

EA- NORTH EAST LEAPS - Box 2

local environment agency plan

NIDD AND WHARFE

ACTION PLAN

SEPTEMBER 1998



ENVIRONMENT
AGENCY

KEY DETAILS

Area: 1,555 km²

Estimated Area
Population: 250,000

ADMINISTRATIVE DETAILS

Unitary Authorities: City of York
Leeds
Bradford

County Councils: North Yorkshire

District Councils: Harrogate
Craven
Selby

National Park
Authority: Yorkshire Dales

Water Company: Yorkshire Water Services Pic

Internal Drainage
Boards: Appleton, Roebuck &
Copmanthorpe, Marston Moor,
North Wharfe, South Wharfe,
Acaster, Claro.

AREA INFORMATION

INDUSTRY

Number of IPC Authorisations: 5
Number of IPC sites: 5
Number of Radioactive
Substances Authorisations: 3

WASTE ARISING

Number of Licensed Landfill Sites: 17
Number of Licensed Waste
Transfer Stations: 6
Number of Licensed Metal
Recycling Sites: 6
Number of Licensed Business Units: 2
Number of Civic Amenity Sites: 5

FLOOD DEFENCE

Length of Defences on Main River: 300km
Number of People and
Property Protected: 2438 house
equivalents

WATER QUALITY

Number of Consented Sewage
Discharges > 250pe: 29 public/
1 private
Number of Consented
Industrial Discharges: 10 (plus 11
fish farms)

WATER QUANTITY

Number of Licensed
Groundwater Abstractions: 270
Number of Spring & Surface
Water Abstractions: 341

ECOLOGY AND FISHERIES

Section 30 Consents to
Introduce Fish (1997): 64
Number of SSSIs: 94

EXECUTIVE SUMMARY

The key actions for the Nidd and Wharfe area are based upon the environmental themes which the Environment Agency is working towards. The nine themes are: addressing climate change; improving air quality; managing our water resources; enhancing biodiversity; managing our freshwater fisheries; delivering integrated river basin management; conserving the land; managing waste and regulating major industries.

An underlying aim for the plan area is to increase awareness of the Agency and of the environment as a whole. The Agency will seek to achieve this in a variety of ways: by working with local authorities on Local Agenda 21 helping them to gain community involvement in sustainability issues; and by working in collaboration with other individuals and organisations in the Nidd and Wharfe area.

Conservation of the natural fauna and flora in this area is a priority for the Agency, the local community and its partners, the Yorkshire Dales National Park Authority, the National Trust and many others. It is crucial that this partnership approach is fostered and developed in order to ensure a co-ordinated and appropriate method of delivery of the actions contained in this plan. In order to address the nine environmental themes in the Nidd and Wharfe area, the Agency will work in collaboration with many individuals and organisations.

The Agency will address the local issues which cause most concern and this action plan will provide the focus for environmental protection and enhancement in the Nidd and Wharfe area.



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ENVIRONMENT AGENCY



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NIDD & WHARFE AREA ADMINISTRATIVE BOUNDARIES

KEY

- CATCHMENT BOUNDARY
- RIVER
- ADMINISTRATIVE BOUNDARY



VISION - THE NIDD AND WHARFE

The Agency's vision for the Nidd and Wharfe catchment is a better environment for present and future generations. This plan details the key actions which the Agency and its partners will undertake to achieve this vision. There are many additional facets of the Agency's work, fundamental to the success of the plan, which are outlined below.

The Nidd and Wharfe area is predominantly rural and agricultural in character and the pressures placed upon it are diverse. The Agency recognises that the decision makers in the catchment will promote economic growth and will address the social needs of the population: the Agency will seek to promote environmental protection so that a balanced approach can be taken.

Water resources in the plan area are a valuable source of public supply water. The Agency will work with Yorkshire Water as the public water supply company in the plan area to ensure that they make efficient use of water resources.

The Agency will maintain, improve and develop the fisheries in the Nidd and Wharfe catchments through enforcement of the Salmon and Freshwater Fisheries Act 1975 and liaison with riparian owners and angling clubs.

