

Minutes of the Upper Thurne Working Group held at Hickling Community Barn, Tate Loke, Mallard Way, NR12 OYU on Thursday 30 November 2023 at 10.30 am

Present: Julia Bower (Administrator and NSBA) (**JB**), Tim O’Riordan (UEA) (**TOR**), Robin Buxton (Horsey Estate/IDB) (**RB**), Stephen Prowse (National Trust) (**SP**), Richard Starling (BRASCA) (**RS**), Will Sands (HBS Farms 1995 Ltd) (**WS**), Patrick Richardson (Phoenix Fleet) (**PR**), James Stone (Bridge Stores of Potter Heigham) (**JS**), Robin Richardson (Phoenix Fleet) (**RR**), Richard Price (NCC) (**RP**), Andrea Kelly (Broads Authority) (**AK**), Giles Bloomfield (Water Management Alliance) (**GB**), Rob Smith (Norfolk Wildlife Trust) (**RS**), Peter Doktor (Environment Agency) (**PD**), Catherine Harris (Environment Agency) (**CH**), Howard Jones (Natural England) (**HJ**), Simon Wilson (Hickling Parish Council) (**SW**), Harry May (Potter Heigham PC) (**HM**), Dan Hoare (Broads Authority) (**DH**), Mark Collins (Navigation Committee/NNNS/Broads Society) (**MC**), Fiona Johnson (NSFA) (**FJ**), Keith Bacon (Catfield PC/RTTA/Broads Society) (**KB**), Harry Blathwayt (BA/NNDC/BFI) (**HB**), John Tallowin (Local Farmer) (**JT**), James Chapman (IDB/Farmer) (**JC**), Rob Wise (NFU) (**RW**), Tim Harris (Local Farmer) (**TH**), Ian Robinson (RSPB) (**IR**), Brian Wilkins (Chair) (**BW**)

1 Welcome and apologies

BW welcomed everyone to the meeting.

Apologies were received from Henry Cator, Stephen Bolt and Paul Rice.

2 Introductions

BW introduced four newcomers to the group namely Fiona Johnson of Norfolk Strategic Flood Alliance, Howard Jones of Natural England, Rob Wise of NFU and Richard Price of NCC.

3 Minutes of last meeting

There were no matters arising.

Notes of Site Meeting held on 4 September at Hickling

This was discussed under Item 5 Aquatic Plant Management at page 8.

4 Broadland Futures Initiative

CH talked about the recent flooding in the catchment. October saw 150-200% of the average October rainfall fall on already saturated ground in addition to neap tides and a tidal surge. This led to a tide lock situation with nowhere for the water to go. There has not yet been a run of lower tides to allow the water to drain. They will come but not just yet. As far as BFI is concerned this event will be useful for the modelling which they are undertaking as it will make the models more robust and realistic. However, the consequences of persistent high water levels for businesses and homeowners are serious. There is a reasonable likelihood that this will happen again so it is important for the BFI to understand why this has happened.

RR said that the water level has not just been higher in the last six weeks but it has been higher than usual all of this year. The height under Potter Heigham bridge was 6’3” for only three days this year. The marshes were already saturated when the recent events happened and the question is why.

PD responded that the waters levels have been consistently high in recent winters, but that this does not explain why they have been so high for all this year. He suggested that perhaps the base line is moving because the sea level has increased by 4 mms year on year since 1991 at Lowestoft. **RR** said that changes have been made to the profile of the lower Bure over the last twenty years including the most recent Herring Bridge and he asked when these interventions were going to stop. **PD** responded that it is all about understanding what is happening and what has happened in the past. **RR** suggested that flooding could be mitigated by installing a large pump at West Somerton to shift river water directly into the sea. **JC** said that a pump is not be needed. Instead a barrier is needed to stop saline coming out there and an under stream to take the water away.

