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Water Quality and Land Use Regulation Under the Water Framework Directive

WILLIAM HOWARTH*

The Water Framework Directive... establishes new and better ways of protecting and improving rivers, lakes, estuaries, coastal waters and groundwater. These include a single way of managing water based on river basins. The usual administrative boundaries will no longer apply. Instead we will be looking after land and water together and in a way that more effectively embraces the natural environment.1

INTRODUCTION

The United Kingdom has a relatively long history of pollution control legislation brought about by the early onset of industrialisation. Despite this precocious start, it would be naïve to suppose that early efforts to "legislate away" pollution had any significant effect. The main lessons learnt were: 1) effective environmental legislation needs to be sufficiently specific to be capable of enforcement; and 2) enforcement requires an independent regulatory authority with sufficient resources and expertise to exercise its regulatory functions effectively.

Beyond the basics, the progression of environmental lawmaking must be seen as aiming to hit a moving target. Perceptions of what constitutes an "environmental problem" of seriousness sufficient to be addressed through regulation change over time. In part, this change reflects differences in human impacts upon the environment as a result of changing human activities. In part, it reflects advancements in scientific knowledge, providing new un-

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derstanding of different kinds of environmental impact. The point remains: Usually gradual, though sometimes dramatic, shifts in the perception of the problem necessitate an ongoing process of evaluation to determine whether the regulatory response is the right one.

The problem of unsatisfactory water quality is presently undergoing an important shift in perception, with significant regulatory consequences. The key difficulty is that of distinguishing between the *substance* of the environmental problem and *symptoms* of that problem. From the perspective of the legislature in nineteenth-century England, the water pollution problem was largely one of unregulated emissions of inadequately treated effluent from industrial "manufactories" and sewage treatment works established under recent public health legislation. The counterpart of this perception was that regulation is best applied at the point where effluent enters a watercourse. Hence, a central criminal offence was committed when a person caused or knowingly permitted the unauthorised entry of polluting matter or effluent into a watercourse or other kinds of controlled waters. There can be no dispute that this paradigm continues to be extremely helpful to environmental regulatory authorities who, with regrettable frequency, bring criminal prosecutions in respect of pollution incidents, usually originating from industrial premises.

However, the supposition that all instances of unsatisfactory water quality are attributable to emissions from industrial or sew-

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2. An example of a relatively dramatic shift in the perception of an environmental problem might be seen in the recent revision of opinion on the problem of air pollution. The problem of unsatisfactory air quality, initially perceived as a local issue of amenity or public health, has been widely reconceived as one concerning the international or global distribution of contaminating material with global climatic impacts. Accordingly, the legal responses include a progression of measures at national and international levels that reflect this shift in perception of adverse environmental impacts, the offending activities giving rise to them, and the appropriate legal approaches needed to address them.


4. Water Resources Act, 1991, c. 57, §§ 85 (Eng. & Wales) (offence), 104 ("controlled waters" defined to encompass relevant territorial waters, coastal waters, inland freshwaters, and groundwaters). Historically, the same offence may be traced back to the Rivers Pollution Prevention Act 1876, though some local provisions for water pollution offences predate this. See William Howarth & Donald McGilivray, WATER POLLUTION AND WATER QUALITY LAW 65-77 (2001).

age treatment activities, capable of being tackled through end-of-pipe regulation, would be a major misconception. Less dramatic, though at least equally damaging, diffuse kinds of contamination enter watercourses through diverse means other than identifiable discharges from discrete points of origin. In various respects, the traditional paradigm fails to fit this aspect of the modern understanding of the environmental problem. Unsatisfactory water quality, therefore, is increasingly seen as having different kinds of cause and needing to be addressed by other means. As will be seen, this involves a supplementation of end-of-pipe regulation by a range of approaches that, in various ways, involves the regulation of land use. This re-characterisation of the environmental problem has taken place over many years and is in the process of continuing development. Indeed, the indications are that the shift from end-of-pipe regulation to land-use regulation has accelerated over recent years for reasons that will be discussed.

The purpose of this article is to consider the mechanisms by which laws relating to land use have progressively adopted an anti-pollution dimension and, in particular, those respects in which water quality problems have been addressed by land-based control mechanisms. Although there are early examples of regulation to protect the aquatic environment from the most polluting kinds of land use, the most comprehensive and powerful weapon in the armoury is the land use planning system. The extent to which development-control mechanisms should be used to prevent authorisation of potentially polluting developments is the most prominent issue needing to be addressed to facilitate an effective means of securing satisfactory water quality.

Land use planning law in England and Wales has its historical roots in the idea of preserving the public "amenity,"\(^6\) primarily of urban areas. However, over recent years it has incorporated an increasingly important environmental protection dimension. At least in relation to the protection of the aquatic environment, the role of planning law has recently been placed under intense scrutiny. The reason for this arises from the need to implement the European Community Water Framework Directive\(^7\) ("Directive"

\(^6\) Hence, in earliest form, planning law made provision for local authorities to prepare "town planning schemes" in connection with the use of the land and neighbouring lands. See Housing, Town Planning, &c. Act, 1909, 9 Edw. 7, c. 44, pt. II (Eng., Scot., & Wales).

or “Water Framework Directive”) in national law. Although the Directive is set to have profound effects upon all aspects of water management, it raises some momentous challenges in respect to land use decisions that adversely impact the aquatic environment. Centrally, the concern is the ways that the Directive will require greater cognisance to be taken of water quality impacts in making land use determinations under the planning system. Whilst the full implications of the Directive upon national law are not yet entirely clear, there are good reasons to think that the role of planning procedures will need to be significantly bolstered if the objectives of the Directive are to be fully realised.

The argument to be presented is that a change of approach to water quality issues is needed within the land use planning system. Past tendencies for environmental quality issues to be sidelined in the face of developmental pressures should not be allowed to subvert realisation of the objectives of the Water Framework Directive. In effect, a more substantive approach is needed in land use planning decisions if the new water quality obligations under Community law are to be fulfilled.

I. MODERNISATION AND PREVENTION

The United Kingdom has many ancient examples of legislation for the protection of water quality, with local statutes enacted for this purpose since mediaeval times. More recently, however, the impetus for such legislation is not so much because of any especial “green-mindedness” on the part of the legislature, so much as the early impacts of industrialisation. The squalid living conditions that prevailed in many nineteenth-century industrial towns caused environmental legislation to be regarded as a necessity, if living conditions were to be raised to an acceptable standard. Hence, the earliest generally applicable legislation was motivated by concerns about public health, prevention of the spread of disease, and removal of nuisances; but, not long afterwards, legislation protecting water quality independent of public health concerns followed. This early legislation tended to adopt a reactive and punitive approach to the problems—as might be expected in primitive environmental law—basically seeking to introduce blanket criminalisation of water pollution. In theory, this might

8. See, e.g., Nuisances Act, 1388, 12 Rich. 2 (Eng.). For other historical references, see Howarth & McGillivray, supra note 4, at 65-115.
9. See Rivers Pollution Prevention Act, 1876, 39 & 40 Vict., c. 75 (U.K.).
look like an attractively retributive approach; but in reality, putting the law into operation was beset with difficulties, not least because of the lack of any specialised regulatory authority, which in many respects rendered it a dead letter. Certainly, the United Kingdom has served as a “laboratory” for experimentation in water legislation and, as in any laboratory, not all experiments can qualify as successes.

It was not until the latter part of the last century that water pollution laws came to resemble anything like a modern system of environmental legislation. Criminal offences were supplemented by environmental licensing systems that allowed legal controls upon discharges to be applied strategically: in relation to the activity being licensed, the contaminants being discharged, and the sensitivity of the receiving environment.10 This flexible approach to the regulation of discharges allowed environmental regulatory authorities to balance the stringency of controls against the environmental objectives and standards being sought, in terms of the desired quality of the receiving waters. Progressively, therefore, the approach of blanket criminalisation of water pollution came to be replaced by a more purposive approach. The new approach involved the strategic use of the law to achieve environmental quality objectives, insofar as these were capable of being achieved through restrictions upon point sources of polluting emissions.

