Broadland Futures Initiative

Minutes of the meeting held on 10 March 2025

Contents

Attendees

Marie-Pierre Tighe (Chair)- Broads Authority, Helen Bradley – Jacobs, Rebecca Bromley- National Trust, David Cobby- Jacobs, Peter Doktor- Environment Agency, John Dougan- Environment Agency, Kellie Fisher- Environment Agency, Vanessa Gouldsmith- Natural England, John Hammond- Met Office, Catherine Harris- Environment Agency, Kevin Hart- Norfolk Wildlife Trust, Dan Hoare- Broads Authority, Andrea Kelly- Broads Authority, Kate Knights – Broads Authority, Helen Mullin- Jacobs, Mark Ogdon- Norfolk County Council, Philip Pearson- RSPB, Tom Say- Environment Agency, Yvonne Smith- Great Yarmouth Borough Council, Rob Wise- NFU, Kylie Moos – Broads Authority (minutes).

1. Apologies for absence and welcome

Marie-Pierre Tighe (MPT) welcomed everyone to the meeting.

Apologies received from Mareth Bassett, Wendy Brooks, Hannah Gray, Charlotte Rivett.

2. Landscape Sensitivity Assessment

In October of last year, the BFI agreed the methodology for the landscape sensitivity assessment. The assessment has since been undertaken based on a limited number of generic actions and the results were presented by Helen Bradley (HB) to the Initiative Project Team (IPT) team. The technical report has been circulated to the IPT for comment and the deadline for responding to Peter Doktor (PD) is 20 March 2025.

Purpose and scope of the study

- Landscape sensitivity assessment is a tool used to inform spatial planning and land management of developments or land management changes that would be of large scale and/or would potentially cause significant landscape effects.
- The purpose of the study is to assess the overall sensitivity of the landscape to the types of Flood Risk Management (FRM) actions presented in BFI's Toolkit of Actions to Reduce Flood Risk.
- The study considers the sensitivity of the landscape to the potential locations of FRM actions and will be used to help further inform the locations.
- The study comprises a proportionate, high level, desk-based assessment carried out in accordance with the latest guidance presented within an approach to landscape sensitivity assessment – to inform spatial planning and land management (Natural England, 2019).
- The BFI plan area incorporates the full extent of the Broads and some of the surrounding landscape including part of the Norfolk Coast National Landscape.
- The study does not cover the full extent of the BFI plan area. It is a more focused study which targets the landscape most likely to be affected by the FRM actions scoped into

the assessment. Urban areas being excluded from Great Yarmouth Borough Landscape Character Assessment, Great Yarmouth is excluded from this study.

FRM actions

FRM actions have been scoped into the study where they would potentially be of large scale and/or it is considered that they could potentially have a significant adverse effect on the landscape. To aid a proportionate approach to the study, the FRM actions that have been scoped in have been aggregated into four types based on similar key attributes:

- Type 1: Small singular structures (water level control - pumping stations, sluices, and weirs)
- Type 2: Large singular structures (in channel flood barrier/barrage)
- Type 3: Linear structures (coastal – including seawalls, rock or concrete block revetments and groynes/breakwaters, inland - including earth embankments, walls, temporary and demountable structures)
- Type 4: New water bodies (Flood transfer and storage for watercourses - including wetlands, washlands and reservoirs for possible later use, and managed aquifer recharge)

Key attributes and high level, worst case, design assumptions have been assigned to each FRM action type for the purpose of assessment.

Landscape assessment units

To carry out the assessment in line with the guidance, 16 landscape assessment units have been defined and assessed, based on:

- The Broads Landscape Character Assessment (edited by Norwich City Council Landscape Architect, December 2016).
- Norfolk Coast AONB Integrated Landscape Character Guidance (published by Norfolk Coast Partnership, alongside the Norfolk Coast AONB Management Plan Strategy 2014 - 19).
- Great Yarmouth Borough Landscape Character Assessment (Land Use Consultants, 2008).
- North Norfolk Landscape Character Assessment (Land Use Consultants, 2018).

