

**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 2015/16 Construction, Maintenance and Environment Section work programme.

This is an update report and Member's questions and comments are welcomed.

1 Construction Programme Update 2015/16

- 1.1 The progress of the Construction and Maintenance work programme is described in this report. As previously reported verbally to members, a further detailed breakdown shows that up to the end of July, 18,750m³ of sediment has been removed from the Rivers and Broads, and the details of quantities and costs achieved so far are set out in Appendix 1. This represents 38% of the programmed target of at least 50,000m³.
- 1.2 Dredging work at Oulton Broad has continued over the summer. The dredging crew mobilised into the North Bay on 1 June and continued dredging until 21 August. The work has been carried out by Grab 10 and the two large 80 tonne wherries, John Fox and Tony Hewett. The sediment has been offloaded by excavator into a setback area at Oulton Dyke. On Friday 21 August dredging equipment will be moved off the Broad to give clear access for sailing during Oulton Regatta Week. The dredging crew will then re-mobilise to the River Yare to start dredging the Whitlingham bends.
- 1.3 The second dredging crew has been busy dredging on the River Bure, near to Horning Hall. Two hydraulic excavators and the two new wherries have been working along this busy stretch of the river removing sediment build up on the bends. The deposition area is into a setback area at Horning Hall.
- 1.4 As the bird nesting season has finished the Fen Harvester programme has begun with the Softrak carrying out works at Horning Water Works, Ludham and How Hill.
- 1.5 The Fen excavator is working at Buttle Marsh to remove the spoil that resulted from a new scrape, dug to create improved habitat on this land. The scrape was dug in March 2015 and the arisings allowed to stand and dry, they are now being reused to build up the track. A higher service track will give better year round access, even when water levels rise.

- 1.6 Members of the Construction Team have also been preparing steel marker posts ready for their installation at Breydon. Seven red and seven green channel markers have been primed and painted and will be installed in early September.
- 1.7 As highlighted and agreed in the Vessel and Equipment Strategy capital purchases of priority equipment is also being progressed this year. The eight new Linkflotes (large steel box sections we float excavators and cranes on) have been ordered from *VolkerBrooks* and are scheduled for delivery in late August 2015. Two of the eight flotes have been fitted to allow spud legs to be installed. Spud legs allows the unit to anchor to the river bed without the need for additional wires, anchors and winches, this saves time in moving the rig, reduces manual handling and takes up less space on the river.
- 1.8 The third new wherry order, build to the Broads Authority bespoke design, has also been placed and is being built in Polruan, Cornwall. The build is on schedule and its estimated delivery is in November 2015.

2 Maintenance Programme Update 2015/16

- 2.1 The maintenance reports below give a few highlights of the work that has been carried out since the last navigation report.
- 2.2 Having made a slow start due to breakdowns, the weed harvesters did some sterling work and cut the Upper Thurne, Somerton, Waxham Cut, and Catfield dyke, totalling over six miles of cut navigational channel. They have begun a second cut at Somerton and proceeded onto the River Bure to cut between Belaugh and Coltishall Lock. Our second harvester has been working on the Upper Ant and cut between Wayford Bridge and Dilham 24hr mooring, Upper Waveney between Beccles and Geldeston and Norwich area, including New Mills to Thorpe Island. The Norwich area is now having a second cut due to a good growing season. This is the first time we have had to carry out two cuts at Norwich.
- 2.3 Mooring refurbishment has been ongoing at Womack dyke, with 130m of timber quay heading being replaced; the mooring posts have also been replaced, with posts being installed at every 3m. The mooring was open during this work with small 30m sections closed at a time to allow the work to continue.
- 2.4 We have also been refurbishing Wayford moorings which had approximately 70 meters of quay heading timber and new mooring posts every 3 metres and we completed Bramerton moorings, with 300m on new timbering and replacement mooring posts.
- 2.5 The unseasonal weather in the late part of July and into early part of August, saw a number of trees fall and obstruct the navigation; two large trees were removed at Trowse and one from Belaugh.

- 2.6 Warm days and the odd rainfall has seen the grass on the 24hr mooring grow quickly, this has meant extra cutting and the Maintenance crews and Rangers have been mowing these areas every three weeks this season .

