and no/inadequate evidence that the risks have been assessed and addressed satisfactorily.
Insufficient information has been provided to assess the risks posed by the proposed activities to the protected species identified on the site – a) European Eels (Anguilla anguilla); b) Water Vole (Arvicola amphibius) and their habitats. We therefore recommend that planning permission is refused.
PART A
We object to the dredging (construction phase), recirculation and pumping of water and increased recreational activity proposed as part of this planning application due to the likely effect this will have on *European Eels (Anguilla anguilla)* and its habitat.

PART B
We object to the development on the peninsula proposed as part of this planning application due to the likely effect this will have on *Water Vole (Arvicola amphibius)* and its habitat.

Reason(s)
This objection is supported by paragraphs 174 and 180 of the National Planning Policy Framework (NPPF) which recognise that the planning system should conserve and enhance the environment by minimising impacts on and providing net gains for biodiversity. If significant harm resulting from a development cannot be avoided, adequately mitigated, or as a last resort compensated for, planning permission should be refused. Opportunities to incorporate biodiversity in and around developments should be encouraged.

Policy EM7: Biodiversity and Ecological conservation in the Hillingdon Local Plan (Adopted Plan 2012) states that Hillingdon's biodiversity and geological conservation

will be preserved and enhanced with particular attention given to the protection and enhancement of populations of protected species as well as priority species and habitats identified within the UK, London, and the Hillingdon Biodiversity Action Plans.

England's Biodiversity strategy identifies priority species also listed as being of 'principal' importance under section 41 of the NERC Act 2006. Local planning authorities have responsibilities under NERC to have regard to those species in their decision-making because of their duty to conserve Biodiversity (s40).
In this instance, the proposed development will have a detrimental impact on the following priority species that we have a role in protecting.

PART A: European Eel

The European Eel (*Anguilla anguilla*) is a protected species under the Eels (England and Wales) Regulations 2009 and listed under section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

The proposed dredging **will** have a detrimental effect on the population and its habitat within Broadwater Lake (Mid Colne Valley SSSI). The application does not include adequate information about the measures proposed to protect the European Eel throughout the construction works.

Additionally, there is no information on the risks posed to eels and juvenile fish by the water recirculation and pumping system proposed as part of the mitigation measures (drawing no. HWSFAC-COL-00-XX-DR-L-1010).
The application does not include adequate information about the measures proposed to ensure that European Eels are protected in this location. In particular, the application fails to:

a) **Identify the presence of this protected species.**
   - The ES Chapter 7 Biodiversity 7.4.158 states that '*Eels (another preferred food) were not confirmed to be present at the Site'.* The ES Chapter 7 Biodiversity 7.4.165 states that fish populations are of local importance only. The PEA records that surveys were undertaken in October 2022 with low numbers of fish caught and only five species identified (Pike, Perch, Tench, Common Carp and three-spined stickleback) that did not include European Eel. However, angling records for the site suggest that they appear to be present in good numbers, potentially at a level of national importance due to the large size of individuals caught.
     Electrofish surveys were undertaken as part of the PEA but are limited in their ability to detect fish population levels in large bodies of water as fish are able to take refuge at depth or outside of the influence of the electromagnetic field of influence. Similarly seine and fyke netting methods have limitations when used on large bodies of water where individuals may be able to take refuge away from set nets. Angling has been present on the lake for many years with regular catches of eel recorded and should be considered a reliable data source for fish populations at the site.

b) **Identify appropriate mitigation measures for this species**.
   - The Mitigation and Ecological Management Plan indicates a net loss of 13,965m^2 open water at the site, resulting in a direct loss in habitat for eels which has not been identified as a risk in any of the documents submitted. The development must demonstrate no adverse effect on this protected species for it to be consented.

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- There is no information regarding the risk to juvenile fish and eels as a result of the proposed water recirculation and pumping system. No mitigation measures have been identified.
- Dredging can affect the water environment by altering flow regimes, releasing contaminants accrued within the sediment, and create smothering effects, thereby damaging benthic habitats and fish populations. The PEA (Table 6.1 Ecological baseline and relevant high-level mitigation and enhancement measures) identifies that a CEMP will be required to manage the impacts of disturbed sediments on fish populations. The dredging operations required as part of this proposal are highlighted as posing a high risk to the surface water quality within the Appendix 8.4 Water Framework Directive Assessment, WFD Risk Assessment table, which will therefore impact fish and eel populations within the lake.
  We do not believe turbidity curtains will provide sufficient mitigation to prevent water quality deterioration in both the short- and long-term operation of the site, due to the likely release of contaminants within the lake sediments to the water column. Additionally, further information on turbidity screen arrangements is required to ensure fish and eels will not be negatively impacted during dredging operations.
- There is no assessment of the impact of increased recreational activity on the fish population within the lake. Boating activity can locally change wave action and turbidity (impacting on fish, macrophyte and invertebrate species), increase the risk of pollution to the waterbody and increase the risk of introducing invasive species.

PART B: Water Vole

The water vole (*Arvicola amphibius*) is a protected species under the Schedule 5, Wildlife and Countryside Act, 1981 (as amended) and/or listed under section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

The proposed new activity centre may have a detrimental effect on the species/population and its habitat along the Broadwater Lake. The application does not include adequate information about the measures proposed to protect the Water Vole in this location. In particular the application fails to carry out adequate surveys to support the proposed development.

The Water Vole survey conducted as part of the PEA identifies areas of the peninsula and the pond area that was not accessible as part of the survey. The area of bank adjacent to the current sailing clubhouse (to be demolished) was not surveyed and there has been no assessment of the likely impacts of demolition to water vole in this area. These are areas of the development that will result in large amounts of construction and ongoing disturbance; therefore, these areas need to be sufficiently surveyed to provide evidence that water vole will not be impacted by the development.

Additionally, the submitted phase 1 habitat survey identifies the majority of the peninsula area as u1c- artificial unvegetated; unsealed surface with no pond habitat identified. This is in direct contrast to the submitted water vole survey findings that shows a large pond area that was partially surveyed. This discrepancy needs to be addressed and updated throughout the ecological assessments submitted (including BNG assessment- see informative).

It is noted that the water vole surveys were carried out in May and August 2022. Water vole populations within the Colne Valley are known to be expanding, with significant populations present downstream at Denham and upstream around Harefield. Water

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vole populations expand and colonise new areas throughout the breeding season (March- October) when young disperse away from the territories of their parents to suitable habitat. No surveys were carried out within the 2023 breeding season when this species may have colonized the areas around and within Broadwater Lake. Updated water vole surveys from the applicant will be required to confirm the absence of this species from the impacted areas of the lake.

