

Navigation Committee

09 June 2022

Agenda item number 8

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 in managing the Broads waterways.

Broads Plan context

The activity of the Construction, Maintenance and Ecology (CME) section contributes 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.

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1. Maintaining water depths for navigation

- 1.1. The detailed breakdown in Appendix 1 gives final volumes for the annual dredging programme for the whole of 2021/22 (April 2021 to end March 2022). A total of 33,950 m³ of dredged sediment was removed from the prioritised sites. This figure represents 144% of the programmed target of 23,490 m³ for that year. The additional dredge volume largely came from the extension of time spent in the Upper Thurne. As the funding arrangements for this work came from the EU Interreg CANAPE project, there was no in-year financial impact on navigation revenue budget expenditure. Half of the working time by staff was also allocated as “National Park” time, given the wider ecological benefits of the Chara Bay habitat creation.
- 1.2. Appendix 2 shows that overall for 2021/22 the amount of time operational staff spent on dredging projects was very close to that planned. The nominal annual target for the construction and maintenance teams time is a split of roughly 70:20:10 for “navigation”, “conservation” and “recreation” activities. The latter category includes all work for public footpath access and maintaining land-based visitor sites. The actual figures for 2021-22 breaks down to 66% - navigation, 25% - conservation and 9 % - recreation. The part inclusion of the Chara Bay project as conservation time generated this higher than planned final figure.
- 1.3. Dredging on the River Chet was completed with sediment placed along the riverbank. This bank formed the previous line of the public footpath adjacent to Hardley Flood, which is currently closed. Slightly less sediment volume was dredged than planned, but this project had a fixed time period within which to work, so no additional volume could be regained. The next steps at this site are to monitor the drying of the sediment. If by the end of autumn 2022 the material is handleable, the aim is to return with excavators to level and shape the riverbank to be suitable for a footpath. Norfolk County Council is leading on a project to look at reinstating the lost bridges on this section of path at Hardley Flood and ultimately re-open the public footpath, which can all now follow on from the Authority’s riverbank restoration and dredging.
- 1.4. Appendix 3 gives the dredge project plans for the new, current year, 2022-23. The initial dredging projects on the River Ant and at Oulton Broad have not yet started in this reporting period, so no volume data is reported here. On the River Ant, delays in gaining all the relevant permissions has set this project back by six weeks. See Notice to Mariners information [NTM 02 of 2022 - Dredging works on the River Ant \(broads-authority.gov.uk\)](#). Mobilisation to Oulton Broad has also been delayed with navigation access restrictions at Haddiscoe Cut, followed by unplanned repairs being needed to the concrete pump. Both projects are now planned to start on the week beginning 23 May. See Notice to Mariners information [NTM 03 of 2022 - Dredging works on Oulton Broad/Oulton Dyke \(broads-authority.gov.uk\)](#).
- 1.5. A project being carried out by the Environment Agency that contributes to Broads Authority objectives on the River Waveney is starting towards the end of May 2022. See Boating News information [Navigation restriction due to flood bank maintenance](#)

[works on the Upper River Waveney \(broads-authority.gov.uk\)](https://broads-authority.gov.uk). The Agency are utilising dried sediment deposited at the Authority's land near Geldeston and re-using this to top up areas of low river bank further downstream. The Authority is assisting the movement of pontoons and work equipment with towage provided by one of our tugs and staff members.

2. Maintaining safe public mooring facilities

- 2.1. At Commissioners Cut 24 hour mooring, the reinstatement of the vertical pile line and installation of replacement anchor ties has been successful. The work was also assisted by a prolonged period of relatively low water in the River Yare. This has meant the mooring path and all the surface features of the site will be able to be reinstated and opened to the public more quickly than planned, which is going to be by mid June this year.
- 2.2. The lease arrangements Burgh Castle 24 hour mooring have been completed. The mooring is now fully open as an Authority 24 hour mooring. In addition to the new steel piling and timber capping and waling installed by the Environment Agency, the Authority has installed an additional electric charging pillar. The re-opening of this strategically placed mooring, upstream of Breydon Water has been long awaited and is already being well used.

3. Our resources

- 3.1. Appendix 2 shows the final proportion of Operations Technicians' time spent on the different navigation work types through 2021/22. The proportional time spent across the navigation work areas was very close to planned. The one variation however was the "staff days worked" by CME on these navigation work areas (third column). Principle causes of time lost were due to a case of long term sickness and also COVID related time off work. Despite being 250 days short of the staff days planned (equivalent of one person missing from the construction and maintenance teams for the whole year), all the dredge projects were completed with more volume of sediment removed than planned, and all the water plant cutting, 24 hour mooring maintenance and tree management tasks were also kept on track.
- 3.2. The Waterways & Recreation Officer post has been recruited to, with Andrew Walters having just completed his first two weeks induction and settling in. Andrew's role covers strategic navigation areas such as access to the water (for canoe, angling, open water swimming etc); slipways and small boat access; waterway specification compliance; and screening applications for events on the waterways, for example [Organising events in the Broads \(broads-authority.gov.uk\)](https://broads-authority.gov.uk).

