

6-monthly newsletter highlighting action by the Broads Authority and its partners to implement the Broads Plan

Aspiration 1 Improve water capture and efficient water use across the Broadland Rivers Catchment, and develop a longer-term integrated flood risk management strategy for the Broads and interrelated coastal frontage

1.1 Promote and implement best practice water capture and water use measures at a community level, and support a whole farm water management approach across the Broadland Rivers Catchment

- Water Sensitive Farming projects: 100+ stakeholders engaged in land use improvement events, 3 management plans in place, and 9 silt traps installed.
- Anglian Water 'Every Drop Counts' campaign 2016: 7,794 households saving on average 20.5 litres a year and 81 businesses a total of 10.9 million litres a year. AW has reduced water mains leakage to record low levels (half the national average).
- Essex & Suffolk Water has reduced leakage by 32% since 1995. It installed around 14,000 domestic and non-household meters in 2016/17 including to all new properties, and 60.5% of households and 91.3% non-households in their region are now metered.

1.2 Promote and implement catchment measures to manage water resources and respond to periods of water shortage and scarcity (incl. abstraction controls, water transfer and trading, infrastructure improvements)

- Broadland Rivers Catchment and Broads Biodiversity partners looking at potential to increase connectivity between rivers and adjoining wetlands, using field mapping to identify barriers and possible trial sites.
- No water shortage or drought measures implemented in this period.



Photo: Wonder Wheel in action

- BA responded to two Environment Agency consultations for water abstractions and is in discussions with abstractor on multiple benefit use of water from Whitlingham Broad.

1.3 Maintain current coastal, tidal and fluvial flood risk management strategies relevant to the Broads, Great Yarmouth and interrelated coastal frontage, and prepare a longer-term, integrated, strategic approach

- Initial trials completed for PhD research project on Broads flood risk modelling.
- Broads Climate Partnership steering 'Broadland Futures Initiative' to consider medium to long term flood risk management. Strategy and engagement/communications plan being written, with decision making framework to involve democratically elected members.

1.4 Investigate, plan and promote schemes to hold back or divert flood water, moving from retrospective to proactive approaches

- New high-resolution turbidity probes in place to monitor effectiveness of three Sustainable Drainage Systems settling ponds, constructed in Wensum catchment to capture road run-off. Sediment accumulation rates and nutrient content of trapped sediment also being monitored to determine mass of nitrogen, phosphorus and soil being prevented from entering the river.

Aspiration 2 Protect, conserve and enhance water quality and land and habitat condition to benefit priority species, recognising natural environmental change and retaining a thriving and sustainable agricultural industry

2.1 Carry out lake restoration, maintenance and enhancement works, incl. bio-manipulation; use monitoring evidence to trial and implement further innovative lake restoration techniques

- Natural England's Hoveton Great Broad project in second year of sediment removal to restore 37 hectare lake.
- Essex & Suffolk Water mud pumping projects completed at Filby Broad and Ormesby Broad.
- Funding secured for CANAPE project (Creating A New Approach to Peatland Ecosystems) to complete reedswamp restoration as part of Hickling Vision.
- Fish surveys completed for biomanipulation of Sotshole Broad, and methodology and licencing being developed.

2.2 Promote and implement measures to reduce point and diffuse pollution into the floodplain and water courses, commensurate with EU/national water and habitat targets and with sustainable farming

- Anglian Water 'Pesticide Amnesty' (Nov-Feb 2016/17) in Wensum catchment collected c.1.2t of agricultural chemicals. £2.5m First Time Sewerage Scheme (s101a) completed at Repps with Bastwick for c.100 properties.
- Investment underway by Anglian Water to meet tighter environmental standards at water recycling centres. Permits for ammonia and phosphorus reduced to improve watercourses, including rivers Yare and Waveney.
- Catchment Sensitive Farming outreach delivered to 12% of holdings in Waveney. 79% of catchment area now engaged in last 10 years of CSF.
- 'Wonder Wheel' purchased and trialled (Water Sensitive Farming project) to shape soil in tractor wheelings and reduce water, soil and nutrient run off. Farming workshop held in April, looking at reducing water usage and run-off in potatoes. (Also see action 1.1)

