

Broads Biodiversity and Water Strategy: Action Plan 2019-2024

The Action Plan focuses on priorities for the Broads Authority as a lead or joint delivery partner, and on key projects led by other organisations working in the Broads. It is monitored by the Broads Biodiversity Partnership and was structured around the Broads Plan (2017-2022) and is one of the key guiding strategies. Several actions would not be possible without the support of volunteers, who make a huge positive contribution to our biodiversity work.

June 2023 Review

Focus Area in bold, and objectives	Complete	On track	Incomplete/ changed
Restoring, maintaining and enhancing water quality to achieve 'good' ecological status/potential	5	3	1
1. Carry out lake restoration, maintenance and enhancement work, including bio-manipulation; use monitoring evidence to trial and implement further innovative lake (broad) and river restoration techniques.			
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	3	3	
Managing habitats and species	7	7	1
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			
4. Define, implement and monitor management regimes for priority species	2	8	1
5. Define, implement and monitor management regimes for invasive non-native species (INNS)		5	
6. Extending and creating new areas of high biodiversity value habitat, habitat networks and buffer zones within the Broads catchment 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	5	7	
7. Improve partnership coordination and communication of Broads biodiversity monitoring and research efforts, linked to national biodiversity network	3	2	3
Managing water resources and flood risk		2	
8. Catchment-scale water capture and water efficiency measures, incl. whole farm water management. Catchment-scale management of water resources, response to drought and water shortages. Long-term integrated coastal, tidal and fluvial flood risk strategic approach			

Focus: Restoring, maintaining and enhancing water quality to achieve ‘good’ ecological status/potential

Table 1

Carry out lake restoration, maintenance and enhancement work, including bio-manipulation; use monitoring evidence to trial and implement further innovative lake (broad) and river restoration techniques

Ref	Detailed actions	Lead	Partners	Timescale	Desired benefits	Progress
1.1	Facilitate use of PCLake model to assess thresholds for ecological change in lakes relating to phosphorus and other management, as part of coordinating a strategic approach to lake restoration	BA (WEG & BIFFA)	NWT, EA BBP	2019/20	Managers of lakes are using the tool to make more informed decisions on the most important factors relating to lake restoration	Status: Complete
1.2	Complete Hickling Broad Enhancement Project as part of CANAPE Interreg Project, in line with project plan	BA (CANAPE)	NWT	2018 - 2023	Larger areas of reed swamp are providing better habitat for wildlife such as bittern and protecting an area of shallows so water plants can grow in sheltered conditions created	Status: Complete

Ref	Detailed actions	Lead	Partners	Timescale	Desired benefits	Progress
1.3	Implement biomanipulation work at Barton Broad and Ranworth Broad in line with project plan	NWT (BIFFA)	BA, EA	2019/20	Restoration work is increasing the diversity of water plants, improving the aquatic environment for species and enhancing wildlife viewing opportunities for visitors	Status: Complete
1.4	Complete Hoveton Great Broad LIFE and HLF Project in line with project plan	NE (LIFE and HLF)	BBP	2018 - 2023	Larger areas of reed swamp and clearer water are providing better habitat for wildlife and increasing public understanding	Status: Complete
1.5	Implement erosion prevention and river bank works and provide protective conditions on development to safeguard fish habitats in line with work plan	BA	EA	Ongoing	Resilient river habitat is supporting a sustainable, balanced and healthy fishery	Status: On track
1.6	Carry out fish management and fishery enhancement at Ormesby Broad and repair fish barriers in line with management plan	ESW (NWT)	TBP	Ongoing	Clear water is enhancing water plant and water bird populations	Status: On track

Ref	Detailed actions	Lead	Partners	Timescale	Desired benefits	Progress
1.7	Implement measures to maintain clear water at Whitlingham LNR, including bird feeding management, sensitive water plant management and assessing impact of potential fish introduction	WCT		tbc	The many environmental benefits of clear water for people, habitats and wildlife are ongoing	Status: Changed Management transferred to the Estate
1.8	Investigate options to manage water and land via replacing water management assets such as 14 pumps in Upper Thurne and those on Halvergate	Broads IDB	BBP	2020 - 2021	The many environmental benefits of clear water for people, habitats and wildlife are ongoing	Status: Complete Detailed design in progress. Funding secured for Horsey wet farming pilot
1.9	Implement Environment Section of River Wensum Strategy	Norwich CC	BA, NCC, EA	tbc	The River Wensum urban corridor is supporting more wildlife and improving people's enjoyment of this area	Status: On track Eel pass installed at New Mills (2018) providing safe passage for the species over the structure and enables them to access the valuable habitat upstream in the Wensum and Tud.

