

water for life and livelihoods

A consultation on the
Draft River Basin Management Plan
South East River Basin District



The Environment Agency works with other regulators and co-deliverers to protect the water environment in the South East River Basin District and improve it for the benefit of people and wildlife. We have produced this draft plan together with a liaison panel of representatives from key sectors. Achieving the outcomes of this plan will involve an even wider range of organisations and individuals – everyone has a part to play.

In preparation of the draft plan the liaison panel developed its shared vision.

The Liaison Panel's vision

The water environment is central to the economy and quality of life of the South East. There have been great improvements over the last few decades. Rivers once dead now teem with fish – and bathing waters are the cleanest on record. These changes have helped catalyse the rebirth of many towns and cities.

But huge challenges still need to be overcome to secure high standards throughout the water environment. Parts of urban and rural rivers are still in poor condition and there are a host of complex pollution issues that need to be managed. Wildlife of many kinds continues to suffer. Aquifers that supply drinking water are under threat from pollution and over-abstraction. In addition, there is pressure from a changing climate and the need to provide adequate levels of housing.

River basin management is an opportunity for this generation – for people and organisations to work together to improve the quality of every aspect of the water environment, under the ambitious and wide-ranging Water Framework Directive.

We want to have healthy water environments as soon before 2027 as possible.

Urban and rural waters will be more natural and will support the needs of people, the environment and the economy. This good status for waters will be achieved by:

- Improving rural land management
- Reducing the impact of transport and built environments
- Securing sustainable amounts of water
- Improving wildlife habitats
- Addressing point and diffuse source pollution.

This plan sets out objectives and actions to ensure no deterioration in status across the water environment, bring protected areas up to the right standards, and make sure that action in urban water environments helps make cities, towns and villages better places.

Everyone stands to gain a clean, healthy environment, fit for the twenty first century. An environment for all to take pride in and enjoy to the full. An environment for life and livelihoods.

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Your views count – how to respond

The proposals in this draft plan may affect you, your business, or your environmental interests, and we want to know what you think. **This consultation runs from 22 December 2008 until 22 June 2009.**

Q Questions throughout this document are marked by this sign. Turn to the back to see how to respond.

This document describes the main issues for the South East River Basin District and highlights some key actions proposed for dealing with them. The annexes to the document give more detail on the conditions in the river basin district, the actions proposed and the mechanisms that can be used to take forward these actions.

You can help in creating an effective and achievable River Basin Management Plan by responding to this consultation, and providing any other suggestions or comments. You may want to look at the information in the annexes before you send your comments.

We will use your comments to help revise the proposals. We will publish a response document on our website by 22 September 2009 to show how we will take your comments into account. Our main questions concern the following:

Q This plan sets out objectives for the water environment for the next six years and beyond. To what extent do you agree with what the plan sets out to achieve?

Q This plan sets out the actions required to meet the objectives. To what extent do you agree that the right actions have been identified (actions that are proportionate and feasible)?

Q There are some extra actions that could be put in place if there was more certainty that they would be effective. These are listed under scenario C and we would like to know if you could help to make these actions happen.

Q Any other comments you may have on this plan.

You will be able to get a good understanding of what is proposed for the river basin district simply by reading this main document. You may also want to look at the more detailed information in the annexes before you send your comments.

This sign indicates where you can find further information.

» The annexes to the plan can be downloaded from our website at www.environment-agency.gov.uk/wfd

It would be extremely helpful if you could provide comments as soon as possible within the consultation period.

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You can look at the information in these annexes in another way through the 'What's in your backyard?' feature on our website. This allows you to search by place name or postcode to get the details of individual waters. Visit www.environment-agency.gov.uk/homeandleisure

Introduction

The Environment Agency works with other regulators and co-deliverers to protect the water environment in the South East River Basin District, and improve it for the benefit of people and wildlife. Together we are using an approach called river basin management to involve others in this work.

The South East River Basin District Liaison Panel has been central to helping us manage this process. The panel includes representatives of businesses, planning authorities, environmental organisations, consumers, navigation, fishing and recreation bodies and central, regional and local government, all with key roles to play in implementing the plan.

This Draft River Basin Management Plan has been prepared with the panel and most members endorse it for consultation. The Consumer Council for Water and environmental non-governmental organisations support the draft for consultation.

This document sets out detailed proposals for the next six years and beyond. We want to know what you think, so that we can improve the proposals, and publish an effective first River Basin Management Plan for this river basin district in December 2009. It will review the condition of the water environment and set out the actions that we all need to take.

We have previously produced a report on the risks of human activities on our water environment and consulted on how we should work together with others. We have also consulted on the most significant issues that need to be dealt with in our river basin district.

» [A record of consultation and participation that has helped to develop this plan and the river basin management planning process, and a description of the South East River Basin District Liaison Panel is given in annex L.](#)

River basin management

The water environment is a precious and vital resource that must be protected. The Draft River Basin Management Plan focuses on achieving the protection, improvement and sustainable use of the water environment. This includes surface freshwaters (including lakes, streams and rivers), groundwater, ecosystems such as some wetlands that depend on groundwater, estuaries and coastal waters out to one nautical mile.

We have prepared the Draft River Basin Management Plan under the Water Framework Directive, which requires all countries throughout the European Union to manage the water environment to consistent standards. All countries have to:

- prevent deterioration in the status of aquatic ecosystems, protect them and improve the ecological condition of waters;
- aim to achieve at least good status for all waters by 2015. Where this is not possible, good status should be achieved by 2021 or 2027¹;
- promote sustainable use of water as a natural resource;
- conserve habitats and species that depend directly on water;
- progressively reduce or phase out the release of individual pollutants or groups of pollutants that present a significant threat to the aquatic environment;
- progressively reduce the pollution of groundwater and prevent or limit the entry of pollutants;
- contribute to mitigating the effects of floods and droughts.

The River Basin Management Plan will be reviewed and revised every six years.

¹ Annex B explains the objective setting process. Annex E contains the appraisal of actions including justifications for extended deadlines.

- » Further information on the Water Framework Directive can be found on the European Union website http://ec.europa.eu/environment/water/water-framework/index_en.html
- » Further information on river basin management planning can be found on our website www.environment-agency.gov.uk/wfd.
- » Government guidance on river basin management planning can be found at www.defra.gov.uk/environment/water/wfd/

To prepare this plan we have divided the water environment into units called 'water bodies' and categorised them as rivers, lakes, estuaries, coastal waters or groundwater. Some water bodies have been designated as artificial or heavily modified if they are substantially modified or constructed to be used for water supply, urban purposes, flood protection or navigation for example. This designation is important because it recognises the uses of these waters, whilst making sure that ecology is protected as far as possible.

The Water Framework Directive sets a target of aiming to achieve at least 'good status' in all waters by 2015 or, where justified, by 2021 or 2027. For surface waters, good status has an ecological and a chemical component. Good ecological status is measured on the scale high, good, moderate, poor and bad; and good chemical status as pass or fail. For groundwater, good status has a quantitative and a chemical component, which together provide a single final classification: good or poor status. There is further information in the section '[The water environment now](#)'.

Good ecological status is defined as a slight variation from undisturbed natural conditions, but artificial and heavily modified waters are not able to achieve natural conditions. Instead the target for these waters is good ecological potential. This is also measured on the scale high, good, moderate, poor and bad. The chemical status of these water bodies is measured in the same way as natural water bodies.

Protected areas have been established under European legislation and include Special Areas of Conservation, Drinking Water Protected Areas, Bathing Waters and Shellfish Waters. There has been action for many years to make sure the objectives set for these areas are achieved. This is a key part of the Water Framework Directive and one of the priorities for the first cycle of river basin management. Many of the actions in this plan are directed towards these objectives and most also help achieve good status or good potential objectives.

About the South East River Basin District

The environment of the South East River Basin District is very special. The South Downs, the White Cliffs, the Solent and the New Forest draw visitors from all over the world. More than 3.1 million people live here, and there are major urban centres at Brighton and Hove, Southampton and Portsmouth. Figure 1 shows the river basin district and its catchments.

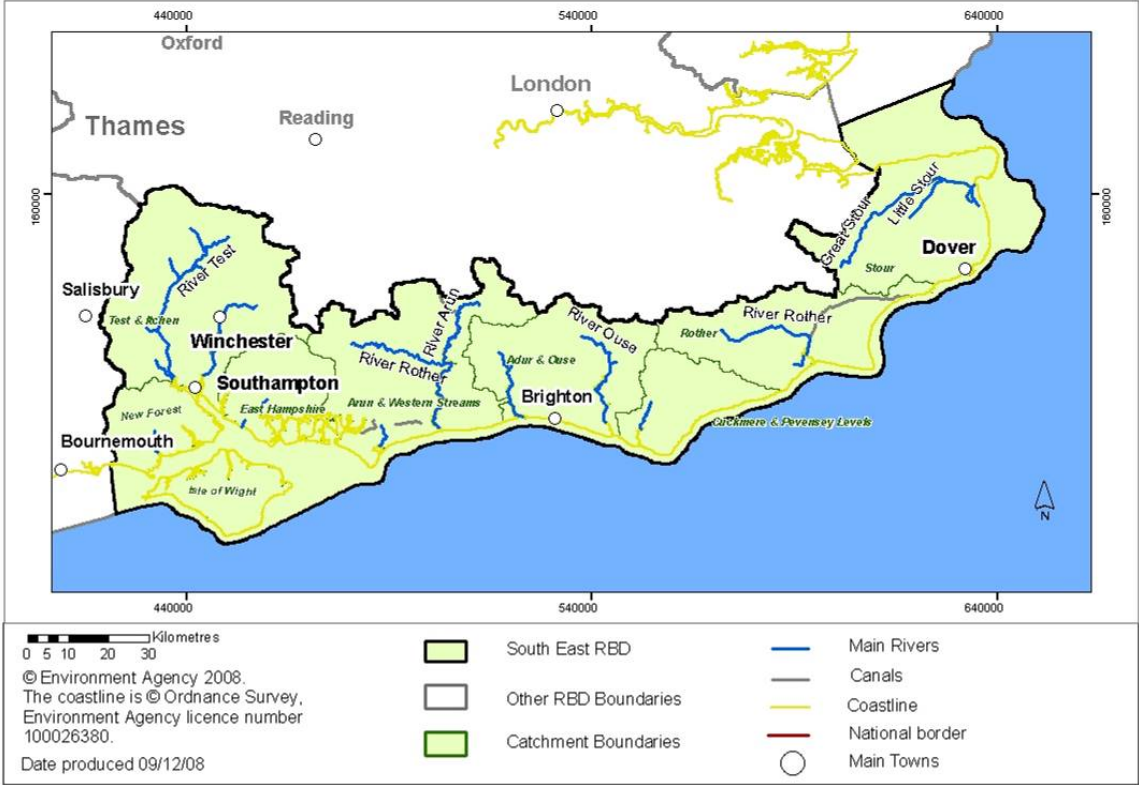
This landscape supports a wealth of wildlife, some of it within protected areas. For example Special Areas of Conservation or Special Protection Areas with wetland features cover some nine per cent of the river basin district. In recent years otter populations have begun to expand and rivers such as the Test and the Itchen have wild salmon populations.

The natural environment is essential to livelihoods in the South East and helps attract businesses as well as visitors. Retail, health and business services are the largest employment sectors in the river basin district. Nearly two thirds of the land is used for farming, which employs over 25,000 people in vegetable growing, animal husbandry and other activities.

But huge challenges remain. Many urban and rural rivers have been modified for flood defence or navigation, often at the expense of ecological quality. The way land is managed has given rise to a host of complex pollution issues. There are also concerns over maintaining the water resources available for people and the environment here. On average, the amount of water available per person is less than for Morocco or Egypt. South East England relies on groundwater for 72 per cent of its public water supply – more than in any other district – yet the aquifers also provide flow for rivers and wetlands. It is therefore essential to safeguard supplies and protect them from pollution.

There will be other challenges. Government envisages that over 200,000 new dwellings and associated infrastructure will be built in the river basin district by 2026, along with the development of an Eco-town. And natural forces such as sea level rise, coupled with climate change, are a threat to people, property and coastal habitats.

Figure 1 Map of the South East River Basin District



The environmental outcomes for the South East River Basin District

A large number of organisations work hard to improve the water environment. Major investment in our water and sewage infrastructure, action by local government, environmental organisations and communities, improvements in farming practice – all of these contribute to making our river basin district a better place.

We expect that by working in partnership with others on a range of actions that are currently underway or agreed, or planned for the near future, there will be many positive outcomes. These are described in the following five sections:

- [Improving rural land management](#)
- [Reducing the impact of transport and built environments](#)
- [Securing sustainable amounts of water](#)
- [Improving wildlife habitats](#)
- [Addressing point source pollution](#)

Across the river basin district, the outcomes will mean that:

Waters do not deteriorate in status

This is a top priority for all waters. Preventing or limiting pollution of groundwater, for example, will also benefit the wetlands and rivers that are fed by water from aquifers.

Quality improves and we prioritise the worst waters

There will be improvements to water quality and flow that in turn will lead to improved ecology. Almost 680 km of our rivers will benefit from reduced phosphate, 250 km will have improved levels of dissolved oxygen, and the great majority of rivers will have not have problems with ammonia pollution.

This will mean over 100 km of river improvements for invertebrates and diatoms, essential parts of the food chain. Fish populations will improve in over 40 km of river as a result of water quality action, and the proposed removal of 25 priority obstructions will help fish swim freely in an extra 500 km or so.

The length of river in good status or potential will more than double by 2015: from 182 km or eight per cent now, to 394 km or 18 per cent. One coastal water, covering some 260 km², will be in good ecological potential.

Some of the worst waters have problems that will be difficult to address – we will investigate the best solutions if they are not clear at the moment. We will also target urban areas so that people benefit from improvements to waters near where they live.

Protected areas meet their standards

Major funding through the water company periodic review should improve the quality of protected areas. This includes two bathing waters and six shellfish waters, and 11 major wastewater treatment works improvements to help reduce green seaweed problems in four Natura 2000 sites in the Solent. Catchment Sensitive Farming approaches will also help in meeting protected area objectives.

We think we could deliver even more than this by ensuring that a range of additional actions are available to use. Some of these are outlined in the '[Summary sector action plan](#)'. We would welcome your comments on them, and support in making them happen, so that the first River Basin Management Plan can make a bigger difference.

Improving rural land management



Better management of rural landscapes will promote the protection of resources such as soils and water, and encourage the restoration of healthy ecosystems. This will help prevent and reduce nutrient enrichment, where the excessive growth of algae and other plants reduces overall biodiversity. Fewer toxic pollutants in runoff will also help protect the diversity of plants and animals. Reducing sediment loss will protect and restore fish spawning grounds, encouraging healthy, sustainable fish stocks.

The main problems have been linked to:

- inappropriate use of fertiliser and pesticides, such as using them in areas sensitive to runoff or groundwater pollution;
- sediment run-off from fields and infrastructure such as tracks;
- management of clean and dirty water on farms and manure from livestock;
- poor storage practice and spillage of fertiliser, pesticide and liquid wastes with high organic content.

The agriculture sector has the main responsibility for implementing measures. Forestry, conservation, fisheries, drainage authorities and other organisations will contribute. The types of measures include creating new Water Protection Zones, England Catchment Sensitive Farming Delivery Initiative (hereafter referred to as 'Catchment Sensitive Farming') and other partnerships offering land management advice. Nitrate Vulnerable Zone designations will be extended. A revised UK Code of Good Agricultural Practice is imminent, which will focus on voluntary and existing statutory pollution prevention.

What this means for the South East River Basin District

- The Stour, Eastern Rother, Test & Itchen and Pevensy Levels catchments will continue to see improvements as a result of Catchment Sensitive Farming. Target areas in the Arun and Western Streams, an additional 976 km² catchment, will benefit from the programme from October 2008. A Strategic Partnership will deliver additional funding for the Isle of Wight for diffuse pollution work from April 2009 and the Environment Agency is putting in place a diffuse pollution officer for the Solent harbours.
- Government will designate statutory Water Protection Zones to reduce diffuse pollution in high priority areas. There will be approximately eight designated nationally by 2010, with further Zones possible from 2012.
- Land managers will benefit from agri-environment scheme funding, targeted at resource protection in those waters at risk from diffuse pollution – especially coastal waters and estuaries around the Solent.
- In chalk rivers, which are particularly sensitive, there will be thriving wildlife populations.
- Improved farmland management will help reduce rural run-off, and help make sure bathing waters meet the required standards.
- Less pollution will enter groundwater. Lower concentrations of nitrate, pesticide and other pollutants will benefit water quality across the river basin district. Drinking water will get more protection where necessary.
- There will be a better understanding of the sources of pressures, through local investigation and development of local drainage plans.

Reducing the impact of transport and built environments



A high quality water environment can improve the quality of life in cities, towns and villages. Spatial planning and design for urban development and infrastructure should aim to reduce surface water run off, protect and restore habitats, and protect drinking water supplies and bathing areas. The release of toxic pollutants that harm the water environment will be reduced.

