Broads Authority

20 March 2015 Agenda Item No 19

Consultation on the Update to the River Basin Management Plan Report by Head of Strategy and Projects

Summary:	The paper interprets and summarises the proposed Cycle 2 update to the River Basin Management Plan. It gives a suggested response to the consultation questions. The main message is the importance of the Catchment Partnership Approach (that the Broads Authority has helped to establish and hosts) in determining the detailed needs and solutions to meet Water Framework Directive requirements in the area. It includes specific mention of proposed changes to the usage definitions for Heavily Modified Water Bodies that raised concerns at the Navigation Committee. The response suggests maintaining a consistent approach across the whole system and using the 'navigation' definition for this.
Recommendation:	That members note the consultation invitation and support the proposed response to the main questions asked.

1 Introduction

- 1.1 In response to the Water Framework Directive (WFD) the first cycle of the River Basin Management Plan was published in 2009. The Environment Agency is consulting over an update to produce the second cycle of the Plan. The consultation opened in October 2014 and closes on 10 April 2015.
- 1.2 There are two parts to the national document supplemented by very extensive additional material available on the web. The national material is supported by regional details the Anglian River Basin Plan which in turn has been supported by specific catchment details (with the Broads falling within the Broadland Rivers Catchment).
- 1.3 There is a challenge to penetrate and understand this complex documentation. As it is primarily a national plan broken down by regions, much of the finer detail on what will happen in the Broads is not explicit and becomes wrapped up in proposed measures constrained by available finance.
- 1.4 Although the Environment Agency has been keen to seek responses from many stakeholders they have the difficulty of making available an enormous amount of data that can sometimes lack the necessary local detail that clarifies the issues for those stakeholders. Appendix 1 tries to provide a simple guide and commentary to the main issues.
- 1.5 The consultation document seeks an electronic response to 9 questions and the draft proposed response is shown in 3 below.

2 Consultation response

- 2.1 After reviewing the documentation, a key element of the Broads Authority response is that it will be vital to develop the work of Catchment Partnerships where the detail of the needs and the mechanism for implementing the proposed measures is best undertaken. The Broads Authority hosts the Broadland Rivers Catchment Partnership which has produced a Catchment Management Plan which provides local detail to help implement the Water Framework Directive
- 2.2 One issue that was raised by local Environment Agency staff was the alterations to the definitions of the usage that caused certain water bodies to be classed as Heavily Modified. These proposed alterations to cycle 2 had been brought in to achieve a greater consistency and clarity about necessary modifications. For the Broads there were proposals to identify the water bodies' usage as 'recreation' rather than 'navigation'. This matter was drawn to the attention of the Navigation Committee at their last meeting and there was concern expressed that such a change may impinge on any future plans around commercial navigation interests. Officers undertook further investigations to clarify the matter.
- 2.3 The definitions had been developed with input from local Environment Agency Officers and did seek to accurately reflect usage of the waterways in the Broads. The investigations suggest that there are no hidden impacts that might constrain what would happen in the Broads over and above the general requirements of the WFD. However, neither were the reasons for having different parts of the system defined in different ways made clear and the Environment Agency has not undertaken a detailed assessment of whether there could be conflicts with the Broads Acts.
- 2.4 The officer recommendation is therefore to respond with the comment that unless compelling reasons could be brought forward it would seem best if all of the navigable system remained defined as modified for navigation rather than anything else especially as the differing definitions appear to have no real impact on measures brought forward to meet the requirements of the WFD.

3 Responses to the questions

3.1 Question1: Do you agree with the proposed changes to the river basin district and catchment, water body boundaries and artificial and heavily modified water body designations?

The Broads Authority understands the rationalisation of boundaries but cannot see clear reasons for the mix of definitions related to usage of Heavily Modified Water Bodies. This could appear to conflict with the overall definitions of the Broads Acts and the Marine Management Organisation. Although it would appear that the WFD definitions have no real significance in the measures proposed, the Authority proposes the whole navigable system is dealt with consistently and a 'navigation' definition is used. The Broads Authority always seeks to gain multiple benefits through managing the waterways and welcomes retaining the ecological value alongside the navigation, recreational and commercial values of the network.

