

**ASHFORD'S FUTURE: IWMS
FINAL REPORT**

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2 WATER FRAMEWORK DIRECTIVE

2.1 INTRODUCTION

The Water Framework Directive (WFD) is the most substantial piece of water legislation from the European Commission to date and has attracted a good deal of attention, especially as the various aspects start to be published and come together. It requires all inland and coastal waters to achieve what is termed “good status” by 2015. It will do this by establishing a river basin district structure within which demanding environmental objectives will be set including ecological targets for surface waters. The Directive therefore provides a framework which should provide substantial benefits for the long term sustainable management of water.

There have been many questions raised and a considerable amount of discussion regarding the WFD in relation to Ashford's development and the Integrated Water Management Strategy (IWMS). It is particularly relevant to the IWMS because the WFD is considered to be an opportunity to improve the water environment and promote the sustainable use of water for the benefit of people and wildlife alike.

This section of the report sets out the current position of the WFD and explores the extent to which it can reasonably be taken on board by the IWMS for Ashford at the current time.

2.2 BACKGROUND AND DIRECTIVE IMPLEMENTATION

The WFD entered into force on 22 December 2000 on its publication in the Official Journal of the EU. The main components of the Directive requiring transposition into National law in each Member State within 3 years after coming into force (by December 2003) included:

- Setting of water quality objectives for all water bodies with objectives of “good status” to be met within 15 years i.e. by 2015;
- Classification of waters into *surface water* according to ecological quality objectives and *groundwater* according to quantitative and chemical quality objectives;
- Promoting sustainable water use based on the long term protection of resources;
- Development of river basin management plans including an economic analysis of water use to integrate the management of water quality and water resources and surface and ground water management in order to meet environmental objectives;
- Adopting a “combined approach” to pollution control i.e. combining the control of sources by emission limit values and by quality objectives to suit the receiving waters;
- Ensuring that prices charged to water consumers reflect the true costs;
- Promoting full public participation;
- Addressing the pressures on water quality from point and diffuse sources and ensuring that necessary measures to meet quality and quantity objectives to achieve “good status” are achieved;
- Ensuring that deterioration of water quality ecological status does not take place;
- Maintaining obligations under International Agreements e.g. OSPAR including an end to discharging hazardous substances;
- Establishing a framework for protection of water which conserves aquatic ecosystems e.g. wetlands;

The Directive has a series of implementation deadlines which stretch to December 2015 (the date by which environmental objectives must be met). The key milestones are set out in Table 2.1.

Table 2.1: Water Framework Directive Implementation Timetable

Date	Action
Dec 2003	The Directive's provisions must be transposed into Law (separate provisions for Scotland and England/Wales) in all Member States.
Dec 2004	Complete analysis of characteristics of the surface and groundwaters and review the environmental impacts of human activity Establish register of Protected Areas.
Dec 2005	Member states to establish appropriate criteria for identifying significant upward trends in groundwater pollution and trend reversal.
Dec 2006	Make operational monitoring programs to provide ecological classification of surface waters within each River Basin District. Member States to establish Environmental Quality Standards for all surface water affected by discharges.
Dec 2007	Publish and consult on an interim overview of significant water management issues for each River Basin District.
2003 – 2008	Environment Agency (as competent authority) to prepare draft River Basin Management Plans (RBMPs) and carry out public consultation.
Dec 2008	Publish and consult on drafts of the River Basin Management Plans and definition of good and bad ecological status
Dec 2009	Establish a 'Programme of Measures' in each river basin district in order to deliver environmental objectives. Publish first River Basin Management Plan for each River Basin District, including environmental objectives for each body of surface or groundwater and summaries of programme of measures
2010	Ensure proper pricing policies are in place
Dec 2012	'Programme of Measures' to be fully operational in each River Basin District to deliver environmental objectives
Dec 2015	Environmental Objectives fully met (except where derogations apply giving further period of up to 12 years to achieve the required status)
Every 6 years thereafter	Review and update RBMPs with same consultation and interim reporting.

2.3 CURRENT SITUATION

One of the early implementation tasks of the WFD is to carry out a first iteration of River Basin Characterisation assessment in accordance with Article 5 of the Directive. There are two main stages to environmental characterisation:

1. identifying water bodies and describing their natural characteristics, and
2. assessing the pressures and impacts on the water environment.

The assessment identifies those water bodies that are unlikely to achieve the environmental objectives set out in the Directive. The Environment Agency recently undertook a risk assessment for each water body, based on the combination of several individual risk assessments covering the following aspects:

- Point source pollution such as effluent discharges from WWTW;
- Diffuse source pollution, including run off from land and acid rain;
- Water abstraction, and flow regulation (including control of flows for navigation, water supplies);
- Physical or "morphological" alterations to water bodies, such as land claim for development, flood defence structures or channel modifications.