GB said that despite recent reports, there has been no loss in pumping capacity. **GB** said that having started with a saturated catchment this was exacerbated by unprecedented levels of rainfall. The water level system is incredibly complicated, and designed to keep the tides at a requisite level. What is critical to understand is that at a certain point when that requisite tidal level has been reached the water is designed to tip into all of the flood cells in all of the areas. The aim is to maintain a standard level of protection to the whole community so that the cells should not fill up any sooner than they are designed to, to provide the required capacity. If they do, you rapidly take people to a different level of risk. Where the low spots are lower than they should be, they need immediate response and raising up so that the tipping in does not happen any sooner than it is designed to do. Unfortunately, the response from the EA has not been good enough to meet this objective during the the current high water event. It took the EA three weeks to provide sandbags after they were requested. At the moment we are pumping water around in circles unnecessarily. The WMA bill is currently around £25K per week for the permanent pumps and an extra £20k per week for the temporary pumps. They do not receive emergency funding so this has to be paid for by the people they tax. That is not equal, nor equitable, nor fair.

JC said that all the businesses, boatyards and farmers affected by high water have only one person on the ground from the EA with whom to consult. This person is fairly new to the job. The low spots have been notified to the EA. Some low spots in Martham were notified to the EA in 2022 but because of the EA protocols it takes them two years to do the work. That is not acceptable.

FJ is new to the job with the Norfolk Strategic Flood Alliance (NSFA) and not here to comment but to here to listen and learn.

HM had many complaints about the EA and their neglect of the area. He suggested they should listen to the people on the ground. Various breaks in the flood barriers have been reported but nothing has been done about it.

CH believed that sand bags had been issued to mitigate local flood bank deficiencies but had to concede that more could have been done. **PD** commented that the recent intense rains and elevated water levels are a challenge for the BFI to understand and address.

KB said that the flood wall is acting as the EA intended it to in that it is overtopping in various different places to avoid one big major breach. However, there is lots of local leaking especially at Martham Ferry. The big difference this year is that the water has stayed and not gone away after a few days, and this requires further investigation.

RW was around when the Broadland Flood Alleviation Scheme came to an end. At that time there was a recognition that not all of the work had been completed to maintain the bank heights. The EA was successful in getting some central government funding and some local levies with a view to getting the flood banks back to design heights. The current discussions suggest that either this work

has not been completed or needs to be supplemented. We have some short-term issues which are not easy to deal with because of the tide lock but the intermediate problems have long been notified to the BFI. These should now be addressed in other fora. There is a meeting on 19 January of the Regional Flood and Coastal Committee and **RW** suggested that we obtain an update from the EA on where the problems exist, what funding is in place, and what are their plans to deal with the issues.

PR said that as far as he is concerned the water levels started to rise on the Bure about twenty years ago. He handed round a picture of the lower Bure at Scare Gap where the river was straightened over the course each of three years. This had definitely restricted the flow by a third.

RP referred to the serious flooding on the Repps side of the road at the bridge. There is a field adjacent that could take the water but there is no way for it to get there. The Highways team are very happy to facilitate this, but due to the recent sharp drop in temperature they are prioritising gritting the roads. Herbert Woods have been pumping out their water into Latham's car park which is not allowed. **RP** has spoken with all the agencies to bring them up to speed, but there are also some very useful people who are posting videos on YouTube showing drone footage of the area. These clearly show where the low spots are. We should also remember that sandbags are not environmentally friendly and are a hazard. The modern equivalents are 97% biodegradable and do a better job.

RR said that someone had come onto his property last week, without permission, and sandbagged it to stop the water going onto their field. It did stop the water going onto the field, but water levels went up in the Phoenix Fleet office by two inches. He went on to ask what the point is in pumping vast amounts of water out of fields into a river system that is already saturated and blocked, causing havoc for homes, businesses, and livelihoods. There has to be someone with an overview, who says that at this point the pumping has to be reduced. This action is necessary because it is not just Potter Heigham, it is the whole of the Bure system that is under water, including the jetties. All this is increasingly dangerous.