3.2 Question 2: Do you agree with the objectives proposed for water bodies and protected areas?

As an area where water is central to its very identity and importance, the ideal would be to ensure all water bodies are rapidly brought to a 'good' standard for the multiple benefits this would give to society. Indeed, society is facing unwanted costs dealing with the effects of poor quality water. The RBMP proposals are however based on the belief that there are insufficient resources to rapidly tackle all the measures necessary in England at this stage. It is hoped that the development and publication of the draft proposals improves the awareness of the need to act and so is a step in the right direction. The assumption about resources is probably pragmatic. The specific objectives for Broads' water bodies are generally 'good' and this is welcomed. Where there are still unknowns or technical challenges, the Authority would wish to see continued effort to identify the causes of less than good status and then the introduction of appropriate measures.

3.3 Question 3: Where flexibility exists, should the priority be maximising the number of water bodies at good status or improving the worst water bodies?

There needs to be improvements across the whole of the district so as to build awareness from society about the need to act and then to maintain the quality status of the water bodies and where possible continue to enhance them. If effort is directed at just the worst areas the necessary behavioural changes will not be so widespread. As water exists in a network there is also sense in trying to raise standards across the whole system together which should facilitate the maintenance of the status gained.

3.4 Question 4: Do you agree the correct measures have been identified?

The measures detailed for the Broadland rivers are broadly acceptable. The Catchment Summaries start to become confusing however in that much of the detail reads more like the Environment Agency's own work programme. Although reference is made to partner organisations, this is inconsistent.

The Catchment Partnership – which includes the Environment Agency – seems well placed to build on the WFD investigations and conclusions and develop local details of needs and solutions. The Partnership should then be able to identify (additional) funding sources and advise on priorities and especially multiple benefits from interventions. It will still be important to identify elements where individual organisations should (also) be acting (e.g. IDBs) and the important lead role and 'catch-all' role the Environment Agency may be required to fulfil. The water bodies in the Broads still have moderate levels of Phosphate and it is not clear how a significant decrease will be made especially with the water companies feeling price restraint for their customers is a high priority. There is insufficient recognition of the level of input required to work with landowners and others to instigate new ways of working both to restore water bodies and to maintain condition afterwards. Clearer indication of who will undertake this work and how it will be funded needs to be drawn out.

3.5 Question 5: Do you agree with the way the economic appraisal process has been done?

The appraisal process is described under 7 in the economic analysis as:

"The analysis has drawn on a large and diverse evidence base. By its very nature, the sort of complex analysis summarised here requires the use of assumptions and brings with it a degree of uncertainty. However, the results are of sufficient quality to inform this consultation."

This seems a fair analysis and provides broad-brush indications. The use of scenarios is also helpful to illustrate the comparative spending to achieve the results detailed.

However, the use of scenario 5 brings in a political decision: both in terms of making assumptions about what funding might be available but also in terms of basing it on existing costs according to the approach of the Environment Agency. The ideal would be to ensure all our water meets the requirements of the WFD. The exclusion, at this stage, of changes that have no technical solution seems acceptable. However affordability will vary according to the value base used to make the judgments and this will not be consistent between all.

At times of public constraint it becomes even more important to explore different ways of achieving outcomes and there could be opportunities to reduce costs by incorporating local solutions. The standardisation by using EA based costs allows comparison but may not be the whole picture in terms actual costs.

3.6 Question 6: What measures can you deliver to help achieve the long term objectives?

The Broads Authority wishes to continue to play an active part in the Broadland Rivers Catchment Partnership and approach. Necessary objectives and actions will be translated into the Broads Plan as appropriate in its forthcoming review and revision. (New Plan proposed for 2016). The Authority will give due regard to the WFD objectives in all the sites it manages and the guiding management plans. The Authority will continue to press for collaborative action in planning for climate change and will seek to develop a collaborative approach to holistic water management to support its three purposes.

3.7 Question 7: Do you have any further comments on this consultation?

The Environment Agency needs to recognise the special qualities of the Broads and fulfil its need to meet the requirements of Section 62 of the NERC Act to have regard to the Broads Plan objectives. This includes ensuring the particular navigation and high wetland biodiversity needs are met.