Overcoming our objection

PART A

It may be possible to overcome this part of the objection by submitting**:**

- Details of an amended scheme that avoids the loss of habitat used by the European eel (*Anguilla anguilla)*
- Details of how the European eel (*Anguilla anguilla)* is to be protected during construction and dredging works.
- Details of how the European eel (*Anguilla anguilla*) and juvenile fish will be protected from the proposed water circulation and pumping.
- A scheme for the long-term management and protection of the European eel (*Anguilla anguilla)* population and its habitat

The design, construction, mitigation, and compensation measures should be based on a survey which is carried out at an appropriate time of year by a suitably experienced surveyor using recognised survey methodology.

For guidance to assist with the design of the above measures, please contact the Environment Agency's local fisheries officer.

PART B

It may be possible to overcome this part of the objection by submitting.

- Updated water vole surveys of the lake from the latest breeding season, including the areas that were not previously surveyed.
- Updated phase 1 habitat survey and associated documents
- if found to be present, details of how the water vole is to be protected during construction works.
- a scheme for the long-term management and protection of the water vole population and its habitat
- details of mitigation or compensation for the loss of habitat used by the water vole.

The design, construction, mitigation, and compensation measures should be based on a survey which is carried out at an appropriate time of year by a suitably experienced surveyor using recognised survey methodology.

Informative

Flood Risk Activity Permit

The Environmental Permitting (England and Wales) Regulations 2016 require a permit to be obtained for any activities which will take place:

- on or within 8 metres of a main river (16 metres if tidal)
- on or within 8 metres of a flood defence structure or culvert **including any buried elements** (16 metres if tidal)
- on or within 16 metres of a sea defence
- involving quarrying or excavation within 16 metres of any main river, flood defence (including a remote defence) or culvert

- in a floodplain more than 8 metres from the riverbank, culvert or flood defence structure (16 metres if it's a tidal main river) and you don't already have planning permission.

Table 8.1 of the consultation response summary (Page 8) states that *"A Flood Risk Activity Permit (FRAP) will be required for the demolition of the existing sailing club building. The in-lake works may also require a FRAP if issues are likely to occur to the adjacent Main River (Colne)."* Please note the highest category activity is charged at 100% of its category and each additional activity incurs a charge of 25% of its associated category. Additional activities include all temporary and enabling works.

We would strongly recommend that planning approval is granted first but the applicant may want to consider the relevant timeframes. Bespoke FRAPs take 8 weeks to determine from the date it is duly made. It is duly made when all the application documents are received, reviewed and it is considered we have all the information required to proceed. At this stage we will confirm and request payment. Once payment is received the FRAP is duly made

For further guidance please visit https://www.gov.uk/guidance/flood-risk-activities-environmental-permits or contact our National Customer Contact Centre on 03702 422 549 or by emailing enquiries@environment-agency.gov.uk. The applicant should not assume that a permit will automatically be forthcoming once planning permission has been granted, and we advise them to consult with us at the earliest opportunity.

Requirements under Environmental Permitting Regulations 2016
The Environmental Permitting (England and Wales) Regulations 2016 state that permitted sites should not harm human health or pollute the environment. The operator is therefore required to have measures in place which will:

- prevent pollution.
- ensure that there is no harm to human health, the quality of the environment, or the surrounding amenity.
- ensure that there is no offence to a human sense or damage to material property.

We would likely reject any permit application which did not include this information.

Current/formerly permitted landfill or Deposit for Recovery (DfR) site
The Broadwater Plant Site landfill was permitted to receive inert waste only. However, anecdotal evidence indicates other waste deposits have been made on the site. Changes proposed from this development could give rise to risks from landform instability and impact to controlled waters (surface water and groundwater). Due to the unknown nature of other deposits on the site there is potential landfill gas emissions and amenity concerns including odour & air quality, pests, or noise and vibration from the new development. These may need to be controlled either through planning conditions or under an environmental permit.

Development on or within 250 metres of known gassing or potentially gassing permitted landfill site.
The proposed development is located on a landfill site that could produce landfill gas consisting of methane and carbon dioxide. It is produced as the waste in the landfill site degrades. Methane can present a risk of fire and explosion. Carbon dioxide can present a risk of asphyxiation or suffocation. The trace constituents of landfill gas can be toxic and can give rise to long-term and short-term health risks as well as odour nuisance.

The risks associated with landfill gas would depend on the controls in place to prevent uncontrolled release of landfill gas from the landfill site. Older areas of landfill may have poorer controls in place and the level of risk may be higher or uncertain due to a lack of historical records of waste inputs or control measures.

The proposed development on top of any landfill site or waste deposits that accepted hazardous or non-hazardous waste should be considered very carefully, as even with appropriate building or control measures in place, landfill gas can accumulate in confined spaces in gardens (e.g. sheds, small extensions) and can gain access to service pipes and drains where it can accumulate or migrate away from the site.

The applicant should consider the potential risk to the development from landfill gas, ensuring that appropriate assessments have been carried out to identify potential risks. Where risks are identified you should ensure that measures to address these concerns are included as part of any planning permission. We would advise seeking the views of the local planning authority's Environmental Health and Building Control departments to ensure that any threats from landfill gas have been adequately addressed in the proposed development. Where this includes building construction techniques that minimise the possibility of landfill gas entering any enclosed structures on the site, you should consider the removal of permitted development rights to ensure that these prevention measures are not compromised by future alterations/extensions.

The following publications provide further advice on the risks from landfill gas and ways of managing these:

- Waste Management Paper No 27
- Environment Agency LFTGN03 ‘Guidance on the Management of Landfill Gas’
- Building Research Establishment guidance – BR 414 ‘Protective Measures for Housing on Gas-contaminated Land’ 2001
- Building Research Establishment guidance – BR 212 ‘Construction of new buildings on gas-contaminated land’ 1991
- CIRIA Guidance – C665 ‘Assessing risks posed by hazardous ground gases to buildings’ 2007.

Non-Environment Agency lead priority species and habitats/species of conservation concern

Section 40 of the NERC Act 2006 as amended by section 102 Environment Act 2021, establishes a general duty on public authorities, to conserve and enhance biodiversity through the exercise of its functions. This has strengthened the original NERC duty from having regard to the conservation of biodiversity, to public authorities periodically considering the actions it can take, consistent with the exercise of its functions, to conserve and enhance biodiversity.