Table 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

Ref	Detailed actions	Lead	Partners	Timescale	Desired benefits	Progress
2.1	Develop Waterways Management Strategy	BA	BBP	2020 - 21	Wildlife (particularly fish) breeding, wintering and feeding areas are improving to ensure maximum benefit is gained from every pound spent	Status: Complete
2.2	Respond to policy consultations to help justify water quality and protection of water resources (e.g. Water Framework Directive, Water Cycle Studies, Water Abstractions)	BA	n/a	Ongoing	Policy makers are understanding more clearly the impact of their policy decisions on the Broads ecosystems and are making policy changes to help improve management	Status: On track

Ref	Detailed actions	Lead	Partners	Timescale	Desired benefits	Progress
2.3	Implement Diffuse Water Pollution Plans following completion	EA, NE	BCP	2019 - 2023	The Plans are supporting improved water quality and more wildlife, in turn improving peoples' enjoyment of these areas	Status: Completed Wensum, Bure. Yare and Ant review completion is June 2023. Both rivers have point sources that require modelling and improvements identified as part of PR24. Improvements will be implemented in AMP8. Started Upper Thurne July 2023
2.4	Support development of local guidance for Environmental Land Management Schemes (ELMS) for resource protection to inform plans (links to action 3.4)	NE	BCP, BBP, landowners	2021-2022	Farmers are using locally agreed information to achieve better environmental benefits	Status: Complete Land Management Board in operation
2.5	Implement Water Sensitive Farming land management engagement and advice	NRT	BCP	Ongoing	Effective farmer engagement is supporting uptake of innovative measures to protect and enhance water and wildlife	Status: On track
2.6	Carry out six litter picks annually to reduce pollution in Broads waterways and support other litter picking initiatives	BA	n/a	Ongoing	Less litter in Broads' waterways is reducing harmful impacts on aquatic and marine food chains	Status: On track

Focus: Managing habitats and species

Table 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

Ref	Detailed Actions	Lead	Partners	Timescale	Desired benefits	Progress
3.1	Respond to policy consultations to help secure support for wetland management and species conservation (e.g. Net Gain, Environment Strategy, Peatland Strategy and input into Lowland Peatland Agriculture Task Force)	BA	BBP partners also likely to respond	Ongoing	Policy makers are understanding more clearly the impact of their policy decisions on the Broads ecosystems and are making policy changes to help improve management	Status: On track
3.2	Carry out innovative water seepage work at How Hill NNR through management of surface water and catch dykes and creation of greater areas of open water as part of Water Environment Grant	BA (WEG)	RSPB, NWT	2019-2021	Wildlife is being protected and obligations to meet designated site conditions are being met while adapting to a changing climate Natural water seepage is supplying fens and creating conditions for lost fen vegetation communities to re-establish	Status: WEG project complete Applied for Nature for Climate Peatland Grant as part of the Broads Peat project.

Ref	Detailed Actions	Lead	Partners	Timescale	Desired benefits	Progress
3.3	Develop collaborative programme of fen management measures additional to those required for agri-environmental schemes (e.g. enhancing natural water seepage and flows, turf ponding, scrapes and foot drains) and seek funding to support farmers and land managers to implement measures	BA	BBP	Ongoing	Farmers and land managers are collaborating to achieve appropriate management to support achievement of biodiversity and wider environmental benefits	<p>Status: On track</p> <p>Programme of improvements at BA management sites.</p> <p>Funding measures such as footdrains from Farming in Protected Landscapes (FiPL).</p> <p>Investigating BNG market and Landscape Recovery to support delivering the Ant Valley masterplan with BAWAG and other farmers and land managers</p>
3.4	Support development of local guidance for Environmental Land Management Schemes (ELMS) for fen, marsh and woodland to inform plans	NE	Farmers, land managers BBP,	2021-2023	Farmers and land managers are using locally agreed information to achieve better environmental benefits	<p>Status: Complete</p> <p>Land Management Board in operation</p> <p>100 face to face interactions funded by Nature for Climate Peatland Grant as part of the Broads Peat project</p>
3.5	Develop proposal for Defra on elements of ELMS to test and trial, including scheme design, role of coordinated advice and farm clusters	BA	BBP, BCP, Farmers and land managers, Defra	2019-2020	Ideas and discussions from the Broads are informing the development of the future ELMS	<p>Status: Complete</p> <p>ELM T&T complete</p>