The main problems have been linked to:

- poorly planned development and housing growth, which can lead to the loss or fragmentation of habitat and pressures on water quality and water resources;
- leaks and storm water discharges from sewage systems and private sewage treatment works;
- flood defences that impact on natural habitats;
- discharge of industrial waste containing pollutants such as oils and chemicals;
- surface run-off from industrial estates, roads, driveways, car parks and car washing;
- land affected by contamination;
- maintenance and dredging of waters, which can release contaminants from stirred up sediment;
- inappropriate fertiliser and pesticide use in open spaces and transport networks.

A number of sectors have responsibility for implementing relevant measures. They include local government – particularly planning authorities – the water industry, the construction industry and the Highways Agency.

What this means for the South East River Basin District

- The South East Plan and Local Development Documents should include policies that address the potential impacts of proposed levels of development to water resources, water quality, biodiversity, river restoration, green infrastructure, contaminated land and surface water management and flood risk.
- The highest code level for sustainable homes is adopted in new housing development;
- Sustainable drainage systems become established features of developments where appropriate, such as the Waterlooville major development area.
- Better understanding of where urban and green space management puts pressure on our waters, to target improvements to pesticide management practice and urban drainage.
- The Green Blue and British Marine Federation's Environmental Code of Practice is used to promote pollution prevention and the conservation of the marine environment.
- Dredging is carried out in a way that is compatible with the achievement of Water Framework Directive objectives.
- Government will designate statutory Water Protection Zones to reduce diffuse pollution in high priority areas. There will be approximately eight designated nationally by 2010, with further Zones possible from 2012.
- Bathing waters will be improved at beaches including Worthing and Bognor Regis by addressing urban discharges and run off.

- Agreed improvement plans are introduced that help enhance groundwater quality in the longer term. For example at industrial premises in high risk areas such as the Thanet Chalk, and for roads in vulnerable areas.
- Less contamination of groundwater from oil storage as the result of advice and enforcement in source protection zones.
- A reduction in contaminants released to groundwater from industrial estates and petrol stations through a programme of pollution prevention advice.

Securing sustainable amounts of water



Water should be affordable, yet supplies need to be managed in a sustainable way. There should also be sufficient flow for wildlife to flourish.

The main problems have been linked to:

- over-abstraction for public water supply, agriculture, horticulture and recreational use;
- industrial abstractions;
- modified channels and structures such as weirs that change river flow;
- climate change.

The river basin district relies on groundwater for 72 per cent of drinking water, and supply for 60 per cent of wetlands. It will be a major challenge to meet the demands of an increasing population whilst protecting the water environment.

The responsibility for implementing relevant measures falls on a number of different sectors, including the water industry, agriculture and consumers. Planning authorities have a key role in managing water resources, such as permitting new reservoirs and promoting water efficiency and the Environment Agency is responsible for issuing and reviewing abstraction licences.

Examples of actions proposed in this plan include demand management and changes to licences resulting from the review of abstraction consents under the Habitats Directive. We expect water companies' water resources management plans to make these changes through the 2009 periodic review.

The main partners are water companies, working with the Environment Agency, central and local government. Other sectors such as farming and business and industry also have an important role to play.

What this means for the South East River Basin District

- The Environment Agency, planning authorities, water companies and others will make sure there is no deterioration of the water environment as a result of the significant growth that will take place in Ashford and other areas.
- A range of organisations will promote efficient water use to ensure that there is a reduction in household and non-household demand.

- The farming community will be encouraged to build and share storage reservoirs, to help reduce the burden on our rivers and groundwater.
- We will address the problems identified through our Catchment Abstraction Management Strategies, such as 144 water bodies that are unsustainably abstracted or over-licensed at low flows.
- We will take a range of actions through the Restoring Sustainable Abstraction Programme. Investigations will be completed by 2015 into the need for measures to modify abstraction licences where there is a high risk that abstraction may be limiting good ecological status. Freshwater flows in Natura 2000 sites will be protected through the modification or revocation of relevant abstraction licences by 2015. River flows will be protected in Sites of Special Scientific Interest through the modification of abstraction licences to ensure no adverse effect on conservation objectives by 2021.
- Metering will be increased in the district to the full extent allowed by the legislative framework. Subject to funding through the 2009 water company periodic review, Southern Water aims to provide universal metering by 2015, Folkestone & Dover Water from 2012/13. Bournemouth and West Hampshire Water aims to have 75 per cent of customers metered by 2015. South East Water will meter 84 per cent of customers by 2020. Portsmouth Water intend metering all customers over a 25 year period beginning 2010.

Improving wildlife habitats



Wildlife benefits from protected and well managed habitats. For wildlife to thrive in future, these habitats need to be expanded and linked. This 'green infrastructure' will provide a range of social, economic and environmental services, as well as protect biodiversity. The plan gives special consideration to the most important wildlife sites – those designated under the Birds and Habitats Directives. Bringing improvements close to where people live is important, to increase the opportunities for recreation and enjoyment of the natural world.

The main problems have been linked to:

- river re-sectioning, straightening, and realignment; creating artificially straight channels and river beds;
- covering rivers and streams, and creating artificial channels or 'culverts' to allow development;
- land drainage for agricultural improvement, reclamation for agriculture and urban development, historical structures;
- physical modifications for flood risk management and water supply;
- navigation impacts such as weirs, bank protection, dredging, bank erosion, river traffic;
- the impact of a number of invasive non-native species.

The Draft River Basin Management Plan will help establish a strategic habitat creation and enhancement programme across the district through the actions of a range of partners. Key organisations include the Environment Agency, Natural England, farming, conservation bodies and riparian owners – as well as the navigation sector and local authorities.

What this means for the South East River Basin District

- Work with planning authorities, conservation groups and others to identify and improve the region's 'green infrastructure'.
- Work to improve ecology by restoring or enhancing habitat in priority water bodies across the river basin district. The Environment Agency has identified 37 candidate waters, including the River Adur in Sussex at Knepp Castle, the Royal Military Canal in Kent, and the Anton in Hampshire.
- Action in a number of Sites of Special Scientific Interest to improve ecology and meet Public Service Agreement targets across the district.
- Natural England will establish a partnership programme of work on invasive non-native species, including clearance work at priority sites, and campaigns to prevent introductions.
- Coastal waters will benefit from the protection of bass nurseries and reef habitats through the establishment of marine protected areas and a code of conduct. This is subject to consultation. The Environment Agency will work with others to investigate coastal waters and improve understanding of their ecology.
- Enhancement of at least ten km of river per year by addressing diffuse pollution and physical pressures including culverts, closed watercourses, pinch points and in channel structures.
- Fish will be able to swim more freely along our rivers and estuaries, as the result of addressing 25 priority obstructions by 2015. We estimate that some 500 km of river will have better fish populations as a result.
- Managed realignment at approximately ten sites covering over 20 km of coast by 2021, and 15 sites by 2027, leading to overall ecological improvement and greater flood resilience in these areas.
- Research and better science about the relationship between ecology, physical shape and water flow in the environment will help to target work more effectively in the second plan.

Addressing point source pollution



High levels of nutrients in water can lead to excessive plant growth, which, in turn, may affect other wildlife including fish. In addition, discharges from a single point – 'point source pollution' – can contribute high levels of sediments and toxic pollutants to the aquatic environment. While diffuse pollution remains one of the biggest challenges to achieving good status in our district, it is important to tackle point source pollution simultaneously. This will protect the groundwater that feeds our rivers and important ecosystems and deliver more improvements in surface water quality.

The main problems have been linked to:

- effluent from sewage treatment works and industrial sites;
- diffuse source pollution, where it enters sewage systems and contributes to point source pollution;
- industrial point sources;

- commercial fisheries;
- watercress farms;
- spillages from domestic as well as industrial oil tanks.

The main responsibility for implementing measures will fall on water companies, agriculture and industry as well as householders and local government. The Environment Agency's main responsibility is to ensure appropriate controls are in place for consented discharges. We will work closely others to make this happen. This draft plan includes the actions proposed in the Water Companies Price Review 2009, to improve treatment standards at sewage works discharging to vulnerable sites.

What this means for the South East River Basin District

- A large number of new dwellings are planned for the river basin district. We are undertaking a project across the whole of South East England to examine the implications of this growth for managing sewage effluent discharges. This will involve local and regional government and water companies, and will be ready in time to inform the final River Basin Management Plan.
- The Environment Agency will continue to investigate the effect of chemicals such as endocrine disrupters on our fish populations. We will compile an inventory of private sewage discharges, so that any unacceptable impacts can be identified and managed.
- The Environment Agency and businesses will investigate emissions from industry, and ensure that the right management is in place to minimise harm to the water environment.
- The Environment Agency and Southern Water will work with others to address treated sewage effluent discharges at a number of key locations including the Great Stour at Ashford and the harbours of the Solent. The water company price review 2009 plans to maintain or improve certain river stretches not covered by other protected area objectives. This includes 185 km of river suffering from organic pollution and 192 km of river suffering from excess phosphorus, which contributes to overgrowth of algae and reduces biodiversity. These outcomes will be revised when the price review is completed;
- Water company investment should also improve the quality of two bathing waters and complete investigations on three more; improve six shellfish waters whilst conducting investigations in 12; and ensure improvements at 11 major waste water treatment works to help reduce the nitrogen load entering four Natura 2000 sites within the Solent.
- We will implement tighter controls on watercress and commercial fisheries discharges to protect the River Itchen Special Area of Conservation.
- We will raise awareness of pollution from domestic oil storage tanks, leading to a reduction in severe spills.

The water environment now

Pressures on the water environment

A great deal is already being done to protect and improve the water environment. However, it will take more time, effort and resources to deal with the pressures of society and industry that have significantly altered and damaged the environment over the last few hundred years.

In the *Summary of Significant Water Management Issues* consultation document we set out the liaison panel's view of the most important issues across the river basin district. This work will help to prioritise and target resources through the programme of actions proposed in this Draft River Basin Management Plan.

The significant issues are: abstraction and other artificial flow regulation; nitrates; organic pollution; pesticides; phosphates; physical modification; sediment and urban and transport pollution pressures. We grouped them under the following headings:

- Diffuse pollution from rural areas
- Diffuse pollution from urban areas and transport
- Flow problems
- Physical modifications
- Point source pollution

The draft plan also addresses other issues that are important locally, such as invasive non-native species. And there are other important considerations such as the need to manage the impacts of climate change, and accommodate significant growth in housing and other development.

Q1 Do you agree with the assessment of problems in water bodies? What would you change?

- » River basin characterisation reports can be found at www.defra.gov.uk/environment/water/wfd/characterisation
- » More information about pressures on the environment in the river basin district is given in annex B, G and H.

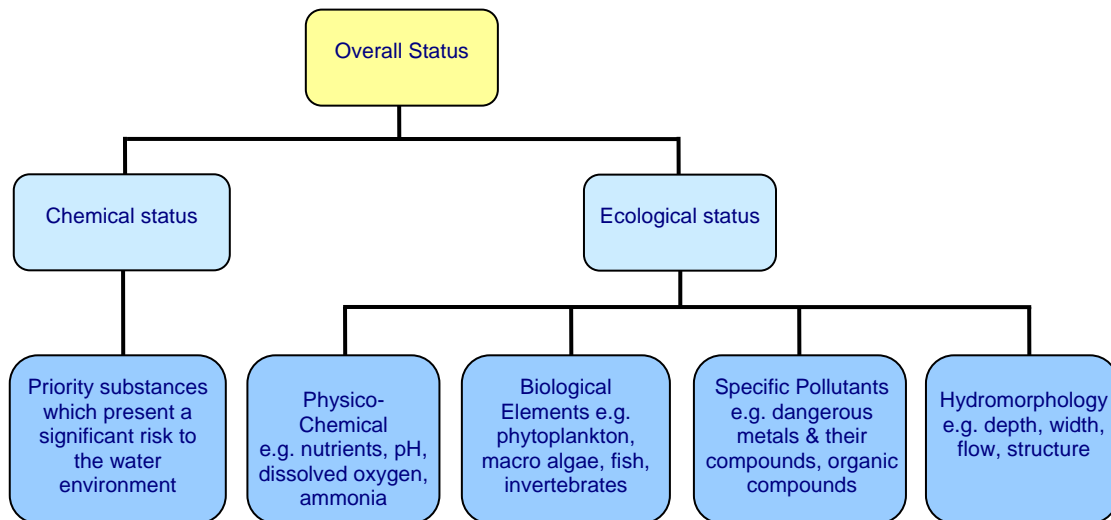
The state of the water environment

Our monitoring programme for river basin management concentrates on where there is likely to be a problem. The Water Framework Directive introduces a classification system that is based on a far wider range of assessments than before, which uses a principle of 'one out, all out' – the poorest individual result sets the overall classification.

This new monitoring and classification system raises the bar. It provides a more sophisticated assessment of the whole water environment to help us all understand it better, and take action where it is most needed.

Figure 2 shows how 'status' is determined. Each of the components of classification (ecological and chemical for surface waters, and quantitative and chemical for groundwater) in turn comprises several different elements. For example the ecological elements include fish and invertebrates, and a series of non-biological elements; and the chemical component includes a range of substances that are harmful to human health and the environment. The elements are measured against a series of specific standards and targets that have been developed by the Department for Environment Food and Rural Affairs (Defra), supported by the Water Framework Directive UK Technical Advisory Group. The spread of invasive non-native species and how well established they have become is also taken into account.

Figure 2 The components of overall status



» The UK Technical Advisory Group website gives these standards and targets: www.wfduk.org/UK_Environmental_Standards.

» Defra and Welsh Assembly Government completed their consultation on these standards on 19 December 2008. This consultation can be found at www.defra.gov.uk/environment/water/wfd/classification.

Eleven per cent of the surface water bodies assessed, and 33 per cent of groundwater bodies, are currently at good status or potential.

This includes 14 per cent of the number of river water bodies (eight per cent of river length) and six per cent of the number of coastal water bodies. There are no estuaries or lakes at good status or potential.

Nationally, 17 per cent of river length is at good status or potential now; 49 per cent of coastal waters, 14 per cent of estuaries, 30 per cent of lakes and 42 per cent of groundwaters.

Figures 3 to 6 summarise the state of the water environment, based on those waters assessed. 116 surface waters have not been assessed, as we don't yet have sufficient information about them. This includes ten per cent of total river length (82 water bodies).

At its heart, the Water Framework Directive is concerned with protecting and improving the natural health of the water environment. The 'one out all out' principle of the classification system can sometimes mask the picture of the underlying biological health of waters. Figures 4a and 4b summarise the current classification based solely on the biological elements of ecological status. The natural life of waters can sometimes be healthy even when the supporting physico-chemical elements suggest a problem – so 33 per cent of waters are at good status for biology (figure 4a) compared to 14 per cent at good ecological status or potential (figure 3a). This emphasises the importance of having confidence that there is a real problem before taking action to solve it.

Figure 3a **Current ecological status and ecological potential of rivers, by number assessed**

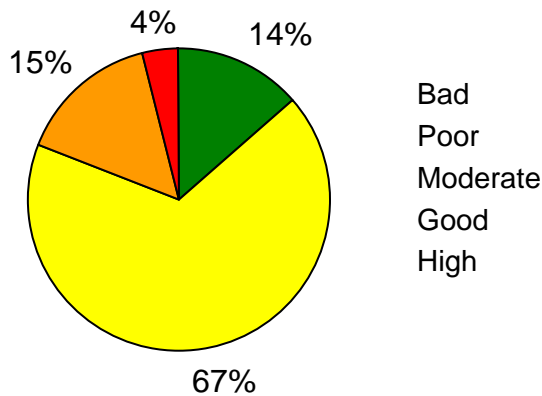


Figure 3b **Current ecological status and ecological potential of rivers, by length assessed**

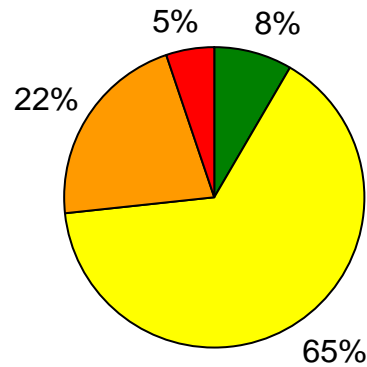


Figure 4a **Current biological status of rivers, by number assessed**

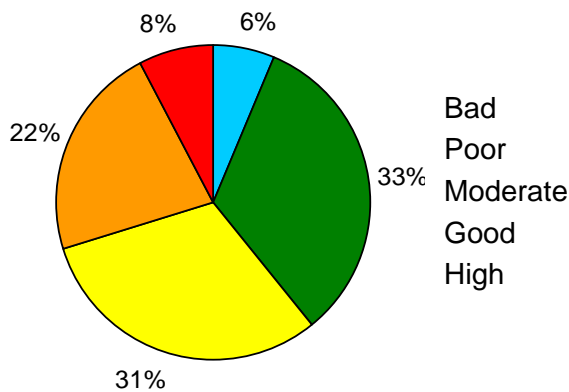


Figure 4b **Current biological status of rivers, by length assessed**

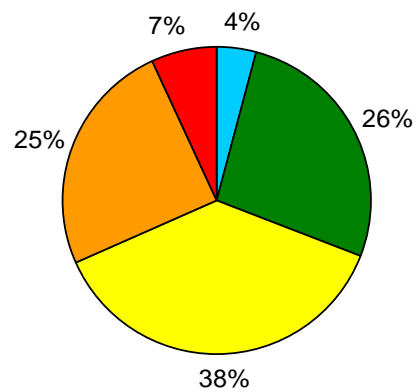


Figure 5 **Current quantitative status of groundwater bodies**

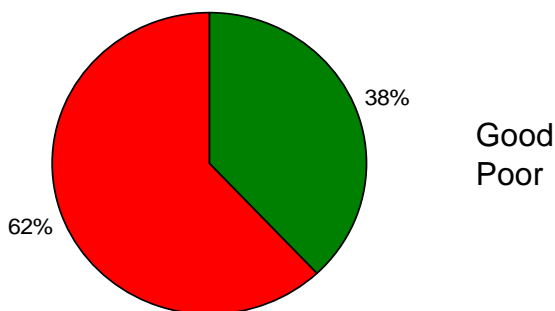
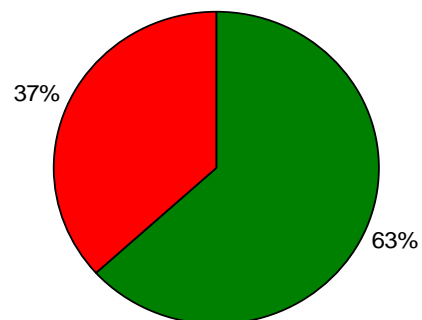


Figure 6 **Current chemical status of groundwater bodies**



Poor groundwater quantitative status occurs if there could be adverse impacts on wetlands or where more groundwater is taken, for example for drinking water supply, and it is not certain that this will be replaced each year by rainfall.

