

**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.

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 September 2017, 28,490 m³ of dredged sediment has been removed from the prioritised sites. This represents 54% of the programmed target of 53,000m³.
- 1.2 Dredging on the Lower Bure between Stokesby and Runham has continued throughout August and September. Arisings have been placed along sections of floodbank where re-use can be made for flood management purposes as and when required. At Oulton Broad, active dredging resumed in September, with arisings going into the Authority's lagoon area at Horseshoe Point on Oulton Dyke. This is planned to be the last significant deposit of arisings into this area as capacity has been reached. The restoration plan in place aims to create a reed dominated site, with a channel and small open water area which can connect to Oulton Dyke. Subsequent dredging work in Oulton Broad is currently being discussed with Suffolk Wildlife Trust and a potential future partnership whereby the benefits of floodbank maintenance and habitat creation using dredge material can be realised, on their land on the Carlton Marshes side of Oulton Dyke.
- 1.3 New equipment brought into service includes the fourth complete Linkflote pontoon. This large work platform enables excavators to dredge from a stable base, utilising spud legs that can be raised and lowered to hold the unit steady in any depth of water. The Authority's fourth long reach excavator is due to arrive by the end of October, and this will mean the long planned for move from grab crane dredging to hydraulic excavators will be complete. This also means Grab 10 and its barge will be taken out of commission and scrapped. The latter is over 100 years old. There is also the opportunity to sell one of the RB 22 crawler cranes now surplus to requirements.
- 1.4 Planning and preparation for the remainder of this winter's dredging work continues. Landowner agreement finalisation and lagoon creation ahead of mudpumping at Hickling Broad will be completed in October. Other dredging

tasks on the River Chet and Limekiln Dyke will be disruptive to river traffic for the period of work on these locations with narrow channels. More information on the restriction for the River Chet can be found here: http://www.broads-authority.gov.uk/_data/assets/word_doc/0016/1016611/NTM-10-of-2017-River-Chet.dotx

and the Close of the Limekiln Dyke here: http://www.broads-authority.gov.uk/_data/assets/word_doc/0005/1016609/NTM-9-of-2017-Limekiln-Dyke.dotx

- 1.5 Fen maintenance work using the Authority's JCB exactor on wide bog tracks and the fen harvester has begun in earnest. Dyke clearance work has started on management agreement sites and at How Hill in the Ant valley. One of the Linkflote pontoons will be used to transport the JCB excavator across the River Ant at How Hill. The fen harvester has completed work at How Hill and Buckenham Marshes, is currently working under contract to a landowner in the Bure Broads & Marshes SSSI and will be heading to Whitlingham Marsh.

2 Maintenance Programme Update

- 2.1 The new stretch of 24 hour mooring at Berney Mill is now open to the public to full Authority safety specifications. This upstream stretch adds to the existing length of 24 hour mooring at Berney Arms Reach.
- 2.2 Weed harvesting on the public navigation has continued all the way through September. In the southern rivers, both the upstream sections of the Yare and Waveney have had two cuts. There has been a rotation for the weed harvester vessel in the northern rivers between the upper sections of the Bure, Ant and Thurne. The marked channel through Hickling Broad has had a second cut. Within Hickling, the approaches to Catfield Dyke were the areas of greatest growth. The marker buoys indicating this channel were also repositioned to more accurately mark the slightly deeper water and area that was cut to standard specification. Please see the Environmental Standard Operating Procedure for more information in this routine cutting http://www.broads-authority.gov.uk/_data/assets/pdf_file/0005/493115/1-Cutting-Water-Plants-ESOP.pdf
- 2.3 The biomanipulation ring in Ranworth Broad, installed just over five years ago by the Authority has come to the end of its consented life and has been removed by the Maintenance Team. The fish barrier structure demonstrated the ability to generate clear water and water plant growth with relatively little intervention. The Norfolk Wildlife Trust trip boat from Ranworth made the clear water area part of its tour for the visiting public.
- 2.4 During September and October, the majority of the Maintenance Team are engaged in various fen management tasks across the range of sites the Authority is involved with. Tasks typically include scrub clearance and fen mowing, filling in the gaps with volunteers, where the fen harvester cannot work and where the commercial reed & sedge cutters don't extract a high value crop.