Pressure maps showing risk categories¹ for rivers and groundwaters in the Ashford area are given in Figures 2.1 and 2.2 respectively.

¹ The assessment places each water body into one of four risk categories. **Dark purple** - Water body at significant risk of failing objectives, **Light purple** - Water body probably at significant risk of failing



Figure 2.1: Risk category for rivers in Ashford area

All rivers in the Ashford area are coloured dark purple representing significant risk of failing the WFD objectives.

The headwaters (upper Great Stour, East Stour, Aylesford stream and the Beult) are considered to be 'at risk' from diffuse pollution and physical / morphological alterations. The Great Stour downstream of Ashford is also 'at risk' from point source pollutants, water abstractions and flow regulation

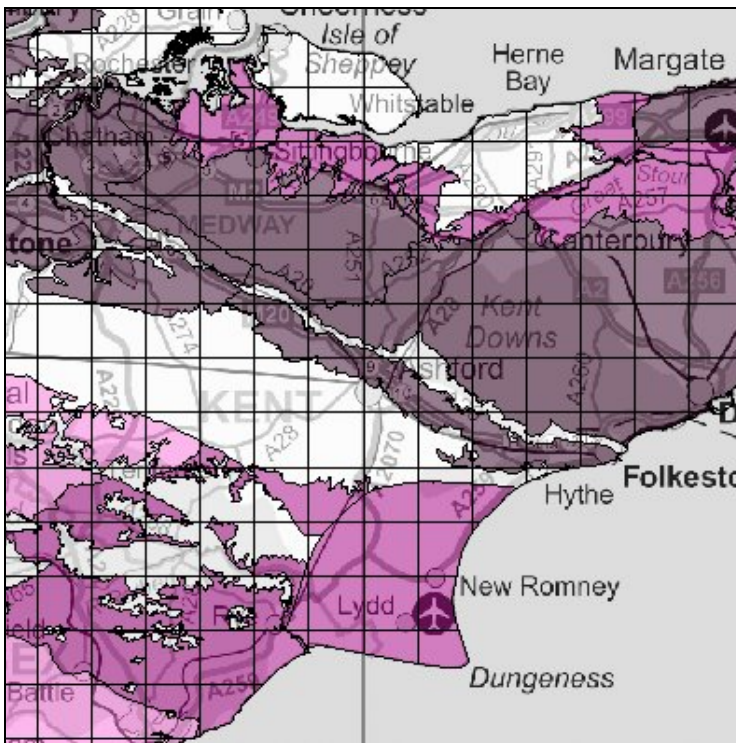


Figure 2.2: Risk category for groundwater in Ashford area

The dark purple colouration of all groundwater's in the Ashford area represents the significant risk of failing the WFD objectives.

The Lower Greensand Aquifer is considered to be 'at risk' to diffuse pollution impacts. In addition to this the Chalk aquifer is also 'at risk' from water abstraction and flow regulation.

The characterisation process is very important. It means the Environment Agency will be able to target monitoring efforts and risk management actions at the waters most likely to fail WFD objectives by 2015. Characterisation will continue to be refined and improved until the Agency publishes the first River Basin Management Plans in December 2009.

objectives, **Pink** - Water body probably not at risk of failing objectives, **Pale pink** - Water body not at risk of failing objectives

2.4 INTEGRATION OF POLICY AREAS

The Department for Environment Food and Rural Affairs (Defra) publication "Directing the Flow" has highlighted the need for stronger integration between water and other policies, including those of other governmental departments. The WFD is considered to be the key delivery vehicle for making this happen.

Defra has identified the following key areas for planning better integration of policies:

Water and agriculture. Much of this is about diffuse pollution. Defra is encouraging more economical use of water resources by agriculture, e.g. by encouraging trickle where it is a more efficient alternative to spray irrigation.

Water and land use planning. Physical development can affect water resources and water quality. Defra wants to ensure that land use planning guidance adequately reflects the pressures this can put on water, including over the long term to reflect the influence of climate change. There is no question that consideration of the Directive will be crucial for safeguarding the environment during a development on the scale of that proposed for Ashford.

Water and biodiversity. Improvements in the quality of water via the Water Framework Directive will greatly help biodiversity both in and around water. Defra does not consider the Directive to be the only tool. For example, it may be necessary to take additional action to meet the Public Service Agreement targets for 95% of Sites of Special Scientific Interest (SSSIs) to be in favourable condition by 2010, to cover for example wetland SSSIs. Changes in agricultural practice are likely to be a key part of this.