The importance of a changing climate and rise in sea level are especially recognised by the Broads Authority due to the vulnerability of the Broads special qualities. The Authority would wish to see continued collaborative effort with the Environment Agency to address these issues and suitable reflection of the necessary actions within the RBMP.

3.8 Economic analysis Questions 8 & 9: Do you have any comments on the scenarios and how they have been produced? How could scenario 5 be developed to present a preferred option for the impact assessment that will accompany the updated plans in autumn 2015?

Although the scenarios are helpful to understand priorities from a national viewpoint they are less useful when looking at the detail at the Catchment level. The potential for cross funding, for the lead to be taken by others and in partnership, could make a significant difference to how far existing funding might be spread. This suggests that although the national requirements of the RBMP review process are met, there needs to be recognition of the importance of allowing regional and local flexibility in the implementation of the overall approach including the value of taking an ecosystem services approach. The creation of a long term vision on how collaborative working can develop and clearer signposting for how key agencies can incorporate helpful actions in their deliberations would be helpful.

Background papers:	www.gov.uk/government/consultations/update-to-the-draft- river-basin-management-plans		
	https://consult.environment- agency.gov.uk/portal/ho/wfd/draft_plans/consult?pointId=s140 5417862790#section-s1405417862790 for the Anglian River Basin District Plan		
Author: Date of report:	Simon Hooton 3 March 2015		
Broads Plan Objectives:	CC4, BD3, BD4, BD5, AL1.2, AL2.1, NA1.2		
Appendices:	APPENDIX 1 – Interpretation of and commentary to the consultation document's key points APPENDIX 2 – River Water bodies in the Broads – summary of status and objectives		

Interpretation of and commentary to the consultation document's key points

A. Introduction / Background

The framework for managing the water environment throughout Europe is provided by the Water Framework Directive (WFD). The directive requires measures to be taken to encourage the sustainable use of water and to protect and improve inland surface waters groundwater and coastal waters. Under the WFD a plan must be developed for each river basin district. For the Broads this has been defined as the Anglian River Basin District and includes the Broadland Rivers catchment.

A river basin management plan is a strategic plan and includes environmental objectives for each body of water and a summary of the programme of measures necessary to reach those objectives. The current Plan was published in December 2009. The WFD requires the Plan to be updated every 6 years and the Environment Agency is currently consulting on a draft update to that Plan. Once approved by Ministers the environmental objectives become legally binding and will inform decision making by all public bodies. The WFD requires prevention of deterioration of all water bodies from their present ecological status/potential. The default status for all water bodies is 'good' and ideally this would be achieved by 2021 although it is recognised that some may not achieve this till 2027 or beyond.

Certain areas are designated as protected areas under other European Community/National legislation and have their own objectives (which unlike WFD water body status objectives cannot have economic arguments used to propose less stringent objectives). These included drinking water areas, bathing waters and Special Areas of Conservation that are water dependent. (See appendix for details)

The Environment Agency believes the proposed objectives in the draft plan can be achieved by carrying out its programme of measures. The programme is a summary of actions that are cost effective, technically feasible and proportionate in terms of the benefits from the actions outweighing their cost.

B. Water body classification

Good status represents conditions close to an undisturbed natural environment. As many water bodies are artificial or have been heavily modified by people for particular purposes (e.g. flood defence or transportation) they are unlikely to be able to achieve the same standards as more natural water bodies and they are assessed against 'ecological potential' rather than status.

Since the 2009 Plan there have been further investigations to better understand which water bodies have been 'modified' and why and to achieve greater national consistency. This has included revising the definitions for the uses that have required modification. For the Broads the noticeable change is a clearer definition between recreation and navigation waters with the latter now being more strongly commercial navigation use including ports and harbours. For the Broads the changes proposed include bringing in a 'recreation' definition instead of a 'navigation' definition for much of the Bure, Ant and Thurne and adding a 'recreation' definition for the Yare from the city as far as about Hardley. The recreation definition does include commercial use and the WFD requires usage to relate to current and not past or future use.

When this was issue was raised at the Navigation Committee there was concern that it might not protect commercial navigation usage and could be seen to be in conflict with definitions used by the Marine Management Organisation. Although the recreation definition did more accurately relate to current usage and would not appear to impact on Broads Authority objectives, there was no clear case for why this would a better definition. For consistency's sake retaining 'navigation' usage as being part of the modification of all of the navigation within the Broads would seem to be simpler and is part of the formal response being proposed. There has also been revision to some boundaries as smaller tributaries have been excluded and other boundaries rationalised.

