

**GUIDANCE NOTES FOR
LOCAL PLANNING AUTHORITIES ON THE METHODS
OF PROTECTING THE WATER ENVIRONMENT
THROUGH DEVELOPMENT PLANS**



NRA

National Rivers Authority





ENVIRONMENT AGENCY

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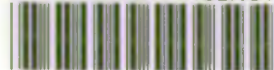
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ENVIRONMENT AGENCY



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TABLE OF CONTENTS

	INTRODUCTION	1
		
	WATER QUALITY AND WATER RESOURCES	3
		
	Strategic/County Concerns	3
		
	Local/District Concerns	4
	Waste Water Management	4
	Surface Water Protection	5
	Groundwater Protection	6
	Availability of Water Resources	6
		
	FLOOD DEFENCE	8
		
	Strategic/County Concerns	8
		
	Local/District Concerns	9
	Protection of the Floodplain	9
	Surface Water Run-off	10
	Tidal and Fluvial Flood Defences	11
		
	FISHERIES, RECREATION AND CONSERVATION IN RIVER CORRIDORS AND COASTAL MARGINS	11
		
	Strategic/County Concerns	11
		
	Local/District Concerns	11
	River Corridors and Coastal Margins	11
	Implementing the Strategy for River Corridors and Coastal Margins	18
	Navigation	18
		
	MINERAL WORKINGS AND WASTE DISPOSAL	11
		
	National Rivers Authority	18
	Information Centre	20
	Head Office	22
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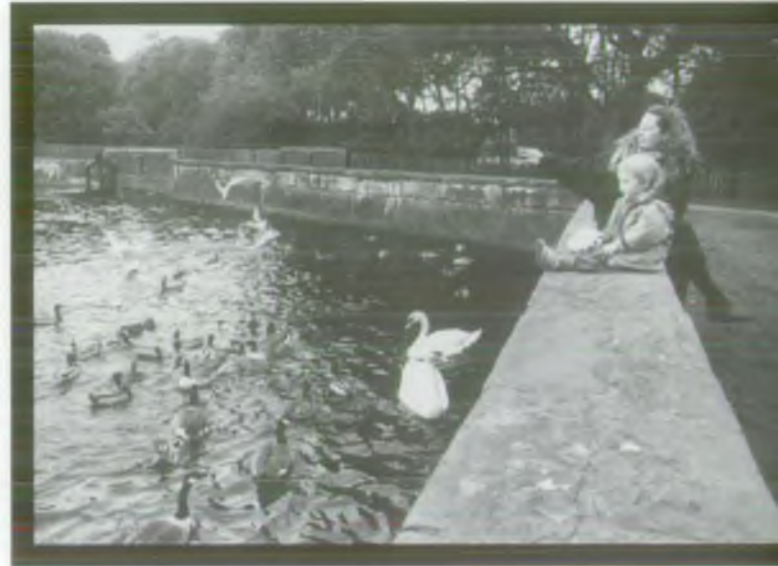
1.0 INTRODUCTION

1.1 The National Rivers Authority (NRA) was established by the 1989 Water Act as a non-departmental body with statutory responsibilities for water resources, pollution control, flood defence, fisheries, recreation, conservation and navigation in England and Wales. The Authority's Head Office is in Bristol, and there are 8 operational Regions. There is a Chairman's Office in London.

1.2 The aims of the NRA are summarised in its mission statement which reads:

"The NRA will protect and improve the water environment. This will be achieved through effective management of water resources and by substantial reductions in pollution. The Authority aims to provide effective defence for people and property against flooding from rivers and sea. In discharging its duties it will operate openly and balance the interests of all who benefit from and use rivers, ground waters, estuaries and coastal waters".

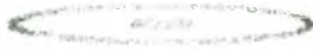
1.3 The statutory requirement to manage the water environment has created wide-ranging responsibilities for the Authority. These include the maintenance and improvement of water quality, conserving water resources, providing effective flood defence, improving, maintaining and developing fisheries, promote and further conservation, regulate navigation and generally promoting water-based recreation of all types. The Water Resources Act 1991 requires the



NRA to conserve and enhance the water environment when discharging all its duties.

1.4 River catchment management planning provides an essential mechanism for implementing these responsibilities. The broad objective of catchment management planning is to conserve and enhance the total river environment through effective land and resource management. However, while the NRA is well placed to influence some of the factors responsible for the functioning of the hydrological system, particularly in relation to the river corridor itself, it has very little control over the mechanisms which

1 *The Water Resources Act 1991 uses the term "controlled waters" to describe the four categories of water for which the NRA has responsibility, ie. "relevant territorial waters", "coastal waters", "inland waters" and "ground waters". In effect, the NRA has jurisdiction over all waters that the general public are likely to encounter.*



determine land use change on a catchment-wide basis. This is largely the responsibility of local planning authorities through the implementation of the Town and Country Planning Acts.