Few surface waters are in poor or bad status – the majority are at moderate status. In most cases, a single pressure causes this. The most commonly failing elements are fish, followed by invertebrates, then phosphorus.

The current status classification is the baseline from which the 'no deterioration in status' objective of the Water Framework Directive is measured.

- » [Monitoring and classification maps, which describe current status, are in annex A.](#)
[More detailed classification results are in annex B.](#)

We propose that 35 of 405 surface water bodies in the South East River Basin District (nine per cent of all surface waters) should be designated as artificial, and 139 (34 per cent of all surface waters) designated as heavily modified – see table 1. We reached this view using a detailed screening process, which involved consulting interested groups and carrying out a technical review.

- » [The reasons for designation of artificial and heavily modified water bodies are given in annex I.](#)

Table 1 **Water body numbers in the South East River Basin District**

	River and canal	Lake and reservoir	Estuary (transitional)	Coastal	Groundwater	Total
Natural water bodies	217	1	1	2	30	251
Candidate artificial water bodies	13	16	4	2	n/a	35
Candidate heavily modified water bodies	108	4	15	12	n/a	139
<i>Not yet assessed</i>	82	28	5	1	n/a	112
Total	338	30	20	17	30	435

We propose to extend the network of water bodies in England to include areas of biodiversity significance. We also propose to split some of the larger water bodies.

- » [Details of changes to water bodies are included in annex J.](#)

The objectives for waters in the South East River Basin District

How we set objectives

This draft plan sets out where we aim to meet good status and good potential by 2015. Where these targets cannot be met by 2015, we set out the reasons.

In some cases for example, actions may not be technically feasible in the short term but can be successfully implemented over a longer period of time. Or using the available resources in this way means that the action is no longer disproportionately costly. Investigations may be needed to understand the source of problems and how to solve them. In most of these cases, we have proposed achievement of good status or potential by 2027. We will review the proposals in relation to these alternative objectives before the next plan in 2015. This will be informed by investigations and our intention to set an overall target for 2021.

- » Objectives for each water body are set out in annex B. More details about alternative objectives are included in annexes C and E.
- » Information about current status and objectives for protected areas, and actions proposed, is in annexes B, C and D.

In assessing the actions that contribute to this plan, we have been through a consistent process to assess the costs and benefits, their effectiveness and their impact. We believe that some of the actions we considered for this plan are not suitable because it is not technically feasible to implement them, or the benefits they would bring are not certain and the cost would exceed the benefits.

- » Information about the planning assumptions we used when assessing actions is in annex E.

Objectives across the river basin district for 2015

Figures 7 to 12 show what we expect the status of our waters to be in 2015 if the proposed actions are implemented.

Figure 7a Predicted ecological status and ecological potential of rivers in 2015, by number assessed

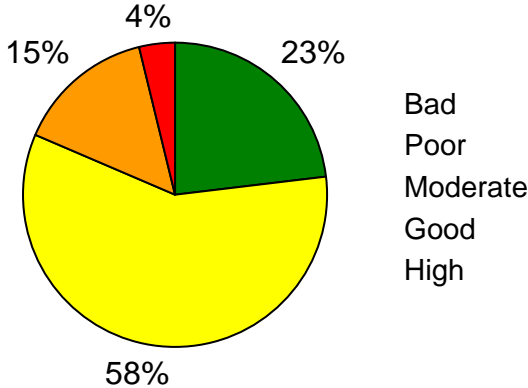


Figure 7b Predicted ecological status and ecological potential of rivers in 2015, by length assessed

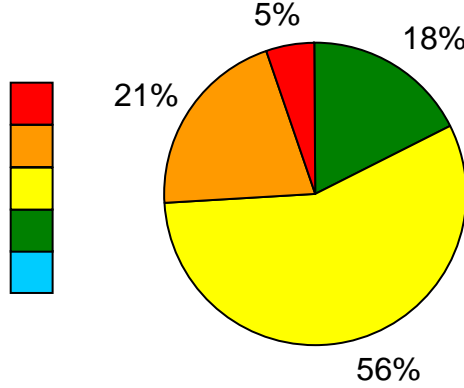


Figure 8a Predicted biological status of rivers in 2015, by number assessed

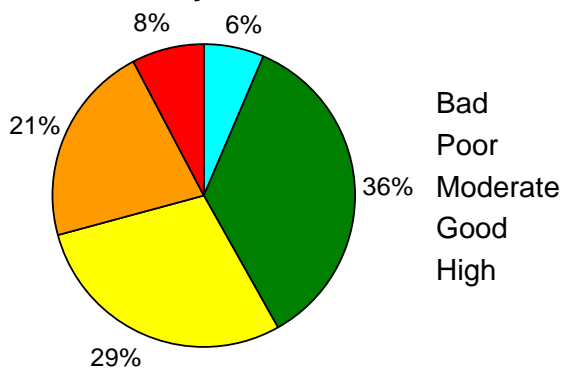
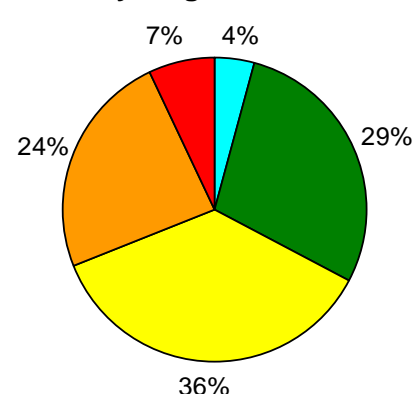


Figure 8b Predicted biological status of rivers in 2015, by length assessed



We have set no less stringent objectives in this plan, and expect 21 per cent of surface waters to reach good status or good potential by 2015.

Across the river basin district, the proposed actions will:

- **Improve rivers to 23 percent at good status or good potential by 2015, from 14 per cent now.** This means more than doubling the length of river in good status or potential: from 182 km or eight per cent now, to 394 km or 18 per cent in 2015. Within this, there will be improvements to water quality and ecology across the river basin district, as described in the [‘environmental outcomes’](#), and [‘catchments in 2015’](#) sections. However, not all of these will be reflected in a change in overall status. For example, investing at sewage treatment works to reduce the phosphorus concentrations may not deal with other elements limiting the status of the water body.
- **Ensure the long term improvement of lakes to good ecological status or potential by 2027.** We will develop our knowledge and understanding of the status of lakes during the first planning cycle.
- **Improve all coastal waters to ensure they reach good ecological status or good potential by 2027, from one (six per cent) now.** 59 per cent of coastal waters will be at good chemical status by 2015.
- **Ensure the long term improvement of our estuaries to good ecological status or potential by 2027,** with seven (35 per cent) at good chemical status by 2015.
- **Ensure no deterioration in groundwater,** such that 33 per cent is at good overall status in 2015, and prevent or limit pollution. 19 groundwater bodies will be at good chemical status, 11 at good quantitative status. It can take a long time for improvements to be shown in groundwater quality. However, the target is to improve all groundwater to good status by 2027.

There will be more information available about the state of waters in time for the final plan, and classifications will be more robust. Together with your consultation comments, this will allow us to improve our judgement on which objectives should be set. New actions will be included as they become available, including those planned through shoreline and catchment flood management plans. This may allow more waters to get to good status or good potential by 2015.

Q2 Do you agree with the proposed objectives? What would you change?

Q3 For some water bodies we have proposed objectives with deadlines after 2015 or a lower overall target. Do you agree with these changes? What would you change?

» Detailed information on the proposed objectives, together with information on current compliance is in annex B.

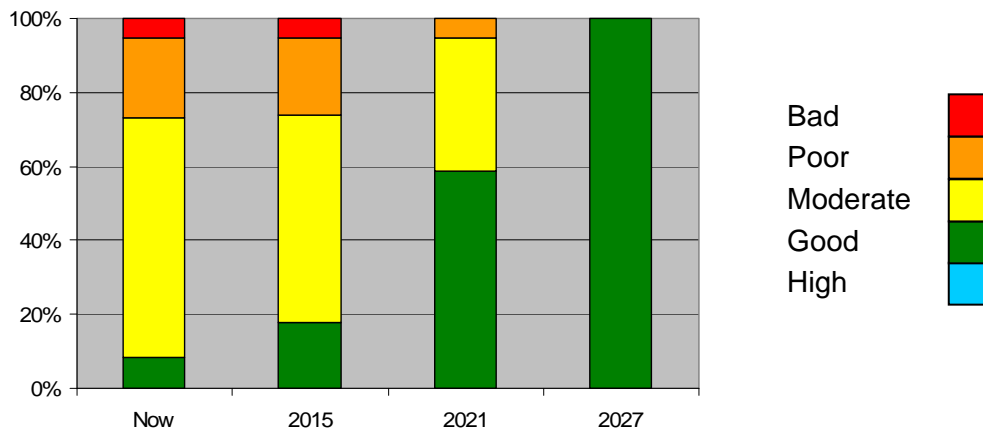
Targets for subsequent cycles

Even with all the improvements described in this draft plan, there will still be a big gap to bridge between 2015 and 2027. To make sure that good progress is made in each cycle, we are proposing targets for what should be achieved by 2021 and 2027. At this stage we believe that the target for 2021 should halve the gap between the predicted status in 2015 and the target for 2027. The targets should also make clear that those water bodies most in need of improvement are priorities for action with no bad status water bodies left by 2027.

These proposed targets are illustrated below. Because these targets are, in effect, the nation's targets for water and wetlands, we would like to see them feature in the Government's future Public Service Agreements.

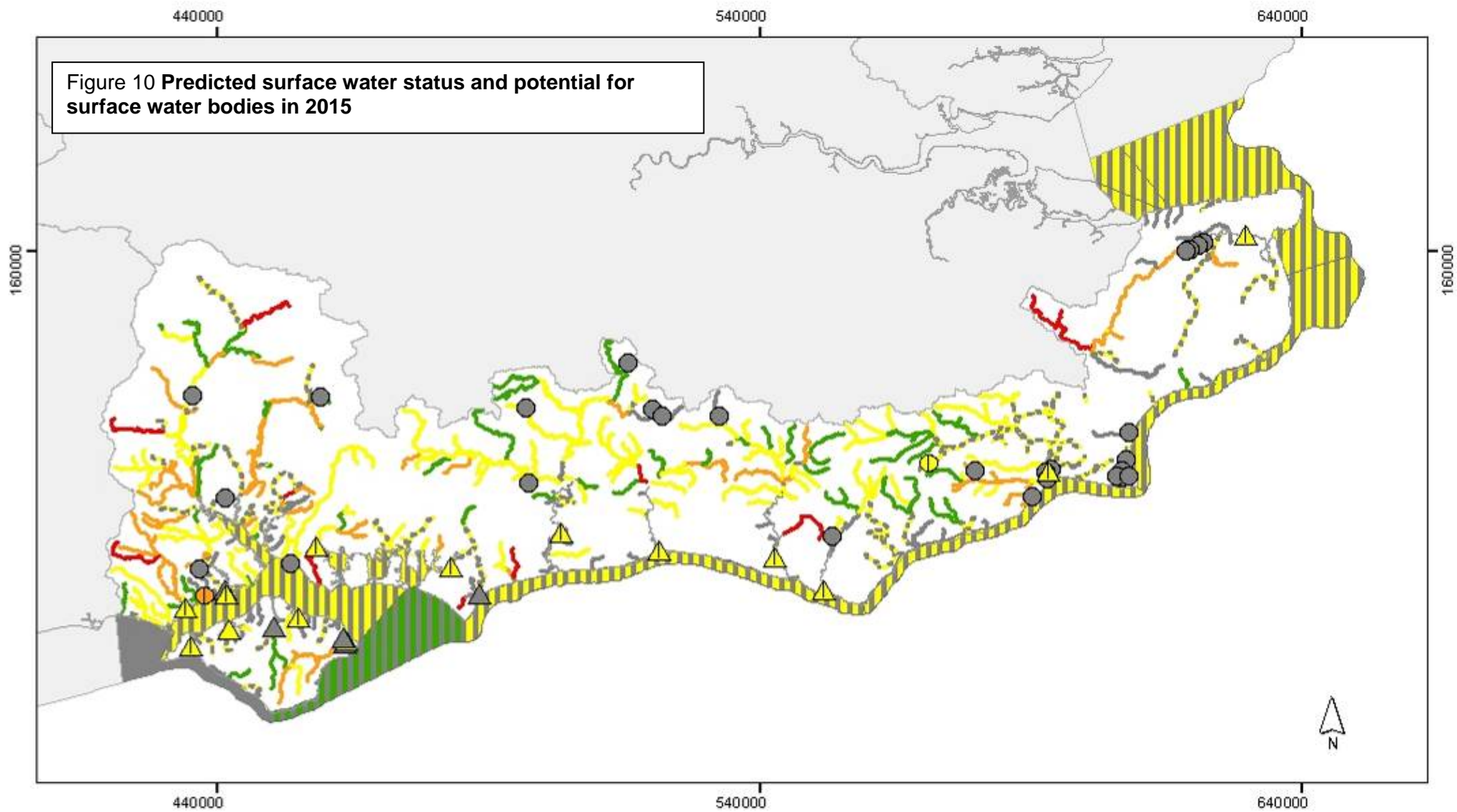
One of the benefits of setting interim targets is that it will encourage all those with a role in achieving the objectives of the Water Framework Directive to work together to identify effective future measures. The targets will be a challenge shared by all with this role.

Figure 9 Targets for subsequent cycles (percentage river length assessed)



The aspiration of achieving good environmental status or potential in all water bodies reflects the fact that no justification for less stringent objectives in any water body has been identified. Investigations planned during the first plan cycle may identify water bodies where less stringent objectives are the realistic approach, and the 2027 target will be firmed up accordingly.