Overall there is a drop in total water body numbers in the Anglian River Basin and it is intended that this revised listing becomes the baseline for future change monitoring although for this consultation reference is made to the old and the new classifications (called 'building blocks' in the Plan)

C. Water body status objectives

The proposed water body objectives are set on the basis that they could be achieved in the longterm if all measures that are technically feasible and when implemented, would give rise to more benefits than they cost are followed. No measures, at this stage, are ruled out on the basis of affordability constraints or available funding. The long term is defined as 2027 and beyond. The proposed water body objectives also take into account the requirement to prevent deterioration though costs and benefits are not taken into account when setting objectives to prevent deterioration.

It is proposed to set the objective of at least good status or potential in 62% of water bodies. For 38% of water bodies an alternative objective of less than good status or potential is proposed. With the 244 water bodies with a proposed alternative objective these relate to natural background conditions, no technical solutions currently being available or the costs of the measures needed to achieve good status being greater than the benefits. Where a status of less than good is proposed this may be because only one or two elements cannot be reasonably be expected to achieve good status. Where this is the case, the objective for all the other water body elements is to achieve good status.

Economic appraisal has been used to develop the proposed objectives. It has been based on HM Treasury's Green Book guidance for the public sector and refined for the purpose with the help of external partners. Worthwhile measures are those where the benefits to society from implementing them exceed the costs of putting the measures in place. The economic appraisal considers a range of benefits and a monetary value can be assigned to some. A simple measure can provide multiple benefits and the Environment Agency provide an example of riverside tree planting which can help the riverside ecology, improve the landscape for anglers and tourists, and help retain farmer's soil. They however are not so clear about taking account of any dis-benefits as might be raised by sailors.

The Environment Agency is also developing methods for assessing climate risk and vulnerability at various scales. Through vulnerability testing it is hoped to establish which individual or combinations of measures are most effective at achieving protected area and water body objectives.

For each of the significant water management issues, the Plan identifies what could be done by each relevant sector and identifies proposed new local measures.

D. The funding challenge

The draft plan identifies water body objectives for the long term assuming implementing all measures that bring a positive benefits-costs balance. However, currently there is insufficient money committed to the water environment for this to be implemented. The Agency therefore suggests there needs to be choices about which objectives are achieved first and how the improvements are funded. The economic analysis illustrates the costs to 4 sector groups (Government, rural land management, water industry, and industry, services, infrastructure and the voluntary sector). It also considers the costs and benefits of 5 scenarios of funding.

Scenario 1	On going measures continue but no new measures to mitigate the trends that will change the environmental baseline.
Scenario 2	Aim to prevent deterioration and achieve protected area objectives through additional measures.
Scenario 3	Aim to prevent deterioration, achieve protected area objectives, and all technically feasible improvements towards 'good' status (No affordability constraint)
Scenario 4	Aim to prevent deterioration, achieve protected area objectives and improvements in status where benefits exceed costs. (No affordability constraint.)
Scenario 5	Illustration of potential progress towards scenario 4 by 2021. Based on an assumed level of available national funding (up to and including 2021) related to the most directly relevant programmes and an assumed level of additional voluntary action through local efforts.

The Environment Agency's conclusions for these 5 illustrative scenarios are:

Scenario 1 will result in significant deterioration in the quality of the water environment and associated loss of benefits. It does not comply with WFD requirements.

Scenario 2 will prevent deterioration and achieve the protected area objectives proposed in this consultation, but it does not make much progress in improving the status of water bodies.

Scenario 3 will result in the best outcomes for the water environment but at an overall cost in excess of benefits. It may go beyond the requirements of the WFD and could be seen as 'gold plating'.

Scenario 4 will result in significant improvement to the water environment, with benefits in excess of costs. The scale of improvement is probably not feasible or affordable to achieve by 2021.

Scenarios 2 and 4 therefore represent the extreme lower and upper limits of the scale of environmental improvement and associated cost that might be included in the updated river basin management plans.

