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River basin planning: summary of significant water management issues

Consultation response for the South East River Basin River Basin District

24 April 2008

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1 Introduction

River basin planning is a new approach to managing our water environment. It gives us the chance to manage and improve all our water bodies, including rivers, lakes, groundwater, estuaries and our coastal waters, as a single whole. This great opportunity is what lies at the heart of the Water Framework Directive.¹

River basin planning encourages the active involvement of everyone with an interest in water. We would like you to play a part in the planning and management process and help to produce a better water environment. This document is part of that process.

Overview of River Basin Planning: Summary of Significant Water Management Issues

In July 2007 we published 'River Basin Planning: Summary of Significant Water Management Issues, South East River Basin District'. The 'Significant Issues' report was a key step towards the development of a River Basin Management Plan for our river basin district. It summarised the main issues affecting the water environment, gave examples of what we already do to tackle these issues, and offered examples of additional measures that may be needed.

It was prepared with the South East River Basin District Liaison Panel, whose members endorsed it for consultation. The panel represents the main sectors involved in river basin planning.

The Significant Issues report was issued early to give enough time to consider how best to address these issues. There was a public consultation aimed in particular at those who are likely to be affected by or have an interest in the process for developing the River Basin Management Plan. However we welcomed everyone's views.

The consultation ran from 24 July 2007 until 24 January 2008. In the South East River Basin District we actively promoted the consultation in the following ways:

1. Published the Significant Issues report online on the Environment Agency's website.
2. Published a notice of the consultation in the Hampshire Chronicle on 2 August 2007.
3. Notified over 1000 stakeholders directly via email or hard copy.
4. Highlighted the consultation in River Basin Planning Newsletters in June and September 2007, sent to over 1000 stakeholders in our river basin district.
5. Promoted the consultation in our 'Get Involved' leaflet published on our website, and sent to over 1000 stakeholders, our statutory Committees, and participants at six Issue Work Groups in the river basin district.
6. Provided electronic copies to all major libraries in the river basin district, who distributed it to branch libraries.
7. Piloted the web-based discussion forum 'River Basin Planning Forum' between 24 September 2007 and 11 February 2008. It received 1596 page views and five posts.
8. Published a press release to promote the discussion forum, which resulted in rolling news stories on Splash FM and Bright FM.
9. Established reciprocal links with other websites to increase the number of visitors.
10. Produced a supplementary report 'Evidence summary – water management issues, South East River Basin District'. This report was made available to the South East River Basin District Liaison Panel and participants at six Issue Work Groups.

This report sets out a summary of the comments made, and the Environment Agency's response.

¹ Further information on the Water Framework Directive is available at www.environment-agency.gov.uk/wfd

2 List of respondents

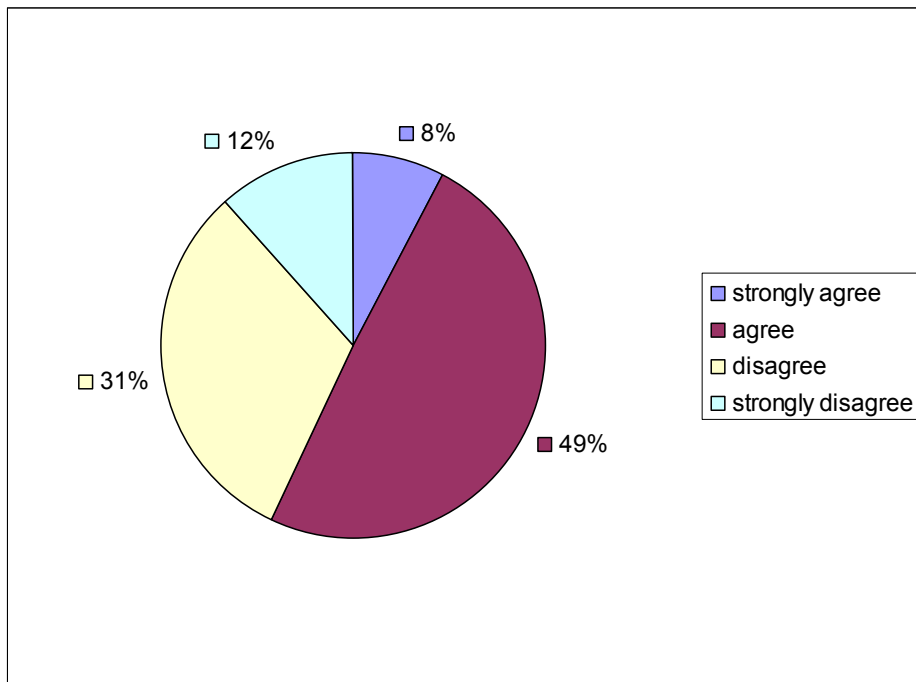
In total we received 55 responses to the consultation. 38 of these were primary responses specific to the River Basin District, 13 were secondary responses that are relevant to South East and were copied in from other River Basin Districts, and four were sent to all River Basin Districts.

The table below shows which organisations responded.