GB responded that if he turned the pumps off, the water levels would be even higher. It is critically important to keep the water tanks empty as long as possible and not to allow the water into them until the requisite time because this practice protects everyone from flooding. It is not one of us against the other. Everyone is in this together. The model is really complicated so a collective approach is vital to protect the 654 residential properties that are below the defence level in the Upper Thurne area. **GB** implored the EA to get the low spots which are below the requisite height sandbagged. There are low spots of 12 to 18 inches below the design level. If that continues we will lose the grass and then we will lose the banks by scouring and it will be a completely different ball game. This event is not over and **GB** warned that it might go right through the winter. We are at the beginning of something, not the end.

PD then explained that the BFI is aiming to produce a one hundred year flood risk strategy for the Broads. The BFI has thirteen objectives that they want to achieve through managing flood risk. These were prioritised at the UTWG workshop one year ago. The BFI has an elected group of top decision makers made up mostly of elected councillors. They have now carried out the same exercise. The top three objectives which came out of it are:-

- 1) Ensuring resilience within the built environment focussing on residential and businesses so that they can resist and recover from flooding.

- 2) Devising an integrated approach to the management of flooding. Do not look at resources in isolation.
- 3) The strategy must adapt to continuing climate change.

These are very similar to the priorities that came out of the UTWG workshop.

The elected members were asked to think about this in both the shorter and longer term. When they thought about it in the longer term measures to try and mitigate climate change became more prominent. All the thirteen objectives are still relevant and will be used as the strategy is developed. In addition the process of prioritisation does not overrule any existing legislation.

The BFI have also looked at different approaches to flood management over the summer. They have done this by going out to public consultation on the long list of the possible actions to manage flood risk. There were no suggested additions or removals to the original list of 16 possible measures to take. Measures include traditional and institutional type responses. The next steps over the coming months are to start thinking about the different scenarios that we are likely to face in the future, going beyond the current situation on the Upper Thurne. We then need to look at possible actions. It is envisaged that the list of potential action combinations may be long, so these will need to be analysed to find out which will be most effective and consolidated into a shorter list. Finally, the hydrological model will be tested to see how effective it will be at managing flood risk. This is necessary to help calculate which measures will work best potentially under a whole range of circumstances. We can then draw these together to form the basis of our adaptive plan.

HB said that he is struggling with the form of an adaptive plan being planned for the eroding coast. He referred to the scheme called the Coastal Transition Acceleration Programme (CTAP) where there will be no financial compensation for homes or businesses. The Dutch are now working on a three metre rise in sea level. This has been passed into law by the Dutch Parliament. All future engineering works will be based on this rise. There is no point beating around the bush. There are houses in Hickling where the residents have been unable to flush their toilets for six weeks. At what point does that become an unsustainable house and what steps we are going to take to ensure houses are sustainable in the future?

RB said that there is a danger that everything will be blamed on climate change. We also need to realise that the model for maintenance and adaptation investments for the drainage of rivers and marshes which are in place at the moment is broken.

WS said that in October we had one third of our annual rainfall, and by now it is probably one half. Farmers were told that the IDB pumps can cope with that kind of rainfall. **WS** thinks that the rivers should be dredged which would help the flow. Take the sediment and put it on the banks as in the past and then the banks are always kept a little bit higher. Channels should be kept to their original river width as opposed to being constantly reduced.

TH commented that it is fine to have a plan but how are you going to identify the trade-offs. As a parallel, the COVID enquiry is now revealing that many options were not identified and explored in the early stages of the pandemic. Will it be quantified? Who will make the decision?

GB responded that current legislation does not allow for compensation. If that is not what we want, then we have to change the legislation. That will also require a change in approach. Some changes are already happening. WMA are installing new pumping stations that pump at a slower rate and have at least twice the capacity of the old pumps. They are running at 80% capacity as opposed to 20% capacity of the old pumps. The industry is already adapting.

CH suggested that we talk about the shoreline at our next meeting. At present the shoreline policy is to hold the line with currently no intention to change this but this policy is conditional on it being sustainable in the long term.

RS commented on the shrinkage of the peat levels during the hot, dry summer. In Somerton it went down considerably and this has made the flooding situation worse. He agreed with others that the water cannot get away like it used to. Flood bank management needs to change. Trees moving in high winds let in water in through their disturbed root systems. This has made the flood risk situation worse.