2.3 Maintain and enhance existing areas of priority fen, reed bed, grazing marsh and wet woodland through site management agreements/ prescriptions and support services to site managers

- Additional fen sites, including Buckenham Fen, under management with Softrack machinery.
- Broads Landscape Partnership Scheme (Water, Mills and Marshes) delivery phase funded and will begin Jan 2018, including Programme 5 (Natural Landscapes) projects.
- Broads Land Management Advice service being provided by conservation partners.
- Norfolk Wildlife Trust successful in bid for Biffa Award funding for habitat restoration at Catfield Fen.
- 42ha wetland creation site at Potter Heigham having productive year for duck and wader species, including successful breeding of pair of rare black-winged stilts.

2.4 Define, implement and monitor management regimes for priority species and invasive non-native species

- Broads mink management programme ongoing. Research shows number of mink trapped in Norfolk in 2016 down 33% from previous year, particularly in Bure catchment. Control programmes ongoing for floating pennywort in Waveney, parrot's feather and New Zealand pygmyweed in Ant, and through other NNNSI regimes.
- Monitoring showing good year for swallowtail butterflies, fen raft spider at Cantley and fen orchid at Sutton.
- Successful research trials by UEA/John Innes Centre showing that, at controlled concentrations, hydrogen peroxide (H₂O₂) is deadly to *Prymnesium parvum* algae.

2.5 Create 'bigger, better and more joined up' areas of priority habitat by identifying opportunities and developing site-specific plans for new habitat areas, connections, buffer zones and pollinator networks

- 4 additional fen sites under BA management contracts.
- SWT's campaign to purchase land flanking Carlton and Oulton Marshes nature reserve, to create 1000 acres of mixed wetland habitats, now raised £750k of its £1m target. NWT's land purchase in Upper Thurne also expanding area managed for wildlife and people.
- Norfolk Green Infrastructure Ecosystem Services Mapping produced by Norfolk County Council and Environment Systems, with a toolkit available to organisations carrying out environmental improvement works.

2.6 Improve partnership coordination and communication of Broads biodiversity monitoring and research efforts, linked to national biodiversity network

- [2-day Fen Research workshop](#) in June agreed research priorities and partnership action, to be led by Broads Biodiversity Partnership.
- Scientific paper written on 'Response of submerged macrophyte communities to external and internal restoration measures in temperate shallow lakes' for submission to Front. Plant Sci (Sept '17).
- [UK Natural Environment Research Council \(NERC\) Hydroscape project work ongoing](#).
- Conservation evidence collated for project on managing peatland habitats (Cambridge University) to feed into www.conservationevidence.com.

Aspiration 3 Apply a catchment-scale approach to reduce sediment input and the sediment backlog, and sustainably reuse or dispose of dredged material

3.1 Implement dredging regimes in accordance with defined waterways specifications, and seek resources/legislation to accelerate the removal of sediment in the Broads system

- To end Sept 2017: 28,490m³ of dredged sediment removed from prioritised sites (54% of BA programmed annual target) and winter dredging programme activated. Detailed BA dredging reports, and summary of hydrographic survey analysis, available at www.broads-authority.gov.uk/broads-authority/committees/navigation-committee



Photo: Plant cutting in navigation channels

3.2 Implement plans and good practice guidance to reduce soil erosion into the waterways, manage areas lost or vulnerable to erosion, and dispose of dredged material in sustainable and beneficial ways

- 4-year European funded CANAPE project launched. 14 partners from 5 countries will develop research and practical works to protect peatlands.

BA projects involve completion of Hickling Vision, including island recreation and large scale dredging and deposition. [Also see action 2.2 on reducing run-off]



Photo: CANAPE partners

Aspiration 4 Maintain a safe, open navigation and reduce pressures on busy or vulnerable areas

4.1 Maintain existing navigation water space and develop appropriate opportunities to expand or extend access for various types of craft

- BA in discussions with Network Rail on preferred options for managing Trowse swing bridge. NR wish to undertake feasibility study but funding of £4-5m not yet secured.