Methodology

When assessing landscape sensitivity, two key elements are considered:

- Asses the susceptibility of the landscape and visual baseline to the specific change
- Assess the values of the landscape and visual characteristics.

Sensitivity assessment criteria

Informed by the key landscape and visual characteristics that could be affected by the types of FRM actions:

- Scenic beauty and special qualities of the Broads
- Scenic beauty and key qualities of natural beauty of the Norfolk Coast National Landscape
- Landform
- Land cover including field pattern, scale, and enclosure.
- Remoteness, wildness, and tranquillity
- Skylines

Indicators of susceptibility identified for each of the landscape sensitivity criteria, by describing how the key characteristics may be affected to a greater or lesser extent by the four types of FRM actions.

Judgements on susceptibility have been made on a five-point scale, very high (VH), high (H), medium (M), low (L) and very low (VL).

Landscape value criteria

The value of each landscape assessment unit has been assessed against a set of criteria based on designations and value associated with other factors*.

* Factors are based on those identified within Box 5.1 'Range of factors that can help in the identification of valued landscapes in Guidelines for Landscape and Visual Impact Assessment (GLVIA3) and Table 1: Range of factors that can be considered when identifying landscape value' in Technical Guidance Note 02/21 Assessing landscape value outside national designations.

Conclusions

The Broads are a nationally recognised landscape of high status, and the landscape value and overall landscape sensitivity to development is inevitably at the high end of the range of scores with limited variation.

Type 1 FRM actions (small singular structures)

- The landscape is largely of medium to high sensitivity to Type 1 FRM actions.
- Whilst small singular structures are present throughout the Broads, further structures would add to visual clutter or introduce structures that may affect skylines and the sense of openness.
- There is often limited tree cover which would restrict screening capacity.

Type 2 FRM actions (large singular structures)

- Type 2 FRM actions are only potentially applicable to landscape assessment units 8 and 11.

- The sensitivity to Type 2 FRM actions in both assessment units is very high as the actions are likely to be visible over an extensive area and in channel flood barriers in particular would be a dominant feature on the skyline.

Type 3 FRM actions (linear structures)

- The landscape is largely of high to very high sensitivity to Type 3 FRM actions.
- The introduction of Type 3 FRM actions would potentially further erode the positive landscape characteristics, and further detract from the distinctive, low lying and level landform.
- Type 3 FRM actions would also potentially present urbanising features within the rural landscape and may not be in keeping with the pattern and scale of the landscape, depending on their length, material, and design.

Type 4 FRM actions (new water bodies)

- The landscape is largely of high to very high sensitivity to Type 4 FRM actions.
- Type 4 FRM actions may require bunded embankments that would be uncharacteristic and potentially affect skyline views.
- Their introduction would also potentially be at the expense of other key component characteristics of the landscape such as Carr woodland, intricate dyke pattern and grazing marsh.

Catherine Harries (CH) added, this product is particularly important to the BFI because the landscape of the Broads attracts a lot of recreation and therefore money to the area. The landscapes is also what communities value most and why they live in the area.

Rob Wise (RW) asked if there will be an analysis of the landscape based on no interventions taking place and if the IPT should include this in their assessment. The Landscape Sensitivity Assessment is based on protection, but there should also be a comparison on what happens if structures are not introduced. Kellie Fisher (KF) noted that this is a good point and that a lot of existing legislation and policy approaches do not consider the impacts of climate change. David Cobby (DC) confirmed that they are planning to use the same assessment criteria that has been outlined today on the ‘do nothing’ and ‘do minimum’ baselines which would both result in a lot more water on the land.

Phil Pearson (PP) added, the opportunities such as new habitats being created should also be considered alongside the impacts. There needs to be balanced information which considers different options and a clear narrative to present the information.