Ref	Detailed Actions	Lead	Partners	Timescale	Desired benefits	Progress
3.6	Provide advice on wetland management to landowners and organisations on request and during fen management demonstration	Broads Land Management Service (BLMS) (BA, RSPB)	BBP, BRASCA and advisors	Ongoing	Farmers and land managers are being supported by expert knowledge and appropriate management is being undertaken, working with sustainable businesses and under clear agreements, to create biodiversity and wider environmental benefits	<p>Status: On track</p> <p>100 face to face interactions funded by Nature for Climate Peatland Grant as part of the Broads Peat project about how to create fen habitat.</p> <p>Funding advice provision via Farming in Protected Landscapes (FiPL).</p>
3.7	Provide advice to land managers to deliver maximum benefits for breeding waders, wintering waterfowl and other priority species through effective use of environmental stewardship	BLMS	BA, (WMM Lottery) BBP and advisors	Ongoing	BLMS trial is providing effective ways of farmer engagement and uptake of schemes to result in public benefits e.g. wildlife, carbon in soils	<p>Status: On track</p> <p>Broads Landscape Partnership Scheme: Water Mills and Marshes (WMM).</p> <p>Funding advice provision via Farming in Protected Landscapes (FiPL).</p>

Ref	Detailed Actions	Lead	Partners	Timescale	Desired benefits	Progress
3.8	Revise and implement management plans for How Hill NNR, extending the declaration to Buttle Marsh, Valentine Meadow.	BA	NE	2023	Wildlife is being protected and landowners' obligations to meet conditions in the Management Plan and any designations are being met	Status: Partially Complete Management Plan in revision, lack of resource to extend declaration
3.9	Investigate Buttle Marsh hydrological function and the feasibility to enhance biodiversity, store winter and spring water, long term carbon.	BA		2020 - 2025	Wildlife is being protected and landowners' obligations to meet Management Plan conditions are being met while adapting to a changing climate	Status: On track Completed Restoration Plan and applied for Nature for Climate Peatland Grant as part of the Broads Peat project.
3.10	Manage BA contracted wetland sites in accordance with annual and longer-term management agreements and plans	BA	landowners	Ongoing	Wildlife is being protected and landowners' obligations to meet designated site conditions are being met	Status: On track Working with reed cutters annually to deliver contract services on fens.

Ref	Detailed Actions	Lead	Partners	Timescale	Desired benefits	Progress
3.11	Carry out joint review of key management plans such as Breydon, Barton, Hickling, Sutton and mid-Yare	BBP	-	Ongoing	Partners are working together to protect wildlife and landowners' obligations and designated site conditions are being met	Status: On track NE coordinating reviews as required.
3.12	Test conversion of cut material from wetland agriculture (paludiculture) into products such as biochar and soil improvers, and evaluate product viability and markets as part of CANAPE and Broads Landscape Partnership Scheme: Wild Compost	BA (CANAPE, WMM)	Business, landowners	2019-2025	Business and farmers are more aware of opportunities for new product creation and supply logistics from wetlands. Products are being market tested to develop greater understanding of paludiculture supply chains	Status: Complete Completed CANAPE and WMM Wild Compost project. Awarded £395,000 Nature for Climate Peatland Grant in 2023 as part of the FibreBroads project. BA lead partner, working on product engagement and development with Norwich University of the Arts, Hudson Architects, Wetland Products and other partners working of water security and developing farming options.