Figure 10 Predicted surface water status and potential for surface water bodies in 2015



0 10 20 30 40 Kilometres

□ River Basin District

— National border

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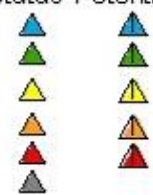
The coastline is © Ordnance Survey,

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High
Good
Moderate
Poor
Bad
Not yet assessed

Estuaries < 30km²

Status Potential



River

Status Potential



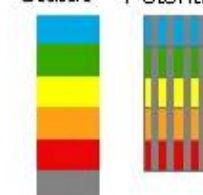
Lakes

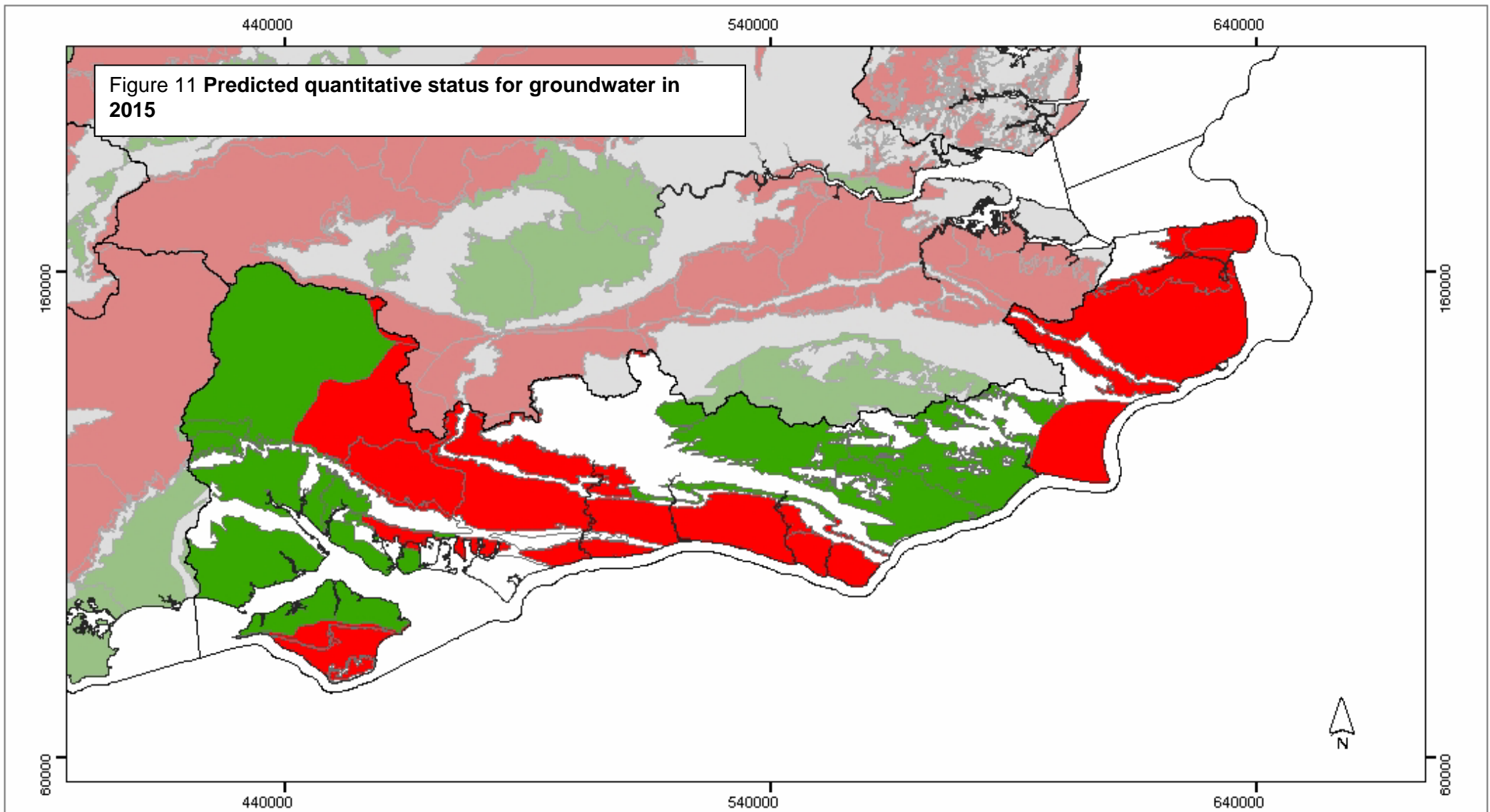
Status Potential



Coasts and Estuaries >30km²

Status Potential

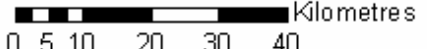






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Groundwater Quantitative Status

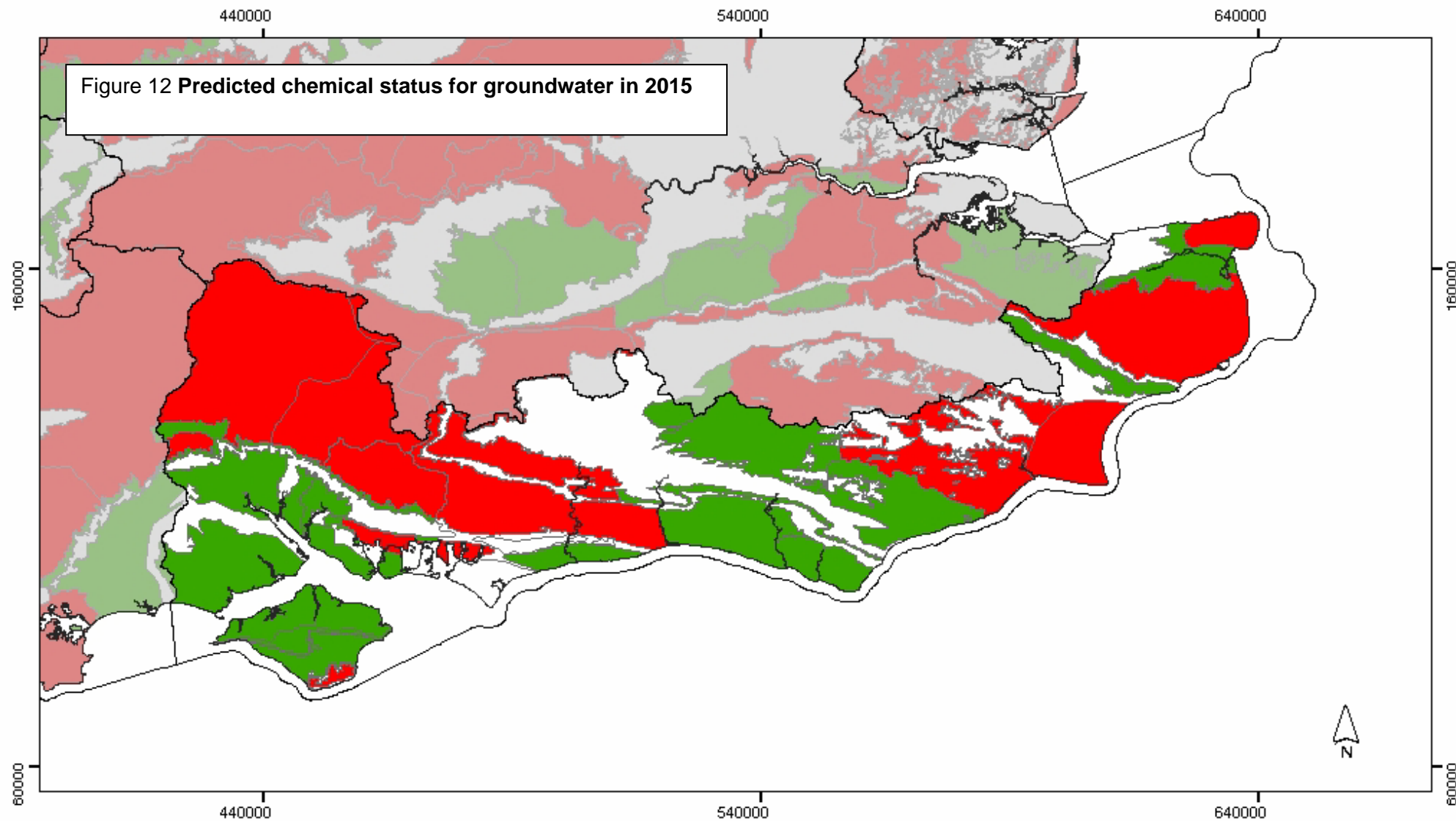
- Good
- Poor
- Not Assessed (Unproductive Strata)

 Kilometres
0 5 10 20 30 40

-  RBD boundary
-  National border

Date produced 16/09/08

Figure 12 Predicted chemical status for groundwater in 2015



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Groundwater Chemical Status

- Good
- Poor
- Not Assessed (Unproductive Strata)

 Kilometres
0 5 10 20 30 40

 RBD boundary

 National border

Date produced 16/09/08

South East River Basin District catchments in 2015

This section summarises information about the status of waters in the South East River Basin District, their objectives and some of the actions proposed for them. Rivers and lakes are grouped by catchment. There are nine catchments, presented here from west to east. Separate sections follow for estuaries and coastal waters, and groundwater.

- [New Forest](#)
- [Test and Itchen](#)
- [East Hampshire](#)
- [Isle of Wight](#)
- [Arun and Western Streams](#)
- [Adur and Ouse](#)
- [Cuckmere and Pevensy Levels](#)
- [Rother](#)
- [Stour](#)

Four case studies illustrate how river basin management relates to specific water bodies. These are:

- [The Bow Lake, Test & Itchen](#)
- [The River Medina, Isle of Wight](#)
- [Langstone Harbour, Estuaries and coastal water bodies](#)
- [Lord of the Manor, Groundwater](#)

» Detailed information on the proposed objectives, together with information on current compliance is in annex B

New Forest



The New Forest National Park covers most of this catchment. Its importance for wildlife is recognised by its status as a Special Protection Area and Special Area of Conservation. The coastal stretch includes the urban and industrial areas of Southampton, Hythe and Fawley along Southampton Water, and towns along the Solent and the Dorset/Hampshire coastal water.

New Forest rivers and streams are particularly sensitive to enrichment caused by nutrient inputs such as effluent from sewage treatment works. As many are fed by groundwater, it is also critical that the underlying Barton Sands aquifer remains low in nutrients.

Although the groundwater is generally good status in terms of quality and quantity, there is local pollution, mainly ammonia, from old, poorly managed landfills. There are also industrial pollution issues, with remedial action ongoing at the Ampress Works site in Lymington.

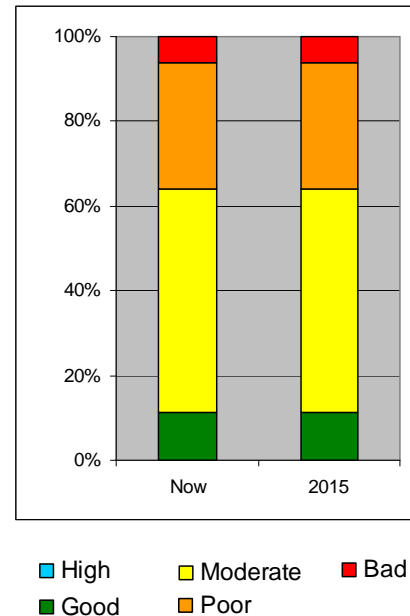
Eleven per cent of river length assessed is achieving good status now (figure 13). Local actions will improve water quality and fish movements in the catchment, but we are not currently predicting that they will be enough to improve the status of any individual water bodies. However, we will reassess the objectives for all waters when there is more certainty about the actions available, and look to bring more waters into good status by 2015. Waters at good status now include the Buckland Stream, Plummers Water and Walkford Brook. 19 km of river have not yet been assessed – some 8 per cent of the total length.

There will be action in the New Forest to improve a range of elements that make up good status, and the worst waters will be prioritised. Phosphate class will improve in over 40 km of river, including the Hatchet Stream, Bartley Water and Highland Water.

Some proposed actions:

- improve sewage works at 14 locations to reduce inputs of nutrients including phosphorus and improve shellfish waters;
- a catchment approach to habitat enhancement in partnership with the Forestry Commission;
- quantify and reduce the impact of private wastewater discharges from septic tanks and cess pits;
- investigate the reasons for low ecological quality;
- address barriers to fish passage at sites including Efford and Gordleton Mills.

Figure 13 Progress towards achieving good status and potential in rivers in the New Forest catchment



Test and Itchen



The rivers Test and Itchen are the birthplace of fly fishing. Fed by groundwater, they support a rich diversity of mammals, birds, fish, invertebrates and plants. The Itchen is designated a Special Area of Conservation for its internationally important wildlife.

Groundwater is also the source of much of the area’s water supplies. In some places water abstraction creates extra problems for wildlife when river levels run low. It will be more difficult to manage this balance in future the climate becomes drier. Major abstractions such as the Otterbourne public water supply near Winchester have been investigated and changes to abstraction licences are proposed to protect the environment.

The rivers, their tributaries and coastal waters can suffer from growth of algae caused by excessive levels of phosphates and nitrates in sewage works effluent, discharges from other industries and farming. Groundwater is also under pressure from oil and chemical pollution in the urbanised south of the catchment.

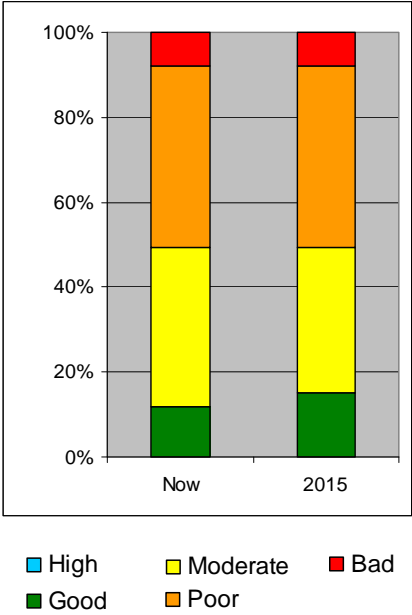
Twelve per cent of assessed river length is at good status or good potential – 29 water bodies (figure 14). Waters at good status now include Luzborough Lane Stream, Pilhill Brook and parts of the Itchen and Test. We are proposing that by 2015 this would have improved to 15 per cent of river length, bringing six more waters to good status or potential. Only two km of river are not yet assessed – representing less than one per cent of total river length.

There will be action in the catchment to improve a range of elements that make up good status, and the worst waters will be prioritised. By 2015, ammonia levels will be improved in 4 km of river, including the Bow Lake and Whiteparish Tributary. Improvements will take place to over 50 km of river for phosphorous, 16 km for dissolved oxygen and 27 km of the River Test for mercury and its compounds. Invertebrate populations will improve to good status in over 40 km of the Cadnam River, Bourne Rivulet and River Dever. We also predict improved fish on 19 km of the River Test and 4 km of the River Dever.

Some proposed actions:

- modify abstraction licences to ensure no adverse impact on the River Itchen Special Area of Conservation;
- improve sewage works at 37 locations including Eastleigh and Andover to reduce levels of phosphorus and organic pollutants;
- work to reduce diffuse pollution from agriculture, partly through Catchment Sensitive Farming;
- address barriers to fish passage at sites including Testwood and Blackbridge;
- enhance habitat at priority locations on the River Anton, River Itchen, Tanner’s Brook and Candover Brook;
- minimise the impact of fish farms and cress farms on water quality;
- improve road drainage to avoid ground or surface water pollution from road run off;
- target pollution prevention in urban areas, including domestic oil storage;
- control invasive non-native fish such as top mouth gudgeon and sunbleak;
- improve understanding of appropriate freshwater flows entering estuaries;
- address rising trends in nitrate at sources in the Test and Itchen chalk aquifers;
- further investigate the reasons for low ecological quality.

Figure 14 **Progress towards achieving good status and potential in rivers in the Test & Itchen catchment**



Case study: The Bow Lake

The Bow Lake flows into the River Itchen, a Special Area of Conservation. The water body upstream should reach good status by 2015. However, there is high confidence that the section of the stream covered by this water body is at poor overall status. It is also a heavily modified water body.

The water quality and ecology of this river is suffering. Dissolved oxygen, invertebrates and diatoms (phytobenthos) are currently at poor status, and are not predicted to improve by 2015.

Investigations are required to discover the exact causes of the pressures. Close to the water body are arable farms, grazing, fish farming, equestrian farms, and a zoo. Septic tanks are also commonly in use in the surrounding area. Some or all of these pressures may be contributing to the problems.

Catchment Sensitive Farming takes place in the area, but will not address the non-arable and grazing pressures. A number of actions have been identified to mitigate the impact of the stream's physical modifications. These include improvements to the channel to improve the habitat. In addition, the area is being considered as a potential Water Protection Zone. There is a target to achieve good ecological potential by 2027.



>> Further information
Annex B, page 777

Water body ID
GB107042016630

Status now
Poor ecological potential

Status in 2015
Poor ecological potential

Notes
Chemical status is not yet assessed

East Hampshire



The East Hampshire catchment includes an urbanised coastal plain along the Solent, and rolling chalk downland to the north. There is internationally important wildlife such as dark-bellied brent geese. Partnership for Urban South Hampshire is a development growth point.

The major pressures come from the built environment. Biodiversity in the estuaries suffers from an overgrowth of green algae caused by too much nitrogen. This comes from treated sewage effluent and agricultural run-off. The catchment is vulnerable to pollution incidents from the extensive sewerage and drainage infrastructure and the many industrial estates, particularly in the Hermitage Stream, River Hamble, and Gosport area. The principal public water supply, Bedhampton and Havant Springs, is at risk of pollution due to the presence of 'swallow holes' that directly link the Chalk catchment to the springs in the urban area of Havant.

Low flows, for example in the Rivers Hamble and Meon, can put ecology at risk and bird life may be affected by insufficient freshwater flows into Langstone Harbour. Licence changes are proposed to the Havant and Bedhampton Springs abstraction, in order to protect these flows.

There are other pressures. Obstructions stop fish moving freely up and downstream in some rivers. Excessive quantities of silt partly due to intensive agriculture can impact ecology, especially fish.

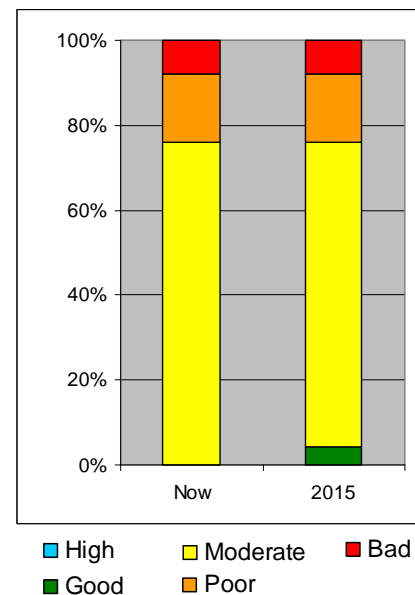
Currently, none of the 22 river water bodies we have assessed in East Hampshire are at good status or potential (figure 15). Four per cent of river length will be compliant by 2015. 17 km of river has not yet been assessed (ten per cent of the total).