Scenario 5 illustrates a further point within the boundaries of scenarios 2 and 4. Measures in addition to scenario 2 are voluntary or are funded by government taxes and those who pay water bills.

E. Broadland Rivers Catchment details

In 2009 this catchment was divided up into 94 river water bodies, 19 lakes, 2 surface water transfers, 2 estuaries & coastal waters and 1 groundwater body. The water bodies were given a baseline classification using data and information from existing monitoring points within the water body. However, some generally smaller water bodies didn't have any monitoring points; these were classified either by using data from a water body with similar characteristics or by a judgement made by technical experts. The apparent change in status since 2009 may not be actual improvement or drop in status. It could be owing to new and improved knowledge of water bodies and data collection factors, for example, monitoring location changes (using new, more appropriate locations or not using others). Where water body monitoring has recently started the 2013 classification will not be based on a full dataset so should be regarded as indicative.

This management catchment contains the Broadland Rivers chalk and crag groundwater body. Groundwater in this body is used for a variety of purposes including a significant amount for public water supply. The chalk and crag are classified as principal aquifers. It is evident from monitoring that the pressures of land use and permeability of soils in this area have resulted in leaching of nitrate to the groundwater. The majority of this comes from agriculture. This results in the groundwater body being of poor chemical status. The quantitative status is at good status.

Water body type	High	Good	Moderate	Poor	Bad
Rivers & Canals (including Surface Water Transfers)	0	7	48	3	2
Lakes	0	1	10	9	2
Estuaries and Coastal waters	0	0	2	0	0
Ground waters	-	0	-	1	-

Number of water bodies in the Broadland Rivers Catchment at each status or potential status as at 2013

Monitoring used to determine WFD status is designed to show trends in ecological quality and will not reflect certain pressures. For example, the frequency and type of sampling does not pick up certain events and will not give the full picture regarding diffuse pollution, as has been shown by the intensive monitoring carried out as part of the Wensum Demonstration Test Catchment Project.

Other important issues which impact on the Broadland Catchment are not measured for WFD. Salinity is a key concern, with increased tidal surges and a changing flooding regime causing changes in ecology. Whilst this may be reflected over time in changing status, the impact it has on the ecologically important wetlands of the catchment must not be overlooked.

It is equally important to stress that the timescales being considered between plan cycles are very short in terms of reflecting measureable improvements. There have been many projects during the first plan period that are expected to deliver long term changes. An example of this is the Catchment

Sensitive Farming initiative, which has involved significant investment by farmers across most of the catchment.

The main issue raised through the 'Challenges and choices' consultation was pollution; particularly diffuse sources from agriculture and roads. Nutrients were seen as an important issue – leading to eutrophication, excessive weed growth and low oxygen levels. It was considered that development was putting pressure on water supplies and water quality. Climate change was mentioned as having the potential to put further pressure on river flows and water supplies, and increasing the risk of flooding in these low lying areas. It was considered that there is a risk of damage to important wetland sites due to habitat change, eutrophication, changes in land use and saline incursion.

The Broadland Rivers Catchment Plan, launched in June 2014, includes 7 goals and 19 actions around:

- 1. Land management to reduce run-off, and soil, nutrient and pesticide loss, and to link habitats and access
- 2. Waste water management to reduce nutrients in watercourses from public and private waste water
- 3. Water management to increase water capture and water efficiency
- 4. Flood risk management and sustainable drainage to reduce and slow run-off and increase aquifer recharge
- 5. River and floodplain management to increase connectivity reduce fish barriers and control invasive species
- 6. Recreation and understanding to increase sustainable use of, and learning about, water and wetlands
- 7. Investment to increase, combine and attract funding for projects

Achieving the long term objectives for the water environment will require a coordinated approach to making improvements across a number of different planning processes. One of the most important links relates to the way flood risks are managed in the catchment. Over the next two years, the Environment Agency will be undertaking considerable planning work, culminating in the publication of the updated river basin management plans (RBMPs) and the flood risk management plans (FRMPs). Together, these plans will shape important decisions, direct considerable investment and action, and deliver significant benefits to society and the environment.

There are 39 proposed measures in the draft Flood Management Plan which include working with natural processes to reduce flood risk and implement WFD actions through habitat improvement and creation, naturalising the river channels and improving land management techniques.