The flexibility provided by environmental licensing systems, or “discharge consents,”11 provided an important means to facilitate strategic objectives for the aquatic environment, but the systems also have recognised limitations. For example, the point of discharge of effluent into a watercourse may be too late a stage to impose regulatory controls. The adoption of more preventative kinds of control may avoid entry of effluent in the first place. Moreover, end-of-pipe regulation is limited to those pollutants that actually enter the environment through point sources. End-of-pipe regulation, by definition, has no relevance to those contaminants that enter watercourses through other routes. Pertinently, diffuse contaminants are now recognised as an increasingly large part of the water quality problem, but they require a different kind of regulatory approach. The implication is

10. *See, e.g.*, Rivers (Prevention of Pollution) Act, 1961, 9 & 10 Eliz. 2, c. 50 (Eng. & Wales); Rivers (Prevention of Pollution) Act, 1951, 14 & 15 Geo. 6, c. 66, §§ 17-28 (Scot.).

that regulation of discrete points of emission, by itself, will not be sufficient to ensure that water quality objectives and standards are met. Thus, land use regulation needs to supplement point source control if satisfactory water quality is to be realised. This appreciation is illustrated by the progressive extension of water quality law into land use regulation.

The Water Act 1989\(^{12}\) is usually noted for its momentous transfer of water supply and sewage treatment utility functions from the public to the private sector in England and Wales.\(^{13}\) Alongside the privatisation of water services, however, the Act enabled the introduction of various kinds of secondary legislation concerned with precautionary regulations, water protection zones, and nitrate-sensitive areas.\(^{14}\) These new mechanisms fell as responsibilities to the specialised environmental regulatory authority established under the Act.\(^{15}\) Hence, traditional, reactive regulatory mechanisms addressing end-of-pipe discharges came to be supplemented by a range of anticipatory measures directed towards different land use activities that contribute to water quality problems.

Specifically, three kinds of preventative regulatory mechanisms were provided for under recent legislation. First, in the Water Act 1989, the Secretary of State was given the authority to prohibit or regulate the activities of persons having custody of polluting matter in order to prevent its entry into controlled waters.\(^{16}\) This power has been exercised to regulate agricultural activities involving silage, animal waste, and oil storage on

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15. The Water Act 1989 established the National Rivers Authority as the environmental regulatory authority with responsibility for protection of the aquatic environment in England and Wales. Id. §§ 1-2. The Environment Act 1995 transferred the powers of the National Rivers Authority to the Environment Agency along with regulatory responsibility for waste management, integrated pollution control of major industrial processes, and various other areas of environmental responsibility. See Environment Act, 1995, c. 25, §§ 1-2 (Eng., Scot., & Wales).
farms,\(^{17}\) and to regulate the storage of oil more generally.\(^ {18}\) Under the relevant regulations, inadequate storage of potentially polluting matter can be a criminal offense, regardless of whether or not any actual water pollution occurs as a result of inadequate storage.\(^ {19}\) In terms of the diminishing number of water pollution incidents arising from agricultural activities, the use of preventative regulations in this context was generally regarded as a success.\(^ {20}\) This success must be attributed to a shifting of attention from water quality, as such, to the regulation of activities taking place on waterside land. Perhaps for the first time, anticipatory land use regulation was established to be the most effective way of addressing specific kinds of water quality problems.

Next, the Water Resources Act 1991 provided the Secretary of State the authority to establish Water Protection Zones—zones in England where land use must be strictly regulated because of the vulnerability of receiving waters.\(^ {21}\) Within these zones, particular activities, such as the storage of pollutants, can be regulated; however, the approach is area-specific, rather than activity-specific, in the first instance.\(^ {22}\) The power to establish Water Protection Zones has not been used as much as the Secretary’s authority to regulate activities under the Water Act 1989—only one area has been designated for this purpose.\(^ {23}\)

Finally, the designation of “nitrate sensitive areas” constituted the initial, national approach to tackling problems of nutrient enrichment and eutrophication arising from fertiliser and manure application to agricultural land. This problem was of par-


\(^{19}\) For example, an offence is committed where any person has custody or control of any crop that is being made into silage unless it is stored in a silo which conforms to construction specifications set out in Schedule 1 to the Regulations or to other specifications. Notably, the offence contains no requirement that any water pollution incident arise from improper storage. Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations, 1991, S.I. 1991/324, art. 3.


\(^{22}\) See id.

ticular concern because levels of nitrate contamination in some areas in England exceeded parameters in the European Community’s Council Drinking Water Quality Directive\textsuperscript{24} and resulted in a judgment against England in the European Court of Justice in 1992.\textsuperscript{25} The tentative national approach involved designating nitrate-sensitive areas in which farmers were compensated for changing land use activities to reduce nitrate transmission to surface and ground waters.\textsuperscript{26} This initial approach was always recognised as a “pilot” scheme, primarily intended to ascertain the effects of changing agricultural land use upon water quality. The national approach to the problem has now been superseded by measures that implement the European Community’s Council Directive on agricultural nitrates.\textsuperscript{27} The Directive provides for mandatory, rather than voluntary, controls upon farming activities where nitrate levels of surface or ground waters exceed parameters that are set both for the protection of water supplies and for more general ecological protection.\textsuperscript{28} Setting aside detailed discussion of the mechanisms for control of agricultural nitrates,\textsuperscript{29} the basic point to be emphasised is that land use control mechanisms are now seen as the only effective mechanism by which water quality can be protected against excessive levels of nitrification.

Cumulatively, these three different kinds of preventative regulatory mechanisms for land use control represent important al-


\textsuperscript{25} See Case C-337/89, Comm’n of the European Cmty’s v. United Kingdom, 1992 E.C.R. I-06103.

\textsuperscript{26} The legal foundation for the national scheme was originally provided for under the Water Act, 1989, c. 15, § 112, sched. 11 (U.K.), though provision for the scheme was re-enacted in the Water Resources Act 1991, id. §§ 94 (concerned with nitrate sensitive areas), 95 (concerned with agreements in nitrate sensitive areas). Detailed provision was made under the Nitrate Sensitive Areas (Designation) Order, 1990, S.I. 1013.


\textsuperscript{28} See Case C-293/97, R v. Sec’y of State for the Env’t ex parte Standley, 2 C.M.L.R. 902 ¶¶ 40-42 (Apr. 29, 1999); Case C-69/99, Comm’n v. United Kingdom, 2000 E.C.R. I-10979 ¶ 23.

\textsuperscript{29} For general discussion of such controls, see HOWARTH & MCGILLIVRAY, supra note 4, at 732-51; Dep’t for Env’t, Food and Rural Affairs (DEFRA), Catchment-Sensitive Farming Programme: Taking Forward the Strategic Review of Diffuse Water Pollution from Agriculture (Dec. 19, 2005) (seeking to reduce diffuse water pollution from agriculture in England), http://www.defra.gov.uk/environment/water/quality/diffuse/agri/index.htm (last modified Feb. 27, 2006).
ternative means of securing water quality objectives and standards to end-of-pipe controls. They represent an evolution of water protection law through the progressive regulation of activities taking place on waterside land, at least insofar as they focus upon the most contaminating kinds of land use.

A further, more recent development, which may be added to the preventative mechanisms initially provided for, is the adoption of a statutory regime for the remediation of contaminated land. The national contaminated land regime compels polluters or landholders to meet the cost of decontamination activities where past land uses have given rise to continuing water quality or other environmental problems. However, regulating the entry of pollutants from contaminated sites into watercourses has been critiqued as too late to address the problem. In specified situations—usually where past industrial use has given rise to continuing problems—land decontamination is the only effective means of addressing water quality problems. Again, preventative approaches, involving the regulation of adversely impacting land uses, must take precedence over traditional end-of-pipe regulation if satisfactory water quality is to be secured.

