



## Canoe Access and Biodiversity evaluation report.

### Executive summary

The *canoe access and biodiversity project* aimed to enhance canoe access and the biological diversity of the River Waveney through engaging local river users with nature-based solutions. The project has used an innovative approach of combining the need for clear canoe access on the river with the biodiversity benefits of wood in the river channel. Through focusing on building local knowledge and recruiting a dedicated volunteer team, the heritage of the River Waveney has improved. Successes of the project include high engagement levels through volunteer recruitment, landowner participation and community events. The knowledge and understanding of the river have been enhanced. Practical conservation working groups have had a positive impact on the nature of the river and community event and partnership work have improved the canoe access and river habitats along the 53km river stretch of the project. This project has facilitated a network of volunteers, partner organisations and riparian landowners who are now actively invested in the river and are committed to continuing to work on solutions and participate in the next phase of supporting the heritage of the River Waveney.

### Brief overview of project

A range of activities have taken place over the 18-month project. Activities have focused on conservation working groups alongside training and upskilling sessions to improve knowledge of stakeholders.

The River Waveney has little diversity in some stretches and is naturally a slow-flowing river with minimal gradient, struggling to maintain natural processes and healthy flows. This has been exacerbated by human-made processes including straightening, over-widening, damming, dredging of gravels and pollution. This lack of diversity means fewer habitats for fish and invertebrates, and the lack of gradient means little fast-flowing water to clean gravels, which have now become overloaded with sediment from farming activities. In addition, like most rivers in the country, the River Waveney is at risk from non-native invasive species. Floating Pennywort is a highly problematic plant that can thrive in slow moving water. An accessible way to improve diversity and river habitats is to increase the fallen trees or wood in the river; woody structures provide a place for plants to root, provide a habitat for fish and insects, and protection of the bank from erosion.

Volunteer recruitment and working parties have supported the community to understand practical river restoration activities. Volunteer river wardens have been trained to map and monitor the health of the river, while working parties have managed invasive species, planted trees and retained valuable woody habitats in the river to enhance the state of the river for wildlife.

### How the project met the outcomes.

This project has clearly positively impacted the heritage of the River Waveney through **Outcome a) A wide range of people will be involved in heritage. Outcome d) People will have developed skills. Outcome e) People will have learnt about heritage, leading the change in ideas and actions.**

Weekly volunteer work parties have recruited **over 40 volunteers** from the local community. The volunteers have contributed to **603 hours** of conservation work on the river to improve its habitat.

Conservation Work parties have

1. Removed non-native species of Floating Pennywort and Himalayan Balsam
2. Planted trees on the riverbank to support the slowing of erosion/flooding and mitigate the impact of climate change through providing shade and reducing the temperature of the river water, thus improving levels of oxygen in the water. Tree planting also increases natural habitats.

3. Berm Construction has added diversity to the river to create habitats and flow; protecting against erosion and helps to filter silt in the water.

Volunteers have learnt about the heritage of the river with training taking part at each work party, focused on supporting volunteers to have the knowledge and skills to manage the environment effectively. Training has taken place on the identification of the non-native species and how to handle and limit spreading to reduce further harm.

*"I have joined work parties for Berm Construction and removal of the Floating Pennywort. Until getting involved with this project I had never heard of floating pennywort. I certainly have now! Working with others from either bank or canoe I have assisted with both raking out large quantities and the picking of small fragments left by the mechanical excavators."* Working Party Volunteer

**20 River Wardens volunteers** have been trained to carry out paddle-over river health surveys and mapping pollution incidents, blockages to canoe access from fallen trees and riverside habitats. Volunteers have accessed full training including a 1-day certificated canoe safety and first aid course and a training session from Fresh Water Biological on healthy habitats. Skills learnt have included recognising signs of a healthy river, river wood management and invasive species management.

*"I joined the Trust in October of 2022 when I retired from the Water Industry, becoming a volunteer river warden, and part of the Harleston local group. Apart from survey work which I love, I have been part of the group tackling floating pennywort. The group work parties have been well organised with clear objectives, and I believe that we are making a genuine difference in the river quality. I have also been involved in tree planting, again a very rewarding experience."* River Warden volunteer

The evaluation questionnaire demonstrates the increased knowledge of volunteers.

**60%** indicated that they now understood the term river restoration; **90%** understood the benefits of leaving trees and wood in the river channel; **90%** reported understanding the benefits of planting trees next to the river. **80%** said they understood individual ways you can restore and protect the river.

Volunteers have used the skills learnt and experience to access further environmental opportunities, further demonstrating their improvements in knowledge. One volunteer has gone on to be employed by the River Waveney Trust and is leading a project on plastic pollution, with further training on river restoration underway. A further volunteer has used the experienced to bolster his application and secure a place to study conservation at university.

The community have been engaged through talks, community events and training.

**1 Canoe access Project Action Group** - Attended by 40 people focussing on the importance of river access, promoting the paddlers code and supporting community engagement in river restoration and creating river habitats.

**2. Wood in the rivers event** - Attended by 40 people. A talk delivered by a specialist freshwater biologist promoting the science behind wood in rivers and habitat creation.