A large proportion of the catchment is recognised for its great conservation value. The Agency will work with its partners to ensure that the area is conserved and enhanced in the most appropriate manner. The Agency will also play an active part in collaborative projects to enhance or improve specified areas.

The recreational demands exerted upon the environment have stemmed mainly from its natural beauty. The goal of those involved in the planning and management of the countryside is to maintain a balance between the many demands placed upon these popular areas. The National Parks along with landowners, the Agency and others strive to protect and sustain the more vulnerable habitats through considered management.

The Agency will liaise with the planning authorities on many issues including:

- minimising flood risks to new development;
- minimising adverse effects of development upon the Nidd and Wharfe area;
- biodiversity as the local authorities produce local biodiversity action plans; and
- Local Agenda 21, which is a community based programme led by local authorities to move towards economically, socially and environmentally sustainable communities.

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1.0 INTRODUCTION

1.1 THE ROLE OF THE ENVIRONMENT AGENCY

The primary aim of the Environment Agency is to protect and improve the environment and make a contribution towards the delivery of sustainable development through the integrated management of air, land and water. We have specific responsibilities for water resources, pollution prevention and control, flood defence, fisheries, conservation, recreation and navigation across England and Wales. Pollution prevention and control includes integrated pollution control, radioactive substances, waste regulation, contaminated land and water quality functions.

In our environmental strategy we have set out the principal and immediate issues which the Agency, in partnership with those other groups, will address. All of the actions detailed in section 4 contribute to one or more of these 9 themes. The themes are:

- addressing climate change;
- improving air quality;
- managing our water resources;
- enhancing biodiversity;
- managing our freshwater resources;
- delivering integrated river basin management;
- conserving the land;
- managing waste; and
- controlling major industries.

1.2 LOCAL ENVIRONMENT AGENCY PLANNING

A Local Environment Agency Plan (LEAP) is the Environment Agency's integrated local management plan, for identifying and assessing, prioritising and solving local environmental issues related to the Agency's functions, whilst taking into account the views of the Agency's local customers.

LEAPs are the successors to Catchment Management Plans produced by the National Rivers Authority. LEAPs should be read in conjunction with the local authorities Development Plans to gain a wider understanding of important local issues.

The process of Local Environment Agency Planning involves several stages, as outlined below:

The Consultation Report

The Nidd and Wharfe Consultation Report described the area, reviewed the state of the local environment, identified the environmental issues which need to be addressed, then made proposals for action to address them.

The publication of the Report marked the start of a three month period of formal consultation which enabled external organisations and the general public to work with the Agency in planning the future of the environment in the Nidd and Wharfe area.

The Action Plan

The Nidd and Wharfe Action Plan includes a forward vision for the plan area; a policy framework based on identified issues for the management of the environment over a five year period; and costed activity plans to address identified issues.

These elements are prepared once the period of consultation has been completed and full consideration has been given to the responses received. Although these plans are non-statutory, their aim is to provide a framework for the integrated management of the local environment through the corporate action of the Agency and other bodies.

The Annual Review

Progress made by the Agency and its partners will be monitored and normally reported annually, by means of a review document which will contain the following information:

- a detailed comparison of actual against planned progress;
- identification of additional actions to maintain progress in the light of changes in the area; and
- consideration of the need to update the LEAP.

The Full Review

A full review will normally be undertaken every five years. At this stage, a new Consultation Report will be produced and the plan re-examined to identify new issues.

1.3 ENVIRONMENT AGENCY RESPONSIBILITIES AND ACTIVITIES

Routine Work of the Agency

The strategic nature of LEAPs as a planning tool means that the plans are not designed to reflect fully the Agency's routine duties within the area. The Agency's everyday work commits substantial resources to managing the environment. The work usually falls into the categories of statutory environmental monitoring or regulation.

Licensing

The phrase 'licensing' in this context includes all Agency permissions for activities which have the potential to impact upon the environment. Applications for licences are rigorously assessed by local Agency staff against the sensitivity of the local environment.