Ref	Detailed Actions	Lead	Partners	Timescale	Desired benefits	Progress
3.13	Map peat, greenhouse gas emissions and paludiculture potential, as alternative agricultural system for reducing carbon emissions as part of CANAPE	BA (CANAPE)	BBP, Farmers, land managers	2019-2023	Business and farmers are more aware of opportunities for income generation and markets for products from wetlands	Status: Complete QMUL study on carbon store and greenhouse gases complete (2021). Net Zero report complete (2022). Cranfield University field-scale water table and emissions study complete (2023).
3.14	Implement peat citizen science and peat engagement project as part of CANAPE Interreg project and linkup with education work in Broads Landscape Partnership Scheme:	BA (CANAPE)	BBP	2019-2022	The gained knowledge and skills of 6 th form students are engaging their peers and the community about biodiversity and geodiversity in the Broads People's learning about different citizen science projects is improving future projects	Status: Complete Youth Engagement though Broads Peat project continued schools engagement in 2022/23 and revision of the curriculum pack for peat provide a legacy.

Ref	Detailed Actions	Lead	Partners	Timescale	Desired benefits	Progress
3.15	Implement Broads Landscape Partnership Scheme Programme 5: Natural Landscapes Wild Watch and aquatic invertebrate identification training	BA (WMM)	Broads LPS Board, BBP	2019-2021	People are becoming more engaged with biodiversity in the Broads and their knowledge and skills are improving	Status: Complete Wild Watch cameras remain operational. Waveney invertebrate survey and advice to landowners produced.

Table 4

Define, implement and monitor management regimes for priority species

Ref	Detailed Actions	Lead	Partners	Timescale	Desired benefits	Progress
4.1	Monitor approved programme for water plants, fen plant transects and water levels at selected sites and Crested Buckler Fern, Swallowtail larvae, butterfly transect, breeding Bittern at How Hill and Buttle Marsh	BA	BBP at non-BA owned or managed sites	Annually	Trends in species populations are being understood in accordance with environment change and management	Status: On track
4.2	Facilitate data input to maintain overview of trends and identify action required where issues are identified	BBP	-	Ongoing	Trends in species populations are being understood in accordance with environment change and management	Status: On track Bid submitted for additional BA internal funds to support the assessment of species of conservation concern and priority species

Ref	Detailed Actions	Lead	Partners	Timescale	Desired benefits	Progress
4.3	Review EA hydrology monitoring network, linkages to BBP (BA, NWT and RSPB) monitoring network according to funding constraints, management and knowledge priorities	EA	BA	Ongoing	Partners are agreeing priorities for the monitoring framework	Status: On track EA monitoring network remains in reduced form. NE, NWT, BA installing and monitoring hydrology in fen sites and are undertaking regular review of data. Bid submitted for additional BA internal funds to support hydrological assessment of BA land.
4.4	Define environmental triggers to support further lake restoration decisions on Trinity Broads	TBP	-	2019/20	Lake restoration in the Trinity Broads is achieving better results, having been informed by more robust evidence	Status: Complete

Ref	Detailed Actions	Lead	Partners	Timescale	Desired benefits	Progress
4.5	<p>Assess findings of surveys and species recovery programmes for Little Whirlpool Ramshorn snail, to inform guidance to farmers, land managers and advisors. Work includes:</p> <ul style="list-style-type: none"> a. Translocate to four sites, monitor monthly b. Monitor ditch translocation for five years c. Monitor to ensure no population effects during wetland creation scheme d. Monitor monthly at three sites for four years, intensive studies on 6 sites, discussing management with landowners e. Steering meetings 	<p>BBP, Abrehart Ecology</p> <ul style="list-style-type: none"> a. Highways England b. WMA c. SWT d. Abrehart Ecology e. AECOM 	BA	<p>Ongoing</p> <ul style="list-style-type: none"> a. 2023 b. 2023 c. 2022 d. 2020 e. Ongoing 	Target species are making use of more opportunities to expand in the Broads	<p>Status: On track</p> <p>Monitoring data requires review and communication with partners to assess the success of the translocations.</p>
4.6	<p>Review data for species recovery programmes for fen raft spider, including next steps, and submit report for national publications such as British Wildlife and Arachnology</p>	Helen Smith (consultant ecologist)	BA, RSPB, NE, SWT	Ongoing	Target species are making use of more opportunities to expand in the Broads	<p>Status: On track</p> <p>Summary report of species work completed, website updated, BW article complete, other articles in progress and eDNA commencing with Nottingham University subject to BA funding support</p>

