

Navigation Committee

02 November 2023

Agenda item number 9

Construction Maintenance and Ecology work programme progress update

Report by Head of Construction, Maintenance & Ecology, and Ecology & Design Supervisor

Purpose

To give an update on the Broads Authority's management activities to maintain public navigation, develop mooring facilities for public use and demonstrate the effective use of available resources in managing the Broads waterways.

Broads Plan context

C1: Maintain navigation water depths to defined specifications, reduce sediment input, and dispose of dredged material in sustainable and beneficial ways.

C2: Maintain existing navigation water space and develop appropriate opportunities to extend access for various types of craft.

C3: Manage water plants, riverside trees and scrub, and seek resources to increase operational targets.

C4: Maintain and improve safety and security standards and user behaviour on the waterways.

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1. Maintaining water depths for navigation

- 1.1. The detailed breakdown in Appendix 1 gives progress and volumes for the dredging programme for 2023/24 (April 2023 to end September 2023). A total of 25,410 m³ of dredged sediment was removed from the prioritised sites. This figure represents 63% of the programmed target of 40,050 m³ for the year.
- 1.2. Since the last meeting in September, all the active dredging and equipment demobilisation from Oulton Broad and Oulton Dyke area has now been completed. Since the initial phase of dredging which started to be off-loaded into the Peto's Marsh habitat creation area in May 2020 at total of 42,440 m³ has been dredged and used. In approximately 18 months' time, once the dredged sediment has dried sufficiently to be worked on by excavators, the final phase of site restoration can begin. This will involve the final raising and levelling of the internal bund wall, which will ultimately become part of Suffolk Wildlife Trust floodbank perimeter to Peto's Marsh. Once this floodbank is completed, the planned network of channels and pools can be created in the 1 ha habitat creation area, with the older outer, river-edge floodbanks then breached to allow water on and off at high tide.
- 1.3. Throughout the Oulton Broad project, from initial conception to final sediment deposition, water vole monitoring and welfare has been a very high priority. The initial construction phases included translocation of water voles out of the works area. This work was carried under licence and supervision of an external ecologist who held the required level of technical competence and breadth of experience. The final monitoring was carried out in September 2023 of the new dyke, created on the adjacent SWT marsh, where voles were moved to (the translocation site). The monitoring showed that the voles were actively using the area and had a small but stable population, where previously there had been none. This demonstrates the feasibility and importance of being able to move these protected species to suitable habitat when the area they were previously living is to be significantly impacted.
- 1.4. The major dredge project from November 2023 until June 2024 is on the Upper Bure, between Wroxham and Coltishall. The lagoon to receive the dredged sediment has been created in agricultural land adjacent to the river between Hoveton and Belaugh. Mobilisation of the pontoons, excavators and pumping equipment is now underway., with dredging due to start in the first week of November, once some site preparation and access work has been carried out.
- 1.5. Part of the planned 2024/25 dredging programme includes removing sediment from the dykes that connect Bargate Broad to the River Yare, and the nominal channel that connects the two across the southern side of the small broad. Water plant cutting has happened in this nominal channel over the past two years, as consented by Natural England in this SSSI. Dredging is also required to meet Waterways Specification depth for this location (1.8 m below mean low water) to maintain a channel for access. This work will also require production of a Habitats Regulations Assessment and assent from

Natural England. To define where these management activities will take place, it is proposed to instal marker buoys to describe a marked channel.

2. Maintaining safe public mooring facilities

- 2.1. Planned work for winter 2023/24 includes contractors repiling the mooring at Womack Island. Other 24-hour mooring sites planned for refurbishment of the capping and waling of the quay heading, are Dilham Staithe, Ranworth Staithe, Ranworth Dingy Dyke, Cantley and Womack Dyke. Some extensive work to replace mooring posts at How Hill is also planned.
- 2.2. Potter Heigham Repps Bank and Great Yarmouth Yacht Station have also been identified for expansion of the available electric charge points this winter. Using some external funding from Norfolk County Council, both sites have some supply infrastructure to be installed, prior to installation of electric pillars.
- 2.3. One of the major issues with installation of electric pillars is that most remaining 24-hour moorings without this provision are often at some distance from the existing electrical grid. Where some sites may be very popular and busy, extending the electrical infrastructure to such moorings can be prohibitively expensive. Sites like Repps Bank are less busy, but installation of charge points is far more feasible. Once this round of installation is completed, a review of the Authority's electric pillar installation programme is required. In terms of traditional connection of pillars to the electrical grid, we are getting close to the point where the costs outweigh the benefits.