1.5 The policies in statutory development plans are very important in this regard in that they set out the framework for land use change, and, since the enactment of the Planning and Compensation Act 1991, provide the key reference in determining development applications. The NRA therefore welcomes the inclusion of policies which reflect the Authority's concerns and responsibilities in development plans, including the statutory requirement to conserve and enhance the water environment and associated lands.

1.6 As guidance for local authorities on these matters, the NRA has prepared this set of statements relating to the broad headings of water quality and water resources, flood defence, fisheries, conservation, recreation and navigation in the river corridor, and mineral workings and waste disposal. While most headings reflect NRA functions, minerals and waste disposal have been included as a discrete section reflecting the practice of preparing separate minerals plans and waste plans. Under each heading, issues are described with suggested statements and reasoned justification.

1.7 Two levels of statements are presented. Those shown at the beginning of each section address the wider issues relevant to the prepara-

tion of structure plans and Part I of UDPs. These are followed by statements relevant to local plans, or Part II of UDPs.

1.8 It is hoped that the objectives will be substantially replicated in each local authority's land use plans insofar as they are appropriate. The NRA recognises that local circumstances will probably require the modification or omission of various policies. The aim is to assist Chief Planning Officers and their staff by explaining the reasons why it is desirable to include policy statements to protect the water environment, and to provide them with information from which to work. The NRA Planning Officers in each Region are available to provide further advice during plan preparation or review, and at the consultation stage. The NRA will subsequently assist with the implementation of policies where appropriate, either through the consultation process or by the use of its statutory powers and in the execution of its duties. Conversely, the NRA may formally object to development plans which conflict with the stated objectives.

1.9 Once a development plan has been adopted, the NRA will look to reinforce the framework created by the land use policies when commenting on development proposals, draft planning briefs, local planning initiatives and the like. It will also ensure that the activities it itself undertakes; such as granting land drainage consent, implementing river enhancement works etc; are in accordance with policies in development plans.



2.0 WATER QUALITY AND WATER RESOURCES STRATEGIC/COUNTY CONCERNS

AIM

2.1 To protect surface, groundwater and coastal water from pollution arising from development.

GUIDANCE STATEMENT

S1 The LPA should normally resist allocation of land for development which, in its opinion after consultation with the NRA, will lead to a deterioration in the quality of underground, surface or coastal water.

JUSTIFICATION

2.2 New development can have significant effects on the quality of surface, underground and coastal water. Therefore the NRA looks to Local Planning Authorities not to permit developments likely to place the quality of watercourses or groundwater at risk.

GUIDANCE STATEMENT

S2 Allocation of land for new development should normally be resisted where the LPA, in consultation with the NRA, considers that adequate water resources do not already exist, or where their provision is considered likely to pose a risk to existing abstractions, water quality, fisheries, amenity, inland navigations or conservation interests.

JUSTIFICATION

2.3 The supply of water to a new development is a critical factor. Development in locations where water resources are already scarce may result in less reliable supplies for existing population and industry, or may result in pressures for further abstraction licences which could put existing abstractions at risk, and may be detrimental to amenity, water quality, fisheries, inland navigations and nature conservation. Developments should be resisted if possible where existing water supplies are inadequate, or where they cannot be augmented in time to coincide with the development without adversely affecting the water environment.





LOCAL/DISTRICT CONCERNS

Waste Water Management

THE ISSUE

2.4 With increasing population and water use nationally, many sewer systems, including sewage treatment works, are becoming overloaded. Further development in the areas served by these systems is likely to lead to the pollution of watercourses unless additional infrastructure is provided. Such pollution poses a serious risk to water quality, water-based recreation, fisheries and nature conservation.

GUIDANCE STATEMENT

LI New development should not normally be permitted unless foul sewers and sewage treatment works of adequate capacity and design are available or will be provided in time to serve the development. The NRA would look to the LPA to discourage the proliferation of small private package sewage treatment plants and other types of discharge direct to watercourse within sewered areas. The use of septic tanks will only be considered if connection to the mains sewerage is not feasible, and only then if ground conditions are satisfactory and the plot of land is of sufficient size to provide an adequate subsoil drainage system.

JUSTIFICATION

2.5 To ensure adequate infrastructure is available to serve the development. Private sewage plants require regular maintenance at frequent intervals in order to produce effluents which meet their discharge consents. Failure to reach the required standard can result in inadequate

dilution of effluents and pollution of the ground or surface waters can result.