Evidence shows that the proposed development poses a risk to biodiversity at the site, in particular to the Mid Colne Valley SSSI, notified under the Wildlife and Countryside Act, 1981 (as amended). As identified by Natural England, the scheme may result in:

- Direct loss of Mid Colne Valley SSSI as a result of loss of open water habitat at Broadwater Lake
- Direct loss of suitable habitat of non-breeding and breeding birds as a result of land reclamation and peninsula works.

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- Disturbance (visual, noise) to both non-breeding and breeding birds throughout the construction phase.
- Concerns that the proposed mitigation is not suitable for the for the interest features.
- Disturbance (visual, noise) to breeding birds throughout the continued operational phase of the development due to the intensification of recreational activity at Broadwater Lake of both water and land-based activities over the breeding season.
- Uncertainties surrounding all year-round activities at Broadwater Lake which would impact over-wintering birds.

Advice for LPA

The control of emissions from Non-Road Going Mobile Machinery (NRMM) at major residential, commercial, or industrial sites

Where development involves the use of any non-road going mobile machinery with a net rated power of 37kW and up to 560kW, that is used during site preparation, construction, demolition, and/ or operation, at that site, we strongly recommend that the machinery used shall meet or exceed the latest emissions standards set out in Regulation (EU) 2016/1628 (as amended). This shall apply to the point that the machinery arrives on site, regardless of it being hired or purchased, unless agreed in writing with the Local Planning Authority.

This is particularly important for major residential, commercial, or industrial development located in or within 2km of an Air Quality Management Area for oxides of Nitrogen (NOx), and or particulate matter that has an aerodynamic diameter of 10 or 2.5 microns (PM10 and PM2.5). Use of low emission technology will improve or maintain air quality and support LPAs and developers in improving and maintaining local air quality standards and support their net zero objectives.

We also advise, the item(s) of machinery must also be registered (where a register is available) for inspection by the appropriate Competent Authority (CA), which is usually the local authority.

The requirement to include this may already be required by a policy in the local plan or strategic spatial strategy document. The Environment Agency can also require this same standard to be applied to sites which it regulates. To avoid dual regulation this informative should only be applied to the site preparation, construction, and demolition phases at sites that may require an environmental permit.

Non-Road Mobile Machinery includes items of plant such as bucket loaders, forklift trucks, excavators, 360 grab, mobile cranes, machine lifts, generators, static pumps, piling rigs etc. The Applicant should be able to state or confirm the use of such machinery in their application to which this then can be applied.

Sequential Test

In accordance with the National Planning Policy Framework (paragraph 168), development in flood risk areas should not be permitted if there are reasonably available alternative sites, appropriate for the proposed development, in areas with a lower risk of flooding. The sequential test establishes if this is the case.

Cont/d..

Development is in a flood risk area if it is in Flood Zone 2 or 3, or it is within Flood Zone 1 and your strategic flood risk assessment shows it to be at future flood risk or at risk from other sources of flooding such as surface water or groundwater.

The only developments exempt from the sequential test in flood risk areas are:

- Householder developments such as residential extensions, conservatories, or loft conversions
- Small non-residential extensions with a footprint of less than 250sqm
- Changes of use (except changes of use to a caravan, camping or chalet site, or to a mobile home or park home site)
- Applications for development on sites allocated in the development plan through the sequential test and:
    - the proposed development is consistent with the use for which the site was allocated; and
    - there have been no significant changes to the known level of flood risk to the site, now or in the future, which would have affected the outcome of the test

Avoiding flood risk through the sequential test is the most effective way of addressing flood risk because it places the least reliance on measures such as flood defences, flood warnings and property level resilience.

Who undertakes the sequential test?
It is for you, as the local planning authority, to determine an appropriate area of search and to decide whether the sequential test has been passed, with reference to the information you hold on land availability. You may also ask the applicant to identify any other 'reasonably available' sites which are on the open market and to check on the current status of identified sites to determine if they can be considered 'reasonably available'. Further guidance on the area of search can be found in paragraphs 027-030 of the planning practice guidance here.

What is our role in the sequential test?
We can advise on the relative flood risk between the proposed site and any alternative sites identified - although your strategic flood risk assessment should allow you to do this yourself in most cases. We won't advise on whether alternative sites are reasonably available or whether they would be suitable for the proposed development. We also won't advise on whether there are sustainable development objectives that mean steering the development to any alternative sites would be inappropriate. Further guidance on how to apply the sequential test to site specific applications can be found in the planning practice guidance here.

Exception test
In accordance with the National Planning Policy Framework (paragraphs 170 and 171), the proposed development is appropriate provided that the site meets the requirements of the exception test. Our comments on the proposals relate to the part of the exception test that demonstrates the development is safe. The local planning authority must decide whether or not the proposal provides wider sustainability benefits to the community that outweigh flood risk.

Biodiversity Net Gain
The BNG viability of the Reduction of lake habitat in size (60.14ha) down to 57.27ha is justified by the claim that the quality of the lake habitat will increase from moderate to fairly good.

Cont/d..