Ref	Detailed Actions	Lead	Partners	Timescale	Desired benefits	Progress
4.7	Assess findings of species recovery programmes for Fen Orchid to inform action plan	Plantlife	BBP	Ongoing	Target species are making use of more opportunities to expand in the Broads	Status: On track Monitoring existing populations and trialling alternative methods and translocations to build resilience.
4.8	Collect seed from Greater Water Parsnip for species recovery work with schools under Broads Landscape Partnership Scheme Programme	BA	LPS Board, NWT, RSPB	2019-2020	Target species are making use of more opportunities to expand in the Broads	Status: Complete
4.9	Monitor Whitlingham swift tower for nesting success, communicate findings to visitors of site and promote information leaflet on encouraging swift nesting	WCT		annually	Target species are making use of more opportunities to expand in the Broads	Status: On track
4.10	Through Norfolk Local Bat Conservation Plan, make proposals to regulate and manage countryside to deliver greater benefits to bats from planning system and other relevant mechanisms	NE	BTO, BBP		Information on the distribution of bats is helping to protect and enhance the most important local locations for bats	Status: Changed and needs reviewing

Ref	Detailed Actions	Lead	Partners	Timescale	Desired benefits	Progress
4.11	Monitor <i>nathusius pipistrelle</i> bats around Broads and coast to improve understanding of species migration from Europe and breeding sites around Broads	Norwich Bat Group	BA, ESW	Annually	<i>Nathusius pipistrelle</i> breeding sites are being protected and migration routes are understood to support measures to conserve this species	Status: On track MOTUS tracking stations installed. First time tracking of bats crossing the English Channel. Broads roosting hotspots found. Interpretation panel installed at Dunwich.

Table 5

Define, implement and monitor management regimes for invasive non-native species (INNS)

Ref	Detailed Actions	Lead	Partners	Timescale	Desired benefits	Progress
5.1	Monitor invasive non-native species (INNS) as part of annual water plant survey	BA	NNNSI	Annually	Trends in invasive non-native species are being better understood in relation to environmental change and management action is better informed	Status: On track Reporting here

Ref	Detailed Actions	Lead	Partners	Timescale	Desired benefits	Progress
5.2	Undertake direct control of priority INNS on BA land and close to areas with high risk of spread on priority basis	BA	BBP at non-BA owned or managed sites	Annually	Priority INNS are being eradicated or controlled to manageable background level to protect biodiversity, water flow and navigation	Status: On track
5.3	Carry out control programmes for American mink, Floating Pennywort and other priority invasive non-native species	NNNSI	Broads IDB/WMA	Annually	Priority INNS are being eradicated or controlled to manageable background level to protect biodiversity, water flow and navigation	Status: On track Waterlife Recovery Trust - Saving our native wildlife formed across the UK with Waterlife Recovery East operational since 2018 evaluating success of coordinated volunteer approach based on genetic and other population assessment.
5.4	Carry out 'Check Clean Dry' and 'Be Plant Wise' awareness campaigns and highlight risks of new invasive species in Broadcaster, Broadsheet and key waterway access points	BA	Parish Councils	Annually	The public are helping to prevent the spread of INNS and playing their part in protecting their local biodiversity, water flow and navigation	Status: On track

Ref	Detailed Actions	Lead	Partners	Timescale	Desired benefits	Progress
5.5	Communicate success of biological control for Himalayan Balsam around River Bure and if successful roll out to other areas	NNNSI	-	2019	Himalayan Balsam stands are reducing their vigour and spread	Status: Completed Reported to the BBP

Table 6

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

Ref	Detailed Actions	Lead	Partners	Timescale	Desired benefits	Progress
6.1	Develop vision for Hickling and other Broads Living Landscapes projects, including reed swamp protection and creation by using dredged sediment	NWT	BA, NE, EA	Ongoing	Landowners and local people are being motivated around a single vision to do more for biodiversity and sustainable management	Status: Complete Meetings held with local business and residents.
6.2	Deliver Suffolk Broads project creating larger areas of wetland, including habitat creation by using dredged sediment	SWT (HLF)	BA	2019-2021	Wetland species have larger areas managed for their needs and are able to move through a landscape, becoming more resilient to change including climate change	Status: Complete