Action in this catchment will address phosphate and dissolved oxygen issues in particular. For example, phosphate levels will be improved from poor or moderate to good in nearly 9 km of the Hamble and Wallington.

Some proposed actions:

- modify abstraction licences to ensure no adverse impact on internationally important wildlife sites;
- improve sewage works at 61 locations. For example, these will reduce levels of nutrients such as phosphorus and benefit shellfish and bathing waters;
- improve the potential for river wildlife, particularly on the Hermitage Stream and River Meon.
- address barriers to fish passage at sites including Tichfield and Botley Mills;
- advice led partnership work to address diffuse pollution from agriculture, particularly on the Meon, Hamble and Wallington;
- improve river flow for example by reducing abstraction and other measures, particularly in the summer months;
- address sewerage misconnections in urban areas;
- pollution prevention targeted around industrial areas;
- collate information on swallow holes and raise awareness of landowners;
- investigate the reasons for low ecological quality.

Figure 15 Progress towards achieving good status and potential in rivers in the East Hampshire catchment



Isle of Wight



The Isle of Wight's landscapes and coast help draw one million people on holiday each year. About half of the catchment is designated as an Area of Outstanding Natural Beauty and Heritage Coast. There is a range of coastal wetlands designated Special Protection Areas or Special Areas of Conservation.

However, there are big issues for the island's water environment. Most streams and rivers have been dredged and straightened, and suffer from sedimentation and diffuse pollution. The lack of mains drainage for many small communities is a concern, as septic tanks can discharge sewage effluent into the island's streams and groundwater. This has increased the levels of nutrients in many waters.

Three major groundwater units (Central Chalk, Southern Downs Chalk and the Lower Greensand) supply water for drinking, agriculture and industry and are heavily abstracted for public water supply. Water is transferred from the mainland to supplement the Isle of Wight's supplies. For the island to become more self-sufficient in water resources, it is critical to protect the groundwater from pollution.

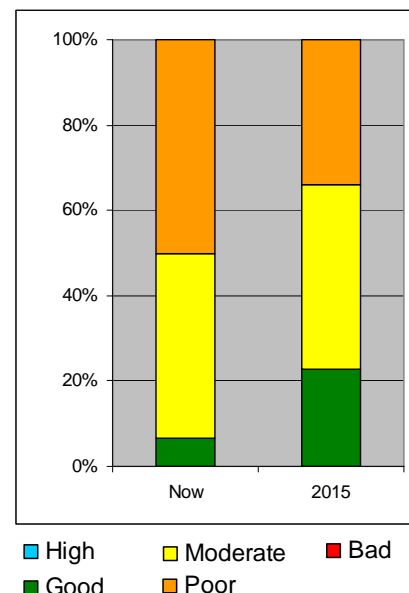
One water body, the Brighstone Stream, is currently at good status or potential. This represents seven per cent of assessed river length (figure 16). By 2015, compliance will increase to 23 per cent. 40 km of river – 29 per cent of the Island's river length, mainly very small streams and tributaries – has not yet been assessed.

There will be action in the catchment to improve a range of elements that make up good status, and we will prioritise the worst waters. By 2015, 16km of the River Medina will see improvements in invertebrates from moderate to good, and fish from poor to good class, as a result of habitat and fish passage enhancement. The coastal waters to the east and west of the island are the best quality in the river basin district. There will be action to make sure these and other waters do not deteriorate in class.

Some proposed actions:

- modify abstraction licences to ensure no adverse impact on internationally important wildlife sites;
- investigate the impact of Highwood Lane sewage works, and improve six further locations to reduce inputs of nutrients and organic pollutants, and benefit shellfish waters;
- tackle diffuse pollution across the whole island through the Landcare Project and a Strategic Partnership with Catchment Sensitive Farming;
- improve habitats and ecology particularly on the rivers Eastern Yar and Caul Bourne, and improve fish passage and habitat on the Medina;
- improve river flow for example by reducing abstraction, particularly in the summer months;
- remove invasive non-native fish such as pumpkinseed;
- quantify and reduce the impact of private wastewater discharges from septic tanks and cess pits;
- address rising trends in pesticide and nitrate in groundwater at Niton;
- investigate the reasons for low ecological quality, and gather further information to classify waters and set objectives with more confidence.

Figure 16 Progress towards achieving good status and potential in rivers in the Isle of Wight catchment



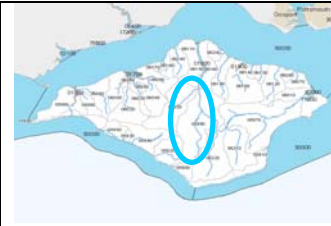
Case study: The River Medina

The Medina drains much of the island and passes through the main town of Newport at the head of the Medina estuary.

As this 17 km stretch heads up to its source on St Catherine's Down, it divides and passes through agricultural land.

The water body is currently at poor status overall. Fish populations are currently at poor status, and invertebrates are at moderate status. The area is over-licensed in terms of abstraction and there are concerns about sediment run-off from surrounding fields. The water body is designated under the Freshwater Fish Directive and targeted through the Nitrates Directive. The Medina estuary is designated as a shellfish water.

Improvements are planned to water company assets that will deliver water quality benefits. The Environment Agency will lead on removing obstructions to fish passage. We would also like to undertake further habitat restoration. A Strategic Partnership will deliver advice to farmers from 2009, to encourage good practice and reduce diffuse pollution. The water body is predicted to improve to good status overall by 2015.



>> Further information

Annex B, page 393

Water body ID

GB107101005990

Status now

Poor overall, poor ecological status

Status in 2015

Good overall, good ecological status

Notes

Chemical status is not yet assessed

Arun and Western Streams



This catchment incorporates the River Arun, including its main tributary the River Rother, and the West Sussex coastal streams including the Ems and Lavant. Worthing, Bognor Regis, Chichester, Arundel, Midhurst and Horsham are key towns, and Ford is the only proposed Eco-town in the river basin district.

Increasing development in the coastal plain will put public water supplies under pressure. The Chalk and Lower Greensand aquifers also support freshwater inputs to a number of internationally important wildlife sites such as the Arun Valley, Pagham Harbour, and Chichester Harbour. Changes are proposed to licenced abstractions from the Chichester Chalk Block, particularly at Fishbourne. This will maintain the flow of freshwater into the harbour that the wildlife depends on.

Groundwater monitoring has highlighted increasing trends in nitrate in the Lower Greensand aquifer and the Worthing and Chichester Chalk. Also, the Habitats Directive Review of Consents has identified a number of localised impacts on nutrient levels from wastewater treatment works. Farming practices can exacerbate sedimentation problems on the Western Rother, which harm fish and other wildlife.

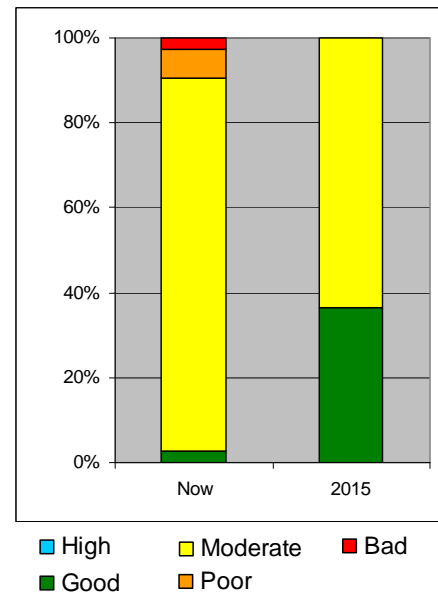
Currently only three per cent of 382 km of river assessed in this catchment – the Chilt and parts of the Lavant and Arun – is achieving good status or potential (figure 17). Seven per cent (5 waters) of the length of river waters is at poor ecological status, and three per cent (two waters) at bad ecological status. By 2015 there should be 36 per cent compliance with good status or potential. 49 km of river length is not yet assessed (11 per cent of the total).

There will be action in the catchment to improve a range of elements that make up good status, and the worst waters will be prioritised. By 2015, there will be improved life in 75 km of river that currently has elements classed as bad. Phosphate class will be improved in 240 km of river. Dissolved oxygen levels will improve to good in 130 km of river, and ammonia in 28 km.

Some proposed actions:

- modify abstraction licences to ensure no adverse impact on the Arun Valley Special Protection Area;
- extend Catchment Sensitive Farming to the Arun and Western Rother;
- realign some embankments on the River Arun to provide new wetland habitats and improve ecological status;
- enhance habitat on priority waters such as the rivers Lavant, Ems and Rother and address barriers to fish passage at sites including Stedham and North Mills and Lordings Lock;
- improve sewage works at 23 locations such as Horsham and Chichester, to reduce levels of phosphorus, nitrate and organic pollutants in the water environment;
- address rising trends of nitrate at two public water supplies within the Lower Greensand aquifer;
- target pollution prevention campaigns around industrial areas;
- improve road drainage to avoid ground or surface water pollution from road run off;
- investigate reasons for low ecological quality.

Figure 17 Progress towards achieving good status and potential in rivers in the Arun & Western Streams catchment



Adur and Ouse



The Adur and Ouse catchment is well known for both its urbanised coast and the South Downs. It includes the city of Brighton and Hove and the port areas of Newhaven and Shoreham – the latter a development growth point. Main inland towns include Lewes, Haywards Heath and Burgess Hill.

There are issues with the quality of effluent from the Goddards Green, Barnes Green and Coolham wastewater treatment works, and problems of diffuse pollution from urban areas. Obstruction to fish passage in the Ouse is a major problem, especially when there are prolonged periods of low river flow.

Groundwater quality in the Brighton Chalk is at risk of deterioration from nitrates and pesticides, relating to rural as well as urban inputs. There are groundwater quality risks in the Hastings aquifer. These relate to localised use of nitrates and pesticides in agriculture and horticulture, as well as nitrogen levels associated with effluent discharges. Another concern is the impact of abstraction on streams fed from the Brighton Chalk aquifer. River flows are lower in summer, and this would lead to a concentration of sewage effluent which can be harmful to wildlife.

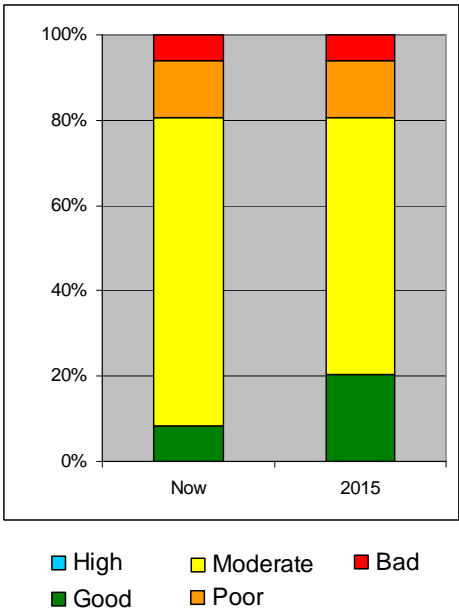
Currently eight percent of 307 km of assessed river water bodies are achieving good status (figure 18). We propose that by 2015 this will rise to 21 per cent. Six per cent of river length is not yet assessed.

There will be action in the catchment to improve a range of elements that make up good status, and the worst waters will be prioritised. By 2015, phosphates will improve to good or high class in 78 km of river, including parts of the Adur and Ouse, Tickerage, Sheffield Park and Shortbridge streams, the Black Sewer and the River Uck. Dissolved oxygen levels will improve to good in 11 km of the Ouse and 12 km of the Adur, and ammonia will improve to good in the North End Stream.

Some proposed local actions:

- improve sewage works at 20 locations to reduce levels of nutrients including phosphorus;
- modify abstraction licences to ensure no adverse impact on Sites of Special Scientific Interest;
- enhance habitat at priority waters such as the Ridgewood stream, River Adur at Knepp Castle, Pellingford stream, Cockhaise brook and Shell brook;
- address barriers to fish passage at sites including Barcombe Mills, Pools Bay and Deans Mill;
- partnership work to address diffuse pollution from agriculture;
- target pollution prevention campaigns around industrial areas;
- improve road drainage to avoid ground or surface water pollution from road run off;
- monitor fish to ensure that invasive non-native species such as pumpkinseed do not establish on the Ouse;
- investigate sources of poor water quality in several waters, including bathing waters.

Figure 18 Progress towards achieving good status and potential in rivers in the Adur & Ouse catchment



Cuckmere and Pevensey Levels



The Sussex Downs and the chalk cliffs between Seaford and Eastbourne lie to the west of this catchment. This contrasts with the High Weald in the north east, where an ancient landscape of copses, hedgerows and small fields extends into Kent.

The central part of the area is on the lower land of the Low Weald, with the Pevensey Levels to the south. A range of designated wildlife sites here depend on water level management and the maintenance of Pevensey Bay sea defences for their existence.

The main sources of public water supply in this catchment are the River Cuckmere at Arlington, the Chalk and Lower Greensand aquifers and Wallers Haven at Hazards Green. These sources principally serve the towns and surrounding areas of Heathfield, Seaford, Eastbourne and Hailsham.

The need for water in this catchment is increasing as a result of pressure from new development, and rising household demands in the coastal plain as well as commuter towns in the north of the area. The groundwater quality is at risk of deterioration, predominantly from the use of nitrates and pesticides in agriculture and horticulture, and nitrogen levels associated with sewage effluent discharges.

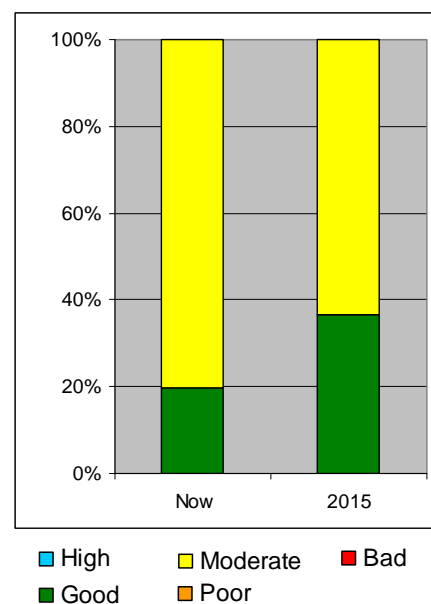
Currently 20 per cent of the length of river assessed in this catchment is at good status or potential (figure 19). This includes the Bull River, Powdermill Stream and Ashbourne Stream. There should be 36 per cent compliance by 2015. 33 km of river length is not yet assessed – 19 per cent of the total.

Action in the catchment, such as investment in the quality of sewage works effluent, will lead to a range of improvements. Phosphate levels will improve in 68 km of river, including the Cuckmere, Wallers Haven and the Watermill Stream. Dissolved oxygen levels will improve in almost 30 km of river, including Wallers Haven, East Stream and the Nunningham Stream.

Some proposed actions:

- improve sewage works at 15 locations to reduce inputs of phosphorus and organic pollutants, and investigations on predicted poor quality bathing water in Hastings;
- review water level management to ensure ecological needs are met;
- improve habitats in priority waters, including the East Stream, Pevensey Haven, Pevensey Levels, Wallers Haven, Combe Haven and the river Cuckmere, and reduce diffuse pollution from agriculture;
- restore the Cuckmere estuary to a tidal floodplain over the next 15 years. This will allow this popular landmark to adapt to the impacts of climate change and provide great benefits to both visitors and wildlife.

Figure 19 Progress towards achieving good status and potential in rivers in the Cuckmere & Pevensey Levels catchment



- manage floating pennywort – an invasive non-native species that can harm ecology and increase the local risk of flooding. Remove problem species at Bull River, Glynde reach and other locations where they are at risk of spreading.

Rother



The steep river valleys and woodland of the High Weald in the north give rise to small springs and streams with spawning trout. Here, the major river valleys of the Rother and Brede provide water to fill Darwell and Powdermill reservoirs. In the south east, water level control is crucial at Romney and Walland Marshes to provide for wildlife and prevent flooding. Dungeness is an internationally important wildlife site, valuable aquifer, and location of a nuclear power station.

Two thirds of the surface waters are artificial or heavily modified, and are managed to facilitate drainage and flood risk management. This can hinder the movement of fish and increases the challenge for providing good ecology.

In general, water resources are fully committed, and there is reliance on water transferred from the Medway via reservoirs. Current use of the groundwater within the Denge Gravels is thought to be unsustainable due to potentially conflicting water level requirements of the Dungeness Special Area of Conservation, together with sea level rise.

