

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

Report by Head of Construction, Maintenance & Environment

**Summary:** This report sets out the progress made in the delivery of the 2017/18 Construction, Maintenance and Environment Section work programme to date. A selection of images illustrating the work sites and tasks will be presented during the meeting.

**1 Construction Programme update**

- 1.1 The progress of the Construction and Maintenance work programme is described in this report. The detailed breakdown in Appendix 1 shows that up to the end of October 2017, 35,070 m<sup>3</sup> of dredged sediment has been removed from the prioritised sites. This represents 66% of the programmed target of 53,000 m<sup>3</sup>.
- 1.2 Dredging on the Lower Bure between Stokesby and Runham has continued throughout October. Dredging has been carried out at numerous shoals between Runham and Mautby. As the dredging moves further downstream, a new off-loading location is being set up near Herringby that will come into operation in early December. At Oulton Broad work in North Bay continued through to the end of October when the lagoon area at Horseshoe Point was filled.
- 1.3 Two new projects have started in November, with 34 channel marker posts being removed on the river Chet and maintenance dredging along Limekiln Dyke, Neatishead. The marker post removal on the Chet is on the section between Chet Mouth and the wherry staithe near Hardley Flood. Some disruption to boat traffic is expected. For more information please see [http://www.broads-authority.gov.uk/\\_data/assets/word\\_doc/0016/1016611/NTM-10-of-2017-River-Chet.dotx](http://www.broads-authority.gov.uk/_data/assets/word_doc/0016/1016611/NTM-10-of-2017-River-Chet.dotx). The requirement for the temporary marker posts has long since passed with the successful re-establishment of the reeded river ronds following flood management work on the banks. The work is being completed with financial support from the Environment Agency. At Limekiln Dyke, the dredging is to restore the waterways specification depth between Gaye's Staithe and Neatishead Staithe. This work has required closure of Limekiln Dyke. More information can be found here [http://www.broads-authority.gov.uk/\\_data/assets/word\\_doc/0005/1016609/NTM-9-of-2017-Limekiln-Dyke.dotx](http://www.broads-authority.gov.uk/_data/assets/word_doc/0005/1016609/NTM-9-of-2017-Limekiln-Dyke.dotx)

- 1.4 A brand new JCB long reach excavator was acquired in November bringing the excavator fleet involved in dredging work up to four machines. The Authority can now plan and deliver two separate dredging tasks where an excavator on floats is required for the active dredging and another at the offload/sediment re-use point.
- 1.5 Fen maintenance work has been completed at Anglian Water's Whitlingham Marsh, with excavator work to clear roughly 400 m of dyke, creation of a new dyke crossing point and cutting of open fen by the Softrack harvester. In areas of previous scrub removal, the stump grinder head purchased last year was also used to remove the high stumps. This work will enable easier, quicker and safer cutting by the harvester in future years.

## **2 Maintenance Programme Update**

- 2.1 Timber refurbishment at Coltishall Common 24 hour mooring has started and this site is the first of the planned refurbishment tasks over this winter. Further work is planned including at Hoveton St John, Belaugh, Ranworth on the Bure and Commissioners Cut on the Yare.
- 2.2 Aquatic Plant cutting finally ended on the 25<sup>th</sup> October this year, with the last cut happening across the usual sites in the Upper Thurne. A total of 185 individual work days (37 working weeks) were spent by staff on the two vessels cutting water plants in the public navigation this season. This compares to 140 work days (28 weeks) in 2016, and 110 work days (22 weeks) in 2015. The trend in increasing work time devoted to water plant management has been growing steadily as water quality and clarity improves across the system. The additional trial cutting of stoneworts in Hickling only took two days this year, so the bulk of the work was on the public navigation.
- 2.3 Riverside tree management work has also begun with teams of staff and contractors working to achieve the desired river edge conditions in priority areas at Waxham Cut and numerous other sections on the Waveney, Bure and Ant. Annual work on the popular sailing reaches upstream of Horning has also continued with volunteer groups, with scrub removal on the Woodbastwick Marshes the focus this year. Broadsword activities are similarly focussed on the River Ant between How Hill and Irstead over this winter. The specification to be achieved from all this work aims over the long term to reduce tree height and overhang in the zone immediately adjacent to the river edge. Retention of habitat features important for fish and birds is an important part of the long term plan, with identification of habitat areas built in to the planning, so that their location does not impact on normal navigational access. The full 5 year plan and maps of prioritised sites, as consented by Natural England and the Environment Agency, is now available on the Authority's public webpages <http://www.broads-authority.gov.uk/looking-after/managing-land-and-water/riverside-tree-and-scrub-management/ nocache>
- 2.4 During October and November, the majority of the Maintenance Team have been engaged in various fen management tasks across a range of sites. Scrub clearance has been carried out at Common Fen, Smallburgh; Hall Fen,

Irstead; Burgh Common, Fleggburgh; and Hulver Ground, Horning. The proportion of the construction and maintenance team's time to be spent on the various conservation tasks over the course of a year is set at 20%. The current running total is 19.5%, which is in line with planned work allocation.