Organisation
Ash Parish Council
Associated British Ports
Bournemouth & West Hampshire Water
City of Bradford Metropolitan District Council
Chichester Harbour Area of Natural Beauty
Country Land & Business Association
Campaign to Protect Rural England
Darent & Cray Catchment Consultative, and Darent River Preservation Society
Darent Valley Trout Fishers
Downswood Parish Council
Edenbridge Angling Society
Environment Agency
Faversham Town Council
Greengrass Leisure Limited
High Weald Area of Outstanding Natural Beauty Unit
Inland Waterways Association-Kent & E Sussex
Kent Wildlife Trust
Luton Borough Council
Maidstone Borough Council
New Romney Town Council x 2
National Farmers Union
Ofwat
Otford Parish Council
Portsmouth Water
Royal Yachting Association
Salmon and Trout Association
Salmon & Trout Association, East Sussex Branch
St James/ Isle of Grain Parish Council
The Institute of Directors, East of England
The Woodland Trust
University of Hertfordshire Environmental Sciences
Unspecified x 21
Water UK
Wey & Arun Canal Trust

3 Summary of responses and action we will take

Q1: Have we correctly identified the significant water management issues?



57% of respondents agreed that we had correctly identified the significant water management issues for the South East River Basin District.

They support the high priority given to obtaining sustainable abstraction limits, tackling phosphate and nitrate pollution, and addressing the problems caused by physical modifications. These people believed that these issues should be tackled urgently in order to achieve the objectives of the Water Framework Directive and a higher quality water environment. Respondents were pleased that more in-depth cost effectiveness analysis will be carried out where additional assessment is required on a site-specific basis.

Of those respondents that disagreed, a number felt that some matters should be raised as significant issues:

- [Temperature and thermal pollution](#)
- [Climate change](#)
- [Endocrine disruptors and other pharmaceuticals](#)
- [Alien \(invasive, non-native\) species](#)
- [Saline intrusion and drinking water protection](#)

A number of other comments were made relating to the text or to cross-cutting concerns. These are summarised in this chapter under the headings below. In most cases, as suggested in the text, there is a need for further monitoring and research to understand the extent and impact of the pressure.

- [Flooding and dredging](#)
- [Increased pressure from development](#)
- [Diffuse pollution from rural areas](#)

- [Sediment/Tributyl Tin \(TBT\)](#)
- [Diffuse pollution from urban areas and transport](#)
- [Recreation](#)
- [Affordability and cost](#)

Topic: Temperature and Thermal Pollution

Summary of responses

Temperature change and thermal pollution were raised as significant issues. It was suggested that this problem occurred primarily through physical modifications and industrial discharges. One respondent thought there was a need for more stringent effluent and water quality standards to meet the stresses caused by higher temperatures. They called for a future review of discharge consents to incorporate higher standards which are relevant to known stress periods during the year. It was also suggested that thermal barriers could prevent the movement of fish populations up and down-stream.

Action we will take

We recognise that water temperature can have an impact on aquatic species. Thermal pollution can be a problem for example in estuarine areas, where it can act as a thermal barrier to migratory fish especially in low flow hot temperature summers. Over the next century surface temperatures of the sea are forecast to rise by 0.5 to 4°C, so temperature may become a more important issue.

We monitor temperature as part of our routine chemical sampling and in specific locations such as some abstractions for drinking water and storm water overflows. We will ensure that our monitoring and operational control of discharges is in line with temperature standards under the Water Framework Directive, when they become statutory.

We are also investigating the effects of thermal pollution on migratory Salmonids in Southampton Water, Lower Test and Hampshire Avon. However, providing clear evidence that thermal pollution is having a direct effect on fish and other life is difficult due to other factors such as low flow, pollution and erratic migration behaviour. We will endeavour to develop further investigations in order to increase our understanding of temperature-related issues.

Further information on temperature standards can be found in the UK Technical Advisory Group report 'Environmental Standards and Conditions Phase 2', at www.wfduk.org.

Topic: Climate Change

Summary of responses

Climate change was raised by several respondents as a major influence on the water environment over the coming decades that may affect our ability to achieve Water Framework Directive objectives. The Water Industry were particularly concerned about how they could achieve the quality improvements required by new Directives such as the Water Framework Directive, while reducing energy use and carbon dioxide emissions as required by new national, European and international legislation. They also felt that the impact of climate change on species balance needs to be understood, and that 'no deterioration' objectives should not be interpreted as a mandate to try and stop unavoidable change.

Action we will take

The South East is forecast to experience some of the most severe impacts through climate change of any English region over the coming century. We recognise that climate

change is likely to have a significant effect on underlying environmental conditions, the impact of human activity on the water environment and the effectiveness of the management actions we put in place to manage these impacts. We need to ensure actions we implement are as effective in a future climate as they are now, and do not add to the climate change burden.

Information on our assessment of the impact of climate change will be published in three key places. First, an annex in the draft River Basin Management Plan will detail the effects of climate change to date, future scenarios and the impacts on all pressures. It will describe our approach to dealing with climate change in the implementation of the Directive.

Second, the draft Strategic Environmental Assessment environmental report will be published in December 2008 alongside the draft River Basin Management Plan. The environmental report reviews the effect of the actions proposed in the draft River Basin Management Plan, including any impacts on climate change.

Third, an Impact Assessment will also be published alongside the draft Plan, and will consider climate change as part of cost-benefit analysis work. Through these assessments, we will be able to make sure that the final plan represents the most sustainable way of managing the water environment, in light of the best available information on climate change.

