

**Construction and Maintenance Work Programme
Progress Report**

Report by Head of Construction and Maintenance and
Environment and Design Supervisor

Summary: This report sets out the progress made in the delivery of the 2012/13 Construction and Maintenance Section work programme to date and updates members on changes to the programme.

1 Construction and Maintenance Programme 2012/13: Progress

- 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 2013, 38,816 m³ 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 78% of the programmed target of 50,000m³ and 79% of the planned expenditure.
- 1.2 Since the last committee report of 13 December 2012, dredging work has continued on the River Bure between Salhouse and Horning. To date 8,573m³ of dredged material has been removed from the navigation and is being used for reed bed creation and restoration of the eroded spit at Salhouse Broad, this is a Prisma funded project
- 1.3 Dredging work on the River Chet between Hardley Flood and Nogdam End has now been completed (note the figures in Appendix 1 do not include the last week of dredging undertaken in the first week of February). This work has removed shoals particularly at narrowing bends to regain the required navigation profile over 50% of the length of the River Chet. Agreements and cooperation from local landowners and BESL has allowed for this efficient side-casting project. The upstream reach from Hardley Flood to Loddon still requires dredging. We are still awaiting the final proposal for the flood defence solution along this section and until this is carried out we are unable to conduct a full scale dredging programme along this stretch.
- 1.4 Mudpumping work is progressing well on Heigham Sound. The Contractor is using a suction dredger to remove silt and pump the material through approximately 1 mile of pipeline to infill a soke dyke on the Marsh adjacent to Candle Dyke. The Contractor has started dredging in the priority area close to the entrance to Meadow dyke and is progressing southward. Samples taken show the pumped material to consist of 15% silt and 85% water, which is good for this operation and pumping distance. At the discharge point silt is

settling out well and we are on course to complete the infill of the soke dyke by the deadline of 31 March 2013.

2 Maintenance Team

- 2.1 The maintenance team have continued to work to priorities set in the works programme and a selection of some of the navigation projects they have been involved which are described within this report.
- 2.2 Tree clearance in the Upper Bure between Hoveton Viaduct and Coltishall has taken place throughout January and early February. Overhanging trees on bends and narrow stretches of river have been felled to provide safe navigable width. Environment Officers surveyed the mature trees for bat potential and presence prior to works to ensure protected species were safeguarded.
- 2.3 The Broadsword volunteer team have also been assisting staff clear scrub and trees from Norfolk Wildlife Trusts marshes on the western side of Ranworth Dam. Environment Officer input to this project has been to gain agreement for the works, gain environmental consents and the setting of the works specification.
- 2.4 Refurbishment of the Stokesby 24hr mooring has been completed by contractors. The heavy corrosion of the tops of the sheet piling was removed and a new upper portion fixed onto the old and finished with standard capping and waling. The same contractors have now moved to replace the timber piling at Beccles South 24hr mooring. This work is due to be completed by the end of March.
- 2.5 The typical range of reactive works and rectification of defects prior to the start of the season has been progressing well. At Potter Heigham dingy park some safety barriers have been installed to mark the edge of the slipway as identified in the risk assessment by rangers; at Ranworth Staithe around 30 metres of capping, waling and mooring posts have been replaced; at Repps Bank some tired mooring posts and safety signs have been replaced; some large dead trees overhanging the River Ant at How Hill have been removed following bat checks by the Environment Officers; and the annual top up of all the woodchip surfaced moorings on the Ant and Bure has been completed.
- 2.6 Following the planned site close-down over the winter to prevent disturbance to overwintering wildfowl, Phase 2 of St Benets access enhancement works is planned for commencing 1st March. Maintenance staff will be initially surfacing the path from the 24hr moorings to the gatehouse, completing the path around the gatehouse and mill, and installing new estate fencing. Materials and plant are all funded from the HLF grant received by the Norfolk Archaeological Trust, with the staff time being the Authority's in-kind contribution.

3 Environment and Design Team

- 3.1 The hydromorphological modelling work which aims to better understand the past, present and future roles of the Turntide Jetty and the Dickey Works structures in influencing the navigation channel management in Breydon Water is now at the model development stage. The contractors, JBA Consulting and Deltares are on track to complete the work by 22 May. A member workshop is planned at Yare House on 18 April to go through the management options and implications of removal, replacement or extension of the channel training wall structures.
- 3.2 A report for decision will go to the next Broads Authority meeting on 22 March 2013 to confirm the approved tender list for contractors meeting Authority criteria for delivering piling works.
- 3.3 A three year term contract is planned to be tendered, with initial priority sections of navigation to be re-surveyed by autumn 2013. This information will update older hydrographic surveys and specific post-dredge surveys will also be carried out as part of this contract. This financial year, 2012/13 Breydon Water was fully resurveyed and the hydrographic data has been used in the training wall modelling contract.