JC said that farmers are not worried about having water on their land for short periods of time. He reiterated the point about flow restrictions being added to the Bure over a period of time including the Herring Bridge at Yarmouth. The river has been narrowed by 25 metres at the Herring Bridge. If you read in the design of the bridge it says that there could be an increase in flooding upstream and that is a critical issue. If the water could get out at Yarmouth we would not be talking about this now. In a normal 24 hour period there are 560,000 tons of pumped water trying to get under Potter Heigham Bridge without taking into consideration the tidal movements of ponded water. The IDB have tried to deal with that at Martham but other sectors cannot do that.

BW commented that flow in the Bure and Thurne is limited by the slack hydraulic gradient which is about 1:30,000. The ground level is about the same at Potter Heigham as at Gt Yarmouth so there is very little to induce flow.

RW said when the BFI comes up with its adaptive plan it might involve doing things that require a change in legislation because some of the areas or historic monuments will no longer be viable. It will be necessary to think outside the box? Projects like BFI will very possibly need to influence national policy.

AK wholeheartedly agreed and said that we need to think outside the box. We all need to influence a number of mechanisms that sit outside the room because we are very much at the sharp end in the Broads. A lot of other places are not coming up against the challenges that we are. At the moment, there is a SSSI reform taking place. She asked Natural England to review our SSSIs because we may not be able to manage them in the same way in the future as we do now. They may be constraining our decisions now because certain schemes have to comply with them. The Agriculture Environment Support systems need to look at adaptation because we will be managing high water levels where farmers will be losing crops as well as the infrastructure associated with managing that land. There needs to be an adaptive pathway that is fully funded through the capital items and through ongoing payments, because what we are talking about is very long-term change. **AK** will present her findings at the next meeting of the UTWG in the spring of 2024.

TH said that the optioneering process is very important and that it is critical that the agencies involved understand the problem. **PD** responded that it is the BFI's intention to do just that but there will be trade-offs.

PD reiterated that the BFI team will undertake to review the coast at the next UTWG meeting and will be happy to bring their consultant **Jacobs** along to face the hard technical questions.

WS asked whether we had been in touch with the Somerset Levels to see what they have done there because they faced similar problems before we did. In addition, is the BFI looking worldwide to see what people have done elsewhere and evaluating this experience. This might save a lot of time and resources.

RP informed the meeting that there are 37 agencies in the Norfolk Strategic Flood Alliance including the EA, AW and the RFCC and it is chaired by Henry Cator.

5 **The Nature for Climate project (AK)**

It was decided to hold this presentation over until the next meeting.

6 **Broads Authority funding, Upper Thurne and Hickling Broad aquatic plant management and river management updates**

DH gave a presentation on these topics. His first slide was a pie chart showing how his budget has been spent on the different navigation activities in the past year. 64% is spent on dredging, 16% on moorings, 10% on water plant cutting, 7% on navigation work and 3% on tree cutting. This is how the BA's income from tolls is spent. In recent years toll increases have been above the CPIs but most of the things that **DH** has to buy have increased in price above the level of the CPI, such as steel and diesel. In the next two years he is looking at a reduction in what they can achieve in real terms operationally. A decision will have to be made about which items on the list they will have to reduce. These are very difficult choices to make.

In the light of the previous discussion **DH** chose to concentrate on dredging and the evidence that the BA uses to decide on where to dredge and how much dredging should take place. All areas of the Broads have a full hydrographic survey on a five year rotation. The whole of the Upper Thurne will be surveyed this coming winter. The BA uses this to see which areas have fallen below Mean Low Water Level (MLWL) which is the specification set for what is a reasonable depth for passenger vessels. The MLWL is the average of all the low water tides through the year. This was a process initiated by BESL in the 1990s. It was repeated two years ago and it was found that the average rise of water at low water over the Broads was 11 cms in thirty years. This calculates to about a 3.6 mm rise each year at Gt Yarmouth, similar to that at Lowestoft. Higher sea levels are a factor in stopping the water getting out.

