

Navigation Committee

14 April 2022

Agenda item number 13

Construction and 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 February 2022. A total of 30,720 m³ of dredged sediment has been removed from the prioritised sites. This figure represents 131% of the programmed target of 23,490 m³ for the 2021/22 year.
- 1.2. In Hickling Broad, dredging and planting to complete the final phase of the Chara Bay project has been completed. Perimeter fencing around the lagoon has been installed to reduce goose access and prevent damage to the young plants from their grazing activities. Additional sediment was also pumped into the previous reedbed restoration area at Churchill's Bay to counteract the settlement of sediment and give the existing reeds a greater chance of stronger establishment. This additional work in Hickling involved dredging 5,500 m³ which was over and above that originally planned.
- 1.3. At Martham Broad, sediment has been dredged from the channel through the broad to build up and restore an eroded reedbed area on Norfolk Wildlife Trust land adjacent to Martham South Broad.
- 1.4. On the River Chet dredged sediment has been placed along the closed public right of way, from Chedgrave Common to just downstream of Hardley Flood. Follow up work in the autumn of 2022 is planned to level off the sediment to facilitate the Norfolk

County Council project to install replacement footbridges and ultimately re-open the footpath.

- 1.5. Project planning for the next phase of dredging in Oulton Broad is well underway. Where the dredged material is to be placed, extensive mitigation work to prevent impacts on the water vole population at Peto's Marsh has been completed. An old dyke was needed to be filled with dredged sediment, which required water vole monitoring, trapping and relocation to happen before the sediment was moved. The Ecology Team worked alongside staff from Suffolk Wildlife Trust and our own Construction Team, to ensure the work all happened according to the plan and as per the Protected Species licensing conditions. A priority task for the Rivers Engineer by June 2022 is to produce a detailed project plan, setting out all the remaining phases of work at Peto's Marsh to create a 1 hectare reedbed. Dredged sediment will be used to establish the correct ground levels for the reedbed and for the construction of a new cross-wall flood embankment.
- 1.6. The forward dredging plan for 2022/23 is shown in Table 1. Three major projects are set for the forthcoming year. Dredging at Oulton Broad and the Peto's Marsh reedbed creation project continues. Priority dredging at Sutton Broad, matched with the opportunity to provide sediment for a landowner to strengthen a section of riverbank along the River Ant, sees the start of a new campaign over several years of activity in the River Ant. Similarly, on the upper Bure upstream of Wroxham, winter 2022/23 marks the first of two winter campaigns, with dredged sediment destined for agricultural reuse.

Table 1. Forward Dredging Plan – 2022/23

| Site | Timescale | Volume (m ³) |
|---|-------------------|--------------------------|
| River Waveney – Oulton Broad | April – September | 10,000 |
| River Ant – Sutton Broad | April – September | 12,000 |
| River Bure – Wroxham Viaduct to Juby's Farm | October – March | 12,000 |
| Lower River Bure – plough dredging | Jan – March | 1,000 |
| Total | - | 35,000 |

2. Maintaining safe public mooring facilities

- 2.1. At Commissioners Cut 24 hour mooring, the tender to achieve the revised refurbishment has been successful with a contract issued. The contractor shall excavate behind the piling, straighten the piling line and strengthen the structure with new anchor ties. Structural work is due to be completed by the end of May. Follow up work by the Maintenance Team will bring the site back to public use in summer 2022 once the land has settled.

- 2.2. At How Hill 24 hour mooring, the second of three 100 m stretches of the timber capping and waling have been replaced by contractors. The final phase to complete the full timber refurbishment will be in winter 2022/23. Capping and waling has also been replaced at the Haddiscoe (East) demasting mooring.
- 2.3. A set of new boat waste bins and associated fenced compound has been created at Hoveton St John 24 hour mooring. This facility replaces the old bin store near the Hoveton Tourist Information Centre. North Norfolk District Council have funded the new bins, which are intended for waste from boats and not general public waste. Issues of repeat illegal disposal of domestic and commercial waste at the previous location, being easily reached by cars and vans, has hopefully reduced; whilst now providing boat users with more convenient and accessible waste and recycling facilities.
- 2.4. The succession of very high tides in January had impacted the path surfaces at many of the 24 hr moorings, especially in the lower river reaches. The maintenance team had an extended programme in February of topping up mooring path surfaces and repairing washed out areas behind the quay heading.

