

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

Report by Head of Construction, Maintenance and Environment

Summary: This report sets out the outcome made in the delivery of the 2014/15 Construction, Maintenance & Environment Section work programme.

This report also details the headline projects for the 2015/16 year. Members' questions regarding the Construction, Maintenance or Environmental works programme are welcomed.

1 Construction Programme Outcome 2014/15

- 1.1 The outcome 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 March 2015, 46,320m³ 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 93% of the programmed target of at least 50,000m³.
- 1.2 The dredge quantity is just below the target of 50,000m³. The shortfall was largely due to mechanical problems we faced at the mud pumping project (Upper Bure – Coltishall Locks) where the pump sank, soon after being mobilised into the water due to a faulty non-return valve. This meant a delay in starting the project as electrics and starter motors had to be replaced. We have made arrangements to continue to mud pump this location into May, to complete the project and get the maximum quantity of material into the lagoon area.
- 1.3 Two of the major dredging projects for 2014/15, have been completed. The Mid Bure (Thurne mouth to Horning Hall) has seen over 16,000m³ of sediments removed. The material was deposited in set-backs area on the River Thurne where it will be allowed to dry and some will be used for crest raising within the BESL maintenance period. 12,000m³ was dredged from the River Waveney, at Burgh Saint Peter's bends, and this material was used to fill the set-back at Black Mill. The Black Mill set-back is now full and restored to the profile agreed with BESL.
- 1.4 Haddiscoe Cut has also had a comprehensive dredging with over 6,000m³ removed from the Reedham and St Olaves ends. This project originally planned to remove 2,000m³ of sediments, but when readings were taken of the accumulated sediments, more than expected had been deposited,

therefore the dredging crews removed the additional material to ensure this section was brought back to specification.

- 1.5 Previous discussions with members highlighted that the target of 50,000m³ of sediment removal was difficult to visualise and that a better way of representing this achievement was needed. As a result of this we committed to demonstrating the volume removed in relation to the Waterways Specification. In order to accurately report the Waterways Specification we carry out Hydrographic Surveys of the rivers and broads, pre and post dredging, to gauge the effectiveness of our endeavours. These surveys are carried out by 'Landscape' who are on a three year contract. The programme for 2015/16 surveys includes post dredging surveys for the River Waveney, Haddiscoe Cut, the River Chet and the River Ant. The Bure will be surveyed once the 2015/16 dredging programme is complete, as more work is required on this river. A compliance report will be presented to Committee once these surveys are complete.

2 Maintenance Programme Outcome 2014/15

- 2.1 In the run-up to the Easter Holidays the Maintenance Team were fully engaged with ensuring that all 64 of the Broads Authority 24hr moorings are in a favourable condition, ready for the start of the 2015 season. In order to be ready to give moorings a high priority of care they have to have completed all their conservation tasks.
- 2.2 An important part of fen management is scrub clearance and How Hill, Hall Fen, Decoy Carr, Whitlingham, Stanley Carr, Mill Marsh, Common Fen and Rollesby Common have all had conservation works take place, most under the High Level Stewardship schemes. This labour intensive work is often complimented with input from volunteers, who give many hours to assist with repetitive task.
- 2.3 Thorpe Green, Commissioners Cut, How Hill and Aldeby moorings have all been refurbished this year, with new quay heading timbers, surfacing and mooring posts being installed
- 2.5 The Maintenance Crews have been heavily engaged with improvement projects at Potter Heigham, with landscaping and surface improvements taking place at Bridge Green and the Dingy Park. The Dingy Park location has also seen improvements made to the canoeing facilities, with better slipway access and secure storage for canoers wishing to enter Potter Heigham on foot.

3 Environment Team Programme Outcome 2014/15

- 3.1 The Environment Design Team (EDT) look after the Fen Management Programme, (Fen Harvesting and Pony Grazing) are responsible for ensuring permits and permissions are gained for dredging disposal/re-use, ensure tree and scrub management programmes are carried out as per the Environmental Standard Operating Procedures (ESOP's), innovative dredging re-use

schemes (erosion protection and erosion restoration) and assisting the Operations Technician and Rangers with any aspect of the environment as they go about their daily tasks. Three key navigation projects the EDT are dealing with are:

- 3.2 Turn Tide Jetty – The contractor, G.T Rochester, have mobilized their equipment to the quay at Fendercare, where materials are being loaded. This includes the recycled Greenheart timbers salvaged from the Solent and trimmed to give us the correct section sizes. Part of this mobilisation was to bring the large platform, JMC9, from Acle down the Bure and into Breydon. This was done under escort from the Ranger Service. A 50ft crawler crane has been loaded onto JMC9 (see photograph) to assist with loading and construction of the repairs to the jetty. The JMC9 will transit Breydon Water and begin work at the Jetty week commencing April 13.