Topic: Endocrine disrupters and other pharmaceuticals

Summary of responses

Several people thought that endocrine disrupters should have been included as a significant issue. Endocrine disrupters can affect wildlife because they are chemical substances that interfere with successful reproduction.

Action we will take

The South East River Basin District Liaison Panel specifically considered endocrine disrupters during the preparation of the Significant Issues report (see the Supporting Information document, Annex 2, page 7). It was agreed that we should take opportunities to manage them where this is cost effective. However, although there is considerable evidence of impacts on fish development, growth and reproduction, especially in the phenomenon of male fish becoming feminised, there is a lack of understanding on the extent of any impact upon fish populations.

We are participating in the national Endocrine Disrupter Demonstration Programme through monitoring at Lingfield and Horsham Sewage Treatment Works, which is due to report in 2010.

Topic: Alien (invasive, non-native) species

Summary of Responses

Some respondents stated that alien species ('invasive non-native species') should have been identified as a significant issue.

It was noted that Australian swamp stonecrop (*Crassula helmsii*) is prevalent in several major locations in the New Forest. The Kent Wildlife Trust thought the impact of some invasive alien species may have been underestimated, in particular the Pacific oyster *Crassostrea gigas*. Other species which were highlighted as a concern were signal crayfish *Pacifastacus leniusculus*, Chinese mitten crab *Eriocheir sinensis*, and Himalayan balsam *Impatiens glandulifera*.

Action we will take

Our river basin district has a number of significant pressures relating to the extent of development and the density of our population. The Liaison Panel considered alien species to be an important issue, but less so than some other water quality and water resources-related issues.

We recognise that there are some alien species that cause problems locally. We will act where there is evidence of impact, as long as it is feasible and proportionately costly to do so. However, once alien species are established, particularly in rivers, estuaries and coastal waters, it may be impossible to eradicate them cost-effectively, or at all. It is therefore better to avoid introduction, for example by educating people not to release unwanted alien species into the wild.

Pacific oysters were first recorded in the UK in 1926, and have been commercially introduced to Cornwall, Essex and Wales with farming on around 300 sites throughout England, Scotland, Wales and Northern Ireland. 'Escapees' have established populations in various regions. The larvae spread far and wide in the marine water column. We probably have to accept that the Pacific oyster is a permanent resident of UK coastal waters.

If there is a cost effective case for action to protect commercial shellfish beds, the development of local management methods by the local shell fishing industry may be appropriate.

Participants in an Alien Species Issue Work Group on 20 November 2007 developed the following short-list of invasive non-native species for our river basin district.

Plants	American skunk-cabbage, <i>Lysichiton americanus</i> Australian swamp stonecrop, <i>Crassula helmsii</i> Canadian pond weed, <i>Elodea canadensis</i> <i>Egeria densa</i> Floating pennywort, <i>Hydrocotyle ranunculoides</i> Giant hogweed, <i>Heracleum mantegazzianum</i> Himalayan Balsalm, <i>Impatiens glandulifera</i> Japanese knotweed, <i>Fallopia japonica</i> Nuttall's pondweed, <i>Elodea nuttallii</i> Parrot's feather, <i>Myriophyllum aquaticum</i> Water fern, <i>Azolla filiculoides</i> Water primrose, <i>Ludwigia spp</i> Wire weed, <i>Sargassum muticum</i>
Invertebrates	American signal crayfish, <i>Pacifastacus leniusculus</i> Chinese mitten crab, <i>Eriocheir sinensis</i> Marbled crayfish, <i>Procambarus spp</i> Noble crayfish, <i>Astacus astacus</i> Slipper limpet, <i>Crepidula fornicata</i> Turkish crayfish, <i>Astacus leptodactylus</i> Zebra mussel, <i>Driessena polymorpha</i>
Fish	Parasite on eels, <i>Aguillicola crassus</i> Pumpkin seed, <i>Lepomis gibbosus</i> Sun bleak, <i>Leucaspius delineatus</i> Topmouth gudgeon, <i>Pseudorasbora parva</i> Wells catfish, <i>Silurus glanis</i> Zander, <i>Sander lucioperca</i>
Mammals	Mink, <i>Mustela vison</i>

Topic: Saline intrusion and drinking water protection

Summary of responses

One water industry representative put forward saline intrusion as an issue and suggested that it is seen as a long-term problem for a number of groundwater abstraction sites along the south coast. It will be of particular concern in respect of climate change and sea level rise.

The water industry's expectation was that drinking water resource protection will be included as a significant water management issue in the majority of the river basin districts and particularly in water stressed areas. They welcomed the fact that the documents recognised the importance of putting in place enhanced protection for drinking water abstractions and the potential benefits this brings in terms of reduced treatment. However, respondents also believed that it would be helpful to address the legal and administrative framework to ensure that the provisions of Article 7 (Waters used for the abstraction of drinking water) are met; in particular, whether the Competent Authority has the necessary powers and duties to prevent deterioration.

Action we will take

Saline intrusion has not been covered in the document but will be addressed in the classification of groundwater bodies in terms of both the quality and quantity of water. Where saline intrusion is thought to be occurring appropriate measures will need to be implemented. Future demands will need to be balanced to prevent the deterioration of groundwater by saline intrusion. This will be controlled by existing mechanisms via the abstraction licensing process.