Andrea Kelly (AK) commented that it is difficult to view the landscape and not consider the trade-offs. For example, through a peat project, the Authority have tried to construct a bunded reservoir but through the feasibility study and approvals process, the hydrological unit is not large enough to take the flood storage losses associated with the material movement off site, which is not unusual for the Broads. The Landscape Sensitivity Assessment also requires the

caveats associated with delivering the actions discussed today. AK added, the Broads Landscape Character Assessment is largely divided into soil types with peat changes dictating the landscape changes, but the Landscape Sensitivity Assessment does not include soil. DC responded, the landscape assessment is purposely at a strategic scale. There may be the option to go into more detail and redo the assessment once there is more certainty with different actions, but currently at this scale there is already a large number of combinations and possible types of FRM actions. HB added, the assessment does point out that landscape and visual impact assessments will be critical going forward once the exact locations and design is known. KF commented, strategies encompass many different themes and aspects of people's lives and, ideally, plentiful tools to help guide decision making would exist. However, resources are finite and instead, we must prioritise and invest in the best tools to help guide as many people as possible, whilst the strategy is being developed.

The comments today highlight the importance of communication and engagement, and the IPT receiving the same message regarding the strategy. The strategy will always have to navigate people coming into the BFI on different parts of their journey at the same time the BFI is on its own trajectory.

3. Climate Change

John Hammond (JH), Met Officer Advisor recently presented future climate change impacts and current impacts to Broads Authority members as part of a BFI workshop. The presentation was well received, and JH was invited to share a shortened version of the presentation to the IPT. Some of the key points from the presentation are listed below.

Global climate

- Global temperatures are on the rise and the past 8 years are the 8 warmest years on record. The global temperature has risen by 1.15ºC since the pre-industrial era.
- The climate has always changed, and always will, but it is the rate of change that impacting people and environment.
- Since the 1970s more than 90% of the excess energy stored in the climate system has been absorbed by the oceans.
- Global mean sea level has risen by more than 20cm since 1901 through the thermal expansion of seawater and ice melt on land. The rate of increase is rising:
    - 1993-2000 =2.27mm/year
    - 2003-2012 = 3.30 mm/year
    - 2013-2022 4.62 mm/year
- Oceans are becoming more acidic. 20-30% of excess CO2 has been absorbed since preindustrial times.

- 2024 was the warmest year on record and the first year that was likely more than 1.5 ºC above pre-industrial levels.

Current state of the UK climate

- 2014-2023 has been 1.25ºC warmer in the UK than 1961-1990.
- Seasonal changes, evident in nature are being observed by Citizen Science as the growing season is extending.
- The number of 'hot' days (≥28 ºC) more than doubled and 'very hot' days (≥30 ºC) more than trebled in the most recent decade (2014-2023) when compared to 1961-1990.
- The Atlantic Meridional Overturning Circulation (AMOC) – a major transporter of heat to the North Atlantic and northwestern Europe- is unlikely to collapse this century. Further research on AMOC weakening is needed to gain understanding of the system and improve predictions.
- Chances of seeing 40ºC was once considered a 1 in 100-1000 years event. In the present climate it has reduced to 1 in 100-300 years and based on the medium emissions scenario, in 2100 it would become a 1 in 15 years event.

Norfolk long term average changes

30- year average	1961-1990	1990-2020
Mean temperature	10.32 Celsius	11.04 Celsius
Annual rainfall	173mm	192mm

Suffolk long term average changes

30- year average	1961-1990	1990-2020
Mean temperature	9.52 Celsius	10.53 Celsius
Annual rainfall	591mm	921mm

What will the UK face in the future?

- Probabilistic projections
    - Rising seasonal temperatures.
    - Increase in temperature of hot summer days.
    - Frequency of hot spells is projected to increase.
    - Wetter winters, drier summers.
    - Increase in extreme hourly rainfall intensity.
    - Changes in the type of rainfall.

- Sea levels will rise more in England/Wales that in Scotland/Norther Ireland. This is due to glacial isostatic adjustment.
- In a high emissions scenario, sea level could rise between 0.5-1.15m by 2100 in London. Under a low emission scenario this would be 0.3-0.7m.
- UK climate change risks
    - Increase in heat related deaths per year.
    - Increased flooding and damages
    - Decrease in water viability due to low river flows.
    - Increase in days with 'very high' fire risk.

