

Construction and Maintenance Work Programme
Report by Head of Construction, Maintenance and Environment

Summary: This report sets out the progress made in the delivery of the 2013/14 Construction, Maintenance & Environment Section work programme to date.

Members are invited to comment on the report and ask questions.

1 Construction and Maintenance Programme 2013/14

- 1.1 The progress of the Construction and Maintenance work programme is described in this report. As agreed with members, a further detailed breakdown shows that up to the end of January 2014, 36,700m³ 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 73% of the programmed target of at least 50,000m³.
- 1.2 The 2013/14 dredging programme on the Lower Bure has been completed, with 26,000m³ of sediment being removed and placed in a setback area at Marsh Farm; the dredging crew have now re-located to the Mid-Bure to dredge between Thurne Mouth and Horning Church.
- 1.3 Good progress is being made at Heigham Sound with the mud pumping being placed in the Duck Island lagoon we created. The first cell (Hickling end) has been filled and the middle section is three quarters full. We project that the contractors will need all of their allotted time at the location but they will fill the lagoon area.
- 1.4 The Hardley Dyke Prisma trial using a Geo-Tunnel to de-water the pumped sediment was not successful but the dredging team were able to complete the planned dredging of Hardley Dyke using traditional side casting methods. The required 3,000m³ of sediment was removed and placed on the rear of the flood wall. When dry we will return to re-profile the bank and repair the bank top using the dried material. Dredging on the River Chet is also progressing with Loddon Basin works now completed and the crew moving to dredge near Pyes Mill.
- 1.5 On Thursday 6 February divers worked on the mechanical gearing of Mutford Lock gates and have enabled the lock gates to be manually opened by Oulton Broad Yacht Station, passage through can be arranged directly with them. The Hydraulic control system is not functional and requires major repair. A re-designed system is proposed to offer better maintenance access, reliability

and mitigate against repeated flood damage. A local hydraulic specialist with experience of maintenance and repairs to Mutford lock has been involved with the design and a Waiver of Standing Orders has been signed off to allow completion of this much needed work before the Easter holiday.

2 Maintenance Team

- 2.1 Maintenance teams have been very busy since returning from the Christmas break. Deep Dyke and Whiteslea moorings have had 137m of quay heading timber replaced, new mooring posts installed, new safety chains and 30 tonnes of soil to build up grassed area.
- 2.2 Deep Go Dyke has seen all 193m of safety chain renewed, 15 new mooring posts and 40 tonnes of soil to maintain the moorings level. Hoveton St John mooring has been topped up with 80 tonnes of type one and has had some drainage improvement works carried out.
- 2.3 Safety Chains and ladders have been fitted onto the Potter de-masting area, Bridge Green and Potter Staithe, totalling over 400m of additional safety chains in this area. Potter Heigham Bridge has also had new advanced Height Gauge Boards installed.
- 2.4 Tree and scrub clearance works have been taking place on the Upper Bure (between Belaugh and Hoveton) and Upper Ant (between Dilham and Hunset Mill). Each location has seen over six weeks work, focusing on corners and encroaching trees.
- 2.5 Following agreeing terms and conditions with the Landowner at Hardley Cross, work has started to create a new 24 Hour mooring. The mooring will be 120m in length and requires mooring posts, capping, waling, safety chains, ladders and a stock fence. The mooring will be open at the end of March 2014.
- 2.6 Horning Marshes mooring has had the de-masting area moved, as agreed, to the upstream end. This allows yachts to mooring safely before they encounter other moored vessels.
- 2.7 Finally, Ranworth mooring is having 60m of capping and waling replaced as well as the installation of 10 new mooring posts.

3 Fitters

- 3.1 The Fitters have been busy with the routine launch refits and swapping launches to ensure cover on the network is maintained, currently Charles Collier is in at Goodchilds Marine and Motor Launch Wensum is coming out. Additional repairs have been required to Motor launch Barton.
- 3.2 Running three dredging jobs simultaneously puts pressure on the plant and equipment and the RB22 has been de-rigged and linkflotes partially flooded to enable the crane through Acle Bridge ready to start dredging in the mid Bure.

Other repairs have been needed to Grab 7, RB22 (66) has needed engine spares, recycled from ex-stock engines kept in the dockyard and a fouled propeller on Wherry Virtue has taken a big effort to release and get back into service.

- 3.3 The Trip Boats are also getting their annual services and refits and RA was lifted out of Whitlingham Broad, re-launched in the River Yare and coasted down to Griffin Lane Dockyard, where she has been lifted out and is awaiting maintenance works to start. Liana is currently in the new workshop having her varnish sanded down and reapplied as well as maintenance checks on the engine and running gear.

4 Prisma

- 4.1 Broads Officers attended a two day testing session at Ecole De Mine in Douai, France to test the Sediment Model which the French Engineering University has developed. The two days were very useful in highlighting quirks and glitches within the Java Script of the programme and we were able to advise the programme designers of our specific needs for the Sediment Model. Further testing of the model is required and the changes need to be implemented before the model can be rolled out for use. It is hoped that through the Prisma Project this model can be widely used by dredging companies and we have been in discussion with The Canals and Rivers Trust and the Environment Agency about this through our links within the Association of Inland Navigation Authorities (AINA).

Background papers: Nil

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Broads Plan Objectives: NA1.1

Appendices: APPENDIX 1 – Dredging Programme 2013/14

Dredging Progress 2013/14 (April to end January 2014)

APPENDIX 1

Project Title	Project Element	Active dredging duration (weeks) Completed (Apr-Jan)/Planned	Volume Removed m ³		Annual project cost	Actual project cost ¹ (Apr-Jan)
			Planned	Actual	Planned	Actual
Lower Bure	Six Mile House to Acle Bridge	28/ 22	20,000	26,200	174,000	£180,690
<i>The setback at Marsh Farm, Stokesby, was completely filled, with greater than expected capacity.</i>						
Mid Bure	Thurne Mouth to Horning Church	0.5/12	9,000	100	66,000	£10,900
<i>Site preparation and mobilization completed at Thurne Bank, with start of first days dredging at the end of January</i>						
Salhouse Spit	Site restoration	0	0	0	45,000	£37,910
<i>Dredging completed. Expenditure represents final payments for 2012/13 work and any remaining staff maintenance on site</i>						
Heigham Sound	Navigation Channel	11/16	10,000	5,400	154,000	£96,200
<i>Contractors on site making good progress, first cell filled with good progress being made on middle cell.</i>						
Upton Dyke	Full boat dyke	1/6	3,000	500	24,000	£1,870
<i>Site preparation and mobilization complete, dredging started at the end of January.</i>						
Hardley Dyke	Centre channel dredged of the full boat dyke length	7/4	3,000	3,000	65,000	£29,700
<i>Geobag trial was unsuccessful, but the required dredging was completed by excavator. Not all costs accounted for yet.</i>						
Loddon Basin	Dredge channel from basin to Pye's Mill, Pye's 24hr mooring and Wherry Close moorings.	2/8	6000	1,500	110,000	£12,800
<i>Excavator work in Loddon Basin completed. Area near Pye's Mill started in last week of January.</i>						
TOTAL			51,000m³	36,700m³	£638,000	£370,070

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.