The BA does not dredge in the same way as the EA do. They are not analogous with the Somerset Levels because the EA are responsible for them. The BA's dredging is very much focused on navigation. The income for navigation activities all comes from the toll payers. This is what is available to **DH** to spend on dredging and maintaining the navigable levels in the rivers. That money is not directed to increasing the conveyance of water or increasing river widths, etc. In the past, where the banks were set back (the Set Back Schemes) that created more volume between banks in the lower rivers. This is where some of the capacity has been increased in the rivers over the last thirty years. Perhaps in the light of current events this arrangement needs to be revised.

JC expressed concern that the BA are only dredging for navigation because that is a problem. **GB** also added that another problem is with the gradient reducing at the side of the rivers and you have to be on top of vegetation management. Vegetation management is especially important with gradients as flat is 1:50,000 although it is an issue for fisheries. Vegetation can slow the flow out as well as in.

RR said that these figures more or less agree with his observed figures at Potter Heigham but this does not explain a huge rise in the last twelve months, namely another 6 inches over the whole Bure system including Wroxham and Horning. **GB** suggested that this appears to be a localised effect.

RS suggested looking at the efficiency of dredging such as putting it on the river banks and not removing it by barge. Similarly with water plant cutting. Cutting the plants shorter early in the season would mean that fewer cuts would be necessary.

JC expressed concern that the BA are only dredging to navigation status because it is a vicious circle. The water levels are going to keep coming up if the river banks are not put back to where they used to be. **DH** responded that he also does not have the evidence of where the previous river authorities dredged to. What we have is the current data and what we need to look at are the gaps in that data and decide what information we need in order to make the best choices. If the BFI are looking at this and will model it that would provide the evidence to give us a better route forward.

WS pressed the point that the BA are only dredging for the navigation and that if they dredged from bank to bank this would make a difference. **DH** said that they are not doing the EA's job for them but that they could.

MC said that the laws are outdated and the Broads Act needs to be reviewed to see if the BA can be relieved of the duty of having separate budgets. He said that the people who are complaining so much about the level of tolls increases are wrong. The idea of going towards a 'budget Broads' is entirely incorrect and will defeat what we all want. He also thinks that some of Natural England's policies should be eased notably with regard to water plant cutting.

DH's team work quite closely with the EA's Asset Performance Team in terms of where the low spots are and where the EA can use the dredge sediment in their future schemes eg, Chapel Field, Postwick Marshes, Reedham and Ant Mouth. Sediment is waste: one of the constraints that they have is about the most sustainable way of re-using it. The biggest challenge is the adherence to Waste Regulations and how to get over them. Dredging and dumping the waste is straightforward but if you want to do something creative with it, meeting the official permitting processes is far more complicated. The BA needs to work with the EA and DEFRA to make sure that there is a route by which they can dispose of waste dredgings and plants without tying themselves up in red tape and ultimately not achieving their objectives. **DH** emphasised that they are de-silting rather than hard dredging.

HM asked what dredging has been carried out in the last 20 years at the Yarmouth yacht station and on Breydon at Asda. **DH** replied that these areas are usually dredged annually by hydro-dynamic dredging which agitates the silt using a rake so that it will be carried out to sea on the ebb tide. The river depth maps are available on the BA web site. They show at least 2 metres depth right through the lower Bure.

Aquatic plant management

The amount of dredging carried out annually has remained fairly static over a period of time but the area that has increased significantly is aquatic plant management over several locations on the Broads. This year the volume and extent of water plant growth has been more than ever. Due to the increased quantity of cut water plant a problem is arising in how to dispose of it. If it is left in large piles it becomes anaerobic and drained liquids high in nutrients leach back into the water system. The piles need to be kept fairly small so that they dry out. This means that there is an increasing challenge over where to dispose of them.