- Lake naturalness assessment uses four criteria; physical, hydrological, chemical and biological. Physical naturalness includes the 10m buffer zone landward from the high water mark. When assigning the final class assign the lowest class rating from all the physical naturalness sub-categories assessed.
- Currently, there is very small scale encroachment and developed land within the lake buffer zone and shoreline. The majority of the buffer zone comprises scrub, woodland, marginal vegetation and grassland. From our arial photography map layers, the modified grassland that is depicted in the applicant's map, looks to comprise more of a mosaic of scrub or woodland, bare gravels as well as grassland. This could mean that the percentage of semi-natural habitat has been under recorded. Being a gravel pit, it is expected that steeper banks occur and therefore a reduced marginal fringe, but plants are able to colonise at least 10m from the edge.
- Some regrading on the new islands and on boat access bays is being offered as part of the development, but how much of this is countered by the encroachment and development of the lake's riparian zone. We argue that the proposed concrete island construction will do little to improve the physical naturalness of the lake. A couple of islands are being created, but a couple are being removed.
- The removal of islands formed from natural materials, with a varying drawdown and marginal zone (albeit they could be improved) and the replacement with planted concrete cassions, with 90 degree, concrete, zero draw down cannot in our eyes be classed as enhancement, despite the planting suggestions.
- The lake condition assessment form is very lacking in information to justify the condition score.
- The addition of clubhouse, slipways, pontons, and other hardstanding within the lake buffer zone is encroachment and is degrading the natural buffer zone. We seek more detail on how the applicant estimates that physical naturalness increases from moderate to fairly good when all this is taken into account.
- We agree that hydrological naturalness would remain the same.
- Chemical naturalness - the interventions suggested by the applicant, namely the floating reedbeds are likely to improve water quality at a local level, however, there seems to be no water quality assessment of the impact of the proposed development; increased boat usage, the associated shoreline erosion, disturbance to marginal vegetation, the run-off from buildings, hard surfaces, and pollutants from vehicles and car parks, combined with impacts that will persist, flooding from watercourses, sediment liberation by carp, climate change. We have low confidence that overall water quality will improve from moderate to fairly good and suggest the applicant should provide further evidence to support this statement.
- If the lake habitat cannot and does not improve condition, and remains moderate then total BNG % change drops from +3.59% to -81.44%, demonstrating a loss of lake habitat. Whilst 10% BNG is not yet mandatory, Local Authorities have a general duty to conserve and enhance biodiversity through the exercise of its functions. This has strengthened the original NERC duty from having regard to the conservation of biodiversity, to public authorities periodically considering the actions it can take, consistent with the exercise of its functions, to conserve and enhance biodiversity.

<u>Watercourse Units/ Metric</u>

- Appendix 7.11 BNG Assessment report stated that for the river metric, 'a generic condition of 'moderate' has been applied for the river habitat because a River Condition Assessment was not undertaken'. There are two issues here, if the river is within the redline boundary, or within a 10m buffer zone of it, then the

river should be also show a 10% improvement (after January 2024). The LPA may decide that a percentage increase is not necessary here, but the correct methodology for assessing the condition of habitats that cannot be accessed is to attribute the condition of good. The methodology is to use a precautionary approach when assigning condition scores. This has not been done. In addition, the river can only be assessed by someone trained and accredited to conduct a River Condition Assessment (RCA). The BNG Assessment states that the ecologists are not qualified and therefore the river element of the metric is void. The applicant mistakenly has stated in the watercourse metric that the watercourse is not in a local strategy. However, both River Colne (confluence Chess to Thames GB106039023090) and Grand Union Canal (Maple Lodge to Uxbridge, Rivers Colne and Chess plus canal, GB70610252) are WFD waterbodies with actions identified for their improvement in the Catchment Planning System. They have not itemised the canal versus the river habitat. It all appears to be incorrectly listed as one.

- Page 19 of the BNG Assessment states that other rivers and streams are of low distinctiveness which is incorrect.

Habitat Units: Reedbed

- A 0.837ha of reedbed creation is itemised in the metric calculations. The report says that the 'Concrete caisson planting where native aquatic and emergent planting will be provided. Condition will be good per the Defra metric criteria'. This habitat has been recorded in error. The UKHab definition of reedbed is that it must be a wetland dominated by Common reed and greater then 5m wide stands…'. These strips of phragmites or other vegetation will be floating on islands of plastic, and will provide valuable cover for fish, screening form boat traffic and some water quality function, they will never function as a semi-natural priority habitat that this metric calculation claims. And certainly not as good condition that they claim. They should be included in the lake habitat area.
- The BNG metric for this proposal states that all the habitats itemised have been 'formally identified in local strategy'. Please can the applicant demonstrate which strategies.

Habitat Units: Wet woodland

- The applicant's metric calculations show a wet woodland baseline of 2.1544ha and a retention of 2.1544ha of wet woodland. Creation of 0.5196ha of wet woodland is recorded for the all the new permanent islands, which have 'been assumed to become wet woodland with willows etc with an assumed condition of poor'. We seek clarity on whether some created habitats have been double counted. For example, has the 0.5196ha, which is attributed to creation of the wet woodland been lost from the lake habitat? And has it been counted in the enhanced lake units also? It's unclear.
- We disagree with the statement 'proposals are predicted to enhance the site for the faunal species that the site is designated for' and that the proposals are conducive to enhanced lake habitat.

We strongly recommend that this is taken into account when the application is considered for approval. Failure to take relevant habitats and species into account may leave the determination of the application open to challenge.

Call-in Directive

We would also like to remind you that if you are minded to approve this application contrary to our objection on flood risk grounds, as it is a major development, you are required to notify the Secretary of State through the Department for Communities and

Local Government's National Planning Casework Unit (NPCU), as outlined in The Town and Country Planning (Consultation) (England) Direction 2009: circular 02/2009.

Advice to Applicant

Pre-Application Advice

We strongly encourage applicants to seek our pre-application advice to ensure environmental opportunities are maximised and to avoid any formal objections from us.. The applicant is welcome to seek our advice now to help them overcome our objection via HNLSustainablePlaces@environment-agency.gov.uk.

Further information on our charged planning advice service is available at; https://www.gov.uk/government/publications/planning-advice-environment-agency-standard-terms-and-conditions.

Final comments

Thank you for contacting us regarding the above application. Our comments are based on our available records and the information submitted to us. Please quote our reference number in any future correspondence. Please provide us with a copy of the decision notice for our records. This would be greatly appreciated.

If you are minded to approve the application contrary to our objection, please contact us to explain why material considerations outweigh our objection. This will allow us to make further representations.

Yours sincerely,

Nisa Vishwanath
Planning Specialist

E-mail: HNLSustainablePlaces@environment-agency.gov.uk | Tel: 077 802 61520

End

Technical Note

Hillingdon Water Sports Facility and Activity Centre, Broadwater Lake, Moorhall Road, Harefield, Uxbridge (Ref: 2382/APP/2023/2906)

Response to Environment Agency Letter dated 12th January 2024

1.1 This document sets out the Applicant's initial response to the Environment Agency's response to the planning application for the Hillingdon Water Sports Facility and Activity Centre ('HWSFAC') submitted by the London Borough of Hillingdon ('LBH') (Application Ref: 2382/APP/2023/2906). The submitted proposals are subsequently referred to as the 'Submitted Scheme'.

1.2 The Submitted Scheme proposals are currently under review and amendment in response to consultation feedback. The Applicant intends to reconsult with the Environment Agency prior to resubmission of the revised proposals. However, it may be useful to note that as part of ongoing design work the Applicant is reviewing the land reclamation proposals, seeking to minimise loss of open water and need for dredging.