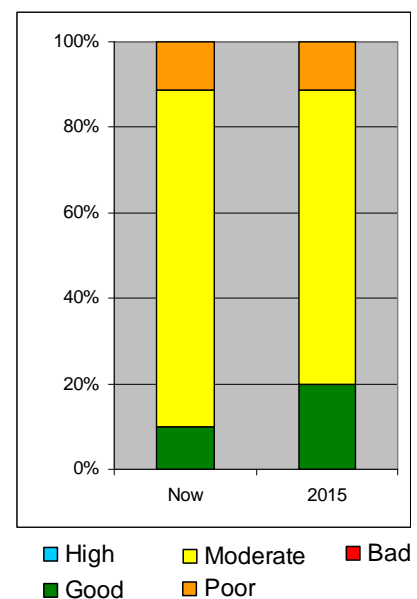
Groundwater bodies under this catchment suffer from high nitrate concentrations caused by urban and agricultural activities. There is oil and chemical contamination beneath an industrial site near Rye Harbour, which impacts on the ecology of the adjacent wetland, lakes and streams. The aquifer in the Romney Marsh area is suffering from the effects of sewage effluent discharges, and is at risk from nitrates, pesticides and saline intrusion.

Currently ten per cent of river length assessed is achieving good status or potential, such as the River Dudwell (figure 20). By 2015, compliance will double. 12 km of river is not yet assessed – some three per cent of total river length.

There will be action in the catchment to improve a range of elements that make up good status. Phosphate levels will improve in over 150 km of river, dissolved oxygen in 70 km and ammonia in 11 km. Invertebrates will improve in 10 km of the River Line. Altogether, this represents over 250 km of river improvement. This includes over 30 km of the Royal Military Canal and the 25 km Hexden Channel near Newenden.

Some proposed actions:

Figure 20 Progress towards achieving good status and potential in rivers in the Rother catchment



- continue to tackle diffuse pollution through Catchment Sensitive Farming, with particular emphasis on the use of pesticides in the top of the catchment;
- improve sewage works at 14 locations to reduce the input of nutrients such as phosphorus, and organic pollutants dissolved oxygen and ammonia;
- address barriers to fish passage at sites including the lower Rother in the marshes and at Scots Float tilting weir;
- enhance wildlife habitat for example at the Royal Military Canal, Doleham Ditch, Hexden Channel and the Rother (Kent lower);
- modify abstraction licences to ensure no adverse impact on the internationally important biodiversity at Dungeness;
- develop a more sustainable approach to using the Denge Gravels for public water supply, and increase water efficiency through the planning process;
- remove invasive non-native species from the Glottenham Stream where they are at risk of spreading.

Stour



From the White Cliffs to the Isle of Thanet, the water environment has a great influence on this catchment. As a result, there is an extensive range of international nature conservation designations in the area. Dover is a new growth point and Ashford is a growth area.

Many of the surface waters in this catchment are candidate artificial or heavily modified water bodies, reflecting the importance of flood risk management, the presence of high value agricultural land and the number of urban areas. Action will be taken to mitigate the impacts of these activities, but it is currently difficult to predict how the biology and water quality will respond.

Several water bodies including the stretch between Ashford and Canterbury have high phosphate concentrations and have been designated sensitive areas under the Urban Waste Water Treatment Directive. Although their chemical status is currently good, considerable work will be needed to drive improvements to ecology.

There are two principal chalk aquifers – Thanet and East Kent. In addition to levels of nitrates and pesticides, the Thanet Chalk is also impacted by solvent contamination. The impacts of the former coal mine discharges on the chalk groundwater are still evident and the potential future impact on the wetlands and surface water needs to be investigated.

Three per cent of river water bodies are achieving good status or potential now (figure 21). There will be action to prevent deterioration in status, but improvement in status by 2015 cannot currently be predicted. 54 km of river is not yet assessed – representing some 25 per cent of the total. This is either because there is not yet enough information to classify a number of small streams and tributaries, or because a water body is artificial or heavily modified and the process of assessing its ecological potential is not yet finished.

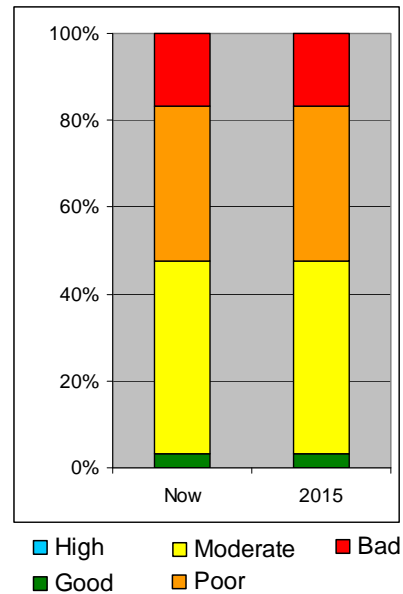
Action in the catchment will continue to deliver benefits within good status. For example, dissolved oxygen and phosphate will improve on eight km of the Little Stour from bad and

poor, respectively, to good and moderate by 2015. 21 km of the East Stour will see phosphate class improved from poor to good over this time, and nearly 50 km of the East Stour and River Great Stour will also see improvements in this important aspect of water quality. Ammonia will improve on the 6 km Brook Farm Stream.

Some proposed actions:

- extend existing Catchment Sensitive Farming to include the Isle of Thanet;
- modify abstraction licences to ensure no adverse impact on Sites of Special Scientific Interest;
- improve sewage works at 16 locations to reduce inputs of nutrients such as phosphorus, and organic pollutants, and benefit bathing and shellfish waters;
- influence the planning process to ensure that the impacts of Ashford's growth are minimised;
- target industrial pollution awareness campaigns and sustainable drainage initiatives;
- improve fish passage and flow, for example at Chartham paper mill, the sluices at Canterbury and the pumping station at West Stourmouth;
- enhance the Little Stour and Great and Upper Stour river channels to improve depth and flow rates, and improve habitats in the North/South Streams, River Great Stour and River Dour.

Figure 21 **Progress towards achieving good status and potential in rivers in the Stour catchment**



Estuaries and coastal water bodies



People in the river basin district benefit from our long coastline, but many environmental pressures are concentrated in our estuaries and sea. Building towns and flood defences, and making space for boats, has left very few natural coastal and estuarine waters. Run-off and discharges cause pollution which challenges our wildlife, bathing and economically important fisheries. There is also a legacy of chemicals in sediments.

Most of our physical modifications result from flood and coastal erosion management and navigation. Some measures have been identified to mitigate the ecological impact of these uses for water bodies. More will be available in time for the final plan, when shoreline and catchment flood management plans have been adopted, and other uses such as commercial fisheries have been assessed.

Nitrogen is a nutrient that causes an overgrowth of green seaweeds in many waters including the Solent. This harms biodiversity, and can cause problems for recreation and navigation. Treating the problem is slow and expensive, and requires efforts to control run off from urban and rural land as well as improvements to sewage works. We do not think that solving the

problem by 2015 is technically feasible, because of the range of nitrogen sources. Work is already underway to improve the sewage discharges that affect the Natura 2000 sites around the Solent.

There are 17 coastal and 20 estuarine (also called ‘transitional’) water bodies in the river basin district. Currently there is one coastal water – Isle of Wight East – at good potential, and one which has yet to be assessed. None of our 20 estuarine waters are at good status or good potential now, though seven will be at good chemical status in 2015. There are five estuarine waters which are not yet assessed.

By 2015, 59 per cent of coastal waters and 35 per cent of estuaries will be at good chemical status. In some places, such as the Adur, a legacy of contamination with the biocide Tributyl tin (TBT) may prove disproportionately expensive to address, even by 2027.

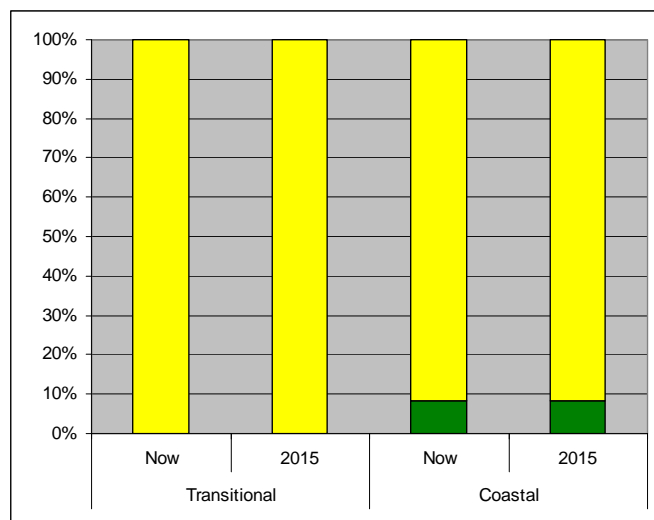
Improvements to sewage discharges and urban diffuse pollution will address eight bathing waters that are at risk of failing new Bathing Water Directive standards. There is also major investment planned to treat discharges that might otherwise affect the importance of our 25 Shellfish Waters. We are working with sectors operating in the marine environment to improve our understanding of the impacts and identify cost-effective measures to address them.

Monitoring has begun on a broader range of elements in our coastal waters and estuaries. Over time, this will provide a more comprehensive picture of these waters, and help relevant organisations to direct action.

Some proposed actions:

- improve sewage works in a number of locations to reduce the impact of urban discharges on water bodies with green seaweed problems and major seaside resorts such as Worthing;
- Catchment Sensitive Farming and local advice led partnerships to reduce rural diffuse pollution entering marine waters;
- provide local guidance and information that helps to reduce the risk from physical pressures, diffuse and point sources;
- managed realignment at sites identified in Shoreline Management Plans and Catchment Flood Management Plans;
- apply national guidance frameworks on dredging and disposal of dredgings where appropriate locally;
- produce code of conduct for commercial fisheries and sea anglers and help to establish marine protected areas.

Figure 22 Progress towards achieving good status and potential in estuaries and coasts



Case study: Langstone Harbour

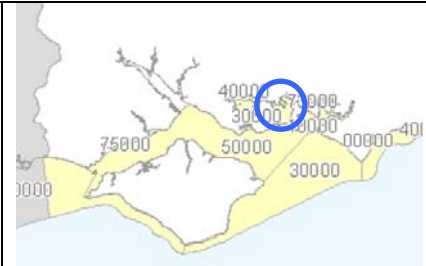
Langstone Harbour lies between Portsea and Hayling Islands and covers over 19 km². It is connected to Portsmouth and Chichester Harbours by narrow channels in the north and opens into the Eastern Solent in the south.

There is an excess of nutrients in the harbour, especially nitrogen. This results in the growth of large amounts of green seaweeds (macro algae), which harms biodiversity, and causes problems for navigation and recreation. Nitrogen and macro algae levels are at moderate status.

Following the Urban Waste Water Treatment Directive and Nitrate Directive designations of the harbour as a sensitive area, there have been improvements to water company assets that will reduce nutrient inputs. Further improvements due to nitrogen stripping at Budds Farm sewage works came on line in 2008. A Strategic Partnership sponsored by Natural England, Portsmouth Water and the Environment Agency will support a project officer who will deliver land care advice from 2009, to encourage good practice and reduce diffuse pollution.

These improvements will reduce nitrogen concentrations in the water column by 2015. However it is likely to take substantially longer for the amount of green algae to reduce and therefore the ecological status is likely to remain as moderate in 2015.

The harbour is a heavily modified water, due to the coastal and flood protection around it. There is a need to examine what can be done fulfil the ecological potential of the water body by mitigating the impacts of these physical modifications.



>> Further information
Annex B, page 972

Water body ID
GB680705130000

Status now
Overall moderate potential.
Moderate ecological potential,
Good chemical status

Status in 2015
Overall moderate potential.
Moderate ecological potential,
Good chemical status

Groundwater



Groundwater is vital to life and livelihoods in the river basin district. It provides 72 per cent of drinking water and supports many rivers and wetland habitats. Groundwater quality must be protected and improved, and abstraction should be balanced with the needs of the environment.

Currently, ten of 30 groundwater bodies in the river basin district are at good status overall, and have an objective of good status for 2015. Overall status is determined by chemical status and quantitative status. In the district, 19 water bodies have been classified at good chemical status, and 11 at good quantitative status. We will work with a wide range of

organisations in order to prevent deterioration, and achieve good overall status in all groundwater bodies by 2027.

Waters at poor quantitative status include the Brighton and Worthing Chalk blocks and the Lower Greensand of Arun and Western Streams. There are two main reasons for this. Long-term abstraction, mainly for drinking water supply, can exceed long term recharge to the aquifer. And the amount of abstraction can impact on surface water bodies fed from groundwater, particularly at times of low flow.

Six groundwater bodies are at poor chemical status due to rising trends of nitrate: the Chichester and Worthing Chalk, the Test Chalk, the Itchen Chalk, the East Kent Stour Chalk, the Lower Greensand Arun and Western Streams and the Isle of Wight Southern Chalk. The Isle of Wight Southern Chalk is also at poor status because of pesticides. The Isle of Thanet Chalk has widespread nitrates, pesticides and solvent issues. Romney Marsh is at poor status because of saline intrusion.

It is necessary to prevent or limit the input of pollutants into groundwater and implement measures to reverse any significant trends in pollutants. The 'prevent or limit' objective is the first line of defence for groundwater, and will drive action on point source pollution as well as the widespread pollutants such as nitrate that are causing deteriorating trends.

All groundwater must be protected from deterioration in quantity or quality, and we will ensure the monitoring network is kept under continuous review so that there is the best possible understanding of pressures and trends.

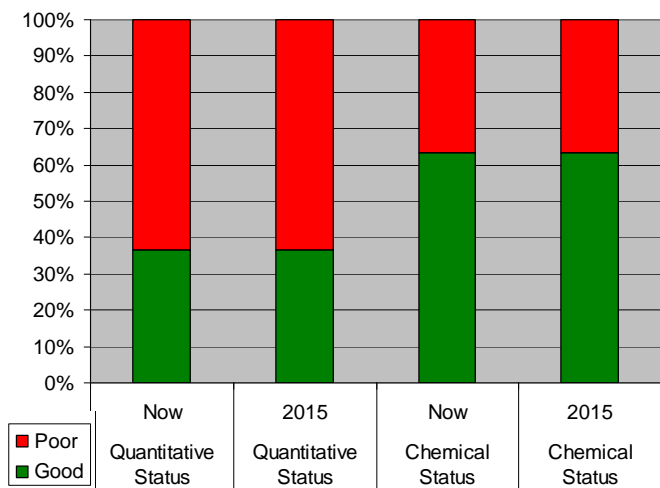
There are further challenges. First, it will take time to address the legacy of pollution in groundwater. In the Chalk, it can take pollutants such as nitrate 50 years or more to move from the surface to groundwater. Second, rising sea levels will increase the risk of saline water entering coastal groundwater bodies. Limiting pumping rates in supply boreholes can control this 'saline intrusion', but this may mean less water is available for abstraction from these aquifers.

As a result of these challenges, it may not be possible to achieve our objective of good status in all groundwater by 2027.

Some proposed local actions:

- use Catchment Sensitive Farming or other advice led partnerships to address diffuse pollution;
- work with Local Authorities and site owners to ensure adequate investigation and remediation of land affected by contamination;
- develop targeted pollution prevention initiatives with organisations such as the Highways Agency and Local Government to prevent and limit the introduction of pollutants to groundwater from road drainage, private sewage disposals, and oil tanks;
- manage groundwater abstraction and progress the Restoring Sustainable Abstraction programme.

Figure 23 **Progress towards achieving good quantitative and chemical status in groundwater**



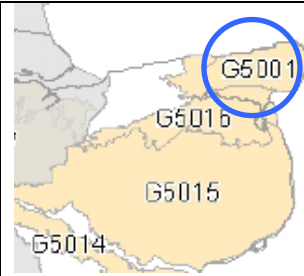
Case study: Lord of the Manor – Isle of Thanet Chalk

The Thanet Chalk groundwater body is subject to considerable pressures from both urban and rural pollution. Nitrates, pesticides, solvents and hydrocarbons are the principal contaminants and come from a range of sources, including industry, agriculture, amenity, transport, horticulture, drainage and residential land use.

The Lord of the Manor borehole is the lead water source for this groundwater. It has been so badly impacted by pollution that the supply was temporarily switched off. Now reconnected, treatment has been necessary to remove pesticides from the water before it is supplied. Other boreholes nearby have also been impacted by pollution.

Current actions underway to address the situation include Nitrate Vulnerable Zones and Pollution Prevention Campaigns built around the Source Protection Zones. Catchment Sensitive Farming is being extended to cover the Thanet area. However, although these are likely to have some effect, there is concern that alone they may not be adequate to achieve good status. For this reason, Lord of the Manor will be considered as a candidate Water Protection Zone.

There is a target of good status by 2027. Achieving good status by 2015 is not possible due to natural conditions – the time it takes groundwater to recover from pollution – and the disproportionate cost of achieving a water supply-demand balance.



>> Further information
Annex B, page 817

Water body ID
GB40701G500100

Status now
Poor status overall. Poor chemical status, Poor quantitative status

Status in 2015
Poor status overall. Poor chemical status, Poor quantitative status

Summary sector action plan

This section summarises the impact assessment of the plan, and highlights the key contributions from those who we will work with to implement it.