II. LAND USE PLANNING AND PREVENTION

Although the particular mechanisms explained above are clearly important in addressing distinct kinds of water quality problems, they have a rather ad hoc character because they address relatively specific kinds of land use activities. For the future, the preventative strategy should be extended to involve the regulation of all kinds of land use according to their impacts upon water quality. The most comprehensive means of addressing this is through the land use planning system.

Over recent years, legislation and policy concerned with development planning (the formulation of development plans) and development control (the control of particular developments) have gained an increasingly prominent environmental dimension. Town and Country planning law, rooted in concerns for public health and premised upon the need for preservation of amenity of land, has placed increasing emphasis upon the environmental im-


plications of decisions concerning land use. Hence, development plans have devoted increasingly explicit attention to the impacts of development upon the environment. Also, environmental regulatory authorities have taken an increasingly active role as consultees, both in relation to the formulation of development plans and in relation to determinations on particular development proposals.32

However, land use planning concerns have never been conceived of as solely concerned with environmental protection. Instead, environmental protection has been one factor to be weighed into the balance against the social and economic benefits of allowing development to proceed. In this respect, planning decisions reflect the approach taken in other kinds of administrative decision-making that have as their objective the realisation of sustainable development. That is, environmental costs must be recognised and weighed into the balance against developmental benefits. The need to make resolutions of this kind is reflected in the general duty upon planning authorities, when formulating development plans and determining planning applications, to “consider” or “take into account” any representations of environmental regulatory authorities.33 “Considering” or “taking environmental concerns into account” does not mean that such concerns must invariably prevail over other factors. It merely means that they are a “material consideration,” which must be weighed into the balance in planning decisions.34 In the past at least, the rather open-


33. On the need to consider representations made in relation to proposals for a structure plan, see the Town and Country Planning Act, 1990, § 33(1)-(2). On the need to consider representations in relation to proposals for a local plan, see id. § 40(1), (5). See also Town and Country Planning (General Development Procedure) Order, 1995, S.I. 1995/419, arts. 10(5) (requiring representations from statutory consultees to be “take[n] into account”), 13(2) (requiring representations from parish or community to be taken into account).

34. See Town and Country Planning Act, 1990, § 70(2); VICTOR MOORE, A PRACTICAL APPROACH TO PLANNING LAW 223-51 (9th ed. 2005). (“Material considerations” are matters relevant to determining a planning application but are not otherwise defined. The matters that may count as “material considerations” in relation to land use plan-
ended or unstructured status of environmental considerations against other factors has been a source of concern.

The case of Ynys Mon B.C. v. Secretary of State for Wales tellingly illustrates the environmental limitations of the customary approach to water quality concerns in determining planning applications. In that case, the proposed development involved building six houses, from which the developer would be allowed to make a connection of sewerage pipes into the local sewerage system. The development was strongly opposed by the environmental regulatory authority because the sewerage system was already acknowledged to be inadequate in that it allowed untreated, foul sewage to be discharged into coastal waters. As a consequence, the authority had formulated a policy of opposing all developments involving further connections to the sewerage system until improvements had been made.

On appeal, the court acknowledged that the environmental duties upon the authority were of high importance in representing the public interest in the environment, and recognised that the conditions at the existing sewage outfalls in the locality were unsatisfactory. Nevertheless, the policy of a total embargo upon development, advocated by the authority, was not accepted to be finally determinative of the planning issues. Whilst the policy objectives of the authority were important material considerations, they were required to be weighed against all other relevant matters. Following this approach, it was legitimate for the court to conclude that the discharge contributed by the additional houses would not give rise to such deleterious consequences as to override other merits arising from the proposed development. Thus, as this case illustrates, increasing water pollution is not necessarily a bar to authorisation of a proposed development, provided proper consideration is given to the environmental costs.

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See also generally RMC Duxbury, Telling and Duxbury's Planning Law and Procedure (13th ed. 2006).

36. See id. at 225; see also Water Industry Act, 1991, c. 56, § 106 (Eng.) (granting a limited right to connect private premises to public sewer).
37. See Kirkwood, supra note 35, at 225. At the time, the National Rivers Authority was the authorized agency, though its functions subsequently became the Environment Agency's under the Environment Act, 1995, § 2 (Eng., Scot., & Wales).
38. Id. at 226.
39. Id. at 226-27.
40. See id. at 227-28.
41. See id.
Essentially the same problem—developmental gain trumping environmental cost—is illustrated by the way in which environmental considerations are treated in the formulation of development plans. Despite the evolution of specific techniques of “sustainability appraisal” of development plans, there is limited confidence that this evolution has succeeded in affording environmental factors adequate weight in land use planning. 42 “Sustainability appraisal” is “a systematic and iterative process undertaken during the preparation of a plan or strategy, which identifies and reports on the extent to which the implementation of the plan or strategy would achieve the environmental, economic and social objectives by which sustainable development can be defined.” 43 The approach focuses upon the formulation of objectives and targets at a regional level that should define sustainable development by headline indicators, against which an emerging strategy could be appraised.

Although progress towards, or regress from, sustainable development is helpfully informative in regional planning, as in other sectors, there is a noted absence of any specific quantifiable objectives in the sustainability appraisal process. Indeed, the weighty criticism has been raised that the approach may actually serve to marginalise environmental appraisal against the more dominant role of economic criteria in the assessment of regional plans. 44 Hence, at the very least, it has been suggested that the


44. See Royal Comm'n on Envtl. Pollution, Twenty-Third Report: Environmental Planning, 2002, Cm. 5459, at 98.
environmental component needs to be bolstered if sustainability appraisal is to be worthy of retention.45

Another criticism has been that the kind of qualitative assessment involved in the sustainability appraisal approach is based solely upon the assessor’s subjectivity.

Attempts to quantify impacts, using scoring systems in matrices, for example, only result in subjectivity being built into the results. One assessor might rank an impact on the air quality very high and an impact on water quality less high in comparison, whereas another assessor would do the contrary, both using their own sensitivity to decide on the ranking.46

Thus, even if the environmental component of the approach is bolstered, it is difficult to determine how to address this skeptical criticism.

In summary, the processes of development planning and development control might seem to offer tremendous scope for a more broadly preventative approach towards water quality protection. However, the theoretical advantages of this approach from an environmental perspective are greatly curtailed by the practicalities of planning procedures. Primarily, this is because of the obscurity of the duty to “take into account” or “consider” environmental factors in planning matters, and the lack of any guidance as to the weight to be given to environmental concerns in deciding whether they must be sacrificed for developmental gains, which are readily open to financial measurement. Even where local authorities are subject to a duty to act in accordance with the principle of sustainable development,47 the gravity that must be attached to environmental matters in decision-making is either nebulous or subjective. In short, the theoretical advantages of land use regulation to protect water quality and other parts of the environment have been foregone because of the lack of substance afforded to these interests in planning decisions.

45. Id. The Government broadly accepted the need for the environmental component of sustainability appraisal to be strengthened. See Deputy Prime Minister & First Sec’y of State, The Government’s Response to the Royal Commission on Environmental Pollution’s Twenty-Third Report: Environmental Planning England, 2003, Cm. 5887, at 13.


The interesting question is whether, in the future, greater substance will need to be attached to the protection of water quality to implement the European Community Water Framework Directive. Addressing this issue requires some introductory discussion of the status of European Community ("Community") environmental law in the twenty-five Member States, including the United Kingdom.