Industrial effluents also pose a significant risk of pollution to surface and ground waters and should, wherever possible, be discharged to the public foul sewerage system.





LOCAL/DISTRICT CONCERNS

Surface Water Protection

THE ISSUE

2.6 The water quality of inland watercourses is an important area of concern for the NRA. This recognises the importance of water quality to a wide range of uses and users, including abstraction for potable supply, industrial water supply, fisheries, livestock watering, spray irrigation, and amenity, including inland navigation, and conservation.

GUIDANCE STATEMENT

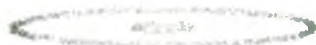
L2 The LPA should normally resist development which in its opinion, after consultation with the NRA, could adversely affect the quality of surface, underground or coastal water as a result of the nature of the surface or waste water discharge, or give rise to pollution problems resulting from the disturbance of contaminated land. The NRA will look to the LPA to generally support initiatives which lead to improvements in surface water quality.



JUSTIFICATION

2.7 Maintaining or enhancing the water quality of coastal water, rivers, canals, lakes, ponds and other water bodies is important in order to protect the wide range of uses. The NRA looks to Local Planning Authorities to restrict development which threatens surface water quality, and will generally encourage initiatives that result in an improvement in surface water quality.

Development which disturbs contaminated ground is an additional concern. Unless carefully designed and implemented, such schemes can cause pollution of surface waters. Contaminated sites therefore should be adequately sealed against the leakage of polluted matter, while surface drainage should be directed away from the source of contamination. However, it is also recognised that the development of contaminated sites can offer opportunities for improvements in surface water quality, for instance by the restoration of sites which have been poorly infilled in the past.



LOCAL/DISTRICT CONCERNS

Groundwater Protection

THE ISSUE

2.8 Groundwater resources are an essential source of water for public supply, industry and agriculture. They also sustain the base flows of many rivers. As a general principle, the NRA supports the conservation of groundwater quality, the aim being to prevent its pollution rather than the subsequent cleaning up of contamination. However, some activities, such as the disturbance of contaminated sites or the inappropriate storage of chemicals can result in the pollution of groundwater. The cleaning up of contaminated groundwater is difficult and expensive. It is better, therefore, to prevent or reduce the risk of groundwater contamination rather than deal with its consequences. Similarly, abstraction and dewatering can affect quantities available, and engineering works can obstruct groundwater flow within an aquifer.

GUIDANCE STATEMENT

L3 Developments should normally not be permitted which, in the opinion of the LPA, after consultation with the NRA, pose an unacceptable risk to the quality of groundwater. Areas subject to different levels of risk and protection are shown on the Proposals Map.

JUSTIFICATION

2.9 To prevent pollution of groundwater by controlling activities, such as the disposal of effluent in soakaways, landfilling of unsealed sites over permeable bedrock, or inappropriate storage of chemicals. Abstraction and dewatering can affect quantities available, and engineering works can obstruct groundwater flow within an aquifer. Guidance on considerations affecting the acceptability of development from a groundwater protection viewpoint has been published by the NRA as its "Policy and Practice for the

Protection of Groundwater" (Bristol, December 1992). This includes map-based data showing the constraints on development.





LOCAL/DISTRICT CONCERNS

Availability of Water Resources

THE ISSUE

2.10 The development of water resources for water supply is becoming increasingly difficult. The NRA is concerned that the provision of water for development does not have a detrimental impact on existing uses. In some areas, over-abstraction has resulted in reduced flow rates in rivers. Further abstraction in such locations will exacerbate this problem. In practice, this allows no significant new all-year-round abstractions, and is therefore an important issue in terms of development control. Consequently, there is a growing need to plan for new strategic water resources which will not harm the environment; these may require the construction of new reservoirs or the expensive transport of water over long distances. This can have a critical impact on the viability or timing of new development.

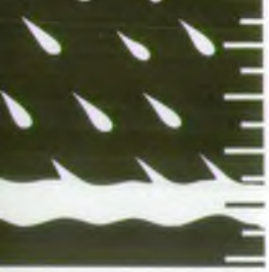
GUIDANCE STATEMENT

14 The LPA should not normally permit development which increases the requirement for water unless adequate water resources either already exist or will be provided in time to serve the development and without detriment to existing uses. The NRA looks to the Local Planning Authority to support water conservation measures.

JUSTIFICATION

2.11 Developments should be limited to locations where adequate water resources already exist, or where new provision of water resources can be made without adversely affecting existing abstraction, river flows, water quality, agriculture, fisheries, amenity or nature conservation, and where it coincides with the timing of the development. The NRA intends to publish its National Water Resources Development Strategy by early 1994.