1.3 The revised proposals, once finalised, will be subject to an updated EIA process and the ES (and therefore Water Framework Directive Assessment and Flood Risk Assessment) will be revised and updated as appropriate. Where clarifications or additional information have been requested by the Environment Agency, this document sets out how the issues will be addressed. Where possible, clarifications are provided as part of the responses.

1.4 This document therefore provides the Applicants' initial response to each of the objections raised by the Environment Agency which will be addressed in the revised submission.

Issues Raised by Environment Agency	Applicant Response
Objection 1: Inadequate flood risk assessment In the absence of an acceptable flood risk assessment (FRA) we object to this application and recommend that planning permission is refused. **Reason(s)** The site lies partially within Flood Zone 3b, the functional floodplain, which is land defined by the planning practice guidance as an area intended to flood. And partially within Flood Zone 2. **Overcoming our objection** To overcome our objection, the applicant should submit a revised FRA to demonstrate that the proposed development will not pose a risk to life and/or property on or off site. This can be achieved through demonstrating that raised finished flood levels, as outlined above, can be provided to prevent internal flooding of the development and damage to people and property. We note that the new land of the peninsula is proposed to be set at a minimum of 37.89 m AOD. Given that the peninsula is being re developed and reprofiled, we suggest that the ground level is set higher than this level to account for freeboard. The proposed development has the opportunity to raise both ground level and finished floor levels to negate flood risk to the building on the peninsula. For finished floor levels the applicant will need to demonstrate a freeboard of 300mm above the 1 in 100 + 20% CC flood level. Please be aware that any built development within the floodplain (1% annual probability, plus an allowance for climate change, flood extent) will only be considered acceptable if it can be compensated for on a volume-for-volume and level-for-level	**The Applicant intends to consult with the EA on the revised proposals in due course prior to resubmission.** **Matter 1 – Finished Floor Levels** The submitted FRA report (Appendix 8.2 of the ES) states in Section 4.6 (page 18) that the finished floor level of all proposed buildings should be set at a minimum of 38.19 m AOD, i.e. 300 mm above the peak modelled water level during a 1% AEP event plus 20% climate change. This principle will continue to be applied to the revised proposals. For the avoidance of doubt, the maximum modelled water level during the 1% AEP event plus 20% climate change is 37.89 m AOD (refer Table 1 of the submitted FRA report). The recommended minimum finished floor level of 38.19 m AOD is therefore 300 mmm this level. The submitted FRA report makes two further recommendations: (i) that the finished floor level of buildings should be least 0.15m above adjacent ground levels following any reprofiling of the Site, and (ii) that buildings should have designed in resilience to flooding to a minimum level of 38.23 m AOD, corresponding to the peak modelled water level during the 0.1% event. The recommendations are restated in Section 8 of the submitted FRA report. Whilst not explicitly stated in the submitted FRA, the above recommendations relate to the Main Building, Workshop and Activity Centre, Energy Centre and Toilet Block, and not the activity shelters located across the Site which would be open structures and not habitable structures per se. **Matter 2 – Impact of Proposal on Lake Water Levels** The Submitted Scheme proposed the movement of lake bed material (via dredging) to extend the existing peninsula area by circa 18,800

Note continued

Issues Raised by Environment Agency	Applicant Response
basis; however, this requires an available area of land on the edge of the floodplain to be viable. If this cannot be achieved, we are likely to maintain our objection.	sqm. It was concluded that the proposals would not reduce the storage volume of the lake, nor impact existing water levels. As such, the Submitted Scheme would not increase flood risk elsewhere. However, these proposals are currently under review following concerns raised over the loss of open water within the lake. The issues raised by the EA are noted and are being taken into account in the revised proposals. **Matter 3 – Built Development within the Floodplain (1% AEP event +20% climate change)** The Main Building is located on extended peninsula. Ground levels in this area will be raised to a minimum of 37.89 m AOD, i.e. the maximum water level during the 1 in 100 AEP event +20% climate change. As such the building will not be located within the floodplain, and there will be no requirement for compensatory storage. The Workshop and Activity Centre (building footprint circa 750 sq m), and the Energy Centre (building footprint circa 100 sq m) will be located on land that is currently at c. 37.8 - 37.9 m AOD (refer Figure 5.1). The land here will be reprofiled to create a level base at a minimum level of 37.89 m AOD, the same level as the peninsula extension. On the worst case/conservative assumption that all ground is currently at 37.8 m AOD, the buildings would result in a maximum

Note continued

Issues Raised by Environment Agency	Applicant Response
	loss of 85 cu m of floodplain storage. However, this volume is significantly less that the 2,535 cu of material that will be removed (cut) to lower the ground level in Zone 3 (which is adjacent to the building location). As such there will be no loss of floodplain storage and consequently no requirement for compensatory storage. The activity shelters located across the site are small open structures and would have a negligible impact on floodplain storage. Irrespective, the volume of the structures would be easily accommodated within the Zone 3 cut volume referenced in para. 18 and also under Matter 2.
Objection 2: More detailed consideration on the control of pollution is required, and parallel tracking is recommended as appropriate. The proposed development will require a permit under the Environmental Permitting Regulations (England and Wales) 2016. We do not have enough information to know if the development can meet our requirements to prevent, minimise and/or control pollution. We therefore recommend that planning permission is refused. **Reason** The development involves the deposit of waste or the disturbance of the existing landfill and so it must comply with the	**The Applicant intends to consult with the EA on the revised proposals in due course prior to resubmission.** The revised proposals avoids disturbance of the existing landfill. The Applicant recognises that proposed development will require a permit under the Environmental Permitting Regulations (England and Wales) 2016 and will consider parallel tracking of the planning and permit applications to help identify and resolve any issues at the earliest opportunity. **The Applicant intends to consult with the EA on parallel tracking in due course.**

Note continued

Issues Raised by Environment Agency	Applicant Response
landfill directive (if relevant) and Environmental Permitting Regulations. To reduce the risks to people and the environment and obtain a permit, the suitability of the location with respect to the protection of groundwater will need to be considered, the design and/or layout of the buildings may need to change and include abatement technology to reduce the impact of the development beyond Best Available Techniques (BAT). In particular, mitigation is likely to be required to control Air Quality impacts, surface water runoff and the squeezing out of leachate from the underlying landfill, therefore may require a leachate extraction and treatment plant incorporated into the development to protect groundwater. **Overcoming our objection** The applicant must gather evidence and submit information as advised above. We recommend that the applicant considers parallel tracking the planning and permit applications as this can help identify and resolve any issues at the earliest opportunity. Parallel tracking can also prevent the need for post-permission amendments to the planning application. We would welcome a joint discussion with the applicant and planning authority to discuss this further.	

