



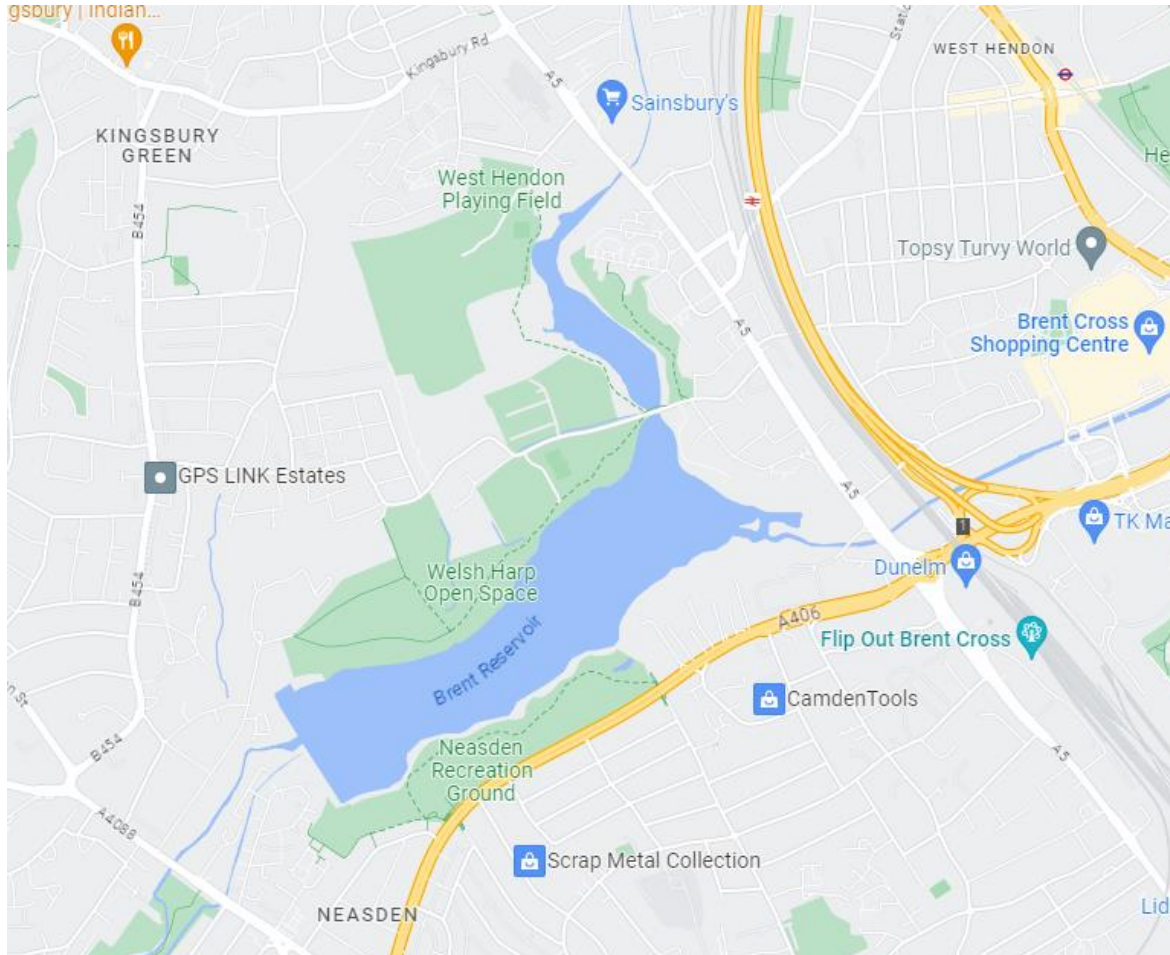
**Canal &  
River Trust**  
Making life better by water

# Brent Reservoir winter works stakeholder webinar

30 November 2023

- Charlotte Wood, Head of London & South East Operations
- Paul Kelly, Senior Project Manager
- Sian Palmer-Ferry, Community Development Manager
- Ben Carroll, Principal Project Manager

