

Broads Authority

25 September 2020

Agenda item number 10

Wetland Demonstration Project

Report by Environment Policy Adviser

Purpose

This report outlines the opportunity for a new wetland demonstration project as part of the EU-funded CANAPE programme.

Recommended decision

To approve a wetland demonstration project as part of the CANAPE programme in collaboration with the Horsey Estate, the Internal Drainage Board and the Environment Agency.

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1. Introduction

- 1.1. The Broads Authority has an opportunity to create a wetland demonstration site at the Horsey Estate in the Upper Thurne area (see Appendix A). The project would be to rewet around 3 hectares of agricultural peatland, with the rewetted area used to trial the production of reed mace (typha) and reed to showcase paludiculture, or wetland farming. At the moment, there is no paludiculture in the Broads apart from reed and sedge cutting, with limited markets for paludiculture farmed crops. The demonstration

site will test seeding and growing plants in the Broads, to see if these crops could be viable across larger areas, and also to test their water filtration capacity.

- 1.2. This is a relatively small-scale project in the Upper Thurne, with expected multiple benefits including improved water quality, reduced carbon emissions and water storage, reduced flood risk, and habitat creation. More specifically, it would help to achieve three main aims:
 - To filter ochre from the Brograve catchment, returning clean water to supply the protected downstream wetlands;
 - To rewet peat to reduce carbon emissions; and
 - To create a 3-hectare demonstration of wetland crops on deep peat agricultural land.
- 1.3. The construction work would be undertaken by the Internal Drainage Board (IDB) and the planting by the Broads Authority, with co-funding from the Authority and Environment Agency. The project is supported by the land manager (Horsey Estate) and land owner (National Trust).
- 1.4. This partnership project would contribute to the objectives of the following initiatives:
 - Environment Agency Water Environment Improvement Fund
 - IDB programme of integrated drainage improvements (planning the replacement of pumping stations in the Upper Thurne)
 - Broads Authority Interreg project CANAPE (Creating a New Approach to Peatland Ecosystems)
 - Other initiatives with an interest in the project, such as Water Resources East and Broadland Futures Initiative
- 1.5. This project would complement the IDB programme of installing new pumping stations with automated gates, which will also contribute to the reduction of ochre pollution. The pump replacements will run at variable speeds for better efficiency in both drought and flood event situations.
- 1.6. There are local complexities and sensitivities with managing land and water in the Upper Thurne. Partners are aiming to learn more from this test site, in addition to the upcoming Environment Land Management (ELM) scheme payments, to develop new ways to address the blockers to landscape change.
- 1.7. Work is also under development for two field parcels, directly south of the wetland demonstration project site, led by Norfolk Rivers Trust. Broads Authority officers are supporting a bid to the Green Recovery Fund in that area, with similar objectives around source pollution, water storage, carbon sequestration and biodiversity gain.

2. Objectives

2.1. The wetland demonstration project would meet CANAPE objectives by:

- Increasing the amount of peatland rewetted, thereby decreasing CO2 emissions
- Providing a demonstration site for farmers and land managers to see the potential of wetland agriculture
- Engaging with farmers and land managers in the Broads
- Collaborating with CANAPE partners and other projects, such as WaterWorks in the Cambridgeshire fens

2.2. The project would also help achieve these Broads Authority objectives:

- Improving water quality in the Upper Thurne broads by filtering ochre polluted drainage water
- Demonstrating the production of wetland crops which could, at a larger scale, be used for sustainable products such as building and thatching materials and biofuel
- Reducing Greenhouse Gas Emissions from the LULUCF1 in the Broads
- Provide habitat for iconic Broads species, such as the bittern and crane
- Working with private landowners/farmers to create nature friendly farming and wildlife corridors outside of designated sites
- Working in partnership with the Environment Agency and the IDB

3. Partner roles

3.1. Partner roles are as following:

- IDB (Lead Local Flood Authority for the pump drained catchment): Scheme design, construction and ongoing maintenance on drainage related infrastructure.
- Broads Authority: Vegetation planting, water quality testing, and arrangements with the land manager.
- Horsey Estate (land manager) and National Trust (land owner): Provision of 3ha of land with compensation against the disruption for taking part in the experimental pilot, but with no financial benefit to them by the end of the project. Support has been received in writing from both parties.

3.2. In addition to managing the Broads Authority tasks, the Environment Policy Adviser will also coordinate research and academic partners to produce evidence on different

¹ Land Use, Land Use Change, and Forestry (LULUCF)

topics, such as carbon calculation and paludiculture. The Centre for Ecology and Hydrology has expressed its interest in the project.

4. Timeline

- 4.1. The Environment Agency and the IDB have allocated some funding towards this project. The project needs to be completed by December 2022.
- 4.2. The estimated timeline for the project is as follows:
 - September 2020 – Broads Authority approval, IDB commencing design work
 - October 2020 – Agreement with the land manager on the valuation of the compensation against the disruption
 - November 2020 – Begin procurement for BA planting contractor, IDB to prepare the land
 - Spring 2021 (TBC) - Construction and planting may occur either in spring or summer 2021

5. Financial implications

- 5.1. The costs of delivering the project are estimated as follows:
 - BA contract for External Expertise for construction, planting and grazing protection, land valuation, water quality tests at £60,000
 - BA staff time £5,000Total project expenditure: £65,000.
- 5.2. The project would be funded from various sources:
 - European Funding (ERDF) at £32,500
 - Funding from the Environment Agency at £20,000
 - Existing funding from CANAPE reserves at £12,500
- 5.3. There is some underspend in the CANAPE reserves due to the favourable exchange rate between the Euro and the Pound since the beginning of the project. There will be no need to add funds into the CANAPE reserves.

6. Risk implications

- 6.1. The main risks have been identified as follows. Mitigation measures are provided against each risk:
 - Creating wetter floodplain areas and planting wetland plants has been done in the Broads, so there is little risk on the ability to deliver the project. Some of the specific plants have not been planted in the Broads before, so a provision of the need to

plant a second time is included in the budget (if the first planting fails). We have checked that a sufficient supply of local provenance wetland plants is stocked by suppliers.

- Wetland planting has not been used until now for testing the water filtration and demonstrating new crops to the farming sector. The partnership will need to define clear roles and responsibility, including on the engagement plan with farmers.
- There needs to be an agreement with the land manager on the valuation of the disruption due to the trial. If no agreement is reached within the estimated budget, the project will not go ahead.
- Planting is seasonal and will be impacted by the weather. The timeline is flexible so that planting can be rescheduled later in 2021 if it is not possible to plant in spring 2021.

7. Conclusion

- 7.1. The wetland demonstration project is a partnership opportunity for the Broads Authority to continue working with farmers and land managers to deliver the desired outcomes in the Broads Plan. The pilot will also provide evidence for options that would be suitable for payments in the future Environment Land Management scheme.
- 7.2. The partnership and academic partners will use the wetland demonstration project to test how new land management approaches could be developed in the Broads.

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Date of report: 04 September 2020

[Broads Plan](#) objectives: 1.1, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6

Appendix 1 – Location of the wetland demonstration site

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