Note continued

Issues Raised by Environment Agency	Applicant Response
Objection 3: Activity could cause unacceptable impacts to waterbodies in the River Basin Management Plan The submitted proposal does not demonstrate that Water Framework Directive requirements have been taken into account. We object to this development as it may cause deterioration of, or jeopardise the attainment of good ecological potential of Broadwater Lake (GB30641907). We will maintain our objection until the applicant has provided evidence to show that the risks posed by the development can be mitigated or removed. **Reasons** Based on the information submitted, there is a significant risk that the development will: ▪ cause deterioration of the water body status ▪ prevent achievement of water body objective to achieve good ecological potential. **Overcoming our objection** In order to overcome this objection an alternative scheme should be provided that meets the requirements of the RBMP. We require an updated WFD Assessment to address all impacts of the development, as identified above including an assessment of the cumulative impacts - and appropriate mitigation measures for the identified impacts.	**The Applicant intends to consult with the EA on the revised proposals in due course prior to resubmission.** The revised proposals have taken into consideration Water Framework Directive requirements to avoid deterioration of, or jeopardise the attainment of good ecological potential of Broadwater Lake (GB30641907). An updated WFD Assessment will be submitted to address all impacts of the development, as identified in the EA's response.

Note continued

Issues Raised by Environment Agency	Applicant Response
Currently the assessment focuses on short-term construction impacts and there is no assessment of the operational changes and how they may impact over a longer timeframe.	
Objection 4: Presence of legally protected species and/or priority species (principally those for which we have a lead role in protecting) and no/inadequate evidence that the risks have been assessed and addressed satisfactorily. Insufficient information has been provided to assess the risks posed by the proposed activities to the protected species identified on the site – a) European Eels (Anguilla anguilla); b) Water Vole (Arvicola amphibius) and their habitats. We therefore recommend that planning permission is refused. PART A We object to the dredging (construction phase), recirculation and pumping of water and increased recreational activity proposed as part of this planning application due to the likely effect this will have on European Eels (Anguilla anguilla) and its habitat. PART B We object to the development on the peninsula proposed as part of this planning application due to the likely effect this will have on Water Vole (Arvicola amphibius) and its habitat. **Reason(s)**	**PART A** **The Applicant intends to consult with the EA on the revised proposals in due course prior to resubmission.** The revised proposals greatly reduce the dredging, recirculation and pumping of water and increased recreational activity requirements. The following information will be provided in an updated Mitigation and Environmental Management Plan: ▪ Details of how the European eel (Anguilla anguilla) is to be protected during construction and dredging works. ▪ Details of how the European eel (Anguilla anguilla) and juvenile fish will be protected from the proposed water circulation and pumping. ▪ A scheme for the long-term management and protection of the European eel (Anguilla anguilla) population and its habitat **PART B** Updated water voles surveys were undertaken in May and August 2023, covering the entire site and surrounds. The results were

Note continued

Issues Raised by Environment Agency	Applicant Response
This objection is supported by paragraphs 174 and 180 of the National Planning Policy Framework (NPPF) which recognise that the planning system should conserve and enhance the environment by minimising impacts on and providing net gains for biodiversity. If significant harm resulting from a development cannot be avoided, adequately mitigated, or as a last resort compensated for, planning permission should be refused. Opportunities to incorporate biodiversity in and around developments should be encouraged. **Overcoming our objection** PART A It may be possible to overcome this part of the objection by submitting: ▪ Details of an amended scheme that avoids the loss of habitat used by the European eel (Anguilla anguilla) ▪ Details of how the European eel (Anguilla anguilla) is to be protected during construction and dredging works. ▪ Details of how the European eel (Anguilla anguilla) and juvenile fish will be protected from the proposed water circulation and pumping.	reported in ES Appendix 7.9 Greengage Ecology Report (terrestrial habitats, lacustrine habitats, survey for invasive non-native species, badger, otter, water vole) (October 2023). The suitability of the on-site habitat for water vole was found to be fairly poor as the lake is artificial with steep gravelly banks, and near-absence of emergent and riparian plants for feeding. Through the surveys in 2023, water vole was confirmed to be absent. It was excluded from assessment of impacts within the ES - as being absent it was therefore not identified as an 'important ecological factor'. The assessment method for water vole in 2023 was set out in ES paragraphs 7.3.56 – 7.3.58, and the results were presented in paragraphs 7.4.148 – 7.4.153**.**

Note continued

Issues Raised by Environment Agency	Applicant Response
▪ A scheme for the long-term management and protection of the European eel (Anguilla anguilla) population and its habitat The design, construction, mitigation, and compensation measures should be based on a survey which is carried out at an appropriate time of year by a suitably experienced surveyor using recognised survey methodology. For guidance to assist with the design of the above measures, please contact the Environment Agency's local fisheries officer. PART B It may be possible to overcome this part of the objection by submitting. ▪ Updated water vole surveys of the lake from the latest breeding season, including the areas that were not previously surveyed. ▪ Updated phase 1 habitat survey and associated documents ▪ if found to be present, details of how the water vole is to be protected during construction works. ▪ a scheme for the long-term management and protection of the water vole population and its habitat ▪ details of mitigation or compensation for the loss of habitat used by the water vole.	

Note continued

Issues Raised by Environment Agency	Applicant Response
The design, construction, mitigation, and compensation measures should be based on a survey which is carried out at an appropriate time of year by a suitably experienced surveyor using recognised survey methodology.	

Lewis Jenkins
Quod
Manor House 21 (Basement) Soho Square
London
W1D 3QP

Our ref: NE/2024/137219/02
Your ref: P409: Hillingdon Water Sports and Activity Centre

Date: 31 October 2024

Dear Lewis,

Hillingdon Water Sports and Activity Centre – Broadwater Lake

Thank you for engaging with us through our pre-application charged advice service to discuss our outstanding objections to our statutory response ref. NE/2023/136564/01.

Our comments below are made in reference to a meeting held on 4 October 2024 and following a review of the technical documents submitted to us via email on 30 September 2024, as well as the briefing note Q220454.EA Review Response.1.0, submitted to us in July 2024.