4.2 Carry out appropriate aquatic plant cutting and tree and scrub management programmes and seek resources to increase operational targets

- BA 5-year priority mapping exercise for riverside tree and scrub management carried out. Around 4000m of riverbank identified and work underway.
- BA annual programme of aquatic plant cutting within navigation channels underway in line with agreed criteria, and monitoring of stonewort cutting trials in Hickling Broad ongoing.
- Detailed reports available at: www.broads-authority.gov.uk/broads-authority/committees/navigation-committee

4.3 Implement, promote and monitor measures to maintain and improve safety and security for the navigation and boats

- Updated conditions agreed for commercial paddling scheme. AINA/MCA/BMF Hire Boat Code updated and awaiting final release for national consultation.

- BA boat test area management arrangements reviewed and no changes made.
- Working group of BA, Broads Beat and boating interests addressing issue of anti-social behaviour on waterways. Agreed actions include expanding Super Safety days programme, encouraging limiting maximum speed of hire day boats, mobile speed signs, intelligence sharing on incidents, and possibly increasing Ranger/Broads Beat presence in evenings.

Aspiration 5 Improve understanding, protection, conservation and enhancement of the Broads landscape character and distinctive built, cultural, archaeological and geological assets

5.1 Implement measures to protect, conserve and enhance the distinctive landscape character and historic assets of the Broads

- Successful 2nd round application to HLF for Broads Landscape Partnership Scheme (Water, Mills and Marshes) and delivery phase to begin 1 Jan 2018. Detailed schedules of work produced for all 12 mills in scheme.
- BA preparing draft management plans for assets at risk as part of 5-yearly heritage at risk survey.
- Toad Hole Cottage visitor centre (How Hill) completely rethatched using local reed, and [project video](#) produced.

5.2 Produce, update and promote local landscape conservation action plans, appraisals and enhancement schemes

- Somerton Conservation Area reappraisal prepared and published for consultation.
- Draft video animations in production, explaining the main landscape character types in the Broads.

5.3 Develop measures to investigate, record and protect local built and cultural features, archaeology and potential hidden heritage (incl. waterlogged assets, waterways history, settlement patterns, WWII remains)

- BA and Historic England working to clarify status of Broads as an area of exceptional potential for waterlogged archaeology. BA reviewing service level agreements with county archaeology services.
- Broads Hidden Heritage projects to be implemented through Broads Landscape Partnership Scheme (Water, Mills and Marshes) from January 2018.
- Detailed laser scanning of 12 mills being carried out as part of Broads LPS, to inform targeted management plans.

5.4 Implement and promote measures to conserve and enhance local geodiversity sites and assets across identified work areas in Norfolk Geodiversity Action Plan

- No funding resources available to pursue County Geodiversity Site designation.

- Geodiversity interpretation projects included in Broads Landscape Partnership Scheme, starting in Jan 2018.

5.5 Expand the longer-term resource of land management and heritage construction and maintenance skills training and qualifications

- Successful 2nd round application to HLF for Broads Landscape Partnership Scheme (Water, Mills and Marshes) and delivery phase to begin 1 Jan 2018, including heritage skills training and restoration works.

5.6 Build on measures to reduce the impacts on the Broads of visual intrusion and noise and light pollution, and pursue potential for dark sky place status

- BA progressing schemes with UK Power Networks and National Undergrounding Wires Steering Group:
- Share Marshes completed in July.
- Stage 2 approval - UKPN ready to deliver: Cantley (awaiting additional design work by UKPN), Ludham Marshes (stalled on landowner permission), Potter Heigham and Repps (UKPN gaining wayleaves to deliver 2018).
- Stage 1 approval: Beccles Marshes and South Walsham Marshes awaiting 2nd stage application from BA to Steering Group, planned 2018.



Photo: Two of the mills earmarked for restoration work through the Broads Landscape Partnership Scheme

Aspiration 6 Provide opportunities for distinctive recreational experiences in harmony with the special qualities of the area

6.1 Develop and implement schemes to upgrade and improve the network of access points and routes (where adverse effects can be prevented), linked to visitor facilities and including easier access for people with mobility and sensory needs

- New BA moorings opened at Berney Mill and Rockland Short Dyke and BA purchased Acle Bridge moorings (620 metres). Canoe launch pontoon installed at Ranworth Staithe.
- Draft River Wensum Strategy consulted on and due for adoption early 2018.