III. THE EUROPEAN DIMENSION TO WATER QUALITY REGULATION

The earlier account of how water quality protection has developed in England and Wales now represents, at most, only half of the picture. The other half is to be seen in the progressive Europeanisation of water quality law in the Member States of the European Community. Remarkably, when the Treaty of Rome was agreed to in 1957, establishing the original European Economic Community, it did not seem to envisage that the creation of a common market had any environmental implications. However, it was not too long before the Community came to appreciate that polluting emissions did not respect national boundaries. From that realisation followed the acceptance that common environmental standards were needed to avoid distorted competition between nations that had markedly different national environmental standards.48

The recognition—that harmonisation of at least minimum environmental standards was needed—has provided the basis for revision of the European Community Treaty49 and for a massive amount of environmental legislation enacted at Community level. On a conservative estimate, there are more than 400 European Community Directives on the environment, and at least twenty of these are directly concerned with water quality. In fact, the number of environmental measures may be considerably greater given that legislation enacted across the diverse sectors of Community activity concerned with industry, agriculture, energy, transport, etc. often includes an environmental dimension. In each instance

48. For an early appreciation that environmental concerns could justify departure from common market principles, see Case 240/83, Procureur de la République v. Association de Défense des Brûleurs d'Huiles Usagées, 1985 E.C.R. 531 ¶¶ 12-15, commonly called the "ADBHU (Used Oils)" case.

of adoption of a Community Directive, it is necessary for the national laws of each Member State to implement the obligations agreed to at Community level, though some flexibility is allowed for in the way national legislation and administrative systems are used to transpose Community law.\(^50\)

Although Community legislation has spanned the spectrum of environmental concerns, water has been one of the most precious areas and arguably represents the most fully developed sector. Early measures concentrated upon regulation of emissions of the most harmful chemical contaminants to surface and ground water.\(^51\) Other relatively early legislation sought to establish environmental quality objectives and standards for waters used for water supply purposes, bathing, or to support fisheries.\(^52\) Slightly later, measures focused upon the regulation of particular activities that were perceived to be especially harmful to the aquatic environment—for example, the treatment of wastewater and the use of nitrate fertilisers in agriculture.\(^53\) Each of the water quality directives adopted at Community level involved significant re-thinking of legislative, administrative, and environmental management approaches adopted in the Member States. The United Kingdom was not alone in failing to recognise the mandatory need to give full effect to its Community obligations in relation to water quality,\(^54\) although it has, on several occasions, been found guilty before the European Court of Justice in this respect.\(^55\)

In short, the legal duty to implement Community water quality directives is an uncompromising one that requires Member

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50. *See id.* art. 249 (making provision for directives to be binding as to “the result to be achieved,” but leaving “to the national authorities the choice of form and methods” of implementation).


55. For early cases involving the United Kingdom, see Case C-56/90, Comm’n v. United Kingdom, 1993 E.C.R. I-04109, commonly called the “Bathing Water” case; Case C-337/89, Comm’n v. United Kingdom, 1992 E.C.R. I-06103, commonly called the “Drinking Water” case.
States to faithfully transpose each directive into national law and notify the European Commission that this has been done by the appointed deadline. Beyond that, various kinds of administrative measures could be required to implement directives, such as the identification of competent national authorities, the designation of areas, the instigation of action plans of various kinds, and related monitoring obligations. Ultimately, the object of most directives is to meet precisely specified water quality objectives for those waters to which they apply. Meeting this substantive obligation can be extremely expensive when major improvements, such as improvements to sewage treatment infrastructure, are needed.  

The legally binding character of the range of obligations arising under Community water quality law must be strongly emphasised. Failure to fulfil any of the matters referred to leaves a Member State open to proceedings brought by the Commission before the European Court of Justice. Moreover, subsequent amendments of the European Community Treaty have allowed the Court to impose potentially weighty penalty payments against Member States for repeated failure to implement and enforce legislation. The upshot of all this is that the somewhat casual approach to transposition, implementation, and enforcement of Community environmental legislation, which may have prevailed in some Member States in earlier times, has been superseded by a recognition that failings in these matters are likely to have serious legal consequences. As a practical result, most environmental legislation in the United Kingdom is actually made for the purpose of implementing Community measures, as is likely true amongst the other Member States as well.

IV. THE WATER FRAMEWORK DIRECTIVE

Having noted the increasing pre-eminence of European Community environmental laws over purely national measures, particularly in the field of water quality, a further observation concerns a particular legislative measure that has recently been adopted in this sector. By the end of last century, Community


57. See European Community Treaty, supra note 49, at art. 228(2) (allowing for lump sum or penalty payments where a Member State has failed to take necessary action to comply with a judgment of the European Court of Justice). See also, e.g., Case C-278/01, Comm'n v. Spain, 2003 E.C.R. I-14141 (penalty imposed for failure to comply with previous judgment under the Bathing Water Directive in relation to inshore waters).
water quality legislation was beginning to show its age. Directives adopted over a thirty-year period reflected markedly different approaches that had prevailed at different times during that period. Directives focused upon particular contaminants, particularly kinds of waters, and particular kinds of polluting activity appeared to be based upon significantly different environmental strategies and objectives. These measures needed to be integrated into a consistent body of controls directed towards contemporary environmental concerns and based upon coherent environmental management principles.

The Water Framework Directive is the outcome of the modernising and integrating process that took place. It is the successor to much of the earlier water legislation and also the mechanism for introducing some quite radical new initiatives. The new obligations incorporated into the Directive are challenging, as is reflected by the quite lengthy time period over which it is to be implemented, extending at least to 2015 in respect of its key requirements. Hence, for at least as far into the future as anyone is capable of seeing, water quality regulation in the Member States will be almost totally preoccupied by the implementation of the Directive.

As a consolidation of existing legislation, the Directive is based upon a general principle that its provisions should be at least as stringent as those already required under previous Com-

58. See Dangerous Substances Directive, supra note 51.


munity water legislation. However, in many respects, its requirements actually extend considerably beyond the requirements of previous legislation. Therefore, the diverse objectives for water quality are consolidated and extended into a single mission. Broadly, this is to secure "good status" for all waters within the scope of the Directive and within the timescale allowed.

For surface waters, two key elements are encompassed: "good ecological status" and "good chemical status." The new element of "good ecological status" is defined in terms of the quality of the biological community in relation to each category of water. "Good chemical status" is defined in terms of compliance with quality standards established for chemical substances at Community level. For groundwaters, good status involves a combination of "good chemical status" and "good quantitative status;" that is, where groundwater exploitation does not exceed the rate of recharge. Again, the extension of Community water legislation into quantitative considerations is a new departure.

Concisely stated, "good status" means that relevant waters must not fall below what is required for the following "environmental objectives" of the Directive to be met:

1. Preventing deterioration of water quality;
2. Protecting, enhancing, and restoring waters with the aim of achieving good status (encompassing both good chemical status and good ecological status of surface waters) by 2015.

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63. Id. ("Whereas: . . . (51) Implementation is to achieve a level of protection of waters at least equivalent to that provided in certain earlier acts, which should therefore be repealed once the relevant provisions of the Directive have been fully implemented.").
64. Id. arts. 4, 24.
65. Id. art. 4(1)(a)(iii).
66. Id. art. 2(22).
67. See id. art. 2(24) (defining "good surface water chemical status" to mean "the chemical status required to meet the environmental objectives for surface waters established in Article (4)(1)(a), that is the chemical status achieved by a body of surface water in which concentrations of pollutants do not exceed the environmental quality standards established in Annex IX and under Article 16(7), and under other relevant Community legislation setting environmental quality standards at Community level"). See also, id. art. 2(25) (defining "good groundwater chemical status" as "the chemical status of a body of groundwater which meets all the conditions set out in table 2.3.2 of Annex V").
68. Id. art. 4(1)(b)(ii).
69. Id. art. 4(1)(a)(i), (b)(i).
70. Id. art. a(ii), b(ii).
3. Protecting, enhancing, and restoring artificial or heavily modified waters with the aim of achieving good status by 2015;\textsuperscript{71}