3.0 FLOOD DEFENCE STRATEGIC/COUNTY CONCERNS

AIM

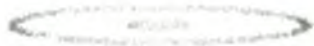
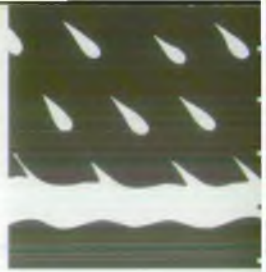
3.1 To ensure that development is not at an unacceptable risk from flooding (including tidal inundation) and does not put other areas at risk, or greater risk, from flooding which could endanger life and damage natural and built assets. To ensure that any work which is needed to reduce the risk of flooding created by a development is paid for by the developer and not the public.

GUIDANCE STATEMENT

S3 The LPA, after consultation with the NRA, should normally resist allocation of land where such development would be at direct unacceptable risk from flooding (including tidal inundation) or likely to increase the risk of flooding elsewhere to an unacceptable level.

JUSTIFICATION

3.2 New development, redevelopment, and land raising can have significant implications for flood risk. Within river and coastal floodplain, new developments may be liable to flooding and may increase the risk of flooding (including tidal inundation) elsewhere by reducing the storage capacity of the floodplain and impeding flood flows. Development anywhere in the catchment may increase surface water run-off, adding to the flood risk downstream, and may increase the risk of pollution and damage to river habitats. Similarly, development which threatens the stability and continuity of fluvial and tidal flood defences can place large areas at risk from inundation.



LOCAL/DISTRICT CONCERNS

Protection of the Floodplain

THE ISSUE

3.3 Throughout England and Wales, and particularly in urban areas, a considerable amount of development has taken place on the coastal plain as well as in river floodplains. Consequently, people and property in these areas are already at risk from flooding. New development in floodplains is also likely to be at risk from flooding. The NRA holds information identifying many of the areas known to be at risk and will provide such information as required. Development can also have the effect of increasing the risk of flooding elsewhere.

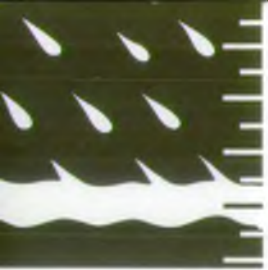
GUIDANCE STATEMENT

LS Within the identified floodplain or in the areas at unacceptable risk from flooding the LPA should resist new development, the intensification of existing development or land raising. Where it is decided that development in such areas should be permitted for social or economic reasons, then appropriate flood protection and mitigation measures, including measures to restore floodplain or provide adequate storage, will be required to compensate for the impact of development. At sites suspected of being at unacceptable risk from flooding but for which adequate flood risk information is unavailable, developers will be required to carry out detailed technical investigations to evaluate the extent of the risk. In all cases, developers will be required to identify, implement and cover the costs of any necessary measures. In some cases the elements of the necessary measures may be such that they are best undertaken by the NRA itself, but in these cases the cost would be covered by the potential developers.

JUSTIFICATION

3.4 Guidance for Planning Authorities on protection of the floodplain is contained in DOE Circular 30/92 "Development & Flood Risk" (WO 68/92) and guidance on coastal floodplains is contained in PPG20 "Coastal Planning". In addition to the risk of flooding to the proposed development itself, development in such locations may increase the risk of flooding elsewhere by reducing the storage capacity of the floodplain, and/or by impeding the flow of flood water. Land raising in the floodplain may have a similar effect. Consequently, the NRA looks to the LPA to resist development in such locations, while redevelopment of existing sites will only be considered where the LPA, in consultation with the NRA, is satisfied that the developer will provide appropriate mitigation and/or protection measures. There may also be opportunities to enhance or restore the natural floodplain when redevelopment takes place.





LOCAL/DISTRICT CONCERNS

Surface Water Run-off

THE ISSUE

3.5 Unless carefully sited and designed, new development or redevelopment, can increase the rate and volume of surface water run-off. This can result in two types of problem. The first is the increased risk of flooding in areas downstream from the development in question. The second is physical damage to the river environment. This is a catchment wide issue and the NRA will take a co-ordinated approach to all developments.