Impact assessment

A separate draft impact assessment shows the costs and benefits of implementing this plan. It sets out the impacts of different actions, as well as an analysis of the impacts on different sectors. It examines three scenarios for action – scenario A, our preferred scenario B as laid out in this draft plan, and scenario C, which is more ambitious and more costly. The results of the impact assessment are briefly noted in this section.

The impact assessment is limited by both our conservative assumptions on improvements in class, and the availability of data, both environmental and economic. However, they are a good basis for discussion during the consultation period.

We will produce a final impact assessment and this will accompany the River Basin Management Plan when we submit this to Ministers for their approval. Ministers will use the impact assessment to help them decide whether or not to approve the River Basin Management Plan, or whether to request changes.

» We have published a draft impact assessment for consultation at the same time as the consultation on this Draft River Basin Management Plan. Copies are available through our website at www.environment-agency.gov.uk/wfd or from the contact given at the end of this document.

Scenarios and what they mean in the Draft River Basin Management Plan

What is already happening and what will happen - Scenario A

Some of the actions in the plan are already happening or will happen. Scenario A reflects the actions required by other EU water directives, which the Water Framework Directive describes as 'basic measures'. It also includes some additional measures already put in place to implement the Water Framework Directive, for example the Catchment Sensitive Farming Delivery Initiative, which is currently operating in 40 catchments across England. These actions are a significant programme of work which provides the foundation to the Draft River Basin Management Plan. We have already consulted on these measures when they were introduced and so are listing them here for information only.

The scenario A costs presented below are an estimate. Whilst costs were not easily available for all scenario A measures, we do have data for the most costly measures. In the South East River Basin District almost all of the scenario A costs are met by the water industry, with approximately 60 per cent arising from Periodic Review 2004 (PRO04) and 40 per cent from PR09. A small percentage of costs are also met by the agricultural and rural land management sectors, mostly as a result of complying with the Nitrate Vulnerable Zones action plan.

This expenditure is also providing significant benefits. Our estimates put this at £10.2 million per year. These monetised benefits only value the public's willingness to pay for surface water improvements. There are many other benefits which have not been monetised, some of which are listed below.

Costs

Average Annual Undiscounted Costs (£m)	Total Present Value (PV) ² (£m)	% of Present Value (PV)
39.5	2,896.2	<ul style="list-style-type: none"> • Water Industry (97.5%) • Agricultural and Rural Land Management (2.1%) • Environment Agency (0.4%)

Benefits

Average Annual Undiscounted Benefits (£m)	Total PV (£m)	Other benefits not expressed in monetary terms include:
10	198.3	<ol style="list-style-type: none"> 1. Reduced operation costs to water companies due to improved water quality, in particular reduced concentrations of nitrate and pesticides; 2. Protection and enhancement of material assets due to reduced alien species pressures, for example zebra mussels which attach to infrastructure in large numbers; 3. Human health benefits due to improvements in water quality of recreational water bodies; 4. Reduced quantities of waste sent to landfill due to revised dredging techniques; and 5. Reduced long-term costs of coastal defence due to measures which encourage natural coastal erosion.

Additional actions that will happen if this plan is approved - **Scenario B**

In addition to the actions in scenario A, scenario B includes actions that we believe should happen and which we believe will bring about important environmental improvements. These actions fall into two categories: new actions that rely on national decisions and legislation but can be implemented according to priorities identified at the river basin district level, and new actions that are local and rely on initiatives that have been proposed in the South East River Basin District.

The scope of the new actions that rely on national decisions and legislation was determined through a series of public consultations on new measures and mechanisms, and the preliminary cost effective analysis exercise undertaken by the Department for Environment Food and Rural Affairs (Defra) and the Welsh Assembly Government. These new actions were identified in statutory guidance to the Environment Agency, and included in Defra's overall impact assessment for the Water Framework Directive. The way in which we have applied these new actions is described in Annex E.

Implementing scenario B involves additional costs over scenario A, for a variety of sectors. The three main sectors bearing these additional costs are the water industry, the Environment Agency and central government. This expenditure will also provide significant benefits. Our best estimate puts this at £3.5 million per year, of which 34 per cent relates to cost savings from investigations and 66 per cent relates to the public's willingness to pay for surface water improvements.

² Present value or PV is the equivalent value assigned now to future costs or benefits, with an appropriate adjustment to take account of the time when they actually occur.

Costs

Average Annual Undiscounted Costs (£m)	Total PV (£m)	% of Present Value
5.9	232.9	<ul style="list-style-type: none"> • Water Industry (91.8%) • Environment Agency (3.7%) • Central Government (3.1%)

Benefits

Average Annual Undiscounted Benefits (£m)	Total PV (£m)	Other benefits not expressed in monetary terms include:
3.5	40.7	The other benefits will include all of the benefits expressed under scenario A. These benefits will be greater in magnitude and will occur in more places.

Actions that could happen if we had more certainty they would be proportionate and feasible - Scenario C

There are further actions which, if implemented, could lead to even greater environmental protection and improvement. However, we may need a better understanding of how to implement these actions, or how effective they will be, so that we are sure that they are feasible and not disproportionately costly. Implementing these actions may have wider impacts on the environment or society. We would like to know if there is any additional information you can supply that will help justify including scenario C actions in the River Basin Management Plan.

Implementing scenario C involves additional costs over scenarios A and B. The three main sectors bearing these additional costs are the Environment Agency, local government and the water industry. This expenditure is also judged to provide benefits through cost savings from investigations.

Costs

Average Annual Undiscounted Costs (£m)	Total PV (£m)	% of Present Value
0.6	2.7	<ul style="list-style-type: none"> • Environment Agency (83.7%) • Local government (4.7%) • Water industry (3.2%)

Benefits

Average Annual Undiscounted Benefits (£m)	Total PV (£m)	Other benefits not expressed in monetary terms include:
0.0	0.3	The other benefits will include all of the benefits expressed in scenario A above. Compared to scenario B, these benefits will be greater in magnitude and will occur in more places.

In addition to the specific scenario C measures mentioned in this plan further work will take place during the consultation period to identify additional actions that are worthwhile, including water protection zones, and actions to: improve morphological condition (specifically barriers to fish movements); control the spread of invasive non-native species; investigate ways to deal with pollution from non-coal mines; address pollution from forestry activities; and manage diffuse pollution.

Q4 We have followed a process to assess (appraise) these actions. This process is described in detail in annex E. Do you agree with how we have done this?

- » Information about the principles for each scenario can be found in annex E.
- » Information about the actions under each of the scenarios, grouped according to the sectors that will be responsible for delivering them is in annex C, and annex D for Natura 2000.
- » Information about the actions under scenario A and B, grouped by catchments, is included in annex B.
- » Information about the actions associated with hydromorphology can be found in Annex C.

Summary of key contributions from different sectors

Key actions for relevant sectors are summarised in the following tables, grouped by scenario. The sectors are: [Agriculture and rural land management](#); [Angling and conservation](#); [Central government](#); [Environment Agency](#); [Industry manufacturing and other business](#); [Local and regional government](#); [Mining and quarrying](#); [Navigation](#); [Urban and transport](#); [Water industry](#).

Agriculture and rural land management

Action (Lead)	What this does	Where	When
What is already happening and what will happen – scenario A			
Cross-Compliance – helping farmers comply with the requirements of a range of Directives (All land managers)	Reduces pollution from agriculture at farms receiving subsidies	Nationally	Ongoing
Follow Pesticides statutory code of practice advice for operators on control of plant protection products (All operators)	Prevents and limits pollution of waters	River basin district	Ongoing
Maintain a nationally funded advice-led partnership under the England Catchment Sensitive Farming Delivery Initiative (Natural England, Environment Agency)	Reduce diffuse water pollution from agriculture in priority areas	Test and Itchen, Stour, Eastern Rother, Pevensey Levels, Arun and Western Rother, Isle of Thanet	Ongoing
Establish and enforce Nitrate Vulnerable Zones in river catchments at high risk from nitrate pollution (Defra, Environment Agency)	Reduce the amount of nitrate and other pollutants entering water from farmland	Nitrate Vulnerable Zones	2009

Form Strategic Partnerships with the England Catchment Sensitive Farming Delivery Initiative and other advice led partnership work (Natural England, Environment Agency)	Provide further funding to reduce diffuse water pollution from agriculture	Isle of Wight, the Solent	2009
Compliance with changes to discharges consents and abstraction licences for water cress farms, commercial fisheries and spray irrigation resulting from the Habitats Directive Review of Consents (Environment Agency)	Removes risk of impacts on freshwater flows and phosphate levels	Test and Itchen	2010
Additional actions that will happen if this plan is approved – scenario B			
Agri-environment scheme targeting will include diffuse pollution as a targeting driver (Natural England)	Water bodies at most risk of diffuse pollution do not deteriorate, and improve in status	Priority waters for resource protection	2015
Additional actions that could happen if we had more certainty that they would be effective – scenario C			
Government expects to designate and enforce Water Protection Zones within which we will apply appropriate measures to control high risk activities. The Zones will provide a regulatory tool to control diffuse pollution to water in high risk areas where other mechanisms are not working or are unlikely to work. We are currently investigating a potential list of sites (Environment Agency)	Regulatory tool to control diffuse pollution in high risk areas where other mechanisms are not working or unlikely to work <i>Uncertain if cost of measure is proportionate – further work needed to improve confidence in expected benefits. Subject to consultation on each Zone proposed.</i>	Initially around 8 Zones in locations to be decided across England & possibly Wales	From 2009 with possibility of further Zones from 2012
Encourage farmers and industry to build storage to support summer irrigation and improve river flow (Environment Agency)	Help ensure no deterioration of river flows from abstraction. <i>Uncertain if cost of measure is proportionate – further work needed to improve confidence in expected benefits</i>	At risk catchments	2015

Angling & conservation

Action (Lead)	What this does	Where	When
Additional actions that will happen if this plan is approved – scenario B			
Develop and deliver programme of habitat management work to improve fish habitats (Environment Agency)	Improve river habitat quality	In rivers with poor habitat quality	2015

Remove and control invasive non-native species from problem sites and promote good habitat management (Natural England)	Identify and control invasive species in key hot spots to reduce the risk of spread and limit local ecological damage	Waters specified in annex B	2015
Additional actions that could happen if we had more certainty that they would be effective – scenario C			
Take strategic opportunities to improve ecology through habitat creation and enhancement (Environment Agency)	37 candidate water bodies have been identified in the district <i>Technical feasibility uncertain - further work needed to demonstrate that the measure is technically feasible</i>	Waters specified in Annex B	Pilot priority areas by 2015
Produce code of conduct for commercial fisheries and sea anglers and help to establish marine protected areas (Sussex Sea Fisheries Committee or any subsequent Inshore Fisheries and Conservation Authority)	Protect bass nursery and priority reef habitat <i>Uncertain if cost of measure is proportionate – further work needed to improve confidence in expected benefits</i>	Sussex coastal waters	2015

Central government

Action (Lead)	What this does	Where	When
What is already happening and what will happen – scenario A			
Offer tax incentives for the purchase of efficient plant and fittings by commercial organisations (Defra)	Reduces water demand	Nationally	2010
Additional actions that will happen if this plan is approved – scenario B			
Agri-environment schemes targeting will include diffuse pollution as a targeting driver (Natural England)	Water bodies at most risk of diffuse pollution do not deteriorate, and improve in status	Priority waters for resource protection	2015
Disseminate and develop species identification guides and train key groups (Natural England)	Improve early detection of invasive non native species	River basin district	2015
New or enhanced local education campaigns to prevent non-native species introduction (Natural England)	Help reduce future problems from invasive non-native species	River basin district	2015
Remove invasive non-native species from sites that are at risk of becoming a source, where feasible (Natural England)	Identify and control invasive species in key hot spots to reduce the risk of spread and limit local ecological damage	Waters specified in annex B	2015
A statutory code of practice to provide guidance on the use and management of septic tanks is under preparation for use in conjunction with the forthcoming amended groundwater regulations and Environmental Permitting Regulations (Defra)	Helps to prevent and limit inputs of pollutants to surface waters and groundwaters	Nationally	2015
Additional actions that could happen if we had more certainty that they would be effective – scenario C			

Defra is considering a range of options to reduce the impacts from sewer misconnections. These include voluntary (public awareness raising and training for plumbers) and regulatory (transfer of powers – power currently with local authorities but could be passed to sewerage undertakers) options (Defra)	Helps to prevent and limit inputs of pollutants to surface waters Uncertain if cost of measure is proportionate – further work needed to improve confidence in expected benefits	Nationally	2015
Defra is considering regulation based on best practice, which will cover the abuse of the drainage system, commercial washing activities, surface water control plans on construction sites and site management for industrial, institutional and commercial sites (Defra)	Reduces emissions of priority substances, priority hazardous substances or specific pollutants as well as organic pollution from urban and industrial activity Uncertain if cost of measure is proportionate – further work needed to improve confidence in expected benefits	Nationally	2015
Defra is considering the need to take action on phosphates in the water environment and the contribution that controls on domestic laundry cleaning products might make to that process (Defra)	Would help to control the amount of phosphorus in waste waters and in sewage effluent, and help to reduce the risk of eutrophication Uncertain if cost of measure is proportionate – further work needed to improve confidence in expected benefits	Nationally	2015
Produce code of conduct for commercial fisheries and sea anglers and help to establish marine protected areas (Sussex Sea Fisheries Committee or any subsequent Inshore Fisheries and Conservation Authority)	Protect bass nursery and priority reef habitat Uncertain if cost of measure is proportionate – further work needed to improve confidence in expected benefits	Sussex coastal waters	2015

Environment Agency

Action (Lead is Environment Agency)	What this does	Where	When
What is already happening and what will happen – scenario A			
Environment Agency monitoring programme	Maintain and improve our understanding of the state of the water environment	Across South East River Basin District	2015
Programme of investigations to understand reasons for failure	Reduce uncertainty about causes of failure and develop solutions	In water bodies not achieving good status or good potential	2015
Review of Consents under the Habitats Directive	Achieve conservation objectives of Natura 2000 sites	Designated areas at risks	2012
Investigations at water dependent nature conservation sites perceived to be adversely affected by abstraction	Improve ecology at these sites	Ten sites in the Arun and Western Streams, Cuckmere and Pevensey Levels and Stour catchments	2015
Additional actions that will happen if this plan is approved – scenario B			
Harbours Diffuse Pollution Project to design and implement a strategy to tackle diffuse pollution in the Solent.	This will help Solent Sites of Special Scientific Interest currently in an unfavourable condition due to diffuse pollution	Waters specified in annex B	2015
Deliver a programme of improvements to priority obstructions to fish	Open up previously inaccessible areas to fish movement	At 25 priority sites across the river basin district	2015
Action to reduce the physical impacts of flood risk management activities in artificial or heavily modified water bodies	Helps waters reach good ecological potential	Waters specified in annex B	2027
Undertake managed realignment and allow more natural management of our coastline outside built up areas where appropriate	Sustainable flood risk management and improved wetland ecology	Managed realignment undertaken at approximately 10 sites: over 20km of coast by 2021, and 15 by 2027.	2021 & 2027
Additional actions that could happen if we had more certainty that they would be effective – scenario C			
Education and behaviour change projects to increase local contributions to water efficiency	Together with metering and tariff mechanisms, education leads to a reduction in per capita water use Uncertain if cost of measure is proportionate – further work needed to improve confidence in expected benefits	Across the river basin district	2015

Local pollution prevention campaigns	Raise awareness of the need for responsible handling and disposal of chemicals, oil and other pollutants Uncertain if cost of measure is proportionate – further work needed to improve confidence in expected benefits	Drinking water safeguard zones	2015
Take strategic opportunities to improve ecology through habitat creation and enhancement	Improve biodiversity as part of a green infrastructure for the region Technical feasibility uncertain - further work needed to demonstrate that the measure is technically feasible	37 candidate water bodies have been identified	2015

Industry, manufacturing & other business

Action (Lead)	What this does	Where	When
What is already happening and what will happen – scenario A			
Comply with regulations such as Environmental Permitting, Contaminated Land and Groundwater (Environment Agency)	Limits environmental damage and helps prevent pollution and deterioration of waters	Nationally	Ongoing
Additional actions that will happen if this plan is approved – scenario B			
Industry support to investigate emissions from sites and pollution from contaminated land (Industry)	Reduce uncertainty and provide additional information	Sites contributing to potential environmental quality standard failure	2015
Pollution Prevention advice and campaigns to provide targeted advice and enforcement (Environment Agency)	Reduction in contaminants being released to groundwater from industrial estates, petrol stations and other sources	High risk areas such as safeguard zones	2015
Additional actions that could happen if we had more certainty that they would be effective – scenario C			
Encourage reduced water use by specific sectors through water efficiency plans (Environment Agency)	Help achieve good quantitative status in groundwater Uncertain if cost of measure is proportionate – further work needed to improve confidence in expected benefits	River basin district wide	2011

Eliminate phosphorus from laundry detergents (Industry)	Reduces the amount of phosphorus entering the water environment, where it can otherwise harm biodiversity, in a cost effective way. <i>Uncertain if cost of measure is proportionate – further work needed to improve confidence in expected benefits</i>	Nationally	2015
Promote good practice to ensure sensitive management of fish farming and water cress farms, where evidence of point or diffuse pollution (Environment Agency)	Help reduce the risks to the water environment these industries can present <i>Uncertain if cost of measure is proportionate – further work needed to improve confidence in expected benefits</i>	Test and Itchen catchment	2015