# The Brent (Welsh Harp) Reservoir



- 170 acres, the size of 255 football pitches
- Contains over 1 million cubic metres of water, enough water to fill 400 Olympic swimming pools
- The Trust owns and operates the reservoir
- The land around it is owned by Brent and Barnet councils
- The reservoir is a Site of Special Scientific Interest (SSSI) and one of London's most significant urban wild spaces



- Programme of statutory maintenance work, required under 1975 Reservoir Act
- Works scheduled to take place between now and February 2024 to comply with MIOS date whilst avoiding adverse impacts to features of the SSSI
- Works include repainting of the Valve House Tower from where the sluices are operated and repair works to the control mechanisms of the sluices



- To carry out the works, the reservoir will need to be fully drained
- This last happened in 2002
- Sadly we expect to see a large amount of rubbish when we drain the reservoir

# SSSI improvements



- This winter we are also carrying out some improvements to the SSSI
- In Sep our specialist contractor Land & Water Services created alcoves in the reed beds, increasing the surface area available to water birds for nesting and shelter
- Early next year we'll be doing some trees works and installing 14 new tern rafts

# SSSI improvements



- Roughly two weeks after we start draining the reservoir our contractor Rothens will use an excavator to clear as much rubbish as possible
- When the reservoir is fully drained we hope to extend the contract to remove rubbish the bed
- Our crowd funding campaign has nearly reached it's £15,000 target – will go towards debris removal contract



- We've also run two volunteer clean-up events with Action for Silk Stream
- The second focused on clearing rubbish from the Environment Agency's trash screen where the Silk Stream enters the reservoir
- If possible, we'll run more volunteering events focussed on litter picking from the edge of the drained reservoir
- We'd like support to remove willow re-growth and monitor tern rafts
- It won't be safe for people to walk on the mud so we've put up signage to warn people not to.



# Dewatering process



- The reservoir contains over 1 million cubic metres of water
- We estimate it will take around four weeks to drain
- It will be done in a steady and controlled way using the sluice gates
- The process has been agreed with the Environment Agency
- Turbidity, dissolved oxygen and temperature monitoring during the works with associated alert/action levels to prevent contamination and erosion of the River Brent downstream



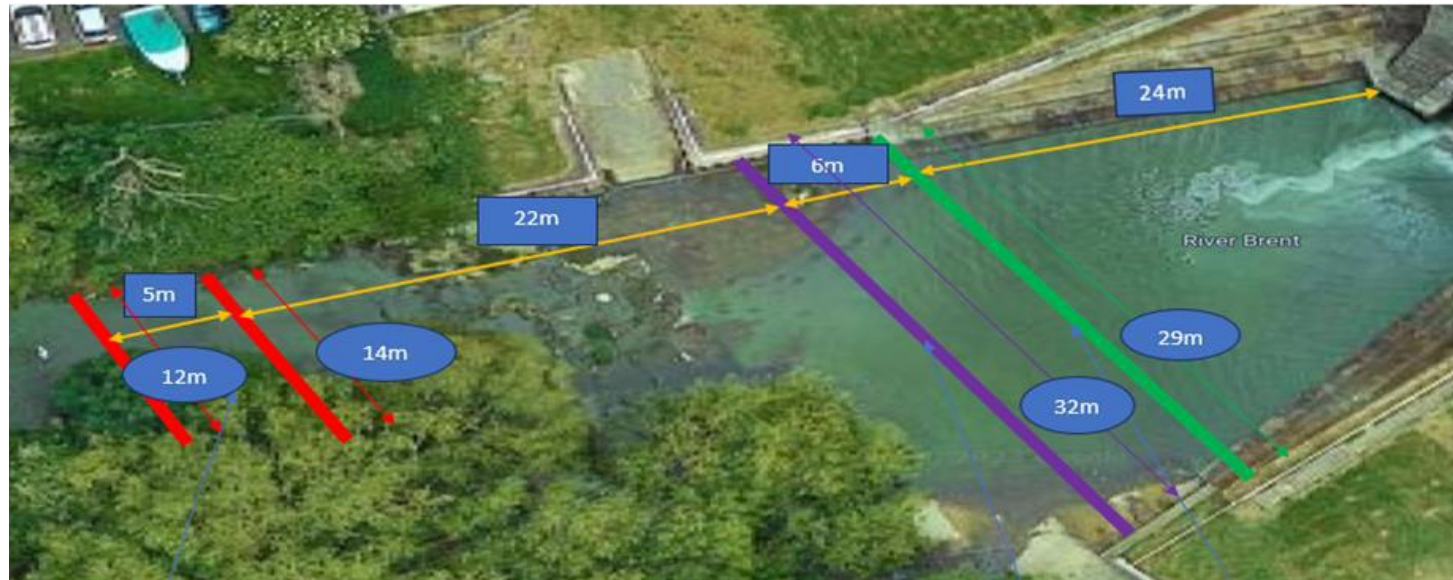
- We'll be looking to reduce the height of the reservoir by around 300mm per day, but some water will enter the reservoir from upstream over night
- The water will be discharged from the reservoir during the day so that water quality monitoring and checks to silt control measures can be checked
- Greatest discharges from the reservoir will be in the first 1-2 weeks, where sluice gates will be opened by around 30%