GUIDANCE STATEMENT

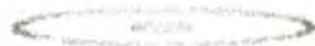
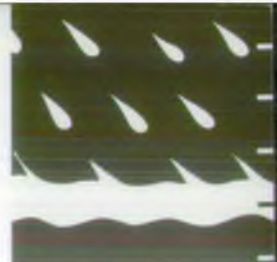
L6 The LPA should normally resist development which would result in adverse impact on the water environment due to additional surface water run-off. Development which could increase the risk of flooding must include appropriate alleviation or mitigation measures, defined by the LPA in consultation with the NRA and funded by the developer. Developers will be expected to cover the costs of assessing surface water drainage impacts and of any appropriate mitigation works, including their long-term monitoring and management.

JUSTIFICATION

3.6 Guidance for Planning Authorities on dealing with run-off from development is contained in DOE Circular 30/92 "Development & Flood

Risk" (WO 68/92). New developments may result in a substantial increase in surface water run-off as permeable surfaces are replaced by impermeable surfaces such as roofs and paving. This may result in an increase in the risk of flooding downstream to an unacceptable level and a reduction in infiltration to groundwater. Other consequential effects include increased pollution, silt deposition, damage to watercourse habitats and river channel instability, as well as reduction in both river base flows and aquifer recharge. These effects can often be at some considerable distance from the new development. The LPA, in consultation with the NRA, will assess the surface water run-off implications of new development proposals. New developments will only be permitted where the LPA is satisfied that suitable measures, designed to mitigate the adverse impact of surface water run-off, are included as an integral part of the development. Where appropriate, the development should include provision for the long term monitoring and management of these measures. Arrangements under S106 of the Town & Country Planning Act 1990 may be appropriate.





LOCAL/DISTRICT CONCERNS

Tidal and Fluvial Flood Defences

THE ISSUE

3.7 Development in lowlying land protected from flooding by tidal and fluvial defences is at risk of flooding, should the defences be overtopped by extreme water levels. A breach in tidal and fluvial defences could lead to significant flooding in areas of low lying land often well away from the location of the breach. Such an incident could place both people and natural and built assets at risk.

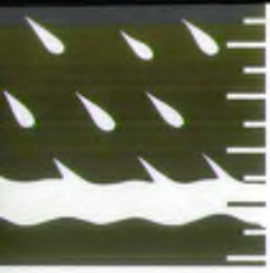
GUIDANCE STATEMENT

17 Development should not normally be permitted which would adversely affect the integrity and continuity of tidal and fluvial defences. Access to existing and future tidal and fluvial defences for maintenance and emergency purposes will be protected, and where appropriate, improved. Where development relating to tidal and fluvial defences is permitted, the LPA will, in consultation with appropriate bodies including the NRA, require appropriate measures to be incorporated in order to ensure that the stability and continuity of the defences is maintained. Developers will be expected to cover the costs of any appropriate enhancement and mitigation works, including their long-term monitoring and management.

JUSTIFICATION

3.8 Guidance for Planning Authorities on development in flood risk areas is contained in DOE Circular 30/92 "Development & Flood Risk" (WO 68/92) and guidance on coastal

floodplains is contained in PPG20 "Coastal Planning". In order to prevent flooding it is essential that local authorities, in consultation with other appropriate bodies including the NRA, ensure that the integrity and continuity of tidal and fluvial defences is maintained. In many cases access to these defences for maintenance and emergency purposes is required together with access for any future improvements. Local authorities should protect, and where appropriate, improve such access. Careful design and siting of flood defences may offer opportunities to increase public access to the waterside or to secure other types of environmental enhancement (for instance, the protection of an important view). In the case of coastal defences, the option of managed retreat should be considered. It is recognised that planning obligations are often a means of achieving such improvements. Developments which pose a threat to the integrity and continuing of tidal and fluvial defences could require the Authority's consent in addition to planning consent and consultation with the NRA is necessary.



GUIDANCE

1.8 In order to minimise the effects of tidal flooding, the LPA should resist development on land to the seaward side of sea defences, including the siting of temporary holiday chalets and caravans. On land between a first line sea defence and the main defence, the siting of holiday chalets, caravans, and camping sites will not normally be permitted. If after consultation with the NRA and other interested bodies the LPA decides that the risk of flooding is sufficiently low to permit certain types of use, time limited occupancy conditions will need to be imposed preventing occupation during the period from November-March inclusive when the risk of tidal inundation is greatest. The development permitted in any area of land subject to a flooding risk must be in line with the level of protection provided by the sea defences which exist. A change in the type of development permitted could result in a need for increasing the level of protection afforded and if so the cost of such provision should be borne by the developer.

JUSTIFICATION

3.9 Any development on land to the seaward side of sea defences is obviously at significant risk from flooding. So as to minimise the effects of tidal inundation, the LPA will not normally permit development in such locations. See Circular 30/92 (WO 68/92).