Drinking water resource protection is covered under Article 6 & Article 7 of the Water Framework Directive, which identifies those areas requiring special protection including water bodies that provide drinking water. The Environment Agency aims to target awareness campaigns and pollution prevention work in areas where land-users plan or carry out polluting activities. By combining the information gathered for classification with Water Company Drinking Water Safety Plans, it will be possible to target particular areas deemed at risk, or already impacted. Where needed, existing legal powers and the existing administrative framework will be used. Where the existing powers are not deemed adequate, additional powers may be requested to prevent deterioration for example by using Water Protection Zones to safeguard groundwater. Cost benefit analysis will take place on all proposed schemes – at either a local or national level as appropriate

Topic: Flooding and dredging

Summary of responses

Numerous respondents raised the issue of flooding as a concern and wanted it to be included in the Significant Issues document.

Comments centered on current river dredging strategies and the possible link to flooding. Other people supported the view that dredging damaged habitats and failed to address the main issue of controlled flooding. It was emphasised by the RYA that dredging for navigational purposes has both social (safety, health & welfare) and economic reasons which need to be recognised and balanced with the need to achieve Water Framework Directive objectives.

The ports sector remarked that dredging is already regulated and that it would not be appropriate to suggest other techniques as at present they contribute to the maintenance of Natura 2000 sites. They felt that the Environment Agency needed to provide evidence to show that there is a water management issue and until this is provided we suggest that

reference to modification of dredging in transitional (estuarine) and coastal waters is removed from documentation.

Action we will take

Flooding and coastal erosion are very important issues, and have a separate planning process. In addition a new European Directive, the Floods Directive will require separate flood risk management plans to be drawn up by 2015. Because defences and control structures impact on ecology, the River Basin Management Plan and all actions proposed need to take account of the impact of flood and erosion management.

The Environment Agency routinely considers dredging and vegetation management in watercourses to reduce flood risk. We also de-silt rivers at critical locations, where we are also the navigation authority, to allow passage for boats. Dredging may be of benefit, where silt or gravel has built up and threatens to reduce the capacity of a watercourse. It is particularly important for us to keep channels clear of blockages in built up or urban areas, where the impact of flooding is greatest and where the watercourse may be confined to a single channel. It is these locations where we are most likely to undertake dredging and vegetation management on a regular basis.

At other locations, watercourses may have both a channel and a floodplain. The channel will only contain low to medium flows. At higher flows the water will spill out onto the floodplain, which is as much a natural part of the watercourse as the channel. In these circumstances, dredging would not increase the flow in the channel enough to stop the watercourse spilling into the flood plain. Any benefits of dredging the channel would be short term because it will quickly silt up again as part of the river's natural process. This dredging can be expensive, harmful to the environment and not very effective. Where this is the case we will have stopped or plan to stop dredging, and use the money saved to pay for more effective flood protection.

The Water Framework Directive does not prohibit dredging. The Directive calls for the reinstatement of natural river channels and, as far as possible, for a reduction in interference in the natural river process. Where we can demonstrate a need for dredging in the public interest, then it will continue.

Dredging (and disposal of dredged material) in transitional and coastal waters is heavily regulated as it can affect the hydromorphological conditions of the site, as well as water quality. Natura 2000 sites have in place to manage dredging and disposal – these will be included in the programme of measures. Outside these sites, appropriate dredging must be in place, and any changes to techniques and procedures will have to be justified by evidence. With time, we expect monitoring programmes to provide further data and clarity on any new measures relating to dredging. In the meantime we will remain open to the potential for changes to dredging and disposal techniques.

Topic: Increased pressure from development

Summary of responses

There was concern that planned development in the South East would be a threat to the water environment. Some respondents felt that further development should be ceased in areas where sewage treatment works were operating at capacity or in areas with water shortages. Furthermore it was thought that land and site drainage are problems because responsibilities for planning, delivery and enforcement are fragmented.

Action we will take

Development is continually being controlled through the planning system. Sustainability and environmental issues are strongly on the agenda for Local Development Frameworks and are constantly being referred to when responding to planning applications. This does

include promoting and requiring sustainable drainage systems and habitat enhancement as a condition of planning approval.

The River Basin Management Plan becomes a statutory document in December 2009. Local Authority planning and development control departments will need to use it when responding to planning applications, to ensure that developments do not cause deterioration, and help to improve the quality of the water environment.

The Environment Agency has been working with local planning authorities in our river basin district to raise awareness of the requirements of the Water Framework Directive, and help them respond to the opportunities of river basin planning.

Topic: Diffuse rural pollution from rural areas

Summary of responses

A query was raised by the farming industry relating to the definition of diffuse pollution from rural areas. They felt that the title 'diffuse pollution from rural areas' should represent a range of issues and not just those which are agricultural. A list of these was given.

An amendment was suggested for Annex 5 of the Supporting Document, as the list that has been provided refers to 'conventional' agriculture being an example of a contributory activity that contributes to certain problems. It was thought that this reference should be revised as it is poorly managed agricultural practices that contribute to pollution and these may arise in either conventional or non-conventional farming.

One respondent felt reassured that nitrate was given priority, particularly as there are rising trends in groundwater concentrations.