3. Our resources

- 3.1. To resolve some on-going issues with lifting operations in the Dockyard, and to provide a route to installing marker posts in Breydon Water, purchase of a replacement 50 tonne capacity crawler crane is planned. The current larger crane in the Dockyard has reached an age where parts are no longer available. Replacement with a more modern crawler crane with a hydraulic system allows for a range of duties and maximising operational safety.
- 3.2. The open tender provision and installation of a 42 KWp solar panel system for the Dockyard roof closed in September. From the 12 competitive tender submissions, the preferred contractor has been selected, with installation to be completed by the end of March 2024.
- 3.3. Parallel to the solar panel generation, the number of electric charging points at the Dockyard is also being doubled, to six. As more of the operational vehicle fleet are now fully electric, utilisation of the in-house generation to charge vehicles, in addition to powering the office and workshop needs, is a key part of our carbon reduction activities.

4. Water plant management

- 4.1. To date, the total number staff days spent on water plant management activities over the 2023 season has finished at 233 days. The planned workdays for the 2023 season were 240 days, so the actual figures were very close. Last year the total days spent cutting water plants was 272. With a similarly high abundance amount of water plant growth this year, the optimistic view is that the level of cutting has remained similar, it has just been achieved in a shorter space of time. Whilst this assumption may be difficult to prove, the addition of the new vessel has certainly assisted in reducing the travel time between cutting sites and allowed more flexibility in deployment to priority areas.
- 4.2. Following an end of season review meeting, with all staff involved in this work area, some learning points and priorities for 2024 have been concluded:-
- The volume of cut material now being regularly offloaded at points around the Upper Thurne is now well over the sustainable capacity of these areas to receive cut water plants. Risks include further loss of bankside habitat, loss of local amenity and negative landscape impacts. Finding locations for offload points with road access and hardstanding are required if positive re-use option (e.g. composting) for the cut vegetative material are to be progressed.
 - Clarity on the consented activity windows and other constraints on the water plant cutting programme needs greater communication, so all staff, stakeholders and the public are aware, e.g. cutting in Hickling between 1 May to 30 Sept inclusive; Yare Broads from 15 July to 30 Sept inclusive; and Thorpe River Green from 15 June to 30 Sept inclusive.
 - Operational mooring points for the water plant harvesters, which reduce our usage of the busiest 24-hour moorings are required in a few key areas.
 - The trial of offloading cut vegetation at Dungeon's Corner near Martham Broad received mainly negative feedback from the public. Despite landowner permission, we shall not use this location in 2024, as other options are explored.
 - The additional capacity to hold cut material in the newest harvester "Amber" means that it has most usefully deployed in the Upper Thurne, where volumes of cut material have been greatest.

5. Channel marking

- 5.1. Planned work for March 2024 includes replacement of up to 30 of the older wooden posts or those entirely missing, with new steel posts in Breydon Water. To spread the materials costs, continuation of this work in April 2024 to add another 20 posts is planned to extend this project into the new financial year 2024/25.

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[Broads Plan](#) strategic actions: C1, C2, C3, C4

Appendix 1 – Annual dredging progress 2023-24 (April 2023 to end September 2023)

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Project title Dredge site and sediment re-use location	Active Broads Authority dredging weeks completed/ planned	Planned volume removed m ³	Actual volume removed m ³	Planned annual project cost ¹	Actual project cost
River Ant River Ant - Wayford to Barton (Apr '23 - Jul '23)	18/17	12,230	12,920	£115,740	£110,490
<i>COMPLETE – lower actual cost was due to slightly lower staff numbers needed to achieve the targets than planned</i>					
River Waveney Oulton Broad (Apr '23 – Sept '23)	23/16	7,600	12,490	£98,430	£121,170
<i>COMPLETE – final costs reflect extension of time on this project</i>					
River Bure Coltishall to Hoveton Viaduct (Oct '23 – Mar '24)	0/30	13,630	0	£176,510	£15,650
<i>Planned start date delayed owing to mobilisation restrictions. Costs so far are all related to project planning costs and site set up</i>					
River Yare Haddiscoe Cut (Nov '23 – Jan '24)	0/13	6,590	0	£80,630	£1,160
<i>There will be some reduction in dredging duration on this project owing to the extension of time at Oulton</i>					
Site restoration	-	-	-		

¹ project costs include staff time for all elements (pre-works ecological mitigation, site set-up, active dredging & site restoration); BA plant; & budgetary expenditure (equipment hire, survey costs, contractor costs, mitigation works, materials & consumables etc); within the reporting period.

Project title Dredge site and sediment re-use location	Active Broads Authority dredging weeks completed/ planned	Planned volume removed m³	Actual volume removed m³	Planned annual project cost ¹	Actual project cost
Hardley Flood <i>(yet to be fully completed)</i>				£8,800	£1,200
Future site preparation Survey, mitigation & set-up	-	-	-	£6,810	£3,710
Dredging support activities Maintenance of ancillary dredging kit, etc.	-	-	-	-	£10,990
Total	41/76	40,050	25,410	486,920	264,370