- 3.3 Mutford Lock – Before Easter Oulton Broad Yacht Station staff were reporting problems with one set of gates at Mutford Lock, stating that the lock gates were not sealing. Without the gates sealing correctly water levels within the dock cannot be controlled enough to allow the lock to operate. Divers have assessed the gates and identified an alignment issue, due to a problem with the gate bearings. We are working with specialist divers and gaining advice from Consultants, who designed the gates, to be able to instigate repairs as soon as possible. We expect the work to adjust the gates and replace the worn bearings to be completed by the end of April. If these repairs are not successful, then we will need to consider further major works to the Lock gate system.
- 3.4 Officers have also responded to an application, received by the MMO (Marine Management Organisation), for a licence to discharge dredged sediments into the River Waveney, as Statutory Consultees. We raised concerns over a number of issues including, accumulative environmental impacts, sediment volumes, lack of chemical analysis and the overall potential impact on the SSSI, RAMSAR and SPA designation of Breydon water.

4 Fitters Programme Outcome 2014/15

- 4.1 The Motor Launch refit programme was split for 2014/15 with four launches being refitted at Cox's Boatyard and four launches being brought in-house' to be refitted 'at the Griffin Lane Dockyard. All the launches have now been returned to service ready for the 2015/16 season, with a few issues still being worked on with the Spirit of Breydon. The splitting of the refits has been successful and the in-house fitters have managed the launches as well as the much needed maintenance and servicing required by the other vessels and equipment used within Construction and Maintenance. This work has included:
- 4.2 The wherry, Tony Hewett, has had a new steel floor fitted. Due to wearing that occurs during offloading the fixings which allows the timber flooring to be secured has become exposed. The new steel floor will offer better protection to the wherry, especially as we move more towards dredging and offloading with 360 excavators. The second of the two large wherries, John Fox, is currently undergoing the same refit.
- 4.3 Grab 7, a large pontoon with fixed grab crane, has come to the end of its working life and is no longer economically viable to repair or maintain. The unit has been escorted back to the Dockyard where the crane unit is being dismantled, this will be used for spares, and the pontoon unit will be fully assessed to see if housing another crane is viable. Currently the work Grab 7 was doing is being performed by our new long reach Doosan excavator.
- 4.4 The three Trip Boats, Ra, Electric Eel and Liana have also been serviced and made ready for the beginning of the season. The Liana received a full refit and has been re-launched and the Electric Eel & Ra only requiring routine maintenance.
- 4.5 Currently the Fitters are busy carrying out diagnostic work on the workboat Shoveller, as she has had a major failure of her hydraulic motors. Repair options are being sought as this much used and heavily needed workboat has a full year of work commitments.

5 2015 – 2016 Navigation Work Programme

- 5.1 The enclosed table headlines the agreed dredging priorities for the year ahead. These locations were brought to the Navigation Committee last October in draft form, in order to affirm they represent a true priority to dredge and allow for changes to be made.

River or Broad	Location	Date	Volume m ³	Comment
Ant	Irstead	To end April 2015	1,500	Continuing from 2014/15
Chet	Pye's Mill to	To end April	1,000	Continuing

	Hardley Flood	2015		from 2014/15
Bure	Coltishall Lock	To mid May 2015	2,000	Continuing from 2014/15
Bure	Coltishall to Belaugh	Oct- Nov	3,000	
Bure	Horning Hall	May - July	8,000	
Bure	Acle to Stokesby	Sept - Oct	7,000	
Bure	Bure Mouth	May	500	Contract work with Gt Yarmouth Port Authority with disposal at sea
Oulton Broad	Channel	May - Aug	10,000	
Yare	Whitlingham bends	Sept - Oct	4,500	
Yare	Seven Mile House to Berney	Nov - Feb	5,000	
Hickling Broad	Channel	Dec - Mar	10,000	If dredging at Hickling does not progress we will dredge Rockland Boat dyke as a plan B
Total			52,500	

5.2 The below table highlights the major mooring works we plan to undertake in 2015/16

Mooring Location	Planned works
Bramerton Common	Timber work and re-surfacing
Wayford Bridge	Replacing timberworks
Womack Dyke	Timberwork, new safety chains & mooring posts
Aldeby	Timberwork and replace tie-rods
Cantley	Replace fendering
Reedham Quay	Replacement safety chains and fendering
Horning Marshes	Refurbish surfacing
Cockshoot	Repairs to tie-rods

5.3 We also plan to replace 10 channel markers on Breydon Water and 10 channel markers on Barton Water. The main focus for bankside tree clearance will be on the River Ant.