Actions we will take

We agree that non-agricultural activities such as forestry may cause diffuse pollution in rural areas. However, poorly managed agriculture is the principal cause. We will highlight these activities where appropriate in the draft River Basin Management Plan. The comment about the wording on conventional farming is noted.

Sub Topic: Pesticides

Summary of responses

The fresh water fisheries sector raised a point nationally concerning Cypermethrin, an insecticide used in sheep dip. They urge that the current ban becomes permanent, to prevent the chemical becoming a significant water management issue.

Actions we will take

In Water Framework Directive terms Cypermethrin is currently classified as a specific pollutant and will be monitored to assess ecological status. Cypermethrin sheep dip is currently still suspended indefinitely. The Veterinary Medicines Directorate have not reached a decision on whether its use as a sheep dip will be re-instated in the future. They are currently conducting research on risk management options (as proposed in the Sheep Dip Pollution Reduction Plan). A decision will be made when the results of this work are concluded.

The Environment Agency has been working with the Veterinary Medicines Directorate and others under a Sheep Dip Pollution Reduction programme to find a sustainable solution that minimises the environmental risks from sheep dip chemicals, whilst also taking account of animal welfare and human health. We are seeking a solution that prevents further environmental damage and ensures we can meet 'good status' in watercourses, as required by the Water Framework Directive.

Sub Topic: Fish Farms

Summary of responses

A reference was made to a CEFAS report which described the increase in fish farm production and resulting effluent having a considerable impact on wild Salmonid populations.

Action we will take

We agree that the impacts of fish farms on salmon and trout smoltation (changes to ready the fish for their lives in the sea) are a concern in our river basin district, especially within the Test and Itchen catchments and other prevalent wild sea trout populations.

The Environment Agency was involved with the research quoted. We are interested in the scope for new local action to promote good practice, in order to assist the sensitive location and management of fish farming.

Topic: Sediment / Tributyl Tin (TBT)

Summary of responses

One comment covered urban run off and the areas of impermeable surfaces as contributing factors to sedimentation of waters.

There was concern that under the Water Framework Directive there are no specific sediment standards. The respondent felt that a total absence of sediment monitoring would be a backward step and urged that, at the very least, inorganic solids are monitored to provide the baseline data for prioritising actions where inputs to rivers are found to be damaging.

The ports sector felt that sediment was suggested as an estuarine problem and considered it had previously been established as mainly a problem in rivers. They did not think sediment per se should be an issue in transitional and coastal waters, although contaminants associated with sediment could be an issue under the daughter Directive. The ports sector would welcome evidence of where Tributyl Tin (TBT) is a problem.

Action we will take

Sediment was highlighted as a significant issue, mainly for its role in rivers as a conveyor of pollutants, and as a pollutant in its own right when present in more than 'natural' quantities. The Significant Issues report recognised the contribution of sediment from urban areas in its section on diffuse pollution from urban areas and transport.

In the absence of a standard for sediment, a 'weight of evidence' approach will be used. This will be based on local evidence provided on diffuse sediment pollution to justify the use of appropriate measures. Evidence could include fish egg survival experiments, pollution incidents, historical pollution incidents or anecdotal information. A risk assessment of sediment pressure in the South East River Basin District is available on the Environment Agency website www.environment-agency.gov.uk/wfd. Defra are in the process of commissioning research to examine how the UK and Europe might develop sediment standards for future planning cycles.

Sediment could be an issue in transitional and coastal waters. Dredging disturbs sediments, but is a heavily regulated activity. A fuller response on dredging is provided under the ['Flooding and dredging'](#) topic.

Environment Agency data reports a number of Environmental Quality Standard (EQS) failures for Tributyl Tin in coastal, transitional and river water bodies within the South East River Basin District. These waters include Southampton Water, River Great Ouse and the English Channel at Folkestone.

Topic: Diffuse pollution from urban areas and transport

Summary of responses

Respondents raised several matters relating to diffuse urban pollution. These included misconnections, contaminants in dredging spoil and drainage maintenance material and chemical storage, especially hydrocarbons. A water industry consultee wished to see the risk of hydrocarbon pollution of groundwater acknowledged.

It was pointed out that there is an overlap between point source and diffuse pollution, and many pollutants can be classed as either. More investigation of the source of contaminants was requested.

A water industry representative stated that the polluter pays principle should be applied to pollution, with more source control methods implemented to tackle the long term diffuse problems. They also believed that full use should be made of the technical infeasibility justification when considering potential controls for non-biodegradable substances at sewage works.

Action we will take

Many of the matters raised are covered in the Significant Issues report, and will need to be addressed in the River Basin Management Plan.

We recognise that there can be a lack of understanding of the source of pollution. For example, elevated nitrate readings in groundwater in rural catchments can be from diffuse use of fertilizers and manure over a large area, or a number of point sources such as septic tanks and poor fertilizer storage. Understanding the source will help to identify the solutions required.

The Environment Agency has investigated sources of pollution in the past, and will continue to do so. For example, up to 50% of pesticide pollution in agricultural catchments has been shown to arise from point sources, particularly farmyards during pesticide handling and sprayer tank filling operations. The water companies' work on drinking water safety plans is an example of another process that will help to prioritise action on diffuse and point source pollution.