4. Progressively reducing pollution by priority substances and phasing out emissions, discharges, and losses of priority hazardous substances;\textsuperscript{72}

5. Preventing or limiting inputs of pollutants into groundwater;\textsuperscript{73}

6. Reversing significant upward trends in the concentration of any pollutant in groundwater;\textsuperscript{74} and

7. Complying with standards and objectives for protected areas by 2015, including objectives for areas for the abstraction of drinking water.\textsuperscript{75}

The environmental objectives of the Directive are to be secured through a sequence of tasks, involving characterising waters according to specified categories, assessing their existing status, and undertaking a range of monitoring activities.\textsuperscript{76} Moreover, the Directive harmonises water management across the Community at the river basin level because it requires management by river basin, as a natural geographical and hydrological unit, rather than according to administrative or political boundaries.\textsuperscript{77} The Directive requires management plans to incorporate specific protection zones within river basins where more stringent requirements are needed for ecological protection or for particular uses, such as drinking water supply.\textsuperscript{78} River basin management plans must also encompass programmes intended to ensure that water quality within the district will meet the environmental objectives of the Directive by the required deadline.\textsuperscript{79} Accordingly, river basin management plans are required to be established and updated within fifteen years of the Water Framework Directive, and then every six years thereafter. These plans will

\textsuperscript{71. Id. art. 4(1)(a)(iii).}
\textsuperscript{72. Id. art. 4(1)(a)(iv).}
\textsuperscript{73. Id. art. 4(1)(b)(i).}
\textsuperscript{74. Id.}
\textsuperscript{75. Id. arts. 1(c), 7.}
\textsuperscript{76. Id. arts. 5(1), 8(1), ann. II.}
\textsuperscript{77. Id. art. 3. See also, id. art. 13(3) (provision for International River Basin Districts, where a river basin district covers the territory of more than one Member State, and the coordination of national water management activities in respect of transboundary river basin districts).}
\textsuperscript{78. Id. arts. 6, 13(4), anns. IV, VII.}
\textsuperscript{79. Id. art. 4(1).}
provide the context for water quality improvement measures that must be put in place.80

From the perspective of England and Wales at least, the idea of managing water bodies at a catchment level is not entirely unfamiliar. Integrated catchment management had been a prominent aspect of the Water Act 1973,81 whereby ten regional water authorities had integrated responsibility for all water functions including water supply, effluent treatment, and environmental regulation. Viewed in retrospect, these arrangements may have secured coordination between different water management functions within river catchments at the expense of an independent environmental regulatory body by placing the regional water authorities in a poacher-gamekeeper role with regard to the proper enforcement of water pollution legislation. This shortcoming was redressed by the Water Act 1989. The Act put environmental regulation upon a proper footing by establishing an independent regulatory authority—the National Rivers Authority.82 Under the Environment Act 1995, the National Rivers Authority was superseded by the Environment Agency.83

Notwithstanding these changes, the basic idea of watershed management of water quality survives in the regional organisation of the Environment Agency. Currently the Agency is organised into eight regions defined hydrologically according to watersheds of major rivers, rather than administrative boundaries of local authorities.84 The system retains a degree of integration insofar as the same regulatory body is entrusted with responsibility for enforcement of a wide range of environmental controls.85 These mechanisms can be applied purposefully to secure objectives for the quality of the environment, including the aquatic environment. Continental Member States have dubbed the Water Framework Directive “The British Directive” because

80. Id. art. 13(7).
85. For the range of functions exercised by the Environment Agency, see the Environment Act, 1995, § 2 (Eng., Scot., & Wales).
the Water Framework Directive has likewise adopted river basins as the appropriate unit for water management. Nonetheless, despite the extensive experience of England and Wales in managing water at the catchment level nationally for at least three decades, the Community obligations required at river basin levels are far more extensive and complex than those previously undertaken in national practice.

Specifically, realisation of the environmental objectives of the Directive envisages programmes, encompassing “basic” measures and, where necessary, further “supplementary” measures, being incorporated into river basin management plans. The “basic” measures must address the following issues:

(a) Implementation of certain Community water legislation;
(b) Cost recovery for water services;
(c) Promotion of efficient and sustainable water use;
(d) Protection of water abstracted for drinking water supply;
(e) Abstraction and impoundment controls;
(f) Artificial recharge or augmentation of groundwater;
(g) Control of point source discharges;
(h) Control of diffuse sources;
(i) Significant adverse impacts, including hydromorphological conditions;
(j) Prohibition of certain direct discharges to groundwater;
(k) Elimination of pollution by priority substances; and
(l) Prevention of losses of pollutants from technical installations.

The categories of “supplementary” measures are specified, non-exclusively, to include mechanisms such as economic or fiscal instruments, negotiated environmental agreements, codes of good practice, restoration measures, and management measures.

Although river basin management planning and the realisation of the “good status” objective are probably the key elements of the Directive, a number of other features should also be noted as important innovations. First, the Directive adopts a combined approach towards emission controls and environmental quality.

87. Water Framework Directive, supra note 7, art. 11, ann. VI.
88. Id. art. 11(3).
89. Id. art. 11(4), ann. VI, pt. B.
objectives. 90 Second, it adopts cost recovery pricing for water, whereby Member States will be required to ensure that the price charged to water consumers represents the true economic and environmental costs. 91 Third, the Directive requires public participation through a process of information sharing and consultation before river basin management plans are established or revised. 92

Finally, the most challenging aspect of the good status requirement arises in relation to securing ecological quality standards. 93 Whilst previous attempts to legislate for water quality at Community level have focused upon physical and chemical characteristics, the Directive takes an ambitious step beyond this. For surface waters, the Directive requires good ecological status to be achieved according to an explicit classification system. 94 Hence, in relation to different kinds of water, the composition and abundance of phytoplankton, aquatic flora, benthic invertebrate fauna, and fish must be assessed. Essentially, the approach character-

90. Id. art. 10; see also Howarth, supra note 61, at 6.
(i) provide opportunities for the general public and those persons likely to be interested in or affected by its proposals to participate in discussion and the exchange of information or views in relation to the preparation of those proposals;
(ii) publicise its draft proposals to those persons; and
(iii) consult those persons in respect of those proposals.
The Water Environment (Water Framework Directive) (England and Wales) Regulations, 2003, S.I. 2003/3242, art. 10, ¶ 2(b); see also, id. art. 12, ¶ 2. Although allowing for consultation of a traditional kind, it is unclear how these measures are intended to encourage active involvement.
94. Water Framework Directive, supra note 7, art. 4(1), ann. V.
ises a paradigm of each kind of water and designates features of its biological and hydromorphological quality that must be met for waters to reach a particular ecological quality classification.95

The need to secure good ecological status for surface waters is not intended to detract from the massive challenges, and substantial costs, that are involved in meeting the other environmental objectives of the Directive. For example, the regulation of land management to secure adequate quality of water for drinking water supply purposes is clearly a major concern. However, the contrast is that securing the quality of drinking water supplies has been a requirement of Community law for some years,96 whereas meeting ecological standards is a substantially new and uncertain requirement.

Full implementation of the Directive will be a major rationalisation of Community water legislation. This will involve the phased repeal of directives on drinking water abstraction (and related measures on sampling and exchanges of information), freshwater fish waters, shellfish waters, groundwater, and dangerous substances.97 Operative provisions will in the future be contained in the Framework Directive but, as has been noted, these will be at least as stringent as requirements under the previous directives.

The magnitude of the challenges involved in implementing the Directive is generally accepted. However, a key question is whether the timescale for implementation is commensurate with the actions that must be taken by Member States. The following table lists the formal requirements alongside their respective deadlines.

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Implementation Schedule for the Water Framework Directive


December 2003: Deadline for transposition into national law (art. 24).

June 2004: Competent national authorities to be identified (art. 3).

December 2004: Establish register of protected areas; characterisation reports for each River Basin District to be completed (arts. 5, 6, and 7).