- 2.5 The three new Practical Environment & Conservation apprentices have completed much of their initial training requirements, including use of chainsaw, brush cutter and RYA II powerboat handling. The site work so far with their Operations Technician mentors has included mooring repair work, fen management and footpath cutting.

### **3 Environment & Design Team update**

- 3.1 Monitoring of the stonewort cutting trials in Hickling Broad was completed up to mid-October. No conclusions can be drawn after one years' worth of monitoring, other than that the cutting was successful and the monitoring techniques were effective in gathering the data required. The cutting and monitoring will be repeated for the next two years with the aim of establishing the impact repeat cutting has on the stonewort plant community. In terms of the water plant species surveys carried out across many of the Broads each year, two surveys were undertaken at Hickling this year (June and July) to help assess the water plant growth. There was six weeks between each separate survey and in that time the abundance of spiked water milfoil doubled and intermediate stonewort more than doubled. The ability of these species to grow rapidly and colonise across the bed of the Broad during good growing conditions is highlighted. Looking back over the last five years the results show an increase in the abundance of intermediate stonewort in Hickling Broad. This species is unique in the UK to the Upper Thurne area and of significant national conservation importance. The monitoring work carried out this year to map the distribution and growth of the water plants in Hickling and the impacts of cutting have involved 50 days of Environment Officer time.
- 3.2 Preparation for the mudpumping from the marked channel in Hickling this winter is still progressing. The dewatering lagoons have been constructed and the final Environmental Permitting for the final land spreading is awaited. The earliest potential start is mid January 2018 for a contractor working for 8-10 weeks. Part of the scope of works includes dredging down the channel to the public staithe between the Pleasureboat Inn and the boatyard. Direct consultation with local stakeholders will be held in December, and once details are confirmed the impacts on navigational access will be publicised through a notice to mariners.
- 3.3 Work is also due this winter for the replacement of the Thorpe ranger launch billet at the Dockyard. The most favourable quotes in terms of cost and longevity have been for a steel clad structure to replace the existing asbestos containing cement sheet one. Planning consent will be required and will be submitted in early December.

Background papers:	Nil
Author:	Dan Hoare
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Broads Plan Objectives:	2.1; 2.3; 3.1; 3.2; 4.2; 6.1
Appendices:	APPENDIX 1 – Dredging Progress 2017/18

# APPENDIX 1

## Dredging Progress 2017/18 (April 2017 to end October 2017)

Project Title	Project Element	Active BA dredging weeks Completed (to end Oct / Planned)	Volume Removed m <sup>3</sup>		Annual project Cost <sup>a</sup>	Actual project cost (Apr-Oct)
			Planned	Actual	Planned	Actual
<b>Haddiscoe Cut</b>	Reedham End (Mar)	1 / 1	500	670	5,600	3,870
<i>Sediment into setback areas on the River Yare upstream of Reedham</i>						
<b>Lower Bure</b>	Phase 1. Stokesby to Three Mile House (Apr-Sep); Phase 2. Three Mile House to Marina Quay (Sep-Dec)	27 / 36	18,000	13,650	222,400	114,330
<i>Use of ronds again for dewatering and a second location using a concrete pump to move sediment to the folding behind the floodbank</i>						
<b>Oulton Broad</b>	Phase 1 - North Bay (Apr-Aug); Phase 2 - North Bay (Sep-Oct)	22 / 22	16,000	20,750	104,800	93,140
<i>Suffolk Wildlife Trust setback area and Authority's own sediment lagoon filled at Horseshoe Point</i>						
<b>Bure Mouth</b>	Use of plough dredging to clear bars (Oct)	Contractor	2,000	-	15,000	2,610
<i>Subject to consent decision from Natural England for the submitted 10 year plan for navigation channel management in Breydon Water SSSI</i>						
<b>Hickling Broad</b>	Mudpumping marked channel in North Bay (Nov-Feb)	Contractor	6,000	-	69,300	30,010
<i>Use of sediment for arable benefit. Awaiting issue of the Environmental Permit from the Environment Agency. £30k from NPG.</i>						
<b>Limekiln Dyke</b>	Gaye's Staithe to Neatishead Staithe (Nov-Jan)	0 / 12	3,500	-	33,300	230
<i>Sidecasting material to the bank clear of trees last year</i>						
<b>River Chet</b>	Shoals near Hardley Flood (Jan-Mar)	0 / 12	4,000	-	22,300	630
<i>Sidecasting to provide additional material onto the weak/low sections of riverbank</i>						
<b>Mid Bure</b>	Thurne Mouth (Mar)	0 / 4	3,000	-	28,400	2,500
<i>Priority shoals in Thurne Mouth area</i>						
<b>Site restoration</b>	Rockland, Acle, Hickling	-	-	-	21,190	27,420
<i>Restoration of dredge sites from work in 2016/17. Rockland Dyke restoration completed</i>						
<b>TOTAL</b>		<b>50 / 87</b>	<b>53,000</b>	<b>35,070</b>	<b>522,290</b>	<b>274,740</b>

<sup>a</sup> –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.