

**Construction, Maintenance and Environment Work Programme Progress
Update**

Report by Head of Construction, Maintenance & Environment

Purpose: This report informs the Committee on the progress made in the delivery of the 2018/19 Construction, Maintenance and Environment Section work programme to date.

1. Dredging and Waterways Specification

- 1.1. The detailed breakdown in Appendix 1 gives the volumes for the dredging programme to the end of September 2018. A total of 20,390 m³ of dredged sediment has been removed from the prioritised sites. This actual figure represents 51% of the programmed target of 40,000 m³ for 2018/19.
- 1.2. Dredging progress on the Lower Bure has been very good with all the major shoals on both sides of the river targeted between Runham and Marina Quays. This is the first time this whole stretch has been dredged in several decades. In Yarmouth itself, between Marina Quays and the Euro Business Park, the shoals and high spots on the true left bank have been dredged. All of this sediment was offloaded at Runham Swim via the concrete pump, for dewatering and ultimate placing next to the floodbank. This dredging crew are now working downstream on the true right bank between Marina Quays and the Euro Business Park, with this sediment heading to directly fill a setback area at Six Mile House. The concrete pump has been demobilised from the River Bure and is heading to Hickling Broad.
- 1.3. All mobilisation of plant and materials to Hickling Broad to start preparation at “Chara Bay” will occur during the first two weeks of October. The set up includes laying a 350 m silt curtain to contain the works area; excavation of a shallow trench in which to place the geotextile tubes; installing 150 five metre alder posts to hold the geotextile tubes; then laying the nine 50 metre geotextile tubes; and securing them to the posts. All of this requires heavy lifting with a long reach excavator and a variety of work platforms and boats. Once all this is installed, the concrete pump and associated pipework can be set up and dredging commence.
- 1.4. The good weather over the summer has allowed some very good progress on restoring the sites where sediment was placed next to floodbanks. This material at Stokesby and Rockland Short Dyke could only be handled once dry. This is all now reshaped and added to the overall width of these banks.

The volume of sediment is available for any future supply of topsoil-like material for crest-raising of the banks, or other strengthening works.

- 1.5. The sediment lagoons at Hickling where the previous winter's mudpumping occurred have now dried out. The Environmental Permit to allow the spreading for arable benefit has been submitted and a response from the Environment Agency is awaited. If the weather remains dry, spreading is expected in late October. If we miss this weather window, the spreading will roll to spring 2019, as agreed with the landowner.
- 1.6. Upstream of the right hand span (true right) of Breydon Bridge, the sand bar that regularly develops has been completely removed. A pontoon mounted long-reach excavator was able to dig through the compacted sediment and achieve the Waterways Specification.

2. 24 hour moorings

- 2.1. The tendering process for repiling 150 metres of the downstream end of Hoveton Viaduct moorings has been completed. Contract details are now being finalised with the preferred contractor. The specification of the work is to pile with M11 interlocking steel piling sheets and install new mooring posts and path. The working window is for nine weeks between 1st November 2018 and 28th February 2019. During this time the upstream portion of Hoveton Viaduct moorings shall remain open, but there will be no pedestrian access to or from the mooring.

3. Riverside tree management

- 3.1. The first outing of the season for Broadsword, the Broads Society group who assist the Authority in the tree management work, was held on Saturday 6th October. The site was near How Hill on the River Ant, with other work planned along the River Ant over the rest of the winter.
- 3.2. A site visit for Authority and Navigation Committee members to view the operation of the tree shears in removing riverbank tree growth has been planned. Details of the date and location have been shared. The new equipment to enable this work includes a 13 tonne excavator, sections of work pontoon and the hydraulic tree shears themselves. This first outing for the equipment and the staff using them will establish the safe system of work for the operation, the practicalities of processing and handling the cut material, and what follow up with chainsaws will be required to finish the task to specification.
- 3.3. The winter work programme for Operations Technicians, Rangers and contractors has been planned out with all landowner agreements established. The maps showing the progress on the five year plan (2017 – 2022) <http://www.broads-authority.gov.uk/looking-after/managing-land-and-water/riverside-tree-and-scrub-management> have been updated. The stretches in purple show where has been completed over the first two winter seasons. The target areas for this winter are also shown.