December 2005: Criteria for preventing and controlling groundwater to be agreed by Member States (if no agreement at Community level) (art. 17).

December 2006: Monitoring programmes for surface water status, groundwater status, and protected areas to be operational; commence public consultation on River Basin Management Plans and Member States are to establish environmental quality standards for surface waters (if no agreement at Community level) (arts. 8, 14, and 16).


December 2009: Programmes of Measures and Draft River Basin Management Plans are to be published (arts. 11 and 13).

December 2010: Establish cost-recovery water pricing policies (art. 9).

December 2012: Programmes of measures are to be operational and Commission to publish first report on implementation (arts. 11 and 18).

December 2013: First review of initial characterisation; requirements for the combined approach are to be met, and repeals of Freshwater Fish Waters Directive, Shellfish Waters Directive, Groundwater Directive, and Dangerous Substances Directive (arts. 5 and 22).

December 2015: Deadline for meeting environmental objectives and review of initial River Basin Management Plans (with review and update of Plans every six years after 2015) (arts. 4, 13, 14, and 15).

December 2019: Commission to review the Directive (art. 19).

V. PROGRESS AT COMMUNITY LEVEL

The Water Framework Directive can be distinguished from previous Community environmental legislation by the initiatives that have been put in place to secure its coherent and harmonious implementation across the Member States. On this, the European Commission has taken on a more active role in providing guidance to Member States as to the correct approach to be taken in national practice pursuant to a "Common Implementation Strat-
This involves the establishment of specialist groups—"Expert Advisory Forums"—that bring together national experts from the Member States to produce a series of guidance documents formulated at Community level. The Common Implementation Strategy has resulted in the production of a series of documents covering diverse aspects of implementing the Directive. However, these documents are intended for the purpose of providing practical guidance; they are not intended to have any definitive legal status.

Alongside this pooling of expertise, the importance of a common approach to classification issues across the Community is recognised to be vitally important. To assist in this endeavour, various Member States have performed an "intercalibration" exercise. In other words, sites are being surveyed and categorised, and the results are being monitored to ensure that the requirements for good status are consistently applied across the different Member States. The United Kingdom is participating in this exercise through the River Ribble Pilot River Basin Project. The first phase of the project is testing the Common Implementation Strategy guidance on the planning process and public participation. The next stages include the preparation of a prototype river basin management plan and a programme of measures for the Ribble basin.


99. Id. at 6-9.


103. See id.
VI. PROGRESS AT THE NATIONAL LEVEL

A. The Transposition Legislation

As has been noted, the Water Framework Directive incorporates a series of deadlines for the accomplishment of different tasks. The first of these—formal transposition into national law—was required within three years of publication of the Directive.104 Initial progress towards this deadline in England and Wales seemed to be rather slow.105 In fact, the House of Commons Environment, Food and Rural Affairs Committee ("Committee") delivered a scathingly critical rebuke of the tardiness of the Department for Environment, Food and Rural Affairs ("Department").106 The Committee urged the Government to "view the Directive positively ... rather than doing the bare minimum required at the last possible moment."107 In reply, the Government was understandably eager to dispel the allegations of complacency. The Department provided assurances that it was engaged in a work programme delivered by a "multi-skilled team of administrators, lawyers and economists," and that the objective was that of compliance with the Directive by the legislative deadline, and not before.108

Notwithstanding the concerns about slow progress, initial transposition of the Directive into national law took place under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2003, which came into force shortly after the official deadline.109 The 2003 Regulations impose a broad division of labours between operational matters and executive responsibilities. Operational matters are generally made responsibilities of the Environment Agency, and executive responsibilities fall to the "appropriate authority," meaning the Secretary of State in England and the National Assembly in Wales.110

105. Transposition was undertaken separately in Scotland and Northern Ireland.
107. Id. (follow "Conclusions and Recommendations" hyperlink).
108. Id. (follow "Conclusions About Administration" hyperlink).
110. Id. art. 2, ¶ 1.
Hence, it is for the central government to approve river basin management plans, to give practical guidance, and, where necessary, directions for the purpose of implementing the Directive. It is for the Environment Agency to undertake the practical exercises of analysing the characteristics of each river basin district; reviewing the impacts of human activity; identifying bodies of water used for drinking water abstraction; preparing registers of protected areas (designated for water protection or conservation purposes); undertaking programmes of monitoring of water status; formulating environmental objectives and programmes of measures; preparing, and consulting upon, river basin management plans; submitting such plans for approval and undertaking reviews; preparing such supplementary plans as thought fit; and providing various categories of public information.\(^{111}\) The only apparent exceptions to the general executive-operational division of labours are: 1) the imposition of a duty to undertake an economic analysis of water use in each river basin district upon "appropriate authorities,"\(^ {112}\) and 2) a duty to ensure that river basin maps are made available for public inspection.\(^ {113}\)

River Basin Districts consist of a river basin or neighbouring river basins, together with associated groundwater, transitional waters, and coastal water,\(^ {114}\) and include definitive maps of districts.\(^ {115}\) Eleven areas were designated in England and Wales (with two of these crossing the border with Scotland: the Solway-Tweed district and the Northumbria district). Another district covers the rest of Scotland, and four districts were designated in Northern Ireland (with three of these shared with the Republic of Ireland).

Notably, there are significant costs and benefits of implementing the Directive. In assessing these matters, it is the United Kingdom's practice to prepare "regulatory impact assessments" of proposed legislative measures.\(^ {116}\) However, in implementing this Directive it was only possible to prepare a "partial" regulatory impact assessment, due to the uncertainties concerning some aspects

\(^{111}\) Id. arts. 5, 7-11, 13, 17-19.

\(^{112}\) Id. art. 6.

\(^{113}\) Id. art. 4, ¶ 2.

\(^{114}\) Id. art. 2, ¶ 1.

\(^{115}\) Id. art. 4, ¶ 1. See also generally ENV'T AGENCY, WATER FOR LIFE AND LIVELIHOODS—A FRAMEWORK FOR RIVER BASIN PLANNING (2005).

of the environmental objectives of the Directive. Assessment of the financial benefits of legislation to improve water quality is no easy task because many of the benefits were recognised to be of a non-quantifiable ecological kind.\textsuperscript{117} Assessment of costs of implementation, however, is less problematic, and the Government gave a rough estimate of overall costs at between £1.3 billion and £6.2 billion, depending upon the extent of the improvements required.\textsuperscript{118}

\textbf{B. The Initial Characterisation Exercise}

As noted above, the effect of the transposition legislation for England and Wales was that the bulk of the practical work under the Directive was allocated to the Environment Agency. Following transposition, the next formal deadline required the characterisation of waters and assessment of pressures and impacts against the stated ecological objectives of the Directive by the end of 2004.\textsuperscript{119} By that time, Member States were to have accomplished the formidable task of assessing the risk that individual water bodies would fail to meet the environmental objectives of the Directive. However, at the time of the initial assessment, those environmental objectives were not fully defined.

Particular problems arose in relation to the quality specifications for groundwater, priority substances, and ecological quality. These uncertainties arose because the Directive's environmental objective of preventing or limiting inputs of pollutants into groundwater does not specify which pollutants are involved. The Directive specifies that this information is to be included in a


\textsuperscript{118} Third Consultation Paper, supra note 117, at 115.

\textsuperscript{119} See Water Framework Directive, supra note 7, art. 5(1) (requiring this analysis to be completed no more than four years after the Directive is published as law, which was December 22, 2000. Member States are required to submit river basin management plans to the Commission within three months of their publication. Id. art. 15(1)).
daughter directive. The daughter directive will provide criteria to apply in determining whether a "significant and sustained" upward trend in groundwater contamination exists. Until these criteria have been established at Community level, Member States must formulate their own criteria. Similar uncertainties surround the environmental quality standards for priority substances, which will not be finalised until agreement is reached on a daughter directive relating to these standards. Likewise, there is considerable uncertainty about the boundaries between the ecological status classes for surface waters, which are needed to determine whether good ecological status has been achieved. Criteria for ecological status are not expected to be finally determined until an intercalibration exercise is conducted across a network of sites to ensure comparability of ecological data, and after the establishment of a monitoring network in 2006.