The water plants themselves are a feature of the SSSIs so we also need to think about the effect of plant cutting. There is a potential for increased turbidity and increased nutrient input. At the site meeting on 4 September the matter of extending the cutting beyond the marked posts was raised. At the moment about 10% of Hickling Broad is cut (within the marked channel). If this were extended to 10 metres outside the marked channel plus the Catfield Dyke approach this would add another five hectares of cut. That would amount to 13%-14% of the Broad being cut. Factors to consider are the effect on the water plants and the increased turbidity of the water. Also highly

relevant is what the landowners, NWT and Natural England think about it. If they agree, the next challenge would be where to dispose of the cuttings. In addition this has been raised at a time when **DH** needs to do less because of limited resources but is being asked to do more.

MC access to Hickling Broad is limited for both sailors and walkers. The businesses around the Broad need to be supported and he suggested that NWT should be funding some of this as both the landowners and as a wildlife organisation.

RR said that even though they have adapted their hire boats so that they can go up to Hickling, when hirers read how careful they have to be, they are put off and decide to go downstream. **GB** said the strength of doing this is that it sustains productivity and growth in a rural area. Unfortunately, the EA do not see the pressures that people are suffering, the real harm to their mental health and the financial consequences of EA's inaction.

JC asked if more boat traffic would keep the water plants down and **DH's** response was possibly. **DH** said that all the navigation maintenance work is paid for by toll payers and is strictly ring fenced. He said that farmers could use the water plant cuttings but the challenge is to get these to where they needed.

HJ said that NE have to be flexible and open to change. He noted the recent improvement in water quality and the constraints imposed by SAC and SSSI designations. However, NE will meet with partner organisations including NWT. If all the evidence is presented to them they will look at it. The relevant officer is Dan Duthie.

MC said that Hickling is being choked, people are losing out, and management plans need to change, and quickly. There needs to be a proposal on the table for balance to be achieved against Broads Act objectives.

DH came back and said that there is now more water plant cutting on the Waveney and the Bure in the main rivers. The BA now routinely cut in the access channels to Rockland Broad and Bargate Broad. The Parish Councils are equally passionate there about getting their water plants cut and **DH** cannot magically conjure up more capacity to cut.

MC said that he was arguing for a more integrated approach to financing the work including NWT, NE and an increase in tolls.

HB said that we need to lobby central government who have not supported National Parks at all for 13 years. Then we could have an argument that dredging and weed cutting could be part of the National Park budget.

BW suggested a campaign for the coming year called 'Fair Funding for the Broads'.

Items 7 and 8 were set aside due to time constraints

TOR summed up as follows:-

First, it has been a very interesting meeting. There is something very special about the mixture of knowledge and the understanding of people, and the courtesy they give each other because they listen and respond and there is very little aggravation.

Second, the BFI should no longer be called that but be termed Broads Futures instead because it is no longer an initiative. Everything that has been said today is about interconnections between Broads Futures.

Finally, we need to look at the next seven years from the Broads Futures in greater depth. Our structures and the way that we do things are out of kilter with what is going on right now and certainly out of kilter with what will go on after 2040. **TOR** urges BFI to take a seven year period and look at building our understanding. We should look at this in our next meeting. Then look at the period 2030-2050 which will be much more of a step change. We need to look at new ways of water and land management. After 2050 we cannot imagine how things will be. The tipping points of the past are now seriously big issues. We cannot know what the global rainfall and temperatures will be in 2075 but there is a likelihood for much more dramatic changes in patterns of tides, salt concentrations, rainfall and droughts. The BFI model has to look at how we make this kind of world viable for people's well-being, for the landscape, for eco systems and above all for different forms of financing land use and management and the sharing of resources and responsibilities. Sustainable economic survival is about reconnecting us with each other and to the planet.

TOR urged us to think about Broadland Futures in this group in three chunks:

- 1 Today's discussion has laid the ground rules for what we do over the next five or six years.
- 2 For 2030-2050 we make step changes but we do that work in the next seven years so that we know what we have to do and the drama that is involved in that.
- 3 2050 and beyond. We need to put out feelers into survival economics. If we do that **TOR** thinks that the UTWG will always have a unique role both locally and globally.

The meeting ended at 1.30pm