5.4 Members attention is drawn to Appendix 2 where the Operatives time allocation in 2015/16 has been split between the main work types. There are currently a further 478 days available and members views are sought on where they would like to see this resource deployed. (*Please note this allocation of spare days is dependent on a number of factors, including keeping sickness and reactive works to a minimum*)

Background papers: Nil

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Broads Plan Objectives: NA1.1

Appendices: APPENDIX 1 –Dredging Progress Table 2014/15
APPENDIX 2 – Summary of Operation Technician Activities
2015/16

Dredging Outcome 2014/15 (April 2014 to end March 2015)

APPENDIX 1

Project Title	Project Element	Active dredging weeks Completed (Apr-Mar)/Planned	Volume Removed m ³		Annual project cost	Actual project cost ¹ (Apr-Mar)
			Planned	Actual	Planned	Actual
Mid Bure	Thurne Mouth to Horning Hall	27/28	19,000	16,960	£165,000	£132,370
<i>Completed. River Thurne rond and setback area near Ant mouth all utilized to plan</i>						
Waveney	Burgh St Peter bends	20/16	12,000	12,050	£112,500	£120,900
<i>Completed. Arisings to setback area at Black Mill on the lower Waveney now full</i>						
Haddiscoe Cut	Reedham end and St Olaves end	9/4	2,000	6,240	£22,700	£51,100
<i>Completed. Work was extended whilst waiting for hire of EA wherries before moving to R. Ant</i>						
River Ant	How Hill to Barton Broad	8/12	6,000	4,670	£99,500	£56,160
<i>Progressing well. Start date delayed to first week of February. Carrying into 2015/16</i>						
Upper Bure	Belaugh to Horstead Mill	6/12	6,000	900	£91,000	£35,190
<i>Mud pump started last week of February. Continuing into May 2015. Bank re-alignment scheme incorporating 3,000m³ gained planning permission but work has had to be deferred to October 2015</i>						
River Chet	Pye's Mill to Hardley Flood	11/10	5,000	5,500	£53,800	£40,210
<i>Side casting of sediment progressing well. Sediment being used to strengthen floodbank. Further 2 weeks in 2015/16</i>						
Heigham Sound	Restoration of lagoon area	0/0	0	-	£17,500	£17,390
<i>Replanting of lagoon baskets and on-going maintenance. Part PRISMA funded in 2014/15</i>						
Postwick Tip	Restoration of disposal cells & on-going management	0/0	0	-	£16,000	£6,710
<i>Movement of dry dredgings ready for site to receive wet dredgings completed end March 2015</i>						
TOTAL		81/82	50,000	46,320	£578,000	£408,930

¹ – Costs to end March 2015 are not final year end figures and more costs are expected

Summary of Operations Activities during 2014/15

APPENDIX 2

	Operations Technician working days	Percentage of Navigation allocation	Plan for 2015/16 Days	Plan for 2015/16 Percent
Number of Operations Technicians FTE	23.6		22.6 (plus proposed apprentices)	
Operations Technician days available	3172		3129 ^b	
Dredging	1807	57.6	1342	50.6
Moorings	263	8.4	291	11.0
Weed harvester	82	2.6	99	3.7
Bankside scrub removal	32	1.0	90	3.4
Channel markers	157	5.0	205	7.7
Signs & boards	47	1.5	40	1.6
Navigation obstructions	36	1.1	14	0.6
Reactive navigation works	27	0.9	60	2.2
Corporate working (training, meetings, etc.) ^a	197	6.3	188	7.1
Sickness ^a	248	7.9	120	4.5
Vessel & equipment maintenance ^a	93	3.0	62	2.3
Premises maintenance ^a	147	4.7	140	5.3
Total	3136	100	2651	100

^a – these activities are recorded and split as per Navigation : National Park allocation (60:40)

^b – Total Operations Technicians days are less in 2015/16, but apprentices will also contribute