Where to access climate projections

- UK Climate Projections (UKCP) - Met Office
- The Met Office climate data portal
- Local Authority | The Met Office climate data portal
- UKCP E-Learning - Met Office

PD commented that the emissions scenarios that was shown as part of the presentation was already at the upper end with a Representative Concentration Pathway (RCP) of 8.5. JH agreed and noted that globally the target of 1.5 ºC as per the Paris Agreement, is already close to being reached.

The core projections for BFI are based on RCP 2.6 and 1.5 ºC by 2100 and RCP 8.4 and 4 ºC by 2100. Based on the presentation today, PD asked if the core BFI projections should be leaning toward a higher RCP. JH responded, there will always be caveats with the range of temperatures because it is not an incremental rise year on year and there are other cycles that need to be considered. The crucial point is not that the change is happening, but the acceleration is which it is taken place, especially in low lying area with vulnerable coastlines such as the Broads.

DH shared a paper on the Future proofing Broads Authority public moorings which was presented to the Authority last year and includes a section on water level changes in the Broads based on UK climate change projections.

KF thanked JH for the engaging presentation and commented on how important it is for the IPT to take away key facts and figures to share with communities and professionals.

4. Consultation on the land use framework for England

John Dougan (JD) Senior Environmental Project Manager at the Environment Agency joined the meeting to discuss the Land Use Framework which the government will be publishing to promote growth, sustainable development and respond to climate change. The Land Use

Consultation is live and closes on the 25 April. The Environment Agency will have their own views, but they may not replicate the view of the IPT. JD added, it is of interest to their team because it may have an impact on the BFI methodologies that are used to investigate different products, for example, landscape sensitivity.

JD asked if organisations that are represented in the IPT will be submitting a response to the consultation. Representatives from the Broads Authority, National Trust, NFU and RSPB confirmed that an organisational response is being prepared. Members of the IPT were asked to share their organisational response with Kylie Moos (KM) for sharing with JD.

5. Update on technical work

PD presented the latest product list and updated the IPT of the documents that have recently been shared for review.

Product 25d Salinity statistical model
The technical report has been shared with the IPT, the deadline for comment was 7 March.

Product 25f Landscape character
The technical report has been shared with the IPT, the deadline for comment is 20 March.

Product 26 Additional economic appraisal methodology
The report is an addendum to the work that has been done previously on the methodology for the economic appraisal. The report focuses on the environmental and recreational valuation withing the economic appraisal. The deadline for comment is 28 March.

Product 21 Long list of possible flood risk management actions
The technical report and appendices of actions is a key report that will be sent to the IPT for comment at the end of March/early April. PD advised that the due to the size of the report, some of the items which are now due are being pushed back to ensure the IPT have sufficient time to review Product 21.

The draft proposal will be presented at the next IPT meeting before being proposed at the Elected Members Forum on the 8 May.

Product 29 Climate scenarios and periods used in the appraisal
The technical report is due in May 2025.

Product 30 The use and nature of 'other changes' in the appraisal
The technical report is due in May 2025.

Regarding Product 26, RW commented that there will shortly be a consultation on revieing the cost benefit rules around flood defences which may mean that the IPT responses need to be reviewed. PD agreed that the economic approach will be reviewed periodically because it is an evolving subject.

6. Update on communications and community engagement

All the monthly newsletters have been uploaded to the BFI website. Tom Say (TS) has been working with the communications team at the Broads Authority to review the website and increase the visibility of the BFI. The aim is to remain transparent and user friendly without overloading the page. TS has also been investigating making video content again which is an easier way for people to digest the information around the BFI.

The BFI will be present at the Norfolk and Suffolk shows again this year.

7. Update on Elected Members Forum

The next meeting is taking place on 8 May 2025. There will be more information regarding the agenda at the next IPT meeting.

8. AOB

Due to a meeting clash, all future IPT meetings will start at 9.30am. KM agreed to update the meeting invites.

9. Date of next meeting

The next meeting of the Broadland Future Initiative is 9.30am-11.00am 28 April 2025.

Summary of progress

Outstanding actions	**Meeting date**	**Assigned to**
Share organisational response to the Land Use Consultation with KM for collation.	10.03.2025	All
Update the meeting invites with the new start time of 9.30am	10.03.2025	KM