Water and tourism, leisure and recreation. Water is a powerful focus for leisure activities and the financial and economic benefits of tourism to local areas and can help stimulate wider local incentives to improving water.

Water and flooding. The use of soft engineering solutions to manage flooding problems will also benefit water quality and biodiversity - though soft engineering will not solve all flooding problems. Again changes in farm practice and avoiding unsustainable physical development can benefit both flood management and water quality and resources.

Water and health. By comparison with the areas above, there have been strong links here for many years.

2.5 IMPLICATIONS FOR ASHFORD

2.5.1 Aspirations

The aims of the Directive and the integration of water issues as proposed by Defra (cited above) are highly relevant to Ashford's development and have featured strongly within the Ashford's IWMS. The IWMS is an overarching assessment of the water environment, which identifies key problems, possible solutions and best practice, and has given consideration to the development of a range of water management strategies that will help to bring the benefits aspired for the water environment.

The aspiration of the study is that:

"the future development and expansion of Ashford leads to the protection and enhancement of the water environment both locally and throughout the Stour catchment, for the benefit of people, wildlife and cultural and landscape heritage".

Many people see the WFD as the key delivery vehicle to achieve this. However, given the relative infancy of the Directive and the amount of work remaining prior to full integration, the extent to which its requirements can be taken on board at this time may be limited.

A number of factors are outlined below that have been considered in evaluating the extent to which the WFD can be addressed in the IWMS.

2.5.2 Water Quality Standards

Water quality objectives for the River Stour and its tributaries are currently set by the Environment Agency through River Quality Objectives (RQOs). The standards to meet those objectives are specified through the River Ecosystem (RE) Classification scheme, which takes into account European Directives such as the Urban Waste Water Treatment Directive (UWWTD) and the Freshwater Fish Directive (FFD), which set stringent standards for the protection of waters from excessive nutrients and to protect fish populations. The improvements achieved by the UWWTD and FFD are expected to help deliver compliance with the WFD. However, at this time it is not known how these standards will compare to the conservation objectives for individual river basins under the WFD.

It is expected that the current system for measuring water quality will be 'subsumed' by the WFD with time and the Directive will effectively rewrite existing water legislation into a new overarching programme to deliver long-term protection of the water environment.

2.5.3 "Good Ecological Status"

The WFD requires that good ecological status is achieved in all water bodies by 2015. However, the question that everyone is asking with regard to the Directive is: 'what is meant by "good ecological status"?'

The key components of "good status" are chemical and ecological qualities. Ecological quality at good status is classified by biological elements and physico-chemical elements. The Common Implementation Strategy guidance² fleshes out what this means in practice, but it is accepted that more guidance is needed at Community level³. It is anticipated that monitoring and classification of all surface water bodies to be undertaken from 2006 will permit good ecological status to be defined and River Basin Management Plans prepared in 2008 - 2009.

It is not clear at the current time how existing water quality standards might be changed to achieve the objective of "good ecological status" and good biological water quality, though it is known that the WFD will focus the assessment of water standards upon biological criteria.

Water quality in the Stour within the Study Area currently achieves RE classification Grade 2 throughout, except for downstream of Bybrook WWTW where water quality deteriorates to RE Grade 3. There is therefore scope for improvement (particularly downstream of Bybrook) and it could therefore simply be assumed that 'any improvement' in water quality would be a beneficial move towards compliance with the WFD. However, there is unlikely to be sufficient impetus by regulators, funding bodies and water companies for moving forward until "good ecological status" has been defined, beyond making recommendations. The uncertainty in the future targets has been considered when assessing water management options and strategies.

2.5.4 Programme of measures

The main impetus for water quality improvements will be brought on during the period 2008 - 2009 when 'good ecological status' has been defined. At that time, a 'detailed series of measures' or 'strategic management plans' for each river basin will be drafted, setting out how to achieve

² <http://www.europa.eu.int/comm/environment/water/water-framework/implementation.html>

³ www.defra.gov.uk/environment/water/wfd/faq.htm

“good” standards. This will be the main opportunity for improved scrutiny of environmental improvements.

2.5.5 Derogations

Improvements cost money - for the water industry, farming and other industries and their customers – and they will need to be justified in each case in terms of the balance of costs and benefits. The WFD recognises this and in exceptional circumstances, where it would be technically impossible to meet the “good” status by 2015) permits Member States to extend the deadline for meeting objectives up to 2027. The circumstances where derogations may apply will not be known until the river basin classification has been completed.