4. Water plant management

- 4.1. The two weedcutters have finished for the season, having been active for a total of 137 days this year. This was split between 81.5 days in the northern rivers & broads and 55.5 days in the southern rivers. 111 days were in the original plan at the start of the year, so actual figures were above the programme. Last year's total number of days spent on weedcutting was 185, indicating a lower overall rate and volume of growth this year. Water plant growth in Hickling Broad for example was lower than the previous year, so this site demanded less weedcutter time.

5. Environment & Design Team

- 5.1. Various ecological and environmental surveys have been completed in September prior to navigation works over the winter. Environment Officers have carried out otter surveys at sites for riverside tree work on the River Waveney; water vole and reptile surveys have been completed on the River Bure sediment dewatering and setback sites; sediment samples have been collected from dredge locations and analysed for contaminants prior to sediment removal; and at Hickling Broad the on-going *Prymnesium* algae sampling continues to keep surveillance on this issue. The findings of these surveys all help shape our delivery of projects and ensure impacts on habitats and biodiversity is avoided or minimized to acceptable levels.
- 5.2. Initial stage of planning are now underway for a major sediment re-use and habitat creation project at Peto's Marsh on the River Waveney. Working closely with Suffolk Wildlife Trust, the scheme aims to generate 20,000 m³ volume of dredged sediment over several years. Once the final design, operational timescales and ecological mitigation plans are agreed a planning consent application is to be submitted by the end of this year.
- 5.3. The Works Licence guidance document (see background papers) is in the process of being reviewed by the Rivers Engineer. The review aims to make the guidance more user-friendly and update some of the text detailing the Authority's procedures. A draft for consultation will be presented to the Navigation Committee in the new year.

Background papers: Current Works Licence guidance document http://www.broads-authority.gov.uk/_data/assets/pdf_file/0018/420624/Guidance_waterways.pdf

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Appendices: APPENDIX 1 – Dredging Progress 2018/19

APPENDIX 1

Dredging Progress 2018/19 (April 2018 to end September 2018)

Project Title	Project Element	Active BA dredging weeks Completed (to end Sept / Planned)	Volume Removed m ³		Annual project Cost ^a	Actual project cost (Apr-Sept)
			Planned	Actual	Planned	Actual
Lower Bure	a) Three Mile House to Marina Quays (Apr-Aug) b) Marina Quays to Yacht Station (Sep-Nov)	24 / 32	14,000	13,280	£184,400	£220,905
<i>Runham Swim rond completed. Next re-use site is filling Six Mile House setback, starting early October</i>						
Mid Bure	a) Horning to Thurne Mouth (May-Jul) b) South Walsham Fleet dyke c) Oby to Acle Bridge (Feb-Mar 2019)	12 / 33	18,000	7,110	£190,450	£93,860
<i>Set back area at Horning Hall has been utilized to current capacity. Next setback area to fill is on the Lower Ant, with dredging in Fleet dyke</i>						
Breydon Water	Bar upstream of Breydon Bridge (March 2019)	0 / 1	500	0	£1,300	0
<i>Mechanical dredging with excavator is required. Re-prioritised to early October as an urgent safety hazard</i>						
Hickling Broad	Mudpumping marked channel in North Bay (Oct-Feb)	0 / 16	5,500	0	£148,850	£4,620
<i>CANAPE funded project. Mobilizing to site early October. All geotextile tubes and materials ordered for delivery in October</i>						
Lower Bure	Plough dredge (Jan-Mar)	Contractor	2,000	0	£9,500	0
<i>Contract for plough dredging to be deferred. Budget used to extend in-house dredging on Lower Bure</i>						
Site restoration	Rockland, Hickling, Stokesby	-	-	-	£42,590	£33,540
<i>Stokesby rond restored with all sediment integrated along floodbank. Rockland planned for early October. Hickling planned for late October</i>						
TOTAL		36 / 82	40,000	20,390	£577,090	£352,925

^a –project costs includes 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.