4.0 FISHERIES, RECREATION AND CONSERVATION IN RIVER CORRIDORS AND COASTAL MARGINS STRATEGIC/COUNTY CONCERNS

AIM

4.1 To consider the effects of development on the water environment so as to minimise its adverse impacts and maximise potential benefits. This is particularly so in river corridors and coastal margins, areas of land which are physically and visually linked to rivers, their estuaries and the coast, in wetlands, around lakes and ponds and in sensitive catchment areas.

GUIDANCE STATEMENT

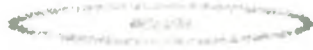
54 The LPA, in consultation with the NRA, should normally resist allocation of land for development which is likely to have an adverse effect on fisheries, nature conservation, landscape and recreation in river corridors, coastal margins and other waterside areas. The NRA will look to the LPA to generally promote and support initiatives which seek to conserve, restore or enhance the natural elements of the river corridors, coastal margins and other waterside areas, or which encourage appropriate water-based and waterside recreation.

The NRA is concerned that new development should not place these aspects of the water environment at risk. However, it is recognised that development, or more often redevelopment, can result in an enhancement of the environment of rivers and coastal margins, for instance by increasing public access, improving water-related habitats, landscape or water quality or by securing the restoration of natural features. The improvement of water-related habitats and water quality is likely to have a beneficial effect on the fish population.

JUSTIFICATION

4.2 River corridors and coastal margins are of great importance for water resources, nature conservation, fisheries and recreation and often make a significant contribution to the character of the landscape. Rivers, groundwater, ponds, wetlands, appropriate public access and water-related recreation all deserve conservation and restoration and enhancement where appropriate.





LOCAL/DISTRICT CONCERNS

River Corridors and Coastal Margins

THE ISSUE

4.3 The NRA, in its role as 'Guardian of the Water Environment', aims to encourage policies which:

- further the conservation and enhancement of the natural environment;
- promote facilities for recreation, including public access;
- further the conservation and enhancement of the built environment, sites and objects of archaeological, architectural or historic interest.

4.4 By emphasising the importance of river corridors and coastal margins, the NRA aims to promote these three aspects of the river environment. Such a corridor is a continuous area of land which is physically and visually linked to the watercourse itself. A coastal margin is similarly an area of land physically and visually linked to the coast and any coastal defences. Studies have shown that there is a high correlation between river corridors in England and existing environmental designations, notably SSSIs and Areas of Outstanding Natural Beauty. In urban areas, the importance of river corridors is even more pronounced since they represent one of few remaining features which link areas of open space. Such links are significant for amenity and recreation, but also for wildlife, allowing otherwise isolated areas to be interconnected and more viable in terms of animal and plant populations and habitat types. These factors suggest that river corridors warrant reference in land use plans as important elements which link areas of open space together.



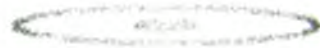
GUIDANCE STATEMENT

19 The LPA, in consultation with the NRA, should seek to promote river corridors and coastal margins as important areas of open land by:

- conserving existing areas of value and wherever possible seeking to restore the natural elements within the corridors and margins;
- promoting appropriate public access;
- identifying appropriate locations for water related recreation;
- protecting and improving access for operational and maintenance purposes, including the provision of maintenance strips where practical;
- resisting development which would have an adverse impact on nature conservation, fisheries, landscape, public access or water-related recreation.

JUSTIFICATION

4.5 In addition to their drainage function, river corridors are of great importance for water resources, water quality, nature conservation, fisheries, recreation and they often make a significant contribution to the character of the landscape. Coastal margins including areas adjacent to coastal defences can be similarly valuable. In many instances river corridors are an important source of open space in their own right, but frequently also form links or 'green chains' between areas of open space, often across borough boundaries. These links can be crucial for the survival or enhancement of wildlife. The NRA is committed to the protection, and wherever possible, enhancement of rivers, groundwater, ponds, wetlands, and appropriate public access and water-related recreation. Consequently, the NRA looks to Local Planning Authorities to support initiatives and proposals which will result in the conservation or enhancement of the natural elements of the river and coastal environment. Planning obligations are an important means of securing such improvements.



LOCAL/DISTRICT CONCERNS

Implementing the Strategy for River Corridors and Coastal Margins

THE ISSUE

4.6 All types of work in, under, over and adjacent to rivers, lakes, ponds and the coast need to be properly evaluated since uncontrolled works may lead to damage to the water environment.

GUIDANCE STATEMENT

L10 The LPA, in consultation with the NRA, should seek to ensure that all works in, under, over and adjacent to watercourses, waterbodies and the coast are appropriately designed and implemented and that the likely impacts of development proposals have been adequately assessed by means of a formal Environmental Assessment, where appropriate. In all cases proposals will need to be accompanied by an environmental report so that environmental impacts can be appraised.