3 Environment & Design Team update

- 3.1 Monitoring of the stonewort cutting trials in Hickling Broad is on-going, with repeat surveys of the cut areas having been repeated one and two months after cutting. The initial look at the first round of results shows that it is too soon to predict impacts upon plant vigour or sensitivity to cutting between species. The final survey of this season is planned for early October in which plant height, species composition and plant fertility will be measured. Once all this data is in and interim report will be produced over the winter.
- 3.2 For the riverside tree management the final site details and who is going to complete the work this winter has been completed. Contractors, operations technicians, rangers and volunteer groups are all tasked with work across priority sites throughout the Broads. The Broads Authority website will soon have a page providing the map locations of this work and a summary report explaining the aims of the work and the prioritisation process.
- 3.3 Mitigation and project planning for all of the current and future dredge jobs is a continual timetabled activity for the Rivers Engineer and Environment Officers. Over the summer breeding birds, reptiles and water voles have all been taken into consideration when carrying out preparatory works and during the sediment placement and treatment at riverside locations. Pre-works checks at locations along the Lower Bure have been completed ahead of work later this year. The team are now also starting to plan out work for next spring as many sites need a minimum of six month lead in time (some up to year in advance) to adequately consider the risks to wildlife on the sites where we work.

4 CANAPE project

- 4.1 As lead partners, the Authority has organised on 10th & 11th October a Kick-Off meeting for all the CANAPE partners and the Interreg North Sea Region project advisors. The agenda is dominated by the agreement and preparation of the documents that will assist us in the governance of the project over the next few years. The range of documents to progress and agree includes a Partnership Agreement; Communications Strategy; Rules of Procedure; Project Contacts; and a timetable of national workshops and activities. Day two includes site visits to see some previous and current projects touching on similar wetland harvest and sustainable peatland themes.

Background papers: Nil

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Broads Plan ref: 2.1; 2.3; 3.1; 3.2; 4.2; 6.1

Appendices: APPENDIX 1 – Dredging Progress 2017/18

Dredging Progress 2017/18 (April 2017 to end July 2017)

APPENDIX 1

Project Title	Project Element	Active BA dredging weeks Completed (to end July / Planned)	Volume Removed m ³		Annual project Cost ^a	Actual project cost (Apr-Jul)
			Planned	Actual	Planned	Actual
Haddiscoe Cut	Reedham End (Mar)	1 / 1	500	670	5,600	3,870
<i>Sediment into setback areas on the River Yare upstream of Reedham</i>						
Lower Bure	Phase 1. Stokesby to Three Mile House (Apr-Sep); Phase 2. Three Mile House to Marina Quay (Sep-Dec)	22 / 36	18,000	12,770	222,400	106,680
<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>						
Oulton Broad	Phase 1 - North Bay (Apr-Aug); Phase 2 - North Bay (Sep-Oct)	17 / 22	16,000	15,050	104,800	70,080
<i>Suffolk Wildlife Trust setback area and Authority's own sediment lagoon being filled at Horseshoe Point</i>						
Bure Mouth	Use of plough dredging to clear bars (Oct)	Contractor	2,000	-	15,000	710
<i>Subject to consent decision from Natural England for the submitted 10 year plan for navigation channel management in Breydon Water SSSI</i>						
Hickling Broad	Mudpumping marked channel in North Bay (Nov-Feb)	Contractor	6,000	-	69,300	21,060
<i>Use of sediment for arable benefit. Awaiting issue of the Environmental Permit from the Environment Agency. £30k from NPG.</i>						
Limekiln Dyke	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>						
River Chet	Shoals near Hardley Flood (Jan-Mar)	0 / 12	4,000	-	22,300	90
<i>Sidecasting to provide additional material onto the weak/low sections of riverbank</i>						
Mid Bure	Thurne Mouth (Mar)	0 / 4	3,000	-	28,400	250
<i>Priority shoals in Thurne Mouth area</i>						
Site restoration	Rockland, Acle, Hickling	-	-	-	21,190	22,270
<i>Restoration of dredge sites from work in 2016/17. Rockland Dyke restoration completed</i>						
TOTAL		40 / 87	53,000	28,490	522,290	225,240

^a –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.