2.5.6 Economic analysis

Ofwat is developing aspects of the WFD economic analysis and in particular is contributing to projects to assess the costs and economic aspects of possible measures, and projects to develop a framework to establish the cost-effectiveness of the possible programme of measures. This will contribute to work led by the Environment Agency and Defra to develop and apply cost-effectiveness analyses starting around 2006. Only once these exercises have been undertaken can a cost-effective programme of measures be identified that will help to deliver the necessary environmental objectives.

2.5.7 Water company expenditure

The requirements for water companies to implement programmes to improve water quality are written into five-year Asset Management Programme (AMP) cycles, which are approved by government. Water company business plans for AMP4 (the current expenditure cycle: 2005 – 2010) have already been approved. Preparation of business plans for AMP5 (the next expenditure cycle: 2010 – 2015) will commence two years in advance of the program period (i.e. 2008).

It is important to consider what benefit can currently be achieved in terms of water quality when not coordinated with the water company spending cycles. It is considered unreasonable to expect water companies to accept any additional stipulations beyond current drivers.

The key milestones outlined in Table 2.1 suggest that planning for AMP5 will coincide closely with the completion of the River Basin Management Plans and the Programme of Measures outlining requirements for achieving “good status”. It is therefore likely that water companies will receive funding under AMP5 that will be tailored to meeting the requirements for the WFD.

2.5.8 Agency’s current policy of “No Deterioration” in water quality standards

Any aspirations to increase water quality standards under the current River Ecosystem (RE) scheme as part of this study would be based on the principle that the highest possible standards need to be achieved by 2015. However, the Environment Agency has set a policy of ‘no deterioration’ in RE water quality for the Stour and its tributaries with an allowance of 10% deviation in quality under circumstances where it is shown not to be cost-effective to have no deterioration. On this basis, it would not be appropriate to promote water quality improvements within the IWMS that clearly do not follow the Agency's current policy for Ashford.

2.5.9 Diffuse Pollution

Until recent times point source discharges were considered to be the main contributing factor to water pollution. It is, however, now acknowledged that diffuse pollution is a widespread problem. Action is required to tackle the impact of agricultural diffuse pollution on the water environment through elevated phosphates and nitrates. Agriculture is, however, not the only source of diffuse pollution: urban diffuse sources are an acute source of pollution in many catchments. Defra has begun a review of non-agricultural sources of diffuse water pollution, which has been taken

forward via a series of stakeholder workshops held by Defra and the Environment Agency. The review will include areas such as the transport and construction sectors, industrial sources, the forestry and leisure industries and contaminated land. It will be linked to, and supported by a separate document detailing current research in this area.

The cost of improvements in reducing diffuse agriculture pollution (e.g. from pesticides, slurry and fertilizer run-off) will have a significant (and overdue) impact on the farming industry. As part of the continuing work on the WFD, Defra has commissioned Risk and Policy Analysts (RPA), in association with ADAS and the Centre for Ecology and Hydrology (CEH), to assess the indicative costs of agricultural measures to achieve good ecological status. In a summary paper produced by RPA (2003), it is concluded that:

'for the purposes of the costs assessment, the use of quantitative data on the current status of water is inappropriate because there will remain considerable uncertainty as to the actual levels that will be required until RBMP reports are prepared', and

'the cost assessment should, instead, make predictions concerning the additional practices and activities that may be required to meet the requirements of the WFD (excluding practices that should already be being applied).'

Key policy issues, such as the control of diffuse water pollution, land-use planning and the role of wetlands in tackling diffuse pollution have been explored through the IWMS process and recommendations will be made relating to the role that various authorities will have in delivering improvements.

2.6 SUMMARY

The factors outlined above highlight the considerable amount of ongoing work (including characterisation river basins and monitoring) prior to the preparation of RBMPs, which will enable "good ecological status" for individual river basin catchments to be defined and the required programme of measures to meet the Directives objectives to be drafted.

Given the infancy of the implementation of the WFD and the uncertainty surrounding the water quality standards that are to be achieved, it is difficult to plan water quality improvements at the present time. The factors discussed above suggest that the requirements of the WFD will be more clearly understood in 2008 – 2009: at which time planning significant changes to Ashford's water management will be more readily received by stakeholders.

This statement is not intended to undermine the importance of the WFD. Indeed ten years remain prior to 2015 during which, attempts should be made to achieve good status. The Ashford IWMS recognises this and has taken on board the WFD's objective as an aspiration that should be achieved during the study lifetime.

This study should be seen as an early building block that will contribute to the overall planning and management of the River Stour and its River Basin District. It is important that the final IWM strategy is updated through its lifetime to accommodate the constraints and opportunities offered by the WFD.