JUSTIFICATION

4.7 Uncontrolled works in the vicinity of watercourses may lead to problems such as an increased risk of flooding, erosion of the beds and banks of watercourses, waterbodies and the coast; increased danger to the public; restricted access for maintenance; and damage to the water environment and the associated river corridor. Consequently, the NRA will assess the environmental impact of such proposals on the water environment. Mitigation measures will be required to balance any adverse impacts. The culverting of watercourses will not normally be permitted since it results in a break in the continuity of the river corridor and may also have serious implications for safety, maintenance and flooding. The granting of planning permission for the above works does not remove the need to obtain relevant statutory consents/licences from the NRA, for which implications for the aquatic environment will be assessed. The NRA can offer guidance on these matters.





LOCAL/DISTRICT CONCERNS

Navigation

THE ISSUE

4.8 Specific Acts grant navigation powers to the NRA in some Regions where it controls various river navigations and harbours. In addition, the NRA has by-law making powers in respect of inland waterways in England and Wales, where there is a public right of navigation but no other authority legitimately exercises navigation powers. In such cases, the NRA's responsibilities include overseeing river based activities, licensing, conducting boat safety inspections and managing locks.

Rivers are an important recreational resource and the NRA recognises the contribution they can make to a community in terms of social and economic benefit. The development of new facilities (eg. moorings, slipways) can have an effect not only on the immediate location, but also throughout the navigation. Development proposals should be considered in the context of the whole navigation to achieve a balance between encouraging development and protecting the resource. NRA staff can provide advice about a catchment, upon which a strategic assessment of proposals can be based. Where possible, and in conjunction with Local Authorities and the relevant navigation authority, the NRA will encourage and support the production of Recreation Strategies for river navigations.

In some areas, riverside land is being redeveloped to provide housing, offices or some other non-river related use. This can lead to the loss of important facilities such as boatyards, slipways, access and open spaces. Where possible, riverside developments which destroy key facilities should be resisted or mitigation works should be required. Access to the riverside and riverside footpaths should be retained.





GUIDANCE STATEMENT

111 The LPA, in consultation with the NRA, should generally support proposals for the development of the recreational, leisure and tourist potential of river navigations where this is consistent with the capacity of the river and does not jeopardise other recreational activities, local amenity or conservation value. Wherever possible, when it is agreed that water based activities are an appropriate afteruse, encouragement will be given to locate new moorings and relocate existing on-river facilities to off-river basins and worked out mineral sites.

JUSTIFICATION

4.9 The development of river navigations is largely dependant upon the provision of land-based facilities. The NRA will consider the merits of each application on a site-by-site basis, and also in terms of impact and benefits that will accrue throughout the navigation. When considering moorings, off-river schemes will be favoured as they do not constrict the navigation channel or obstruct the river bank. They can also result in the creation of additional off-river areas which are of benefit to fish and wildlife. Riverside developments can have a significant visual impact and will be required to make a positive contribution to the landscape value and local characteristics of the area. Rivers are a natural resource and are of value and attraction to a broad cross section of society. Existing public access to the riverside should be protected and, wherever possible, opportunities for increased access points, riverside viewing points and riverside footpaths should be encouraged.



5.0 MINERAL WORKINGS AND WASTE DISPOSAL STRATEGIC CONCERNS

AIM

5.1 To reduce the negative impacts on the water environment of mineral workings and their after use, including subsequent infilling with waste, and to maximise the environmental benefits associated with site restoration.

GUIDANCE STATEMENT

55 The LPA should normally resist proposals for new mineral extraction or waste disposal sites where, after consultation with the NRA, it considers that there would be adverse effects on groundwater, rivers or other water bodies.

56 The LPA should generally support initiatives, including site restoration proposals, which result in benefits relating to the water environment, and improvements in the standard of flood protection.

JUSTIFICATION

5.2 Mineral extraction and the restoration of sites can raise a number of environmental issues. The extraction process, if it involves dewatering of workings, can lower groundwater levels around a site, possibly affecting flows in nearby watercourses and levels in nearby lakes, existing water abstractions and natural habitats. In some cases these effects can be over distances of several kilometres. The necessary mitigation of these adverse effects can sometimes be provided by appropriate design. In addition, the restoration of worked-out mineral sites may



increase the possibility of flooding if they are located within the floodplain, and involve landraising or doming. Landfilling floodplain sites with putrescible waste increases the risk of pollution. However, the NRA also recognises that the restoration of worked-out mineral sites may offer opportunities for environmental enhancement, the provision of water based recreation or flood protection.