3. Riverside Tree Management

- 3.1. The initial five year riverside tree management plan and work programme ran from 2017 to 2022, see [Riverside tree and scrub management \(broads-authority.gov.uk\)](https://broads-authority.gov.uk/riverside-tree-and-scrub-management/). The work to this plan has now been completed. A brief summary is that over the five years, 15,600 m of riverbank has been managed to the specification set for each stretch. This total is broken down by rivers, as: -

- River Ant 4,160 m
- River Bure 6,180 m
- River Thurne 660 m
- River Waveney 1,820 m
- River Yare 2,780 m

- 3.2. Total length of riverside tree management between 2017-2022. This is broken down by year, as: -

- 2017-18 2,976 m
- 2018-19 3,290 m
- 2019-20 3,218 m
- 2020-21 3,050 m
- 2021-22 3,070 m

4. Our resources

- 4.1. Timmy Lamb our previous Construction Supervisor retired in February. Wayne Collins has stepped up from the Construction team to take on the role. The vacant Waterways & Recreation officer role has been appointed to, with the new starter joining in early May.
- 4.2. A design and build tender for a small motorised barge/workboat has been opened, see [Tender for the design and build of a small motorised work boat/barge - Contracts Finder](#). Specification is for a 20 tonnes (metric) load capacity, flat-bottomed vessel. Loads to be transported to support the work of the Construction Team, are likely to include a 3,000 litre bunded fuel tank and a small welfare unit. As a multi-purpose vessel, the open hold design will also be capable of moving bulk materials such as aggregate or timber.
- 4.3. Appendix 2 gives the planned proportion of Operations Technicians' time spent on the different navigation work types through 2021/22 and the progress reported up to the end of February 2022.
- 4.4. The planned percentage of the Construction and Maintenance teams time spent on the different navigation management work areas in 2022/23 is shown in Table 2. Dredging continues to occupy most time in the work programme at the same proportion to the previous year. The slight relative increase in mooring maintenance and other navigation works is due to planned reduction in Construction and Maintenance staff time on riverside tree management. The 2022-27 riverside tree management plan, due for finalisation by July 2022, sees contractors, use of the tree shears and ranger teams playing the major role in completing this regular annual set of tasks. One significant navigation project is the replacement of the older channel markers in Barton Broad, which is due to start in October 2022.

Table 2. Planned percentage of operational staff time on navigation work types (2022-23)

| Navigation work type | Staff days planned (2022-2023) Days | Staff days planned (2022-2023) % of annual total |
|-------------------------------|--|---|
| Dredging | 1800 | 60% |
| Mooring maintenance & repairs | 660 | 22% |
| Riverside tree management | 85 | 3% |
| Water plant cutting | 190 | 6% |
| Other navigation works | 250 | 9% |

| Navigation work type | Staff days planned (2022-2023) Days | Staff days planned (2022-2023) % of annual total |
|----------------------|---|--|
| Total | 2985 | 100 |

5. Future working arrangements

- 5.1. The Habitat Risk Assessment for the Waterways Management Strategy is underway, with consultants carrying out this task for the Authority. Completion is due by the end of June, with assent for the strategy as a whole required from Natural England before final adoption of the strategy.
- 5.2. The removal of the fuel duty rebate on the use of “red” diesel for certain uses has impacted some of our road legal plant. The JCB Fastrack tractor and the telehandlers now need to use “white” diesel, which does not have the fuel duty rebate applied. All use for propulsion in vessels and fuel for excavators can continue to use the rebated fuel.
- 5.3. At the June 2022 Navigation Committee, the evaluation of the whole 2021/22 navigation work programme will be presented.

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Date of report: 31 March 2022

[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 February 2022

Appendix 1 – Annual dredging figures 2021-22 (to end Feb 2022)

| Project title | Active Broad 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 | 89,650 |
| River Waveney Oulton Broad to Peto's Marsh (May-Aug) | 18/13 | 6,000 | 10,010 | 119,230 | 137,870 |
| River Thurne Martham to Somerton, sediment to Hickling/Martham (Sept-Jan) | 6/13 | 3,490 | 3,330 | 85,480 | 41,490 |
| 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) | 15/15 | 8,000 | 4,950 | 112,360 | 72,280 |
| Site Restoration Waveney - Beccles, Rockland Short Dyke, Bure - Six Mile House | - | - | - | 19,340 | 15,580 |
| Total | 61/58 | 23,490 | 30,720 | 457,670 | 356,870 |

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 February 2022

| Navigation work type | Staff days planned (2021-2022) | Staff days planned (2021-2022) | Staff days worked (April 2021 to end February 2022) | Staff days worked (April 2021 to end February 2022) |
|-------------------------------|-----------------------------------|-----------------------------------|--|--|
| | Days | % of annual total | Days | % of annual total |
| Dredging | 1843 | 60.5% | 1,430 | 47% |
| Mooring maintenance & repairs | 626 | 20.6% | 478 | 15.7% |
| Riverside tree management | 180 | 5.9% | 115 | 3.7% |
| Water plant cutting | 230 | 7.6% | 191 | 6.3% |
| Other navigation works | 165 | 5.4% | 174 | 5.7% |
| Total | 3044 | 100 | 2,388 | 78.4 |