For the sake of the RBMP, the Broadland Rivers Catchment is split into 4 operational catchments. These are the Bure (encompassing the Ant and Thurne and reaching up to the headwaters); the Waveney all the way to its headwaters; the Wensum west of Norwich to its headwaters; the Yare from its junction with the Bure, incorporating the Chet and westwards past Norwich to its headwaters.

<u>The Bure</u>

There are 15 river and 15 lake water bodies in this catchment. The status (health) of the water environment in 2009 was assessed as being generally moderate. In 2013, the status of the water environment had not deteriorated. It can take five to ten years for the positive benefits of actions to be reflected in the ecological status. The technically feasible and cost beneficial measures identified suggest that 76% of the water bodies in the Bure catchment should have a long term objective of achieving good status.

Economic assessment for the proposed measures-

Net present value: £26.9 million Benefit cost ratio: 4.9 Present value benefits: £33.8million Present value costs: £6.9million

This means that for every pound that is spent towards improving the water environment in this catchment, you could expect to receive £4.90 of benefits.

The Waveney

There are 18 river and 2 lake water bodies in this catchment. The status (health) of the water environment in 2009 was assessed as being generally moderate. In 2013, the status of the water environment had not deteriorated. It can take five to ten years or the positive benefits of actions to be reflected in the ecological status. The technically feasible and cost beneficial measures identified suggest that 40% of the water bodies in the Waveney catchment should have a long term objective of achieving good status.

Net present value: £37.8million Benefit cost ratio: 3.27 Present value benefits: £54.4million Present value costs: £16.6million

This means that for every pound that is spent towards improving the water environment in this catchment, you could expect to receive £3.27 of benefits.

The Yare

There are 17 river and 3 lake water bodies in this catchment. The status (health) of the water environment in 2009 was assessed as being generally moderate. In 2013, the status of the water environment had not deteriorated. It can take five to ten years for the positive benefits of actions to be reflected in the ecological status. The technically feasible and cost beneficial measures identified suggest that 65% of the water bodies in the Yare catchment should have a long term objective of achieving good status.

(Only about one third of this catchment falls within the Broads direct area of interest)

Net present value: £6.01million Benefit cost ratio: 1.24 Present value benefits: £31.5million Present value costs: £25.45million

This means that for every pound that is spent towards improving the water environment in this catchment, you could expect to receive £1.24 of benefits.

APPENDIX 2

River Water bodies in the Broads – summary of status and objectives

		2009 Cycle 1	2013 Cycle 2		
River water bodies	Elements of condition	assessment	assessment	Objectives	supporting reasons for objectives
Ant (Dilham to Bure)	Overall status	Moderate	Moderate	Good	
	Ecological	Moderate	Moderate	Good	
	Chemical	Not assessed	Good	Good	
Bure (Hostead Mill to St					
Benet's Abbey	Overall status		Good	Good	
New designation - not in Cycle					
	Ecological		Good	Good	
	Chemical		Good	Good	
hurne	Overall status	Moderate	Moderate	Good	
	Ecological	Moderate	Moderate	Good	
	Chemical	Not assessed	Good	Good	
Muckfleet	Overall status	Moderate	Good	Good	
	Ecological	Moderate	Good	Good	
	Chemical	Not assessed	Good	Good	
					Unfavourable balance of costs-
					benefits; Cause unknown; Practical
Yare (Wensum to tidal)	Overall status	Moderate	Moderate	Moderate	technicalities
	Ecological	Moderate	Moderate	Good	
					Unfavourable balance of costs-
					benefits; Cause unknown; Practical
	Chemical	Not assessed	Fail	Fail	technicalities
Chet	Overall status	Poor	Bad	Good	Ecological recovery will take time
	Ecological	Poor	Bad	Good	Ecological recovery will take time
	Chemical	Good	Good	Good	
Vaveney (Ellingham mill to					
Burgh St Peter	Overall status		Moderate	Good	
lew designation - not in Cycle					
	Ecological		Moderate	Good	
	Chemical		Good	Good	
Bure&Waveney&Yare&					
othing	Overall status	Moderate	Good	Good	
ransitional waters	Ecological	Moderate	Good	Good	
	Chemical	Good	Good	Good	