We are working closely with Government and water companies to help rectify misconnections and address chemical and oil storage. The Environment Agency recognises the threat to groundwaters from mismanaged storage and disposal. We address this through regulatory action and local actions such as the Oil Care campaign.

Government is currently consulting on the control of phosphate in laundry detergents, as part of a polluter pays approach to tackling diffuse and point source pollution. The Environment Agency will examine the contribution that this measure could make to the achievement of Water Framework Directive objectives. The consultation ends on 30 April 2008, and can be accessed at: <http://www.defra.gov.uk/corporate/consult/phosphates>.

Topic: Recreation

Summary of responses

Respondents stated that recreation should be defined as a sector rather than a water management issue.

Action we will take

Agreed. The necessary amendments will be made in the draft River Basin Management Plan. Specific water management issues related to recreation activities – such as physical modifications – will still need to be addressed as necessary.

Topic: Affordability and cost

Summary of responses

A number of respondents raised matters of affordability, cost and the costs-benefits of measures (actions) proposed to address water management issues.

Action we will take

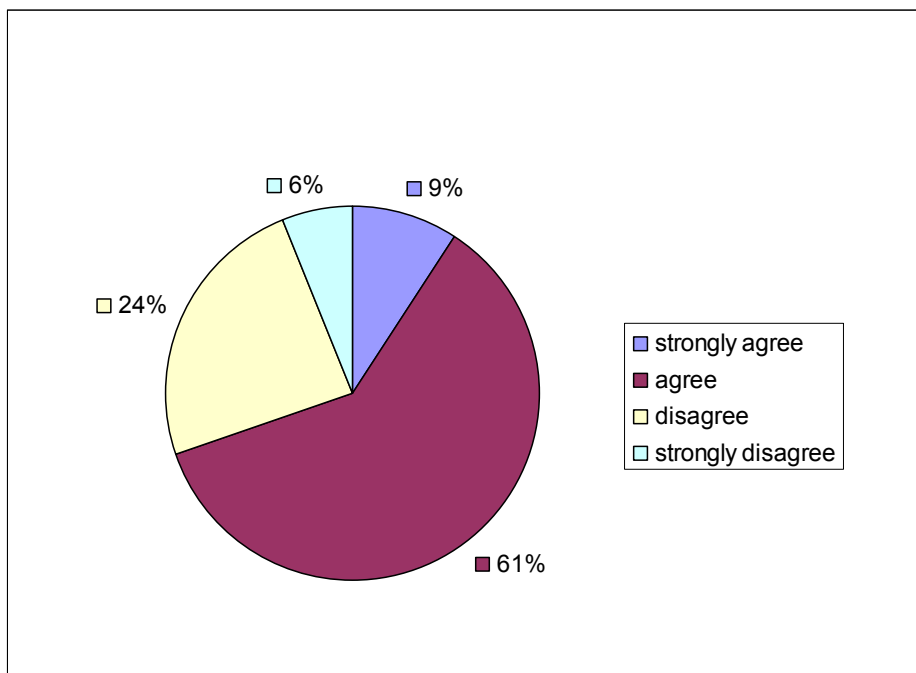
When choosing measures for the draft River Basin Management Plan, the benefits of achieving the environmental objective and the impact on different sectors are considered. This 'disproportionate cost assessment' will consider the consequences of implementing the combination of actions in terms of the distribution of gains and losses among stakeholders.

The 'Draft Ministerial Guidance on River Basin Planning (v2)'² states that the Environment Agency should take into account the following considerations:

- extent of any deviation from the polluter pays principle;
- affordability of the environmental improvement for those who would have to pay taking into account the characteristics of the economic sector concerned;
- adverse consequences for vulnerable or disadvantaged social groups;
- scale of recent investment in environmental improvements already made by those who would have to pay.

We will publish this information in an Impact Assessment. This will be released at the same time as the draft River Basin Management Plan and copies will be available from the Environment Agency at the contact address given at the end of this document.

Q2: Have we correctly identified the sectors involved for each significant water management issue?



² Defra (2008) Consultation on River Basin Planning Guidance, Volume 2.
<http://www.defra.gov.uk/corporate/consult/river%2Dbasin/>

Summary of responses

Most people (70%) agreed with the sectors we put forward, subject to further exploration and development. One person suggested that the chemical supply industries must be engaged to help manage pollution ground and surface waters.

The polluter pays principle was accepted as long as it was dispensed fairly and proportionately. One person did not feel that the issue of successfully implementing the polluter pays principle had been adequately addressed in the document.

Some changes were suggested to the list of organisations identified to address transitional and coastal water body measures. The ports sector provided some views on the limit of their role in tackling alien species. They said that the International Maritime Organisation Ballast Water Convention is the appropriate vehicle for addressing alien species risks from shipping.

Action we will take

We welcome the comments in support of the polluter pays principle. We will work with this principle when working with others to establish a draft programme of measures. Further information on the operation of the principle will be provided as required in the draft River Basin Management Plan.

In transitional and coastal waters prevention of alien species is the key concern, as control and eradication is impossible or very difficult. We agree that the ballast regulations are the mechanism for this where commercial vessels are concerned. Ports, harbours, marinas and yacht clubs are encouraged to alert authorities of any indication of alien species colonisation to allow mechanisms to be put in place to prevent spread. Defra, the Marine & Coastguard Agency and the Marine & Fisheries Agency are the lead organisations.