6.2 Implement measures to improve the network provision of riverside facilities, incl. refuse and recycling services, electric power points, water and pump out

- Updated electric charging point meters rolled out at BA 24-hour moorings and yacht stations, allowing use of new reusable top-up cards and bringing charging system under best practice audit guidelines.
- BA providing additional waste facility at newly acquired Acle Bridge moorings, and Broads facilities map updated.

6.3 Maintain, develop and promote a coordinated and year-round programme of activities (taking measures to prevent any adverse environmental impacts)

- BA annual events programmes completed, including Broads Outdoors Festival, Broads Village at Royal Norfolk Show, presence at Great Yarmouth Maritime Festival, Norwich Science Festival.
- Make Great Memories in England's National Parks awarded £1m funding from Discover England Fund to create unique visitor experiences for German and Australian markets. Branding tender process commenced.
- Broads Landscape Partnership Scheme (Water, Mills and Marshes) delivery phase to begin 1 Jan 2018, including multiple recreation projects.

6.4 Implement Broads Angling Strategy action plan through partnership working and securing of additional resources

- Policy included in draft River Wensum Strategy that angling access and fish habitat will be enhanced at appropriate locations along the River Wensum.

Aspiration 7 Strengthen and promote key messages and tourism offer in keeping with the area's status, special qualities, history and traditions

7.1 Develop integrated, multimedia communications to boost local community and visitor awareness and appreciation of the special qualities of the Broads National Park

- www.visitthebroads.co.uk upgraded with additional content via 'blog' page, inspiration features, enhanced search functionality and improved category listings.
- Promotional media coverage on Broads National Park included Visit Norfolk TV advertising campaign, BBC/local press features on Water, Mills and Marshes programmes, and a feature on Channel 4's Great Canal Journeys.
- Broads National Park branding materials in production for installations at Norwich Airport, selected railway stations, and for Broads National Park village identification signs.
- Broads Landscape Partnership Scheme (Water, Mills and Marshes) delivery phase to begin 1 Jan 2018, including projects under Programme 1: Interpreting the Landscape.

7.2 Maintain and upgrade the range and provision of multimedia and 'point of need' visitor information and interpretation

- Improvement plans being written for interpretation and signage at Whitlingham Country Park and How Hill, following site audits.

7.3 Implement industry-based measures to strengthen the quality and distinctiveness of the Broads tourism offer, including careers and skills training

- Whitlingham Country Park website improved. BA taking on responsibility for replying to TripAdvisor comments.
- Broads Tourism has introduced subsidised Welcome Host/Aboard training for members.

Aspiration 8 Support development growth within and adjacent to the Broads, while avoiding adverse impacts on the area's special qualities

8.1 Update and adopt Broads spatial planning policies and site specific allocations to support local business, housing need, community facilities and transport choices, and to ensure development occurs within environmental limits

- Publication version of Broads Local Plan out to public consultation to 5 January 2018.

8.2 Develop comprehensive approach to enhancing sites that are strategically important for their heritage or green infrastructure value

- Whitlingham Charitable Trust developing strategy for external funding to support plan of action by 2018.



Photo: BA volunteers willow harvesting

Aspiration 9 Strengthen connections between a wide audience, particularly local communities and young people, and the Broads environment

9.1 Widen the range of active and entry level/ taster initiatives that promote physical and mental health and wellbeing, based in the Broads natural environment

- BA and Active Norfolk in discussions to set up canoeing and paddle boarding taster sessions.
- Broads Landscape Partnership Scheme (Water, Mills and Marshes) delivery phase to begin 1 Jan 2018, including accessible 'try it out' recreational activities.
- New research completed on effects of volunteering in nature on people's mental health (University of Essex for The Wildlife Trusts). Findings show mental wellbeing of 69% of participants improved after just six weeks.

9.2 Offer a flexible range of practical volunteering programmes, events and training, and establish a longer-term succession strategy

- BA volunteer training reviewed, syllabus compiled for each volunteer role, and new modular training plans being written, with guidance for each training module.
- Next round of BA volunteer recruitment due in early 2018 and new role of Site Specific Volunteer at Whitlingham Country Park continues to expand.