Alongside the formal reasons why the initial assessments were bound to be incomplete or uncertain, there are other, more practical, limitations that must be recognised. Broadly, these limitations arise because much of the data on water quality pressures and impacts have not previously been gathered or analysed for the purposes of Community or national law. Even where data on the existing state of water bodies is available, the futuristic and cumulative assessment of how it is likely to change over the next decade—due to plans, projects, and implementation of other Community environmental legislation—is bound to generate a high level of speculation. Given the relatively short timescale involved, the likelihood of Member States having the expertise to be able to collect, collate, and analyse the new kinds of information in the

122. The Directive requires Member States to address priority substances. Id. art. 4, § 1(a)(iv).
123. See id. art. 16. The Commission is in the process of preparing a proposal for Community-wide environmental quality standards, see id., art. 16(7), and emission controls, see id., art. 16(6). See European Parliament & Council Decision (EC) No. 2455/2001 of 20 Nov. 2001, 2001 O.J. (L 331) 2.
125. See the requirements at Water Framework Directive, supra note 7, ann. V, § 1.4.
126. See the monitoring network requirements at id. art. 8.
comprehensive and consistent manner envisaged by the Directive was remote.

To a degree, the imperfections of the initial assessments were widely recognised. The Common Implementation Strategy document most relevant to the assessment of risks arising from human activity that impede attainment of the objectives of the Directive is Analysis of Pressures and Impacts.127 Pertinently, this guidance recognises the limitations of the initial analysis of pressures and impacts that have been noted above, and acknowledges that it will be necessary for some accommodations to be made.128 An example of this is in the assessment of surface water bodies that are to be designated as "artificial and heavily modified" so that the environmental objective of "good ecological status" is reduced to the lesser objective of "good ecological potential."129 For non-artificial waters, it is advised that the first impacts analysis should concentrate upon the risks of such waters failing to meet the good ecological status requirement, leaving for later consideration the assessment of whether those bodies subsequently designated as "heavily modified" are at risk of failing to meet the "good ecological potential requirement," though this should be done "as soon as practical."130

This background of uncertainty or incompleteness has also been recognised by competent authorities in the United Kingdom, who have summarised the limitations of the initial characterisation exercise and reviewed the refinements needed to improve the degree of certainty that can be achieved in future characterisation exercises.131 Hence, it seems to be generally conceded that quite a lot more needs to be done before meaningful assessments of waters can be made in relation to the environmental objectives required by the Directive.

The limitations that have been noted might cause the unsatisfactory initial assessment of pressures and impacts to be "written off" as the inevitable result of the misguided short time period that was allowed for the exercise to be completed. Alternatively,

128. Id. at 10.
129. See Water Framework Directive, supra note 7, art. 4 (1)(a)(iii) (emphasis added).
130. Policy Summary, supra note 127, at 5.
the exercise might be seen more positively as a "trial run" in an ongoing process of reassessment and refinement that will eventually become genuinely useful as a guide to meet the environmental objectives of the Directive. From this positive perspective, it might be noted that the initial assessments are of significant importance in relation to the monitoring programmes that must be put in place by the end of 2006.\textsuperscript{132} Although the next formal assessment of pressures and impacts is not required until the end of 2013,\textsuperscript{133} the initial assessment has identified those waters needing special monitoring and can inform that process, albeit imperfectly.

Despite all the shortcomings of the initial characterisation exercise, the characterisation reports for each river basin district were dutifully completed by the Environment Agency and communicated to the European Commission by the deadline under the Directive.\textsuperscript{134}

On the less positive side of things, the proportion of waters that were identified as being likely to fail to meet the environmental objectives of the Directive in 2015 is alarming. The Environment Agency produced maps indicating which waters were at risk of failure for five reasons: point discharges, diffuse pollution, abstraction, physical changes, and the presence of alien species.\textsuperscript{135} Cumulatively, the findings were that over 92 percent of rivers, 98 percent of estuaries, 75 percent of groundwaters, and 84 percent of lakes are at risk of failure.\textsuperscript{136} Although there are marked disparities in different parts of the United Kingdom, the overall picture is daunting.\textsuperscript{137}

Thus, major questions arise as to how programmes are to be formulated to address the substantial prospect of failure to meet

\textsuperscript{132} On monitoring requirements, see generally Water Framework Directive, supra note 7, ann. V, \textsection 1.3.

\textsuperscript{133} Id. art 5(2).


\textsuperscript{135} See Env't Agency, Analysing the Pressures and Impacts on the Water Environment, \url{http://www.environment-agency.gov.uk/business/444217/444663/955573/1001324/1005861/1001338/} (last visited June 1, 2006).


\textsuperscript{137} For a description of the tasks ahead, see Who Will Pay for the Costs of Water Pollution?, ENDS REPORT 363, Apr. 2005, at 25.
the environmental objectives. In particular, the high proportion of waters that were perceived to be at risk of failing to meet their environmental objectives because of nitrate contamination and other diffuse pollutants\footnote{ASSESSING RISKS, supra note 136, at 2-3.} raises the issue of what additional land use controls are needed to address the problems thus revealed by the initial characterisation exercise.

C. Land Use Planning and the Water Framework Directive

As noted previously, the Water Framework Directive lists a range of “basic” measures that must be incorporated into programmes of measures under river basin management plans and further, “supplementary” measures that may also be applied to secure the environmental objectives of the Directive.\footnote{Water Framework Directive, supra note 7, art. 11(1)-(4).} To some extent, these reflect “traditional” approaches to protection of water quality—for example, the control of point source discharges into surface waters and discharges to groundwater. In other respects, the necessary measures involve land use regulation—for instance, to control diffuse sources of pollution or to prevent losses of pollutants from technical installations. The respective roles of traditional kinds of control and newer land use restrictions in the implementation of the Directive are far from clearly defined. Nevertheless, given the extent of the challenges, there are good reasons to suppose that realising water quality objectives will only be possible through a combination of measures, including effective controls upon offending kinds of land use, applied through the land use planning system.

A central issue arising from this is the extent to which river basin management plans should influence land use policy and practice. Essentially, the issue is the extent to which river basin management plans should be regarded as a kind of land use plan. In this respect it is important to appreciate that the planning system in England and Wales is “plan-led.” That is, individual determinations of whether a proposed development should be authorised must follow the relevant development plan, unless material considerations indicate otherwise.\footnote{Planning and Compulsory Purchase Act, 2004, c. 5 § 38 (Eng. & Wales).} The national system of development plans has recently been subject to major reforms,
including a streamlining of the hierarchy of plans, but the system remains essentially "plan-led."

Under the new planning regime, the "development plan" that must be followed in determining planning applications is a combination of the "regional spatial strategy" and the local development framework that has been adopted or approved for a locality. Local development frameworks are envisaged as a "portfolio" of documents that are relevant to planning matters and which, taken as a whole, comprehensively set out the policies of a local planning authority with respect to development and use of land in its area. This encompasses any document, or proposed document, containing statements or policies regarding, amongst other things, any environmental, social, and economic objectives that are relevant to encouraging development or use of land. Most significantly, the new emphasis upon "spatial planning" seeks to integrate policies for land development and use with other kinds of policy and programmes that influence the balance between competing land uses. It puts particular emphasis upon sustainable development. Hence, supplementary planning documents could include policies relating to diverse matters including regeneration, economic development, education, housing, health, waste, energy, biodiversity, recycling, protection of the environment, transport, culture, and social issues.