4 Dockyard Development

- 4.1 The development works, to build a new workshop with office accommodation above, continues with good progress. Since the last report the main ground works have been completed and the steel frame has been erected and clad. The building is now water tight with windows and superficial timber cladding almost finished allowing internal works to commence.

5 Fitter Projects

- 5.1 The work boat 'Didler' has almost completed her half-life refit at Ludham Fieldbase and is due to be back in the water for testing and return to service before the end of February.
- 5.2 Trip boat 'Liana' is currently at Cox's Boatyard at Barton Turf undergoing refit work and also insurance repair work as a result of two collisions last season in Hoveton.
- 5.3 Tug 'Cannonbrook' has returned to the Dockyard where she will be lifted out for an overhaul of the gearbox and drive system. While this is undertaken the engine will be re-painted and a heater fitted.
- 5.4 Checks and remedial works have been undertaken on some of the wherries and tugs at the dockyard in order to renew expiring BSS certificates. Also at the Dockyard some cranes and the telescopic forklift have undergone annual testing and maintenance works.

5.5 A number of ranger Launches have been taken to Goodchilds Marine for refit work and this continues.

5.6 Hand Arm Vibration meters have been introduced and rolled out into service for use with all small tools. The Authority now has recharging and download points at the Dockyard and Ludham Fieldbase, each with a set of meters for operational staff and volunteers

6 Prisma

6.1 The total budget for the PRISMA project is £ 1,554,957. In the previous four claim periods a total of £ 858,410 was spend, thus leaving a remaining budget of £696,547 for the claim periods 5, 6 and 7. Considerable sums of the remaining budget are ring-fenced for shared costs with project partners and the depreciation cost of purchased equipment. For these ring-fenced budgets to be spent on time, partner input, or Interreg approval, is required. The PRISMA project is on schedule with expenditure at 70% of the total budget at the end December 2012 (excl. ring-fence budget). The remaining 30% is to be spent on the completion of existing pilots, land purchase as well as a new trial before June 2014.

7 Asset Management Strategy

7.1 Given the range of vessels and plant required by the Broads Authority in delivering its operational duties, ensuring optimal value for money through regular review of usage and costs is essential. Prior to decisions of major refit, or purchases of replacement or brand new vessel/plant, the planned usage and running costs are considered against options of coping without the item and the cost effectiveness of hire for short periods.

7.2 A practical example of where this approach is currently being applied is regarding resource allocation and cost options for dredging more than the current target of 50,000 m³. At the next Navigation Committee meeting (18 April) a report will be presented detailing the cost, resource and wider work programme implications of increases of over 50,000 m³ dredged per year.

7.3 Elements to be considered include:

- staff resource (both management and operational) in delivery of the annual dredging work programme;
- the staff/plant/vessel/ equipment requirements for each specific project;
- timing and duration of staff/plant/ vessel/equipment availability and allocation for projects;
- costs of staff/contractors/plant/vessels/equipment for each specific project;
- planning and preparation time and staff resource to develop each dredging project;
- and staff resource for site and contract management throughout the delivery of projects.

- 7.4 The potential to increase dredge volumes, to options of 60,000 or 100,000 m³ per year will also be evaluated in terms of the feasibility of delivering all the other navigation management work in-house given current staff resource levels. Also for consideration is the impact on the 60:40 ratio split of navigation to National Park budgets and operational staff time. The feasibility of increased staff time over 60% being spent on navigation work will be explored in the context of contracting/out-sourcing other Authority practical work.

Background papers: Nil

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Appendices: APPENDIX 1 – Dredging progress April to January 2012/13

Dredging Progress April 2012 to end January 2013

APPENDIX 1

Project Title	Project Element	Active dredging duration (weeks) Actual Apr-Jan/ Planned	Volume Removed m ³		Actual project cost ¹ £ (Apr 12-Jan 13)	Planned dredge cost (£ per m ³)	Planned annual project cost ¹ £
			Planned 2012-13	Actual (Apr-Jan 2012/13)			
Heigham Sound	Navigation Channel	7/20	12,000	3,500	30,270	12.50	150,000
<i>Comments – mudpumping started active pumping on 17/12/12, Note actual cost includes mobilisation and site preparation</i>							
Lower Bure	Continuation from 2011/12 programme	25/24	20,000	21,343	171,716	6.95	139,000
<i>Comments – Scare Gap & Six Mile House setbacks completed</i>							
Middle Bure	Island Strengthening at Salhouse Broad	13/18	12,000	8,573	192,272	16.66	200,000
<i>Comments – Geotextile bag fill completed in November. Lagoon area currently being backfilled and alder pole piling being installed</i>							
River Chet	Hardley Flood to Nogdam End	11/12	6,000	5,400	21,998	6.33	38,000
<i>Comments – Started first week of November, sediment placed on rond and folding areas on track to complete as programmed</i>							
TOTAL			50,000	38,816	416,256		527,000

¹ – actual project cost includes staff time, BA plant time and budgetary expenditure (equipment hire, mitigation works, consumables etc) to date