Photo: Millwright repairing floor joists

9.3 Increase the scope for partnership fundraising and other income generation initiatives to support Broads-themed projects

- [Broads Landscape Partnership Scheme \(Water, Mills and Marshes\)](#): 2nd round HLF application approved and delivery phase to begin 1 Jan 2018. £4M awarded for 55 projects delivered by 38 scheme partners.
- [CANAPE \(Creating A New Approach to Peatland Ecosystems\)](#): BA to receive 700,000 euros from European Regional Development Fund to deliver Hickling Vision and healthy peatlands in the Broads. The full project is worth 5.5 million euros.
- [Make Great Memories in England's National Parks](#): £1M+£400k match funding from Discover England Fund National Parks Partnerships: 5-year partnership agreement to make Columbia Sportswear the official outfitter for National Park staff
- BA preparing external funding strategy to build on success of CANAPE and Broads LPS bids.
- Training given to smaller charitable trusts in the Broads on strategic approaches to fundraising.

9.4 Improve the capacity of the Broads Environmental Education Network (BEEN) to develop and run educational programmes and events for local schoolchildren

- Broads Landscape Partnership Scheme (Water, Mills and Marshes) delivery phase to begin 1 Jan 2018, including multiple education and outreach projects.
- Broads Trust leading HLF bid for funding to produce educational materials on wherries.
- Draft Broads Curriculum summary and framework documents prepared. Schools activities implemented, including Short Stay School for Norfolk (Engage Trust), River Wensum project and BA Young Rangers.
- 'Rooted in Nature' mindfulness sessions for adults set up at Whitlingham Country Park.



9.5 Develop and run motivational outreach activities and award schemes for young people, including those from disadvantaged backgrounds, focusing on life and work skills training and practical experience

- BA taken on 3 operations apprentices and 3 UEA interns.
- Broads Landscape Partnership Scheme (Water, Mills and Marshes) delivery phase to begin 1 Jan 2018 including youth learning and future skills projects.
- Two 6-day youth programmes of outdoor learning, two John Muir Discovery awards and nine John Muir Explorer awards delivered. BA provided total of 115 days of work experience for high school students aged 15-18.

Aspiration 10 Build the awareness and adaptive capacity of local communities to the challenges of climate change and sea level rise

10.1 Develop and promote tailored 'climate-smart' mitigation and adaptation measures, guidance and support to local communities

- BA, EA, Norwich City Council and emergency response bodies ran public information session at Norwich Riverside on increasing risk from flooding.
- New suite of stories on Broads' climate and sustainability issues trialled at 3 events, and now part of wider interpretation of the Broads past, present and future, on offer to local groups and societies from October 2017.

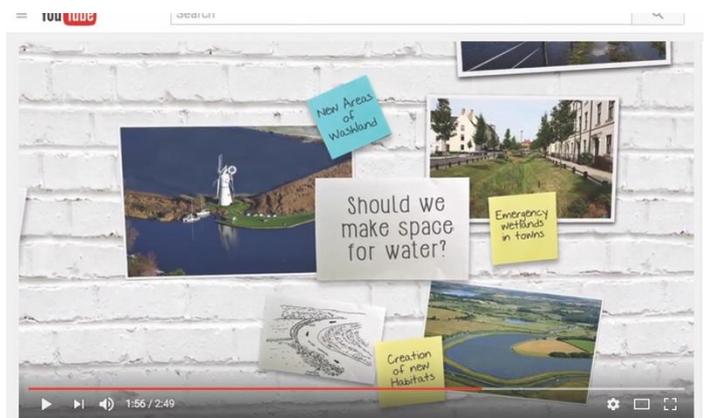


Photo: Still from [Broads Future](#), a short video raising issues around flood risk management in the Broads.

10.2 Commission and coordinate research to inform management approaches to decrease carbon emissions and increase carbon sequestration in the Broads

- BA supporting universities partnership bid for Natural Environmental Research Council (NERC) funding to study sustainable blue-green management of peat and water through agriculture.
- Scoping ideas submitted to National Parks Partnership on model of external investment for carbon (peatland) management in the Broads.



Website: www.broads-authority.gov.uk/broads-authority/how-we-work/strategy

Email: broadsplan@broads-authority.gov.uk