Q3: What other types of measures not listed in this document do you think we should consider? For example, actions that you or your organisation could take?

A number of actions or adaptations of existing measures were emphasised in the responses. Further information is given under the topic headings below.

- [Flow and abstraction](#)
- [Point source pollution](#)
- [Diffuse pollution from rural areas](#)
- [Temperature](#)
- [Planning](#)
- [Physical modifications](#)
- [Recreation](#)

Topic: Flow and abstraction

Summary of responses

Measures concerning flow and abstraction were a feature of the responses on measures. There was concern over the water resources impacts of development in the south east. Specific comments covered the following:

- It was felt that more pilots were required to test the effectiveness of water efficient appliances alongside behavioural factors that may limit their potential.
- Water company information and awareness campaigns were suggested to help to influence behaviour.

- Metering was supported, and the potential for desalination should be explored.
- It is important to consider costs to the water customer when implementing quality improvements and efficiency drivers.
- Water abstraction was considered to be the biggest threat to river flows, and Environment Agency should be reducing borehole abstractions.
- Winter storage reservoirs should be encouraged, as well water transfers between catchments that are plentiful to poorly resourced ones. This could include a role for redundant quarries.
- There is low water pressure on the Isle of Grain.

Action we will take

We welcome the respondents' emphasis on water resources as a key aspect of achieving the objectives of our waters.

We will consider the proposed actions alongside our work with the Liaison Panel to develop local contributions to the draft River Basin Management Plan. A number of the specific suggestions covered measures that are currently supported by the Environment Agency's water resources policy and operations. In particular, we are working with planning authorities to ensure that housing is developed in the least damaging areas, and ensure that high levels of water efficiency are adopted for new development.

We support water efficiency design standards in new development. For example, from 1st May 2008 all new homes will be subject to a mandatory rating against the Code for Sustainable Homes. This will allow purchasers to demand higher standards for private homes. We believe that water fittings should be improved and support Defra's proposed review of Regulations later in 2008 with a proposed implementation date of April 2009. The Government is also investigating whether a whole-building performance standard can be developed for non-domestic buildings, both as a regulatory level and a voluntary code above that.

In appropriately sized developments (such as Ecotowns) and water stressed areas, we support the adoption of the higher levels of the Code for Sustainable Homes that will require either extremely low water use fixtures and fittings, rainwater harvesting and/or grey water recycling. We do not believe that these are appropriate technologies for smaller scale developments due to the uncertainties around their overall environmental benefit and the extra cost premium. These actions will be put forward through the draft River Basin Management Plan.

We suggest that respondents concerned about the pressure of public water supply contact their water supply company.

Topic: Point source pollution

Summary of responses

The removal of chemicals and other pollutants at source was raised as one of the most effective measures. This 'source control' approach was considered to have significant benefits to the water and sewerage industry in the form of reduced treatment costs and carbon footprint.

Water industry respondents wished to emphasise the major challenges associated with aligning the timetable for river basin management planning (which works on a six year cycle) with the Water Company Periodic Review process (which is on a five year cycle).

Action we will take

The Environment Agency supports source control alongside the management and control of point and diffuse sources. For example, we support proposals to control phosphate in laundry detergent a contribution to the quality of our freshwaters.

A range of campaigns, advice and other actions will be included in the draft River Basin Management Plan as a means of source control. The Environment Agency will work with the water industry, farming sector and others to plan and deliver these actions.

We are aware of the challenges of the timing of the two planning processes mentioned. We will continue to work with water companies, Ofwat and other stakeholders to ensure that any problems this may cause are minimised, and substantial investment is secured for the first River Basin Management Plans.

Topic: Diffuse pollution from rural areas

Summary of responses

The major comment was from the water industry. They stated that diffuse sources of pollution pose more of a significant problem than point source discharges. The most effective method to manage this problem was suggested to be to implement more control methods at source, funded via the polluter pays principle.

The water industry respondents said that voluntary measures must be accompanied by additional targeted measures including fiscal instruments to reward and incentivise farmers to deal more effectively with diffuse pollution, statutory water protection zones; and source control of phosphate, for example through detergent or from land run off.

It was felt to be important that the cost of implementing measures be allocated fairly between sectors according to their relative contribution.

One respondent stated that Nitrate Vulnerable Zones need to be maintained and adequately 'policed' to ensure that further rises in nitrate levels are constrained.

Action we will take

These comments are noted. The Environment Agency supports the measures raised, in addition to the ongoing management and consenting of point source discharges. For example, the Environment Agency is working with Natural England to target High Level Stewardship in areas that would benefit from improvements to water quality.

New measures will be available for consultation in the draft River Basin Management Plan.

Topic: Temperature

Summary of responses

The freshwater fisheries sector suggested that management of bank side vegetation should enable more tree and shrub cover. This would allow shade for rivers and streams during summer, reducing the potential impact of water temperature increases. Management best practice could be disseminated and promoted to the relevant authorities as best practice.

A concern was also raised about the potential temperature impact of heat exchange system abstractions/discharges to groundwater and surface water. It was thought that these problems would have to be faced through planning and development control.