Ref	Detailed Actions	Lead	Partners	Timescale	Desired benefits	Progress
6.3	Deliver Bure and Thurne Living Landscapes Broads Project creating larger areas of wetland	NWT	BBP	Ongoing	Wetland species have larger areas managed for their needs and are able to move through a landscape, becoming more resilient to change including climate change	Status: On track Brendan's Marsh wetland creation complete
6.4	Implement Natural Flood Management and River Restoration Projects, such as Upper Bure, Badley Moor on River Tud and Sculthorpe Moor, including fish habitat improvement plans	Various partners within BCP	-	Ongoing	River species are having better places to live, breed and eat, and the water flow regimes to allow them to survive	Status: On track Funding measures via Farming in Protected Landscapes (FiPL). Multiple projects, some listed on: Project Maps - Broadland Catchment Partnership
6.5	Implement programme of Catchment Sensitive Farming advice	NE, EA, Water Companies, NRT	BCP	Ongoing	Landowners are being supported by expert knowledge and the appropriate management is being undertaken, under clear agreements, to support achievement of wider environmental benefits and biodiversity	Status: On track Essex & Suffolk Water report that catchment measures have not been effective to reduce nitrogen concentration in drinking water.

Ref	Detailed Actions	Lead	Partners	Timescale	Desired benefits	Progress
6.6	Deliver Broads Priority Landscape project, including development of Broads Land Management Services helping landowners create larger wildlife-rich areas (projects 3E1 and 5A within the HLF LPS WMM)	RSPB (WMM)	BBP, local FWAG	2018-2022	Wetland species have larger areas managed for their needs and are able to move through a landscape, becoming more resilient to change including climate change	Status: Completed WMM Project Funding measures via Farming in Protected Landscapes (FiPL). RSPB England Land Management
6.7	Coordinate delivery of actions in Ant Valley as described in WEG project	RSPB	BA, Butterfly Conservation NWT	2019-2020	Fen is being restored, and removal of acidic influence protecting Fen Orchid colonies and understanding of ecohydrology and impact of groundwater input on habitat condition is improving	Status: Land forming Complete. Ongoing monitoring to be completed

Ref	Detailed Actions	Lead	Partners	Timescale	Desired benefits	Progress
6.8	Consult and decide on water abstraction licences based on ecological and hydrological evidence	EA	NE, BA, NFU, land managers and farmers	Ongoing	Protected areas that support sensitive water dependent habitats and species are being maintained and sites that have deteriorated are showing signs of recovery	<p>Status: On track</p> <p>Ant Valley and Broads SAC Sustainable Abstraction resulting in changes to permanent licences in the Ant Valley. The Sustainable Abstraction Plan on other parts of The Broads SAC is ongoing.</p> <p>The winter abstraction licence applications located within the Bure catchment are progressing. The EA and NE agreeing conditions to protect the lake features and around issues of prolonged saline intrusions within the catchment.</p> <p>Time Limited Licences due to be determined in Autumn 2023.</p>

Ref	Detailed Actions	Lead	Partners	Timescale	Desired benefits	Progress
6.9	Respond to planning applications and policy consultations to support ecosystem management and species conservation (such as Net Gain)	BA and other appropriate organisations	-	Ongoing	Planning applicants and policy makers are understanding more clearly the impact of policy decisions on the Broads ecosystems and are making changes that improve ecosystem functioning	Status: On track Developed and adopted guide for Biodiversity Net Gain (BNG) in Suffolk. Started Norfolk Planners BNG group June 2023. BNG market research undertaken by BA 2023 ongoing.
6.10	Advise landowners and organisations, including Parish Councils, on managing land to extend more nature friendly land management and buffers for nature areas	NE, BA and other appropriate organisations	EA, local FWAGs, NRT, BA	Ongoing	Landowners are being supported by expert knowledge and the appropriate management is being undertaken, under clear agreements, to support achievement of biodiversity and wider environmental benefits	Status: On track Wellbeing blogs for Norfolk ALC Wild Patch

Ref	Detailed Actions	Lead	Partners	Timescale	Desired benefits	Progress
6.11	Support development and implementation of Green Infrastructure and Recreational Avoidance and Mitigation Strategy (RAMS) to inform spatial planning decisions and policy	BA	Norfolk Strategic Planners Group	2020	The biodiversity value of sites is being protected from increasing recreational pressure and mitigation measures are being costed and put in place through Local Plans	Status: Complete RAMS tariff is being collected across all local planning authorities in Norfolk and part of Suffolk to fund measures to manage and reduce the impact of people making extra visits to Special Areas of Conservation (SACs) in the counties.
6.12	Develop Local Natural Capital Plan and Norfolk and Suffolk Nature Recovery Strategy and key sites for improvement	NCC, SCC	BBP	2020	The delivery of the 25-year Environment Plan is becoming better integrated through local natural capital plans for specific places in England	Status: On track Local Nature Recovery Partnership set up. Mapping group underway, other sub-groups to be set up.