MINERALS PLANS/PART II OF UDPS

THE ISSUES

5.3 Mineral extraction can affect water resources, flood risk and the environment, if appropriate measures are not taken. Conversely, restoration works may offer opportunities for environmental enhancement, the provision of water based recreation or flood protection measures.

GUIDANCE STATEMENT

L12 The LPA should normally resist proposals for new mineral workings whose impact on surrounding groundwater levels is likely to have a detrimental effect on existing water abstraction, river flow, lake levels, or natural habitats.

JUSTIFICATION

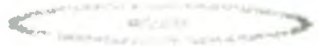
5.4 Mineral extraction may have the effect of temporarily and in some cases for a prolonged time reducing groundwater levels in the area surrounding a site and up to some significant distance away. This may reduce flows in surrounding watercourses, reduce levels in adjacent lakes, affect existing water abstractions, or damage natural habitats.

5.5 Restoration of previously worked mineral sites may involve the raising of ground levels or the doming of sites. Such works may reduce the capacity of the floodplain, thereby increasing the flood risk in other areas. Planning consent should only be granted for this type of restoration where works elsewhere in the floodplain will provide appropriate alleviation or mitigation

measures to compensate for the reduced capacity. Furthermore, backfilling with impermeable materials can lead to raised groundwater levels upstream, in turn leading to localised waterlogging and groundwater flooding. Similarly, groundwater levels can be lowered downstream leading to derogation of watercourses, existing abstractions and natural habitats.

5.6 However, sites which remain as open water may offer opportunities for the provision of routes for flood water, habitat creation, recreation provision, landscape enhancement and improved water resource availability.





GUIDANCE STATEMENT

L13 The LPA should not normally grant planning consent for mineral workings in floodplains where such workings could result in raising of existing ground levels, either during the operational life of the works or after restoration. Permission may exceptionally be granted where the LPA, in consultation with the NRA, is satisfied that flood compensation is provided elsewhere in the floodplain. Where restoration involves landfilling, care will be taken to ensure that the proposals do not affect groundwater quality and levels or impede flow paths.

JUSTIFICATION

5.7 If the restoration of disused mineral workings raises the ground level of a site within the floodplain, the capacity of the floodplain may be reduced, and the flow of flood water impeded, thus increasing the risk of flooding elsewhere. In addition, backfilling with impermeable materials can lead to raised groundwater levels upstream, in turn leading to localised waterlogging and groundwater flooding.

GUIDANCE STATEMENT

L14 The LPA should generally support and encourage restoration proposals for worked-out mineral sites, and restoration of related waste disposal sites which have been poorly restored in the past.

JUSTIFICATION

5.8 The restoration of worked-out mineral sites can present opportunities for environmental enhancement. In some locations, the retention of areas of open water may be appropriate, allowing the provision of routes for flood water, habitat creation, new or improved fisheries, recreation provision, improved water resource provision and landscape enhancement. The NRA will therefore generally support appropriate environmental enhancement as an element of site restoration including the proper restoration of sites which were poorly restored in the past. Conditions may be attached to new planning consents to this end.



WASTE PLANS/PART II OF UDPS

THE ISSUE

5.9 The disposal of waste, either by landfilling of disused mineral workings, or by land raising in the floodplain, presents a number of issues of concern to the NRA. The first is the reduction of the capacity of the floodplain itself. The second is the risk of pollution. Thirdly, raising of ground levels within the floodplain (for example by the doming of sites).

GUIDANCE STATEMENT

L15 Disposal of waste within the floodplain should be restricted to inert waste only. The LPA should not normally permit waste disposal which results in a raising of ground levels within the floodplain. Elsewhere, the disposal of putrescible waste should not be permitted where it is likely to lead to the pollution of groundwater or surface water.

JUSTIFICATION

5.10 The deposition of putrescible waste increases the risk of pollution for surrounding groundwater and surface water. The risk is greatest within the floodplain where disposal should be limited to inert waste only. Elsewhere, the disposal of putrescible waste should be limited to locations where there is no risk to groundwater or surface water quality. An additional problem is the risk of flooding that may result from waste disposal which involves the raising of ground levels or the doming of sites within the floodplain, since this can reduce the capacity of the floodplain to store water, and may impede the

flow of floodwater. Guidance on considerations affecting the acceptability of development from a groundwater protection viewpoint has been prepared by the NRA in "Policy & Practice for the Protection of Groundwater" (Bristol Dec.92). This includes map-based data showing the constraints on development.



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