3 Environment Team Programme Update 2015/16

- 3.1 The Environment Officers have been heavily involved with the Water Plant Survey, with Hickling, Horsey, Heigham Sound, Wroxham, Cromes, Hudson Bay, Pound End, Sotshole and Barton all have been surveyed. Other areas already completed include Rockland, Wheatfen, Strumpshaw, and Bridge Broad. A total of 29 Sites will have been surveyed this year.
- 3.2 A hydro-acoustic survey of Hickling Broad has been completed, this survey looked at the height and coverage of water plants within this area. The hydro-acoustic equipment was also used to assist Norfolk Wildlife Trust carry out a similar survey on the Trinity Broads.
- 3.3 In order to be able to carry out dredging on the Lower Yare, mitigation works have to be planned in advance, so Environment Officers have been working at the set-back area near Six Mile House, to ensure this location can accept the 5,000m³ of sediment later in the year.
- 3.4 Other Environmental tasks taking place over the summer include: sites visits with Anglian Water at Whitlingham as part of the 5 year management agreement, getting quotes for bank stabilisation works on the Upper Bure, water sampling to establish the impacts of stockpiling fen harvester arisings on the surrounding fen and sediment coring on Hickling to differentiate the layers of peat and clay within the dredging areas.
- 3.5 The works at Turn Tide Jetty have been completed and include the additional works to stop scouring on the upstream section, on the River Yare side. These works were largely longer length sheets being placed to stop eddying waters washing material from behind the structure. The large barge used by the contractors will remain moored alongside the Jetty until mid-September when it will move onto Breydon to replace 14 channel markers.

4 Fitters

- 4.1 Expressions of interest have been sought for the fitting out of a Patrol Launch (using the existing mould within the mould-tool). Officers are reviewing these expressions and will be progressing a public tender, in accordance with the Authorities Standing Orders and being mindful of the latest version of the Public Contract Regulations, in September.
- 4.2 Over the summer the fitters have been carrying out programmed refits on key work boats and vessels. Z1 and the Tug Richard were both lifted out, shot-blasted back to bare metal and repainted with primer and numerous top coats to preserve their structural integrity.

- 4.3 This demanding work programme has proven to be hard upon our older plant and equipment and the Fitting team has been fully occupied with repairs to the Weed harvesters, Grab 10, Electric Eel, Yanmar Dumper, and the Motor Launches
- 4.4 Routine services have been carried out on motor launch Wensum, Ant, Charles Collier, Spirit of Breydon, as well as wherry Tony Hewett, Iona, Gleaner and the John Fox.

Dredging Progress 2015/16 (to end July 2015)

APPENDIX 1

Project Title	Project Element	Active BA dredging weeks Completed (to end Jul/Planned)	Volume Removed m ³		Annual project cost ¹	Actual project cost (Apr-Jul)
			Planned	Actual	Planned	Actual
River Ant	Irstead to Barton Broad	3/4	1,500	1,030	£24,340	£21,560
<i>Completed mid May 2015</i>						
River Chet	Pye's Mill to Loddon Basin	7/4	1,000	2,900	£10,810	£21,590
<i>Completed mid May 2015. Additional volume near Loddon Basin removed</i>						
Upper Bure	Coltishall Lock	5/8	2,000	900	£29,570	£26,640
<i>Pumping completed end May 2015. Total sediment removed 1,600 m³. Mud due to be spread in September 2015</i>						
Upton Dyke	Restoration work on setback filled in 2014/15	NA	NA	NA	£7,000	£1,040
<i>Completed at end of May 2015.</i>						
Mid Bure	Thurne Mouth to Horning Hall	11/12	8,000	6,550	£80,070	£74,570
<i>Dredging started mid May 2015, filling setback area upstream of Ant Mouth</i>						
Mid Bure	Thurne bank rond restoration	NA	NA	NA	£10,550	£0
<i>Re-profiling rond upstream of Thurne White Mill due August 2015</i>						
Oulton Broad	Oulton Broad	9/14	10,000	7,370	£73,090	£56,960
<i>Mobilisation started mid May 2015. Due to end 21st August 2015.</i>						
Mid Bure	Acle to Stokesby	0/10	7,000	0	£56,150	£150
<i>Use of setbacks near Acle Bridge agreed.</i>						

¹ 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, contractor costs, mitigation works, materials & consumables etc); within the reporting period. 2015/16 costs for staff and BA plant will be updated following analysis of previous year's average figures.

Upper Yare	Whitlingham bends	0/8	4,500	0	£53,500	£160
<i>Arisings to Postwick Tip. Working window swapped with Lower Yare, to start winter 2015/16</i>						
Lower Yare	Seven Mile House to Berney Arms	0/10	5,000	0	£50,330	£270
<i>Use of setbacks downstream of Reedham. Working window swapped with Upper Yare, to start September 2015.</i>						
Upper Bure	Belaugh to Coltishall	Contractors	1,500	0	£28,000	£340
<i>Sediment re-use in bank stabilisation schemes</i>						
Hickling Broad	Navigation channel in NW corner and approaches to Catfield Dyke	0/8	3,500	0	£90,000	£4,540
Subject to gaining all required consents						
TOTAL		35/78	50,000	18,750	£513,410	£207,820