Table 7

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

Ref	Detailed Actions	Lead	Partners	Timescale	Desired benefits	Progress
7.1	Look for funding for modelling of long-term sea-level rise in Broads and likely impact on freshwater dependant species, such as the Swallowtail breeding sites	BFI	Academic institutes	TBC	Translocation is being more clearly recognised and used	Status: On track BFI salinity statistical model underway

Ref	Detailed Actions	Lead	Partners	Timescale	Desired benefits	Progress
7.2	Research detailed ecology of Swallowtail and its food plant milk parsley, including impact of salty water on the plant	UEA	BBP, Swallowtail & Birdwing Butterfly Trust	2019/20	Potentially costly translocations are being based on more robust evidence, bringing more chance of success	Status: Complete
7.3	Disseminate findings of research on water connection and environmental degradation in influencing species distributions and potential for species recovery as water quality improves	Hydroscape (NERC)	BA, EA, NE	2019/20	Water management organisations are acting from better understanding about the impact of water connection on the control of invasive species and diseases of wildlife and humans at international, national and local level	Status: Project Complete, conference abandoned due to Covid About – Hydroscape (wordpress.com)
7.4	Research movements of fish in Broads via fish tracking	Portsmouth University	EA, Anglers	2018-2021	Water management organisations and anglers have a better understanding about the impact of waterway management on fish movement and are creating sustainable fisheries	Status: Complete Results supported the EA decision not to support the temporary closure of Hoveton Great Broads to fish.

Ref	Detailed Actions	Lead	Partners	Timescale	Desired benefits	Progress
7.5	Research historical microplastic pollution in Broads compared to more pristine waterways and report results to BBP and BCP	UCL	BA, NWT	2019-2022	The start time and extent of microplastic pollution is being understood more clearly	Status: Incomplete Project abandoned due to Covid and poor dating of core from Ranworth.
7.6	Send all wildlife records to NBIS including setting up systems to support public to submit wildlife records	BBP	NBIS	Ongoing	Better species abundance and distribution data is informing development and management	Status: On track
7.7	Update research topics identified at Fen Research Workshop 2017 and Lake Review 2015, and send research opportunities to academic institutes to attract research students to work with BBP	BA	BBP	2022	Academic research in the Broads is supporting better management regimes	Status: Not started
7.8	Produce series of Broads wildlife identification books to promote public awareness and monitoring of species	NBIS	BBP, NCP	2019-2022	The public are recognising and reporting sightings of Broads species, creating stronger public interest and providing stronger data to inform management	Status: Not started

Focus: Managing water resources and flood risk

Table 8

Catchment-scale water capture and water efficiency measures, incl. whole farm water management

Catchment-scale management of water resources, response to drought and water shortages

Long-term integrated coastal, tidal and fluvial flood risk strategic approach

Ref	Detailed Actions	Lead	Partners	Timescale	Desired benefits	Progress
8.1	Support holistic water plan for Broad water resources under 'Water for Tomorrow' Interreg bid to run computer scenarios of multi-sector sustainable water storage and abstraction licensing to predict effects on ground and surface water and on dependent wetland habitats and species.	Rivers Trust	WRE, EA, Farmers, BBP, AW, Broadland Agricultural Water Abstractors Group (BAWAG)	2021-2023	Water management organisations are acting together from better understanding of the water environment and potential solutions	Status: On track Conference held 2023. Feasibility report to support the Wensum Catchment Partnership (WCP) in monitoring water quality and resources using citizen science alongside the existing monitoring.
8.2	Manage a partnership approach to future flood risk management in Broadland area, including High Level Options Study to inform discussions during engagement activities, and the option shortlisting process.	Broadland Futures Initiative (BFI)		Ongoing	Informed discussion and holistic consideration of options	Status: On track Broadland Futures Initiative (broads-authority.gov.uk) Elected Members Forum operating. Online survey. Virtual Exhibitions and Study Reports, Story maps, objective development, and prioritisation.