Action we will take

We support the establishment and management of bank side vegetation as part of good habitat management and restoration practice. This will have a range of benefits for the ecology of the water environment, providing it is properly managed. We do not believe that ground source heating, borehole cooling and similar technologies will have a significant impact on Water Framework Directive objectives. Further information is provided in the section on [‘Temperature and thermal pollution’](#).

Topic: Planning

Summary of responses

Comments were made relating to the role of spatial planning and development control in managing impacts on the water environment.

It was felt that PPS25 (Development and Flood Risk) and the River Basin Management Plan have a role in influencing Local Development Frameworks and other local planning documents. It was suggested that the Environment Agency should object to development in places where environmental quality thresholds have been reached.

Actions we will take

Noted. We are awaiting further guidance from Government on the concept of ‘no deterioration’ under the Water Framework Directive. This will help the Environment Agency and other organisations actively maintain the quality of our water environment.

Topic: Physical modifications

Summary of responses

It was suggested that public and private sectors should be involved in discussions at various levels regarding the removal or mitigation of physical modifications such as culverted rivers.

There was support for removing or modifying obstructions to fish passage. The latter is particularly important where the structure makes a positive contribution to the ecology.

Actions we will take

Our Catchment Flood Management Plans (CFMPs) are a key opportunity for the involvement of local stakeholders in flood risk management policy. However it may not always be feasible or cost effective to restore rivers in urban areas to a more natural state. Further information on CFMPs can be found at www.environment-agency.gov.uk/cfmp. There are additional opportunities to get involved in river basin planning, which will be advertised in December 2008.

We are currently reviewing the opportunities to remove or modify structures that obstruct fish. Our proposals will be included for consultation in the Draft River Basin Management Plan.

Topic: Recreation

Summary of responses

Respondents from the recreation and boating sectors called the Environment Agency’s attention to Royal Yachting Association and British Marine Federation action to address problems associated with boating and water sports.

Action we will take

We note these comments. We plan to work with these organisations to maintain progress.

Q4: What else would you change and why

- [Lack of detail](#)
- [Measure of success](#)
- [Suggested changes](#)

Topic: Lack of detail

Summary of responses

Several respondents expressed concern over a lack of detail and evidence in the main Significant Issues document to support the selection of issues for the region. They thought that considerable additional data collection, investigation and modelling were required for the first plan in order that the most appropriate and sustainable solutions can be applied in future cycles.

It was felt that the summary documents should have contained more detail on the objectives of Water Framework Directive and the planning cycle timescale.

Action we will take

We note these comments.

For the first cycle we will do as much as we think, after consultation, can be justified by the evidence we have. We will expect action where there is reasonable certainty. We will be assessing our proposals according to the evidence we have, and will be clear about our confidence in the evidence when consulting on them.

The cyclical nature of river basin planning means we should adapt and revise our plans and proposals as new evidence and information becomes available. In the first River Basin Plans we will identify areas where we need more information before action can be justified.

The draft River Basin Management Plans will include, for consultation, information that shows what could be achieved through the delivery of additional low confidence measures. If the confidence and evidence base is improved in time, these measures could be added to the final First River Basin Management Plans.

Topic: Measure of success

Summary of responses

It was expressed that the real measure of success was the achievement of the Directive's objectives and that it is necessary to have criteria for measuring this success. Once agreed, the criteria would focus attention on working towards achieving the objectives. It was thought that the following was essential in the process in delivering Water Framework Directive:

- Incorporate a reasonable approach to risk, rather than being unduly risk averse.
- Use the exemption process to postpone measures if the information is not yet available to confirm either their need or effectiveness.
- Identify a realistic timetable to achieve objectives over three river basin plan periods to 2027 at the overall least cost, again using exemptions as appropriate, and align with the principles of sustainable development.

Action we will take

Noted. Government is currently consulting on an approach to delivering the Directive's objectives over time. The 'Draft Ministerial Guidance on River Basin Planning (v2)' and 'Impact Assessment' states that costs should not exceed benefits, and that the costs and benefits are likely to be manageable only if we aim to deliver over the full three planning cycles (to 2027).

The consultation is open until 19 May 2008, and is available at:
<http://www.defra.gov.uk/corporate/consult/river-basin/index.htm>.

Topic: Suggested changes

Summary of response

A number of people referred to the need for regulatory change to avoid historical bad practice in development and building practices.

One individual wanted to identify more locally the balance between flood defence and wildlife management to 'tailor' the thinking dependant on the terrain.

The Port and Harbor Authorities wanted to highlight that the Significant Issues report text should recognise that where Heavily Modified Water Bodies are designated, any measures will be directed towards achieving 'good ecological potential' rather than 'good ecological status'.

Action we will take

Noted. Where relevant, we will ensure that these comments are addressed in the Draft River Basin Management Plan.

4 Next steps

Get involved in river basin planning

This consultation response document will be published at www.environment-agency.gov.uk/wfd on 24 April 2008. Individuals who wish to follow up their responses in more detail are welcome to contact us.

Our next consultation will be the Draft River Basin Management Plan for the South East River Basin District, which we will publish on by 22 December 2008. We will publish the final River Basin Management Plan (2009 – 2015) by 22 December 2009.

Further information about the Water Framework Directive, river basin planning and the South East River Basin District can be found on our website at www.environment-agency.gov.uk/wfd. Alternatively, contact

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