Please see below our formal written feedback in response to the meeting and documentation. We have split the response into our objections for your convenience.

Objection 1 - Flood Risk

Building in Flood Zone 3b

We are pleased to see that the new proposal has addressed our objection to building on the area of reclaimed land, which is classified as Flood Zone 3b. In line with Table 2 of the Planning Practice Guidance, this type of development within Flood Zone 3b is unacceptable. The proposed buildings have been relocated to the existing island, which is in Flood Zone 1. Should the proposal remain the same at submission, we would be happy to remove this part of objection in terms of flood risk.

We are also pleased to see the precautionary approach has been taken for Finished Floor Levels (FFLs) and that they will be raised.

Floodplain Compensation

Further to the above, we can confirm that as the built development will now be located in Flood Zone 1 it will not need floodplain compensation as there will be no loss in floodplain storage [from the buildings]. Any shelters [or other structures] located in the northern tip of the island and on reclaimed land must be open so that they do not impede flows. We would expect detailed plans for these structures to be submitted with the planning application.

Flood Plain Storage
As the lake is a flood storage asset, there must not be a net loss of flood storage area at any point. Proposals for land/islands to be removed must be done so prior to any new land being recreated/reclaimed. **Our asset performance team will review the cut and fill analysis to confirm if the plans set out are acceptable, at the time of writing we are awaiting their feedback, and we will issue this as soon as possible.**

Colne Modelling
The updated Upper Colne model is hoping to be delivered by the end of November 2024, it may be another couple of weeks until it is formally available for external use.

Flood Risk Activity Permit (FRAP)
A FRAP may still be required. Please see the below informative for further information. We recommend that you seek advice from the National Permitting Team on this.

The Environmental Permitting (England and Wales) Regulations 2016 require a permit to be obtained for any activities which will take place:

- on or within 8 metres of a main river.
- on or within 8 metres of a flood defence structure or culvert **including any buried elements**.
- involving quarrying or excavation within 16 metres of any main river, flood defence (including a remote defence) or culvert
- in a floodplain more than 8 metres from the river bank, culvert or flood defence structure and you don't already have planning permission.

For further guidance please visit https://www.gov.uk/guidance/flood-risk-activities-environmental-permits or contact our National Customer Contact Centre on 03702 422 549 or by emailing enquiries@environment-agency.gov.uk. The applicant should not assume that a permit will automatically be forthcoming once planning permission has been granted, and we advise them to consult with us at the earliest opportunity.

Waste, Contamination and Pollution

Land reclamation and Dredging
We are pleased to see a significant reduction in land reclamation [and therefore reduced proposed reuse of material] and dredging in the updated proposal.

Parallel Tracking
We understand that you are in the process of, or have already requested, the national permitting service pre-application advice, following our meeting. If the permitting regime requires any change of design, we anticipate that you will address this through normal planning routes.

Waste – Definition of Waste

It is positive to hear that site investigation works are being undertaken. We'd like to remind you that material is defined as a waste where the producer or holder discards it, intends to discard it, or is required to discard it.

Based upon the submitted information, 12,746m^2 of material is going to be removed with dredging and/or island cutting. We appreciate this is a reduction in dredged materials since the previous submission. The plans show only 8,290m^2 will be reused to create the new land, shelf and buffer. That leaves approximately 4,500m^2 to be disposed of. We request further details to be submitted as part of any planning application regarding what is intended to be done with the remaining material, and this disposal will require a permit.

Material Reuse
During the meeting, material reuse was discussed. Based on this information, it is likely the redeposit will need to be managed as a waste 'Deposit for Recovery' which will require a permit. More information on Deposit for Recovery is available here: https://www.gov.uk/government/publications/deposit-for-recovery-operators-environmental-permits/waste-recovery-plans-and-deposit-for-recovery-permits.

To reuse waste, it needs to be chemically and physically suitable and must also consider the original holders' intention (not just the new proposals). The deposit of concrete, rebar or asbestos sheeting into the lake was disposal, and therefore must be treated as a waste.

Waste – Invasive Species
Soils and sediments containing invasive non-native species (INNS) will need to be handled and disposed of correctly. As this material is considered waste, it is not suitable for reuse and therefore must comply with waste legislation. Further information on handling and disposing of INNS is available here: https://www.gov.uk/government/publications/treatment-and-disposal-of-invasive-non-native-plants-rps-178/treatment-and-disposal-of-invasive-non-native-plants-rps-178.

Overcoming our Objection
In terms of overcoming our planning objection, detail on the results of the site investigation works would be beneficial, we are pleased to see that you appreciate the requirement for a permit and have stated you will begin the process of arranging permitting pre-application advice or submitting a permitting application. As discussed in the meeting, it would be helpful to see an updated Construction Environmental Management Plan (CEMP) and any further documentation surrounding the ground conditions.

Objection 3 – Unacceptable impact to waterbodies in River Basin Management Plan

Water Framework Directive Assessment
We are pleased to hear that an updated water framework directive (WFD) assessment will be conducted and submitted as part of the planning application. We

can review this as part of our charged advice service ahead of your submission to the Local Planning Authority (LPA), should you wish.

Mitigation
Mitigation proposed to address concerns regarding the impact to the Site Special Scientific Interest (SSSI) must be separate from mitigation proposed to address the impacts to WFD. There will likely need to be some overlap and agreement in the mitigation principles (e.g. mitigation should aim to restore lake habitat that is beneficial to all species using it). The WFD assessment should clarify where mitigation is proposed to address impacts on WFD and must not use mitigation for impacts to the SSSI.

Lake Condition and Dredging
During the meeting, there was reference to the current condition of the lake being poor, with patches of macrophyte growth limited to where the lake was shallower. Whilst we appreciate that the extent of the dredging area is reduced, there are still areas of dredging to minimum 1.5m depth proposed with this submission. Therefore, it's anticipated that there will be a reduction in areas suitable for macrophyte growth, and the creation of a more uniform lakebed, compared with the existing condition. We would like the emphasise that the WFD assessment must use the mitigation hierarchy to avoid, mitigate and compensate.

If dredging cannot be avoided in its entirety, it should be clear from the assessment what mitigation is proposed for:

(i) the construction phase (dredging methodology), and
(ii) long term changes to hydrological & morphological elements (loss of lake depth variation, increase lake depth, changes to the structure of the lakebed).

Boat Users
We expect the explicit figures of the proposed levels of disturbance i..e. boat users per day to be included within the planning submission. This will help with understanding the level of mitigation that will be required for recreational pressures. These impacts should also be explored within the WFD assessment.