**3. Healthy Rivers Training** - Delivered by the Fresh Water Association

**4. Community talk – The Flow - Rivers Waters and Wildness**, by the author Amy-Jane Beer disseminating information about the importance of access to green and blue spaces.

*"It was a lovely evening. Inspiring. I'm so looking forward to immersing myself in the River Waveney and I am ordering a copy of the book from the library asap and suggesting it to them as a multiple-copy book for their Wild Reads Promotions."* RWT member comments after attending the Amy-Jane Beer talk.

## **5. Love your River – community event.**

A free event in the heart of the community on the banks of the River Waveney in Bungay, Suffolk. Partner organisation came together to host fun activities for all the community to learn about the river. Activities

included pond dipping; bug hunting; heritage skills activities (scything, thatching, traditional tools); Celebration of traditional land management; wildlife experts, bird club members. Attended by **400** community members and **94** volunteer hours.

*“A superb day. It was especially excellent to have scything guru Richard Brown from Scythe Association (Britain & Ireland) to talk about the history and importance of floodplain meadows and how awesome scything is. Lots of people 'had a go' and I learnt how to peen my blade properly.”*

### **Community Signs**

10 permanent signs have been installed along the river at portage points to help promote responsible river use. Educational messages explain that wood is good and encourage community rivers users to leave tree matter in the water.

Riparian Landowners engagement has taken place through 1-1 consultation sessions and groups events.

### **Group Events**

In February 2023, 43 landowners attended a landowners information event to expand their knowledge of river management. Three guest speakers facilitated discussions and disseminated information; The Environment Agency discussed riparian landowner rights and responsibilities; Norfolk non- native species talked about non-invasive initiatives; The Norfolk Rivers Trust focussed on river restoration.

From the event, The Riparian Landowners knowledge increased. **81%** said they had a better understanding of river management and **81%** had a better understanding of what makes a healthier river.

### **1-1 Consultation sessions**

Through building positive relationships with landowners along the river, The River Projects Officer, along with volunteers have taken part in practical conservation sessions.

**29** positive practical interventions have taken place and have all supported the landowners to understand the needs of the river they have on their land. For example, fallen trees have been retained in the river due to direct advice from this project and work parties have taken place to remove evasive species.

*“I learned a great deal about the river and its management. Especially about my role in controlling invasive species”* River Waveney Landowner in Wortwell, Norfolk

*“Thank you both for organizing such an informative evening last night. It was really good to hear from all the speakers and meet lots of people involved in the Waveney afterwards. I came back inspired”* River Waveney Landowner in Hoxne, Suffolk

Through increasing community and stakeholder engagement the project has contributed to outcome

### **b) Heritage will be in better condition.**

The 20 Canoe- based River Wardens were all allocated a stretch of the River Waveney from Scole to Geldeston. The River Wardens took a survey every 2 months with data logged on the River Waveney Trust App called Survey 123. Their training supported them to record potential restoration opportunities and potential problems which needed further action and resolving (e.g., pollution, blockages, fallen trees). The River Projects Officer used this data to feed into the working parties and consultation sessions with landowners. Positive restoration work has taken place to improve the heritage.

- **36** trees identified as an obstruction in the river. These have been managed and retained for biodiversity. Instead of removal, volunteers have either pinned, cut back or constructed berms out of them. Many landowners commented that they would have removed the tree if they had not been part of this project.

- A total of @400 trees have been planted including 13 Black Poplar trees. The Black Poplar is a red list species and under threat of extinction. This project has engaged with the Save the Black poplar scheme to ensure the native Black Poplar to the Waveney valley is replanted in this area. Other trees have been sourced from the Suffolk tree planting scheme grown from seed only of Suffolk provenance. Only locally grown trees have been planted to ensure the heritage is protected and enhanced.

The regular monitoring of the river Wardens has demonstrated the extent of the problem of the non-native species of Floating pennywort and Himalayan Balsam to the heritage of the River Waveney. The Volunteer working groups have actively contributed positively to the removal of the invasive species to maintain the nature heritage of the river.

Area covered by the project	Length in KM	length in Metres	
The original length of project area Shotford - Geldeston	36.2	36200	
Expanded area additional 17 KM Fair Green (Diss) to Geldeston	53.2	53200	47% increase in area
Total river enhanced	4.2	4230	enhanced 8% of the project, against a target of 2%

The canoe access and biodiversity project has provided regular mapping of the river and enabled reporting to partner organisations to further protect the river's heritage. Mapping of water quality and other issues has been active during the project and data recorded. For example, a River Warden reported illegal dredging. The River Waveney Trust reported this to the Environment Agency who are taking action to resolve the issue.

#### **Outcome g: The funded organisation will be more resilient.**

This project has supported the River Waveney Trust to have an increased profile in the local area and the needs of the river to be highlighted. Interviews with the Rivers Project Officer have taken place on Park Radio, BBC Radio Suffolk and That's Tv. News coverage had been widespread in local papers including Diss Express, Beccles and Bungay Journal, Community newspaper and CEO newsletter for the River's Trust. The evidence collected through this project has contributed to the organisation having a robust network of volunteers to carry out future conservation projects on the river. In addition, it has supported the organisation to gain further funding. Anglia Water have donated £50,000 over 2 years to support the River Waveney Trust to work with all stakeholders to obtain Bathing Water Status in the stretch of the Waveney in Bungay on the Norfolk / Suffolk Boarder. Knowledge and partner links from this project is providing a strong foundation for this project.

