

Navigation Committee

31 October 2019

Agenda item number 9

Construction, maintenance and environment work programme: progress update

Report by Head of Construction, Maintenance and Environment

Purpose

To report progress on Broads Authority activity to maintain the public navigation and develop mooring facilities for public use, and to demonstrate the effective use of available resources.

1. Maintaining water depths for navigation

- 1.1. The detailed breakdown in Appendix 1 gives the volumes for the annual dredging programme to the end of September 2019. A total of 17,210 m³ of dredged sediment has been removed from the prioritised sites, representing 39% of the programmed target of 44,000m³ for 2019/20.
- 1.2. The planned spring and summer dredging on the River Waveney, Oulton Broad and River Bure was completed. Less time was spent dredging on the River Waveney and Oulton Broad, which impacted slightly on planned volumes. Demobilisation from Hickling Broad was later than planned to maximise time on that site, and there was extended movement of equipment and set up time on the Waveney site. The sediment from the River Waveney was all placed on the rear slope of the floodbank on the south (Suffolk) side of the river, and will be available for future floodbank maintenance work.
- 1.3. Dredging project set up has featured heavily this summer in the Construction Team work programme. At Peto's Marsh at Suffolk Wildlife Trust's reserve at Carlton Marshes, the preparation for the habitat creation area that will use 20,000 m³ of sediment is underway. The initial lift of the retaining wall has been constructed and is being allowed to consolidated before more layers are added. At Postwick Tip, our licenced landfill site adjacent to the River Yare, the dried sediment from the past few dredging campaigns on the River Yare has been moved to its final position, as per the site restoration plan. The receiving cell for wet dredgings is ready to accept more sediment in 2020/21. At Waxham Cut, the vegetation on site has been removed ready to start dredging in November.
- 1.4. Mobilisation and site preparation are now underway for this winter's dredge sites at Hickling Broad, Tyler's Cut and Waxham Cut. At Hickling, the Chara Bay reedbed

restoration area had its final engineering assessment, funded through the CANAPE project, prior to infilling the central area with sediment this winter. All forthcoming dredging work is communicated through the [Notice to Mariners](#) page on our website.

- 1.5. The fundamental gauging of water levels and the benchmark level from which target dredge depths are taken from beneath the water surface is being reviewed. Monica Pichler, a PhD student from UEA, has joined the Environment and Design Team on a three-month internship. The aim is to update the modelled 'mean low water' level across the Broads' navigable system using Environment Agency and Broads Authority water level data. From this refreshed analysis and the most recent data, we will be able to see if there are significant variations or improvements that can be made following the exercise last carried out in the mid-1990s.
- 1.6. The draft 2020/2021 dredging programme is in Table 1. Sites on the River Yare in winter 2020/2021 are subject to further planning and agreement.

Table 1

Draft 2020/2021 dredging programme

When	Dredge location	Re-use option
Apr-May	Acle, River Bure	Floodbank setback filling, Oby
Jun-Jul	Fleet Dyke, South Walsham	Floodbank setback filling, Horning
Jun-Sep	Oulton Broad	Peto's Marsh habitat creation scheme
Aug-Sep	Geldeston, River Waveney	Bankside spreading/ floodbank strengthening
Sep-Oct	Trowse, River Wensum	Postwick Tip disposal
Nov	Langley, River Yare	Rockland Short Dyke - bankside spreading/ floodbank strengthening (TBC)
Oct-Mar	Hickling Broad	Chara Bay reedbed creation
Nov-Jan	Waxham Cut	Bankside spreading/ floodbank strengthening
Dec-Mar	Reedham, Lower Yare	Floodbank setback filling, Raveningham (TBC)

2. Maintaining safe public mooring facilities

- 2.1. Ground investigation surveys were carried out at Acle Bridge 24-hour mooring ahead of the planned quay re-piling work this winter. This vital information feeds into the piling and anchoring design specification being drawn up for us by a structural engineer.
- 2.2. Other recent routine maintenance and repairs includes refurbishment of the steps to the Whitlingham Country Park 24-hour mooring, upgrading of safety ladders at Stokesby and Hardley to a new more durable design, and replacement of mooring posts at various locations.

3. Managing riverside trees

- 3.1. We have started our annual winter programme of cutting back tree growth from prioritised areas of the system. Maps of the stretches being managed are shown in the [online mapping](#). The tree shears will be used on stretches along the River Yare from January.

4. Other navigation works

- 4.1. Numerous wrecks have been removed from the system using our floating plant and larger work vessels. Wrecks at Oulton, Commissioners Cut, Geldeston, Rockland and Herringfleet were raised and scrapped.
- 4.2. The continuing marker post replacement programme across Breydon Water saw another 16 posts replaced in September, with broken, missing or weak wooden posts in key locations being replaced by steel posts.

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Background papers: [Notice to mariners](#), [Riverside tree and scrub management](#)

[Broads Plan](#) objectives: 2.1, 2.3, 3.1, 3.2, 4.2, 6.1

Appendix 1 – Dredging progress

Appendix 1

Dredging progress

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
Hickling Broad Dredging of marked channel & habitat creation (Oct - Feb)	0/22	8,000	0	149,670	13,670
Tyler's Cut, Dilham Dilham Staithe and 600m downstream (Nov - Dec)	0/17	3,000	0	40,330	800
Mid-Bure a) South Walsham Fleet Dyke (Apr - May) b) Oby to Acle Bridge (Jun - Aug)	22/22	13,000	10,440	126,640	84,700
Oulton Broad Dredging in North Bay (Aug - Sep)	3/9	6,000	1,200	51,680	16,280
Waxham Cut Dredging & sidecast (Nov - Jan)	0/13	4,000	0	38,090	6,670
Waveney Beccles to Stanley Carrs (Apr - Jul)	10/16	8,000	5,570	102,550	78,360

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	Active Broads Authority dredging weeks completed/ planned	Planned volume removed m³	Actual volume removed m³	Planned annual project cost ¹	Actual project cost
Lower Bure Plough dredge (Mar)	Contractor	2,000	0	10,000	0
Site Restoration Stokesby, Lower Bure & Postwick Tip	-	-	-	43,540	29,460
Site Preparation Peto's Marsh, Carlton Marshes	-	-	-	15,860	11,570
Total	33/99	44,000	17,210	568,360	241,510