

# Navigation Committee

02 September 2021

Agenda item number 9

## Construction, Maintenance and Ecology work programme – progress update

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

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### 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.

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## 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 June 2021. A total of 7,940 m<sup>3</sup> of dredged sediment was removed from the prioritised sites. This figure represents 34% of the programmed target of 23,490 m<sup>3</sup> for this year.
- 1.2. In May, dredging started at Beccles and Oulton Broad respectively. As the dredging on the River Waveney started a month earlier than planned, this work will finish in August. The target sediment volume to be placed into the disposal location at Geldeston is set to be achieved. Dredging locations on the Waveney have included along the Beccles town reach, Geldeston Dyke and removal of shoals between Geldeston and Dunburgh. In Oulton Broad, the dredging has focussed on the approach towards Mutford Lock. Several weeks were delayed in July following mechanical issues with the concrete pump used to pump sediment over the floodbank at Peto's Marsh. Following the earlier than planned finish time for the River Waveney work, dredging in Oulton can now extend until late September to ensure target volumes are met. A revised Notice to Mariners will be issued for this extension of dredging.
- 1.3. August will see mobilisation to Hickling Broad for the final phase of the Chara Bay reedbed creation funded by the CANAPE project. Covering the geotextile tubes with

sediment and planting on top of the tubes will complete the design specification. Dredging in Heigham Sound is planned to provide the sediment to achieve this. Once dredging in Heigham Sound is completed, the team will move to the River Thurne, dredging upstream of Martham Ferry.

## 2. Maintaining safe public mooring facilities

- 2.1. Replacement of the capping and waling timbers at St Benet's 24 hour mooring and installation of a new 24 hour mooring pontoon at Peto's Marsh have been completed.
- 2.2. At Commissioners Cut, 24 hour mooring site investigations, new quay specifications and construction footprint requirements for a 12m wide dyke have been completed. Tendering and delivery of the construction work is intended for late autumn/early winter 2021.

## 3. Water plant management

- 3.1. Water plants are becoming more apparent in the Bure broads, notably this year in Wroxham Broad and Hoveton Little Broad. This is the positive and expected outcome of the water quality improvements across the whole of the Broads catchment that has been a focus of much research and investment by multiple stakeholders over the past 40 years.
- 3.2. With improved water quality and particularly increased clarity, increased water plant growth is one of the restoration targets now being achieved. The Authority has been [reporting on the status of water plants in the Broads](#) for many decades. This year's survey by the Ecology team is planned through July and August, with reporting by December. This information will be used to help us plan for the future.
- 3.3. The Authority's role in managing navigational access through plant cutting with the weed harvester vessels is focussed on the main rivers and marked channels through many broads such as Hickling, Rockland, Barton and Martham. We are now seeing the broads on the Bure and Yare 'catching up' with the Thurne broads, which have historically retained water plants communities and good water quality.
- 3.4. The Authority continues to inform waterways users of the presence of plants and their role in the ecology of the Broads, as highlighted in previous editions of the Broadsheet and Broadcaster publications. There is also lots of useful information on the Authority's website at <https://www.broads-authority.gov.uk/looking-after/managing-land-and-water/water-plant-cutting>.

## 4. Our resources

- 4.1. As part of the Government's Kickstarter scheme, which provides funding to employers to create jobs for 16 to 24-year-olds on Universal Credit, two work placements have been filled within the Construction, Maintenance & Ecology section (one with the

Plant & Equipment Team, and one with the Ecology & Design Team). The placements run for a fixed term of six months.

- 4.2. 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 June 2021. One area already ahead of its scheduled allocation is the "other navigation works" category. This includes unplanned time spent raising sunken vessels, which has been a necessary but reactive activity. Two significant operations have been completed to remove such hazards to navigation at Beccles and Thorpe St Andrew. No riverside tree management was carried out by Operations Technicians in the period March to June, as this work can only be carried out in autumn and winter.

## 5. Other navigation works

- 5.1. The initial trial phase of the use of HVO fuel (Hydrotreated Vegetable Oil) as a direct, low carbon replacement for diesel in plant and vessel engines has been completed. No performance issues were detected with any of the engines using the fuel. The next steps are to confirm the future volumes required, policy compliance of future procurement and delivery logistics. A 90% reduction in carbon emissions is gained from operation of the plant and vessels running on this fuel.

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[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 June 2021

## Appendix 1 – Annual dredging figures 2021-22

Project title	Active Broad Authority dredging weeks completed/ planned	Planned volume removed m <sup>3</sup>	Actual volume removed m <sup>3</sup>	Planned annual project cost <sup>1</sup>	Actual project cost
<b>River Waveney</b> Beccles to Geldeston (June-Sept)	10/17	6,000	5,270	121,260	47,420
<b>River Waveney</b> Oulton Broad to Peto's Marsh (May-Aug)	6/13	6,000	2,670	119,230	59,720
<b>River Thurne</b> Martham to Somerton, sediment to Hickling (Sept-Jan)	0/13	3,490	0	85,480	490
<b>River Chet</b> Loddon to Hardley Flood bank (Nov-Feb)	0/15	8,000	0	112,360	700
<b>Site Restoration</b> Waveney - Beccles, Rockland Short Dyke, Bure - Six Mile House	-	-	-	19,340	2,810
<b>Total</b>	<b>16/58</b>	<b>23,490</b>	<b>7,940</b>	<b>457,670</b>	<b>111,140</b>

<sup>1</sup> 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 June 2021

Navigation work type	Staff days planned (2021-2022) Days	Staff days planned (2021-2022) % of total	Staff days worked (April 2021 to end June 2021) Days	Staff days worked (April 2021 to end June 2021) % of total
Dredging	1843	60.5	408	13.4
Mooring maintenance & repairs	626	20.6	93	3.0
Riverside tree management	180	5.9	0	0
Aquatic plant cutting	230	7.6	62	2.0
Other navigation works	165	5.4	107	3.5
<b>Total in plan (2021/22)</b>	<b>3044</b>		<b>670</b>	