4. Water plant management

- 4.1. Water plant cutting in the channel at Hickling starts in late May each year, running through to September, as per the assent the Authority has from Natural England. The

cutting only happens once a threshold levels of water plant growth and water quality are met. This protects the vulnerable plant populations in years when there is low growth. In reality if there were such low plant growth, the likelihood of it being within the deeper marked channel is remote. The threshold to trigger the requirement for water plant cutting is established through annual hydroacoustic (sonar) survey in May. The threshold above which cutting can occur in the marked channel is 30% of the bed of the broad covered with water plants. At the time of writing this report, the survey results for 2022 were still being processed. The assent for water plant cutting in the marked channel at Hickling Broad is now in place for the next seven years. The water clarity has been exceptional during the early spring, so water plants are already strongly established and large areas of stonewort have remained intact over the winter. Once the hydroacoustic survey results are known, the water plant harvester is aiming to be on site before late spring bank holidays to ensure the marked channel is clear of any potential obstructions. The cutting activity is carried out in accordance with the Authority's Environmental Standard Operating Procedures [Environment standard operating procedures \(broads-authority.gov.uk\)](https://www.broads-authority.gov.uk/environment-standard-operating-procedures)

5. Navigational safety

- 5.1. The Ranger Service have identified a range of improvements to the signage and safety measures on the approaches to St. Olaves road bridge. The maintenance team are actively engaged in installation of new gauge boards, warning signs on the bridge, advance notice signs and hazard marking panels (chevrons) around the bridge. All work is planned to be completed by July.

6. Future working arrangements

- 6.1. The timetable for the consultants to complete the Habitats Regulation Assessment (HRA) for the Waterways Management Strategy is the end of June. The Authority can then submit the strategy and associated HRA to Natural England, who have a statutory 28 day response period. Once assent has been gained from Natural England, then the Waterways Management Strategy can be made available on the Authority's website.

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

Appendix 1 – Final annual dredging figures 2021-22 (April 2021 to end March 2022)

Appendix 2 – Final percentage of operational staff time spent on navigation work types (year April 2021 - March 2022)

Appendix 3 - Annual dredging plan 2022-23

Appendix 1 – Final annual dredging figures 2021-22 (April 2021 to end March 2022)

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 Beccles to Geldeston (June-Sept)	14/17	6,000	7,060	121,260	92,060
River Waveney Oulton Broad to Peto's Marsh (May-Aug)	18/13	6,000	10,010	119,230	149,440
River Thurne Martham to Somerton, sediment to Hickling/Martham (Sept-Jan)	7/13	3,490	3,670	85,480	60,190
Heigham Sound to Chara Bay, Hickling (Sept-Dec)	17/0	0	8,260	0	CANAPE project costs
River Chet Loddon to Hardley Flood bank (Nov-Feb)	15/15	8,000	4,950	112,360	77,220
Site Restoration Waveney - Beccles, Rockland Short Dyke, Bure - Six Mile House	-	-	-	19,340	19,070
Total	71/58	23,490	33,950	457,670	397,980

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 – Final percentage of operational staff time spent on navigation work types (year April 2021 - March 2022)

Navigation work type	Staff days planned - Days	Staff days planned - % of annual total	Staff days worked - Days	Staff days worked - % of annual total
Dredging	1,843	60.5%	1,718	61.5%
Mooring maintenance & repairs	626	20.6%	542	20%
Riverside tree management	180	5.9%	152	5%
Water plant cutting	230	7.6%	198	7%
Other navigation works	165	5.4%	182	6.5%
Total	3044	100	2792	100

Appendix 3 – Annual dredging plan 2022-23

Project title	Active Broads Authority dredging weeks completed/ planned	Planned volume removal m³	Planned annual project cost ²
River Waveney Dredging at Oulton Broad to Peto's Marsh (May-Sept)	0/21	10,000	50,780
River Ant Dredging at Sutton Broad (May-Sept)	0/20	12,000	120,090
River Bure Dredging from Wroxham Viaduct to Belaugh (Oct-Mar)	0/26	12,000	162,960
River Bure Plough dredging Lower Bure (Gt Yarmouth, Tar Works Road to Vauxhall Bridge)	Contractor	1,000	5,000
Site Restoration Beccles, Raveningham, Hardley Flood	-	-	13,020
Total	0/67	35,000	351,850

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.