

Navigation Committee

13 January 2022

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 the public navigation, develop mooring facilities for public use and demonstrate the effective use of available resources.

Broads Plan context

Construction, Maintenance and Ecology (CME) activities contribute to multiple objectives, in particular to Aspirations 3, 4 and 6 to manage sediment sustainably, maintain a safe open navigation, and maintain the access network and visitor facilities.

1. Maintaining water depths for navigation

- 1.1. The detailed breakdown in Appendix 1 gives the total volumes for the annual dredging programme for the whole of 2021/22 to the end of November 2021. A total of 23,940m³ of dredged sediment was removed from the prioritised sites. This figure represents 102% of the programmed target of 23,490m³ for this year.
- 1.2. Dredging in Upper Thurne to complete the final phase of the Chara Bay project has been on-going since September. Sediment has been gained from shallow areas in Heigham Sound, which has all been placed on top of the geotextile bags and to provide a supporting slope in front of the bags, as per the construction drawings. The volume required to complete the design has been greater than predicted, so there has been an extension of the time spent dredging in this area. In October, a lost dyke was also restored on Norfolk Wildlife Trust land by the Construction Team. The arisings were used for their abundant reed rhizomes and roots, which have all been placed along the outer perimeter of the Chara Bay reedbed. Other established plants from a nursery, grown under contract for us on coir mats, have been placed around the reedbed structure to provide another means of establishing vegetation quickly. Floating and fixed fencing has been installed to reduce goose access and prevent damage to the young plants from their grazing activities.

- 1.3. Dredging in Oulton Broad was extended by an additional five weeks, which produced an additional 4,000m³ to the annual total. The remaining capacity within the reedbed creation site at Peto's Marsh will enable us to carry out two more dredging campaigns in and around Oulton Broad over the next two years. The planned dredging in the River Waveney between Beccles and Geldeston was completed and delivered for less total cost despite the project duration being longer, as fewer staff and vessels were required than anticipated to carry out the work effectively.
- 1.4. The two active projects being carried out in early 2022 include dredging upstream of Martham Ferry to Somerton Staithe [NTM 07 / 08 2021 UPDATE - Continued navigation restrictions due to dredging works on the Upper River Thurne](#) and on the River Chet between Loddon and Hardley Flood [NTM 09 2021 - Dredging River Chet](#) . At Martham Broad, sediment is to be used to build up and restore an eroded reedbed area on Norfolk Wildlife Trust land. On the River Chet the dredged sediment is being placed along the closed public right of way, from Chedgrave Common to just downstream of Hardley Flood. This work is in conjunction with Norfolk County Council Highways, who have received funding to replace the bridges that had eroded away along this stretch of footpath at Hardley Flood. The aim is that by the end of 2023, the riverbank path and bridges will be in place to allow re-connection of the public footpath along the River Chet between Chedgrave and Hardley.

2. Maintaining safe public mooring facilities

- 2.1. At Commissioners Cut 24 hour mooring, prices from the tender exercise for full replacement of all the steel piles and widening of the mooring cut were received. Unfortunately, the price per linear meter was at least twice that for which the Authority has ever paid for such mooring replacement work. Increases in steel, timber and fuel prices have pushed up costs for the original plan, far beyond acceptability. Further site investigations have revealed that a solution cheaper than fully replacing the steel piles is possible, but this does mean that widening the Cut is not going to be delivered in a way that achieves value for money, so has been dropped as an option. Alternate plans to maintain the existing piling line are being drawn up and a revision to the tender is to be released in January.
- 2.2. The transfer of ownership of a section of mooring at Berney Arms has been completed. This small section of the site named "Berney Arms 2" is now fully open as an Authority 24 hour mooring in addition to the existing longer section.
- 2.3. The Maintenance Team completed timber refurbishment to the quay heading at Rockland Staithe 24 hour mooring. 60 metres of new timber capping and waling were installed. At Sutton Staithe 24 hour mooring, 140 metres of new capping was fitted, as well as 30 new mooring posts. New mooring signs have been installed and some further work remains to be completed on the smaller detached section of mooring, called "Sutton Staithe 2", once site conditions improve in the new year.

3. Our resources

- 3.1. Two new Operations Technicians have been recruited (one permanent and one 12 month fixed term contract) following a retirement and a pause in the apprenticeship programme for a year. A Kickstarter work placement has also begun a six month position with the Maintenance Team to gain working experience and technical skills. The two Kickstarter placements in the Ecology and Fitter teams both completed their time with the Authority in December.
- 3.2. Appendix 2 gives the planned proportion of Operations Technicians' time to be spent on the different navigation work types through 2021/22 and the progress reported up to the end of November 2021. The staff time spent on water plant cutting has now ended for the year. The amount of cutting required to maintain specifications in the southern rivers was less during 2021 than in previous years. This did allow both cutting vessels to operate in the northern rivers for a short period. Overall total time spent in 2021 on water plant cutting was less than predicted.

4. Future working arrangements

- 4.1. The [Waterways Management Strategy](#) was adopted by the Broads Authority at its meeting on 24 September 2021. The document has a final stage of undergoing a Habitats Regulation Assessment (HRA), as per the requirements of the Conservation of Habitats & Species Regulations (2010). This work has been opened to tender and is expected to commence in early 2022. Once the independent HRA is completed, the strategy document will be uploaded to the Authority website.
- 4.2. The first year of training courses delivered at the Dockyard for Boat Safety Scheme assessors has been completed. The Boat Safety Scheme training team ran four week long courses with a total of 38 participants from all over the country. Trainees had theoretical training presented in the meeting room, backed up by hands-on experience in the nine vessels specifically set-up in a compound in the Dockyard. The vessels have a range of pre-arranged safety and maintenance issues "staged" to develop would be assessors skills and experience. In 2022 more course are planned, as per the lease agreement.

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Date of report: 15 December 2021

[Broads Plan](#) strategic actions: 2.1; 2.3; 3.1; 3.2; 4.2; 6.1

Appendix 1 – Annual dredging figures 2021-22

Appendix 2 – Percentage of operational staff time spent on navigation work types (2021-22) to end November 2021

Appendix 1 – Annual dredging figures 2021-22

Project title	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 Waveney - completed Beccles to Geldeston (June-Sept)	13/17	6,000	6,910	121,260	87,370
River Waveney Oulton Broad to Peto's Marsh (May-Aug)	18/13	6,000	10,010	119,230	134,920
River Thurne Martham to Somerton, sediment to Hickling/Martham (Sept-Jan)	0/13	3,490	0	85,480	1,450
Heigham Sound to Chara Bay, Hickling (Sept-Dec)	10/0	0	5,520	0	CANAPE project costs
River Chet Loddon to Hardley Flood bank (Nov-Feb)	4/15	8,000	1,500	112,360	27,900
Site Restoration Waveney - Beccles, Rockland Short Dyke, Bure - Six Mile House	-	-	-	19,340	12,080
Total	45/58	23,490	23,940	457,670	263,720

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.

Appendix 2 – Percentage of operational staff time spent on navigation work types (2021-22) to end November 2021

Navigation work type	Staff days planned (2021-2022) Days	Staff days planned (2021-2022) % of annual total	Staff days worked (April 2021 to end November 2021) Days	Staff days worked (April 2021 to end November 2021) % of annual total
Dredging	1843	60.5%	1,072	35.2%
Mooring maintenance & repairs	626	20.6%	362	11.9%
Riverside tree management	180	5.9%	9	0.3%
Water plant cutting	230	7.6%	190	6.2%
Other navigation works	165	5.4%	148	4.9%
Total	3044		1781	