#### **Outcome i: the local economy will be boosted.**

The *Canoe access and biodiversity project* has successfully contributed to the local economy. Local employment has taken place through the appointment of the Rivers Project Officer. This role has continued, and the aim is to offer a permanent contract. Volunteer opportunities have been advertised across the community and the project has recruited and trained a network of River volunteers. As discussed earlier, some of the volunteers have used the skills to access further education or employment.

#### **Barriers to achievement**

The weather was a consistent barrier to work parties taking place or booked contractors completing tasks.

The river level was often too high to carry out work safely and time was taken to re-organise dates for conservation work. To mitigate the impact of this, The River Waveney Trust applied for a permit extension, from the Environment Agency, to allow work to be carried in summer months. The required paperwork needed to enable the tree management work to take place was time consuming and meant that progress was sometimes slower than anticipated.

### Lessons learnt

the lessons learnt from this project have fed into the successful development of two legacy projects that will cover further work on river access and make an application for a site on the river to be a designated bathing water. Both projects began in April 23. Lessons learnt are as follows and have fed directly into project development:

- The recording app was not as easy to use as it should be, so is being improved so that it is simpler and faster for volunteers to use and captures different data at different periods during the year.
- The volunteers wanted to see the data they had recorded online, so we are developing a database to capture and display this data along with any subsequent actions taken.
- Vegetation was found to be the main obstacle to canoe access, rather than fallen trees, so this is one of the focuses of our next project which includes a feasibility study on removal of excess vegetation at scale.
- We recognised that poor water quality must be tackled alongside habitat work on the river, as it is the root cause of many issues such as high growth of in-channel vegetation, leading to a new project looking to designate a bathing water area on the river.

At the beginning of the project, volunteers also highlighted the high pollution levels in the river at Diss and the need to support this section of the river. The length of the river was therefore extended to include the Diss river stretch and support the river's heritage in this section. In addition, community project applications for a larger community project in Diss is in progress.

### Successes and Project legacy

The project has attracted a strong and committed volunteer network who have enabled regular monitoring, work parties and community events to take place and benefit the River Waveney. Partnerships work has been a key success of the project with developed links with communities, landowners, freshwater specialists and partner organisations. Practical interventions have taken place to develop immediate improvements to the River Waveney. These include more wood matter in the river and the removal of invasive species to support a healthier river and improved heritage.

Volunteers, Landowners and Community have improved knowledge about the heritage of the river and learning is being shared to create a wider impact.

*“Berm construction has been especially interesting and has utilised my practical skills. In addition to the actual construction work I have also assisted with the development of a reference document outlining the construction, methods of construction and the health and safety aspects. This document will be uploaded to the trust's web site and act as a reference for other trusts and organisations.”* Working party volunteer

The data gathered through this project is helping to shape future heritage projects on the river, creating a long-term impact from the project and prompting further activity.

1. Volunteers raised concerns about poor water quality and pollution along the River Waveney. This inspired the expansion of our Riverfly Monitoring Project; another ten volunteers were trained in April. New monitoring sites can now be found on the River Dove and in Diss, Weybread, Brockdish and

Homersfield. Thanks to Ian Hawkins, the East Anglian Coordinator of the Riverfly Project, for donating his time and expertise the data is now being used to plan future work – for example patterns of poaching and erosion caused by cattle. Looking to work with Essex and Suffolk water to fund fencing and water troughs to allow river banks to be restored.

2. Access to the river for canoeing has been found to be compromised by high nutrients levels in the water and a high plant growth. The River Waveney Trust are working with the Environment Agency to further study this trend and to carry out a feasibility study on removal.
3. High amounts of duckweed have been recorded. RWT in partnership with the University of Nottingham are looking at the possibility of harvesting it to use as poultry feed.
4. Mapping of the location of the invasive species Himalayan Balsam and Floating Pennywort has been carried out and highlighted the extent of the problem for the river. Pennywort is capable of out-competing native species and travelling downstream at 5km per year, left untreated, it could be causing havoc to the Broads boating industry within three years. RWT now sit on the pennywort steering group which aims to eradicate pennywort and is continuing weekly volunteer workparties.
5. Learning from the project on managing naturally fallen trees as habitat is to be shared nationally via the Rivers Trust network, which encompasses over 60 members Trusts across the UK.

The *canoe access and biodiversity* project has successfully improved the heritage of the River Waveney and has embedded a strong network of volunteers and increased the knowledge of stakeholders to continue this work in the future.

*“It (the project) has certainly helped us at the river. There has been excellent training, willing and enthusiastic work parties, learning new skills, effective monitoring and surveying of the river, tree planting. The particularly fun days for us were the three days of berm making and the removal of part of the tree on the Sunday”*. Landowners in Weybread, Norfolk and RWT volunteers