Lake Margins
The Ecological Mitigation & Enhancement Plan shows there are buffer zones around the margins of the lake. It was also suggested in the meeting that the quality of these marginal areas are poor (with presence of willow, buddleja and other scrub species).

We will expect to see information regarding the improvements to the lake margins and the materials and methods for this. These improvements must be sought to comply with WFD legislation and actions within the River Basin Management Plan to reach Good Ecological Potential.

Concrete Caissons

The physical modification of Broadwater Lake is listed as a Reason for Not Achieving Good (RNAG) under WFD. The inclusion of concrete caissons is not appropriate WFD mitigation due to the hard-engineered and artificial nature of this solution.

We request you explore what other, greener solutions, that could be used for screening of the undisturbed zone, that do not compromise the naturalised extent of the lake.

Waterbody should aim to reach Good Ecological Potential.
The development should aim for the Broadwater Lake waterbody (GB30641907) to reach Good Ecological Potential. The development must not cause deterioration of or jeopardise the attainment of good ecological potential. We expect the new submission and WFD assessment to reflect this ambition.

Objection 4 – Presence of Legally Protected Species

European eel, *Anguilla Anguilla*

Impact of Dredging
During the meeting there was discussion around the selection of dredged areas, particularly in the Eastern channel. Whilst the reduction in dredging is an improvement on the original proposal, the newly proposed dredging would create a more uniform bed level. This move to increased uniformity in one of the few shallow (~1.5m depth) areas of the lake reduces diversity of habitat, macrophyte growth and associated macroinvertebrates all of which play an important role in eel ecology.

Habitat Availability and Quality
It would be helpful to understand the current habitat availability and quality of that habitat (it was noted during the meeting that a bathymetric survey had been completed), how this loss will be mitigated for and details of how eels will be protected during the dredging/construction phase.

Bed Depth and Lake Aeration
We request further information/clarification around the bed depth, composition and quality. We also request any information around the potential aeration of the lake, alongside an understanding of how that would be managed. This will help us to assess the potential impacts on Eels.

Water Vole, *Arvicola amphibius*

Water Vole Surveys
We request evidence to show that surveys have been completed (and when), and evidence of habitat condition to support the position that there will be no impact to Water Vole as a result of the development.

We are particularly keen to see this evidence for the areas of banks that will be impacted by the development. For example, the area where boats will be launched, or new infrastructure is being built within 5m of the waters edge.

We usually ask for surveys to be from the most recent breeding season as we know that Water Vole populations can quickly spread during a good breeding season. Where surveys have not been completed for the most recent breeding season, we will be looking to see that habitat has not changed significantly from previous surveys and the site remains unsuitable/the risk of Water Vole colonising the area remains low.

For context, the Water Vole population within the wider Colne Valley has continued to spread over the last few years in nearby rivers and lake waterbodies making Broadwater Lake a potential colonisation site.

Lake Edges
We encourage any improvements to the lake edges to provide better habitat for this protected species.

Further Advice

Biodiversity Net Gain
We did not discuss or review biodiversity net gain (BNG) as part of this charged agreement, however, we strongly recommend that an updated BNG assessment is undertaken in line with the guidance within our formal response ref: NE/2023/136465/01, dated 12 January 2024. We also recommend you refer to the latest planning practice guidance here: https://www.gov.uk/guidance/biodiversity-net-gain to ensure that your BNG assessment uses the most up to date information.

Other advice
Despite the changes to the proposal, our advice paragraphs held within the submitted formal response NE/2024/136465/01 still stand. We recommend that you continue to refer to these, with particular reference to the waste, landfill and permitting advice, as well as our advice on Non-Environment Agency lead priority species and habitats.

Final Comments
Please note that the views expressed in this report by the Environment Agency, is a response to a pre-application enquiry only and does not represent our final view in relation to any future planning application made in relation to this site. We reserve the right to change our position in relation to any such application. You should seek your own expert advice in relation to technical matters relevant to any planning application before submission.

Should you have any queries regarding this response, please contact me.

Yours sincerely,

Harry Scott
Planning Advisor

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creating a better place
for people and wildlife

Environment Agency

Lewis Jenkins
Quod
Manor House 21 (Basement) Soho Square
London
W1D 3QP

Our ref: NE/2024/137219/03
Your ref: 2382/APP/2023/2906

Date: 28 November 2024

Dear Lewis,

Hillingdon Water Sports and Activity Centre - Broadwater Lake

Thank you for engaging with us through our pre-application charged advice service to discuss our outstanding objections to your planning application for the redevelopment of Hillingdon Watersports Facility and Activity Centre (our statutory ref. NE/2023/136465/01, Local Authority ref. 2382/APP/2023/2906).

Please note, our comments below follow on from our previous pre-application response (ref. NE/2024/137219/02) so should be read in conjunction with the below.

Flood Plain Storage – cut and fill analysis (additional comments)
The cut and fill approach presented in the submitted documents demonstrates that there will be no net loss in flood storage volume, therefore we have no major concerns regarding this approach.

However, as part of your planning application you should demonstrate that any increase in flood capacity resulting from the cut and fill approach will not result in an increase in flood risk downstream of your site. Paragraph 165 of the National Planning Policy Framework states that new development should not increase flood risk elsewhere. As the lake is a flood storage asset, any increase in flood storage capacity could potentially result in greater water levels entering the river Colne if the lake were to breach or be overtopped in a flood event.

We advise that you conduct your own modelling to demonstrate the effect the cut and fill approach has on offsite flood risk. This can be used and compared against our updated Upper Colne Model which, as previously mentioned, should be available for external use soon.

We also note that there is an outfall on site which diverts water into the river Colne. It would be beneficial to understand more about this, for example how often it is used, whether it is common for water to be diverted into the Colne and whether it has any kind of flow control. We advise that this information is presented together with the above suggestion to demonstrate the effect the cut and fill approach might on offsite flood risk.

Final comments

Please note that the views expressed in this report by the Environment Agency is a response to a pre-application enquiry only and does not represent our final view in relation to any future planning application made in relation to this site. We reserve the right to change our position in relation to any such application. You should seek your own expert advice in relation to technical matters relevant to any planning application before submission.

Should you have any queries regarding this response, please contact me.

Yours sincerely,

Bronte Giles (on behalf of Harry Scott)
Sustainable Places Planning Advisor

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