The following are examples of licences granted by the Agency:

- *abstraction licence*: to take water from a surface or underground source;
- *discharge consent*: to put a sewage or trade effluent into a watercourse or into/onto ground;
- *land drainage consent*: carry out work affecting a watercourse or floodplain;
- *integrated pollution control authorisations* (IPC): permission to operate a prescribed process.
- *waste management licence*: the treatment, keeping or disposal of controlled waste in or on land;
- *radioactive substance authorisations*: use and storage of radioactive materials; and
- *fishing licences*: to fish (using rod and line or nets) in rivers and estuaries or written consents to use instruments other than a rod and line and to introduce fish.

These licenses include conditions which must be complied with. Such compliance is checked regularly by the Agency.

Monitoring

The method of licence monitoring depends upon the nature of the licence. The regularity of monitoring is usually dependent upon the nature of the process and

the relative risk to the environment.

In addition to the regulatory monitoring, a great deal of statutory monitoring takes place to establish the general state of the environment, mainly the water environment. This data provides baseline statistics which enable informed environmental management decisions to be made. Monitoring may also alert the Agency to problems which may not otherwise be obvious, and may help to pinpoint the source of the problem.

The Agency has instruments which continuously monitor rainfall and river levels. These are used to manage flood events and archived data is used to assess the need for new flood protection measures.

Campaigns

Although certain campaigns are included in this action plan, there are a number which are routinely undertaken which are not detailed. Such campaigns may relate to raising awareness through waste minimisation and pollution prevention site visits for example.

The Agency aims to prevent rod licence evasion through concentrated enforcement inspection campaigns. An additional initiative in this area is to secure private fishery owner involvement for improved uptake of rod licences.

The Agency will look to provide advice and support to projects led by the relevant Local Agenda 21 group. Other opportunities to influence and provide environmental educational materials will be assessed as they arise and, where resources permit, will be taken.

Incidents

The Agency runs a 24 hour free telephone hotline to receive notifications of flooding, fly-tipping and pollution events. Any such report will be rigorously investigated and actioned in the most appropriate manner.

The Agency has responsibility for alerting members of the public to potential flooding incidents. In addition, the Agency has information lines to give the public updates on potential flood risks and fishing prospects. The floodcall line, 0645 881188, allows householders in flood risk areas to ascertain the latest position with regard to river levels in their

areas. Rivercall, 0930 107701, provides a similar service but is geared to help anglers assess the condition of rivers with respect to suitability for fishing.

Environmental Regulation and Monitoring provided by other organisations

The Agency has been charged with the protection and enhancement of the environment in an holistic manner. However there are areas of environmental regulation and monitoring which are the responsibility of other organisations, mainly the relevant local authority. For example regulation of Part B processes (Environmental Protection Act 1990, those industries which pose least environmental risk), provision of recycling facilities, litter and dog fouling are all the responsibility of the local authorities. Land use planning is the responsibility of the local authorities and the National Parks. The local authorities also routinely monitor air quality.

Collaborative Working

The Agency works with many individuals and organisations both formally and informally. Formal working arrangements are usually in the form of agreed Memoranda of Understanding for example, with the National Parks, and the Fire Services. Informal local arrangements exist such as, in the plan area, the Agency advises the Gouthwaite Board of Management as to the use of the water held by the reservoir.

1.4 STATUTORY AND NON STATUTORY COMMITTEES

Each Region of the Agency has three statutory committees covering environmental protection; flood defence; and ecology, recreation and fisheries. The Flood Defence Committees have executive powers; the remaining committees act in an advisory capacity. Regional committees provide a way of getting involved locally in managing and running the organisation. Each includes local authority and business representatives. The Agency also runs Area Environment Groups (AEGs), the membership of which is drawn from the local community, representing industry, agriculture, utility groups and community groups. The AEGs advise the Agency on proposals and priorities in the LEAP process and are a valuable link between the Agency and the community. The membership of the North Yorkshire

AEG is detailed in Appendix C.

1.5 SUSTAINABLE DEVELOPMENT

The goal of sustainable development, which is supported by the UK government, is reflected in the Agency's vision statement and requires economic and social activities in England and Wales to be undertaken within the carrying capacity of the environment.

The economy, society and the environment cannot be considered in isolation from each other as they form a dynamic system that is in constant change. Environmental management therefore requires an integrated approach to sustainable development.