Local and regional government

Action (Lead)	What this does	Where	When
What is already happening and what will happen – scenario A			
Strategic development planning, incorporation of Green Infrastructure and controls on site specific pollution (Local authorities)	Ensures appropriate locations for development and minimises development impact	River basin district	Ongoing
Additional actions that will happen if this plan is approved – scenario B			
Ensure Local Development Documents (LDDs) take into account the objectives of the River Basin Management Plan (Local authorities)	All adopted LDDs address this Plan's objectives by 2015, and include sustainable drainage schemes to reduce urban diffuse pollution at sites at risk	River basin district	2015
Action to reduce the physical impacts of urban development in artificial or heavily modified waters	Helps waters reach good ecological potential	Waters specified in annex B	2027
Additional actions that could happen if we had more certainty that they would be effective – scenario C			
Improve street and green space cleaning and management practice including chemical application where risk or evidence of impact (Local authorities, Environment Agency)	Prevent and limit the realisation of contaminants to groundwater <i>Uncertain if cost of measure is proportionate – further work needed to improve confidence in expected benefits</i>	At risk locations to be identified	2015
Improved management of surface water drainage by use of sustainable urban drainage systems (SuDS) and development and implementation of Surface Water Management Plans where appropriate (Local government)	Reduce risk of diffuse pollution <i>Uncertain if cost of measure is proportionate – further work needed to improve confidence in expected benefits</i>	River basin district	2015

Mining and quarrying

Action (Lead)	What this does	Where	When
What is already happening and what will happen – scenario A			
Comply with regulations such as Contaminated Land and Groundwater (All operators)	Prevent and limit pollution of groundwater	Nationally	Ongoing
Additional actions that will happen if this plan is approved – scenario B			
Investigate emissions from working sites and appraise options of best practice controls at mines and quarries (Operators)	Ensure environmental quality standards are met	Sites contributing to potential environmental quality standard failure	2015
Additional actions that could happen if we had more certainty that they would be effective – scenario C			
Investigate and prioritise impacts from contaminated land and mine pollution in surface waters, including groundwater sources (Environment Agency)	Identifies locations where contaminated land and pollution from mines impacts on water body objectives and puts in place pollution prevention plans to reduce pollution. <i>Uncertain if cost of measure is proportionate – further work needed to improve confidence in expected benefits</i>	East Kent Chalk groundwater body and other locations to be identified	2015

Navigation

Action (Lead)	What this does	Where	When
What is already happening and what will happen – scenario A			
Non-application of Tributyl tin (TBT) to boat hulls by July 2003. From January 2008 TBT should not be used on ship hulls or there should be a coating to prevent leaching of underlying TBT anti-foulants (Marine and Fisheries Agency, others)	Prevent and limit pollution in marine waters	Across European Union	2008
Additional actions that will happen if this plan is approved – scenario B			
Investigate the reason for failure: to assess the contribution from dredging or disposal activities on compliance with environmental quality standards as appropriate (EA working in partnership with Defra, Marine and Fisheries Agency and Port and Harbour Authorities)	Reduces emissions of priority substances, priority hazardous substances or specific pollutants from navigation	Sites failing Environmental Quality Standards or where there is evidence of deterioration	2012
Develop national guidance framework on dredging and disposal and dredging to inform programme of actions to meet Water Framework Directive objectives (Defra working in partnership with Port and Harbour Authorities, EA, Marine and Fisheries Agency and others as appropriate)	Reduces emissions of priority substances, priority hazardous substances or specific pollutants from navigation	England Dredging guidance Disposal guidance	2009 2012

Apply national guidance frameworks on dredging and disposal of dredgings to refine local measures as appropriate (where not disproportionately costly or technically infeasible) (Marine and Fisheries Agency, others)	Reduces emissions of priority substances, priority hazardous substances or specific pollutants from navigation	Applies locally as necessary	2012
Review existing controls for dredging inside and outside harbour limits as appropriate (Marine and Fisheries Agency, others)	Reduces emissions of priority substances, priority hazardous substances or specific pollutants from navigation	England	2012
Additional actions that could happen if we had more certainty that they would be effective – scenario C			
Campaign to educate boat users regarding disposal of toilet waste, oil, solvent, paint and cleaning products (British Marine Federation, Royal Yachting Association)	Reduce diffuse pollution from boats <i>Uncertain if cost of measure is proportionate – further work needed to improve confidence in expected benefits</i>	Waters around our estuaries and coasts at most risk from diffuse pollution, including Natura 2000 sites and marinas	2015

Urban & transport

Action (Lead)	What this does	Where	When
What is already happening and what will happen – scenario A			
Follow pesticides statutory code of practice advice for operators on control of plant protection products (All operators)	Prevents and limits pollution of waters	River basin district	Ongoing
Additional actions that will happen if this plan is approved – scenario B			
Pollution Prevention advice and campaigns to provide targeted advice and enforcement (Environment Agency)	Reduction in contaminants being released to groundwater from industrial estates, petrol stations and other sources	High risk areas such as safeguard zones	2015
Support to investigate emissions from sites and pollution from contaminated land (Industry)	Reduce uncertainty and provide additional information	Sites contributing to potential environmental quality standard failure	2015
Action is taken to reduce the physical impacts of urban development in artificial or heavily modified water bodies (Local government)	Helps waters reach good ecological potential	Waters specified in annex B	2027

Additional actions that could happen if we had more certainty that they would be effective – scenario C			
Government expects to designate Water Protection Zones within which we will apply appropriate measures to control high risk activities. The Zones will provide a regulatory tool to control diffuse pollution to water in high risk areas where other mechanisms are not working or are unlikely to work. We are currently investigating a potential list of sites (Environment Agency)	Regulatory tool to control diffuse pollution in high risk areas where other mechanisms are not working or unlikely to work Uncertain if cost of measure is proportionate – further work needed to improve confidence in expected benefits. Subject to consultation on each Zone proposed	Initially around 8 Zones in locations to be decided across England & possibly Wales	From 2009 with possibility of further Zones from 2012
Identify hot spots for sediment and other pollutants from highway run off and prepare management plans to reduce the risks (Highways Agency)	Reduction of diffuse pollution from the built environment Technical feasibility uncertain - further work needed to demonstrate that the measure is technically feasible	Hot spots in the river basin district	2015
Local partnerships and campaigns to reduce the risk of oil pollution from leakage and disposal, and maximize the efficient collection of waste oil (Environment Agency)	Reduction in the number of oil pollution incidents and the impact of diffuse pollution Uncertain if cost of measure is proportionate – further work needed to improve confidence in expected benefits	River basin district	2015
Manage impact of urban and highway runoff by encouraging the use of sustainable drainage systems (Environment Agency)	Provide more sustainable way of treating this source of diffuse pollution, and deliver wider public benefits Technical feasibility uncertain - further work needed to demonstrate that the measure is technically feasible	Problem areas identified in the river basin district	2015

Water industry

Action	What this does	Where	When
What is already happening and what will happen – scenario A			
Reduce leakage through active leakage control and customer supply pipe repair policies (Water companies)	Help ensure sufficient water for people and wildlife	River basin district	Ongoing
Complete the current round of water company asset investment (Water companies)	Deliver water quality improvements and reduce the impact of abstraction	Rivers, coasts and estuaries across the river basin district	By 2009
Improvements to water company assets under the next round of company investment (PR09) (Water companies)	Deliver water quality improvements and continue to reduce the impact of abstraction across the river basin district under a range of environmental Directives	Rivers, coasts and estuaries across the river basin district	By 2015
Additional actions that will happen if this plan is approved – scenario B			
Improvements to water company assets under the next round of company investment (PR09) for Water Framework Directive (Water companies)	Deliver further water quality improvements and continue to reduce the impact of abstraction across the river basin district	Rivers, coasts and estuaries across the river basin district	By 2015
Additional actions that could happen if we had more certainty that they would be effective – scenario C			
Education and behaviour change projects to increase local contributions to water efficiency (Environment Agency)	Together with metering and tariff mechanisms, education leads to a reduction in per capita water use in the river basin district <i>Uncertain if cost of measure is proportionate – further work needed to improve confidence in expected benefits</i>	River basin district	2015
Move towards universal water metering (Water companies)	Reduce water demand while ensuring water needs are met for all <i>Uncertain if cost of measure is proportionate – further work needed to improve confidence in expected benefits and assess distributional impacts.</i>	Universal in 2015 for Southern Water and Folkestone & Dover customers, 75% Bournemouth and West Hampshire Water customers. 84% of South East Water customers by 2020, all Portsmouth Water customers by 2035.	2015

Finalisation of the water industry periodic review process is running in parallel to this consultation. Measures to be delivered by the water industry, and their predicted outcomes can change from those used to develop the draft plan. Any additions, deletions or alterations and any subsequent changes of predicted outcomes will be made available to inform the consultation as they become available.

Q5 What comments do you have on these actions? Are there any actions we've missed, or any changes you'd propose?

Q6 What comments on Scenario C actions do you have, including any additional information you can supply about specific actions?

Q7 What support can you offer, such as undertaking any actions or providing resources, to help deliver more for your environment?

» This is a summary of the actions that will be taken. Full tables of actions are in annex C and D (for Natura 2000 actions).

» Local actions acting on a particular water body can be found through What's In Your Backyard (WIYBY) at www.environment-agency.gov.uk/homeandleisure

Planning for changing conditions

River basin management provides an opportunity to work on a long-term programme of environmental improvement. Through this, we will all be better equipped to adapt to changing conditions caused by climate change and development, and extremes such as drought and floods.

Climate change

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 actions that are put in place to manage these impacts. Actions that are implemented need to be as effective in a future climate as they are now, and not make it more difficult to address climate change.

The UK Climate Impacts Programme predicts that we will experience hotter drier summers, warmer wetter winters and rising sea levels. We need to take account of these changes in assessing the scale of the pressures on the water environment. This will help ensure that the actions proposed in this Draft River Basin Management Plan will continue to meet their objectives and that investment decisions are effective.

Table 2 Qualitative description of how climate change may change the risk of pressures in the South East River Basin District

Pressure	Increased risk
Abstraction and other artificial flow	Very high
Nutrients (nitrogen and phosphorus)	High
Physical modification	High
Sediment	High
Biological (invasive non-native species)	Medium
Microbiology (including faecal indicator organisms)	Medium
Organic pollution (sanitary determinands)	Medium
Biological (fisheries management)	Low/Medium
Acidification	Low
Hazardous substances	Low
Salinity	Low
Temperature of point source discharges	Low

Our screening analysis of the proposed actions shows that would be effective under a range of climatic conditions so they will help tackle pressures both now and under the future climate. Most actions can also be adapted so climate change should not rule out implementing them now.

No single body is responsible for ensuring climate change adaptation in the water environment. Delivery will best be achieved through partnerships and integration of activities. Working together on river basin management is a great opportunity to achieve this.

Q8 Do you agree with our assessment of how climate change will affect pressures on the water environment? What would you change?

» Further information about our assessment of the impact of climate change is in annex H.

Development

Spatial planning contributes to achieving sustainable development and can help protect and improve the environment to help implement the Water Framework Directive. We need to work with Planning Authorities to ensure that the aims and objectives of the Water Framework Directive are understood and translated into policies within spatial planning documents.

Current spatial plans in the South East River Basin District propose levels of new growth and development up to 2026. The South East Plan has proposed Strategic Development Areas for mixed-use major development schemes at Fareham, North of Hedge End, Whitehill/Bordon and Shoreham in the River Basin District.

We are working with local and regional government, and water companies to identify where growth may be particularly difficult to manage while maintaining the quality of our water environment. This major piece of work is an extension of our examination of growth and water quality at Natura 2000 sites, and will be completed by March 2009.

Flooding and coastal erosion

Flooding and coastal erosion are very important issues, and have a separate planning process alongside the new European Floods Directive. Because defences and control structures impact on ecology, the River Basin Management Plan and all actions proposed need to take account of the need for and the impact of flood and erosion management. Catchment Flood Management Plans and Shoreline Management Plans will take into account the objectives of the Water Framework Directive.

The Environment Agency plans its flood and coastal risk management capital investment through the Medium Term Plan, which is a rolling 5 Year investment plan that lists proposed projects. Using this, we will identify flood and coastal risk management activities that are relevant to the water body specific objectives in the River Basin Management Plan. These activities will be implemented with the goal of enhancing the ecology of water bodies where possible and so as not to require lowering of water body objectives unless fully justified under Article 4.7 of the Directive.

Further information

Strategic environmental assessment

Strategic environmental assessment reviews the effects of the actions proposed in this consultation on the environment, including any impacts on climate change. Through this assessment, as well as the impact assessment, we will be able to make sure that the final plan represents the most sustainable way of managing the water environment.

» We will publish an environmental report at the same time as this consultation. Copies are available through our website at www.environment-agency.gov.uk/wfd or from the contact given at the end of this document.

Habitats Directive assessments

River Basin Management Plans also fall within the scope of the Habitats Directive. This means that each River Basin Management Plan will require an assessment of its likely effects on any Natura 2000 sites within, or hydrologically linked to, the river basin district. Whilst it is unlikely that any parts of the plan will have a significant effect, an initial assessment by us will determine if the objectives and actions contained within the River Basin Management Plans pass a number of tests.

These tests will look at whether the River Basin Management Plans contain actions to support the achievement of objectives for Natura 2000 sites in the time required; that the objectives within the River Basin Management Plan are not less stringent than those already used to determine consents and licences as part of previous Habitats Directive assessments; and that the plans contain no exemptions, derogations or less stringent objectives for Natura 2000 sites other than those that are compatible with the Habitats and Birds Directives.

If the River Basin Management Plans do not pass these tests and do not appear to be meeting their obligations for Natura 2000 sites, then a fuller assessment may be required.

Give us your views

We encourage you to respond by using our online consultation on our website at www.environment-agency.gov.uk/wfd. From here, you will be able to download the draft plan and annexes, see other people's responses, and find out more information about river basin management planning and the Water Framework Directive.

Alternatively you can return a copy of the question form, and request further information, or contact us in any of these ways:

- email at southeastRBD@environment-agency.gov.uk
- phone on 08708 506506
- post to Sue Lade, Environment Agency (Southern Region), Regional Strategy Unit, Guildbourne House, Chatsworth Road, Worthing, West Sussex, BN11 1LD.

This consultation closes on 22 June 2009.

We will use your comments to help us revise the proposals, and will publish a response document on our website by 22 September 2009 to show how we will do this. We will then publish the first River Basin Management Plan for the South East River Basin District in December 2009.

Data Protection Notice

The Environment Agency will use the information you provide to produce the first South East River Basin Management Plan in 2009. We may need to use your personal information to contact you during this consultation period to clarify any comments. We may make your information available to members of the South East River Basin District liaison panel, or our agents/representatives to do these things on our behalf. If you do not want us to contact you, please let us know.

Under the Freedom of Information Act 2000 and Environmental Information Regulations 2004 we have to disclose information that we hold if people ask for it. This is subject to the exemptions/ exceptions and the 'public interest test' set out in the legislation.

Compliance with the Government's Code of Practice on Consultation

This consultation is being run in accordance with the criteria set out in the Government's Code of Practice on Consultation. If you have any queries or complaints about how the consultation has been carried out, please contact:

- Cath Beaver, Consultation Co-ordinator, Environment Agency, Rio House, Aztec West, Bristol BS32 4UD
- email cath.beaver@environment-agency.gov.uk

Consultation questions

This plan sets out objectives for the water environment for the next six years and beyond. To what extent do you agree with what we are planning to achieve?

1. Do you agree with the assessment of problems in water bodies? What would you change?
2. Do you agree with the proposed objectives? What would you change?
3. For some water bodies we have proposed objectives with deadlines after 2015 or a lower overall target. Do you agree with these changes? What would you change?

This plan sets out the actions required to meet the objectives. To what extent do you agree that the right actions have been identified (actions that are proportionate and feasible)?

4. We have followed a process to assess (appraise) these actions. This process is described in detail in annex E. Do you agree with how we have done this?
5. What comments do you have on these actions? Are there any actions that have been missed, or any changes you'd propose?

There are some extra actions that could be put in place if there was more certainty they would be effective. These are listed under scenario C, and we would like to know if you can help to make these actions happen.

6. What comments on Scenario C actions do you have, including any additional information you can supply about specific actions?
7. What support can you offer, such as undertaking any actions or providing resources, to help deliver more for your environment?

Other comments you may have on this plan

8. Do you agree with our assessment of how climate change will affect the pressures on the water environment? What would you change?
9. What other comments do you have on this draft plan?

Would you like to find out more about us, or about your environment?

Then call us on
08708 506 506 (charged at local rates)

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enquiries@environment-agency.gov.uk

or visit our website
www.environment-agency.gov.uk

incident hotline 0800 80 70 60
(Freephone 24 hour)

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floodline 0845 988 1188 (24 hour)