- We'll need to carry out a fish health check and fish rescue as the water drains down
- We use specialist contractors MEM Fisheries
- The fish will be relocated to one of our canals
- We'll re-stock the reservoir when it has re-filled
- Species and densities to be agreed with Natural England

# Sediment control downstream

- Downstream we're installing a line of concrete legato blocks 800mm high to form a barrier and trap any silt that makes it through the sluices
- This will be followed by a line of straw bales approx. six metres downstream of the concrete blocks
- 22m metres further downstream we will install two rows of silt curtains held in place by legato blocks with geotextile between so the water can flow through.



# Sediment control upstream



- Upstream of the sluices, we're putting in a ring of stone-filled gabions (wire baskets) wrapped in geotextile material
- The gabion baskets will be stacked in a pyramid pattern and will hold back as much silt as possible
- The baskets will be removed at completion of the works



- A Water Framework Directive has been carried out as part of our Flood Risk Activity Plan (FRAP) approved by the EA
- Measures to hold back the silt will minimise the transfer of invasive species, inc. American Signal Crayfish and Giant Hogweed seeds
- We'll be implementing biosecurity measures to prevent the spread of invasive species, inc. killer shrimp
- Non-native fish species will be removed from the reservoir and humanely disposed
- It's possible we'll find red-eared terrapins. If we manage to catch any, they'll go to a Natural England licensed rehoming sanctuary

# Impact on over wintering birds



- Water from the River Brent and Silk Stream will continue to flow through the reservoir during the works, supporting over-wintering birds.
- We aim to have the reservoir will be re-filled in time for the nesting season and new plant growth
- We'll put in mitigation measures, agreed with Natural England, should there be any delay due to low rainfall

# Impact on aquatic invertebrates



- Draining at the least impactful time of year for aquatic invertebrates, as most are inactive throughout the winter
- Likely to be a temporary negative impact upon aquatic invertebrates, but they're predicted to recover to their current levels within one season
- In the longer term there'll be a greater diversity as a result of the habitat restoration works within the north and eastern marsh.





- Regular update emails from Project Manager [paul.kelly@canalrivertrust.org.uk](mailto:paul.kelly@canalrivertrust.org.uk)
- Project webpage <https://canalrivertrust.org.uk/brent-reservoir-winter-maintenance>
- Call the Canal & River Trust on 03030 404040
- Email [customer.services@canalrivertrust.org.uk](mailto:customer.services@canalrivertrust.org.uk)