Despite the apparently all-encompassing range of policies that are relevant to the preparation of local development frameworks, the inclusion or exclusion of river basin management plans amongst these policies remains somewhat indirect. National guidance requires regional planning bodies to take into account a list of European Community, central government, or central government agency national policies, guidance, research, and related material when revising regional spatial strategies. Within this list is featured the national legislation transposing the Water Framework Directive. Because local planning authorities must have regard to regional spatial strategies in preparing local development documents, which constitute a part of the local development scheme, they are implicitly bound to implement the Directive. The indirectness of the planning law and guidance, however, contrasts markedly with the national legislation that transposes the Directive. It is explicitly stated that each public body, in exercising its functions so far as they affect a river basin district, must “have regard to” the relevant river basin management plan. Hence, the rather circuitous obligations arising under planning guidance are effectively displaced by a more specific duty under the transposition legislation.

The inference that follows is that bodies making planning determinations must pay “regard” to river basin management plans


148. Planning Policy Statement 11, supra note 42, at 8, ann. A.


151. The Water Environment (Water Framework Directive) (England and Wales) Regulations, 2003, S.I. 2003/3242, art. 17. See also id., art. 2, ¶ 1 (defining “public body,” amongst other things, as a person holding an office under the Crown or “created or continued in existence by public general Act of Parliament”). Similarly, see Third Consultation Paper, supra note 117, at 45, which states that “[p]lanning authorities are required to take into account environmental considerations and, although the [Water Framework Directive] contains no explicit provisions in relation to land-use planning, planning authorities will need to take account of the objectives which it creates.”
and, in principle, this may constitute an overriding consideration unless material considerations indicate otherwise. The implications of this for planning practice are important because planning permission would have to be denied where a development project might prevent the good status of waters being achieved. What "material considerations" might justify a failure to meet the requirements of the Directive are difficult to see, so the duty to "have regard" to the river basin management plans in planning might be considered an especially compelling one.

On the other hand, the problem noted above is that "having regard" to environmental concerns may be insufficient to allocate an appropriate weight to those concerns against other material considerations. Until river basin plans are in place and planning authorities are confronted with prospective developments that conflict with them, it is difficult to be categorical about the way in which such issues will be dealt with in practice. However, the remarkable feature of the arrangements that have been put in place is the contrast between the "procedural" obligation that is imposed upon local planning authorities to "have regard" to river basin management plans, and the numerous substantive obligations that are imposed on the Environment Agency in relation to implementation of the Directive. As has been noted, the Agency is made responsible for a sequence of implementation tasks, each of which is couched in terms of mandatory duty.152 Put bluntly, the Agency is legally bound to perform each of its allocated tasks, not merely to "have regard" to the need to do so. Given the possibility that land use development has the capacity to obstruct realisation of the environmental objectives of the Directive, it is difficult to see why the obligations upon local planning authorities should be, in comparison, so weakly formulated.

In more practical terms, the problem for local planning authorities is likely to arise in ascertaining the circumstances in which a development plan, or authorisation of a particular development, will obstruct the realisation of the objectives of the Directive. A recent consultants' report to the Environment Agency addressed this issue and concluded, "planning authorities cannot be expected to know what it is that has to be done to achieve what is sought[,] . . . they expect to seek expert and authoritative advice, and they are entitled to expect this to come from the Agency

in the first instance." The firm recommendation is that development planning, development control, and now strategic environmental assessment of development plans must be used more effectively to input more precise advice about the implications of changes in land use upon water management. In practical terms, achieving this will involve a change of gear on the part of both the Agency and local planning authorities, if the full potential of planning system is to be realised. Nonetheless, the problem remains as to what consequences would arise where, after being fully informed that a prospective development project will obstruct realisation of the environmental objectives of the Directive, a local planning authority decided to authorise a project based on a conclusion that the developmental benefits outweighed the environmental costs.

It is difficult to determine this question in the abstract, but it is notable that the Directive makes only the most qualified provision for this to happen lawfully. The Directive states that Member States will not be in breach where, amongst other things, failure to achieve good status is the result of new modifications to the physical characteristics of a surface water body, and a series of cumulative conditions are met. The conditions require that all practicable steps are taken to mitigate adverse effects; that the reasons for the modification are set out in the river basin management plan; that these reasons are of overriding public interest and/or benefits to the environment and to society in terms of their contribution to human health, human safety, or sustainable development; and that these benefits, for reasons of technical feasibility or disproportionate cost, cannot be achieved by other means.

In relation to these provisions for "exceptional" development, it is notable, first, that the exception only relates to developments actually affecting the physical characteristics of a surface water body. Implicitly, therefore, the provisions should have no relevance to land-based kinds of development that have adverse effects upon water quality, even though these effects might contribute to a failure to meet the environmental objectives of the

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153. Land Use, supra note 147, at 37-38.
155. See Land Use, supra note 147, at 40-42.
157. Id.
158. Id.
Directive. Second, the exception is only available in relation to projects that are of overriding public interest or those that confer specified kinds of environmental or human benefits that cannot be otherwise provided.\textsuperscript{159} This formula is reminiscent of the restrictive approach to authorisation of developments that impact nature conservation sites designated under Community law.\textsuperscript{160} This similarity suggests that a relatively narrow interpretation will be applied to those projects that may qualify as exceptions.

CONCLUSION

As the preceding discussion has made clear, there is no shortage of challenges to meeting the environmental obligations of the Water Framework Directive by the 2015 deadline. The present chemical, physical, and ecological state of national waters within the scope of the Directive leaves much to be desired. Clearly, extensive programmes of measures will need to be put in place through river basin management plans to ensure that present causes of failure to meet environmental objectives are fully addressed by the deadline.

However, what remains uncertain is the role of land use regulation in these programmes, alongside traditional mechanisms for protection of water quality. In principle, the historical duty of local planning authorities “to have regard” for environmental impacts, including those relating to the aquatic environment, has much to commend it. Specifically, it has allowed local control over land use planning and control over authorisation of particular developments. This may be seen as a local democratic mandate for control over the process of balancing social and economic factors against environmental impacts in determining what kinds of development qualify as “sustainable.” On the other hand, the capacity of developmental factors to override adverse environmental impacts is a particular cause of concern where the implementation of European Community legislation is involved. The key issue is whether allowing development that results in a failure to meet the environmental objectives of the Directive could ever be justified in

\textsuperscript{159} Id. arts. 4(5), (7).

\textsuperscript{160} See Council Directive 92/42, art. 6(4), 1992 O.J. (L 206) (EC) (making provision for authorisation of projects that have an adverse effect upon certain sites, where a project is permissible for “imperative reasons of overriding public interest” of particular kinds depending upon the category of habitat or species impacted upon). For elaboration of the implications of this, see EUROPEAN COMM’N, MANAGING NATURAL 2000 SITES: THE PROVISIONS OF ARTICLE 6 OF THE ‘HABITATS’ DIRECTIVE 92/43/EEC (2000).
Community law, whatever the local perception of the development.

Given the escape hatch that the Directive makes for development which conflicts with the achievement of its environmental objectives, there may be good reason to doubt whether the obligation imposed upon local planning authorities is sufficient. The duty "to have regard" for the relevant river basin management plans, as has been noted, is no bar to overriding the requirements of the Directive where there is a local perception that non-environmental material considerations are more weighty. A tentative view is that a duty upon any body merely "to have regard" for the needs of river basin management plans is not sufficiently substantive to fulfil the Community obligations at issue.

Subject to the narrow exception for sustainable development provided by the Directive itself, public bodies should be required to act in accordance with the requirements of the Directive. The implication of imposing that duty upon local planning authorities would be that it would not be permissible to allow development of a kind that conflicted with the environmental objectives of the Directive. Undeniably, this would involve the loss of some local autonomy in land use decision-making; but the alternative would be worse, given the prospect of proceedings against the United Kingdom in the European Court of Justice for failure fully to implement the Directive.