Integrated environmental management, embracing action, regulation, education and enforcement, is a means by which the Agency can promote sustainable development, and LEAPs are an important part of this process. As in many ways the environment is shared, the Agency seeks to encourage collective action.

The Agency will use the following guidelines whilst seeking to implement the principles of sustainable development:

- decisions will be based on the best possible scientific information and analysis of risks;
- where there is uncertainty and potentially serious risks exist, a precautionary approach will be adopted;
- ecological impacts must be considered, particularly where resources are non-renewable or effects may be irreversible; and
- those responsible for causing pollution will bear the cost.

2.0 AREA DESCRIPTION

2.1 INTRODUCTION

The Nidd and Wharfe area is home to around 250,000 people and covers an area of over 1,500km². The majority of the area is rural. The population and industry are concentrated in the towns, including Harrogate and Wetherby.

There is a wealth of opportunity for the Agency to work in partnership with the community for a variety of benefits to the environment in the Nidd and Wharfe area. The challenge of managing the environment is in effectively responding to the range of pressures on the area and reconciling all the uses demanded of it, whether from industry, agriculture, water supply, waste disposal, fisheries, conservation, recreation or protection from flooding.

2.2 GEOLOGY

The characteristic limestone scenery of the Dales in Upper Wharfedale and Littondale is produced by the Carboniferous Limestone, which comprises a sequence of limestones and shales. In Nidderdale, the Carboniferous Limestone appears in a few isolated places such as at Howstean Gorge and along the bed of the river between Scarhouse and Gouthwaite reservoirs.

The sandstones and shales of the Carboniferous Millstone Grit form an area of grit moorland overlying the Carboniferous Limestone in Nidderdale and tributary catchments of the Wharfe, such as the Washburn, Dibb, and Barden Beck. Downstream the rocks become progressively more recent in age.

The Permo-Triassic rocks of the Vale of York overlie the Carboniferous rocks. The Magnesian Limestones (limestones and thick clays) form a north-south ridge of higher land on the western side of the Vale of York, followed for much of its length by the A1. These outcrop as limestone cliffs alongside the River Nidd in Knaresborough. As the Magnesian Limestones dip gently eastward they are overlain by the Sherwood Sandstone Group, a thick soft sandstone that forms the centre of the Vale of York.

2.3 THE RIVERS

The River Nidd rises to the east of Great Whernside, the highest point in the catchment at 704m AOD. The river flows southeast through a steep sided

valley, before turning east below Birstwith. Downstream, the valley broadens out and the surrounding hills gradually decrease in height. Below Knaresborough, the river takes a meandering course across the Vale of York, joining the River Ouse at Nun Monkton.

The River Wharfe rises on the eastern flank of Penny-Ghent (694m AOD). Upstream of Grassington, the valley of the southeasterly flowing River Wharfe is characterised by the limestone scenery of pasture and rocky outcrops. The valley is generally steep sided with a flat valley floor. Downstream of Addingham the river turns east; here the valley is wider and the landscape more undulating. The River Wharfe joins the tidal River Ouse one kilometre upstream of Cawood.

Due to the size of the catchment and its topography, rainfall and climatic conditions vary dramatically across the Nidd and Wharfe area. Annual rainfall totals range from 600mm at Cawood to 2000mm on the tops of the Pennines. Annual evaporation rates vary less dramatically, from 500mm at the top of the catchment to 560mm in the Vale of York. Due to the variations in rainfall and evaporation rates, there is effective rainfall in the Pennines all year while the Vale of York has no effective rainfall during an average summer. Snowfall is a significant source of water in the upland parts of the catchment during winter months. Melting snow has been a major factor in several large flood events, including the flood of January 1995.

Large areas of agricultural land are at risk from flooding together with several urban areas. Flood warnings are issued for Pateley Bridge on the Nidd and Ilkley, Otley, Wetherby and Tadcaster on the Wharfe.

Tadcaster Ings is a Controlled Washland registered under the Reservoirs Act (1975). The Agency operates control structures at this site and also on the River Fleet to manipulate water levels in times of flood. The future management of these structures has been set out in a water level management plan which indicates how the Agency will balance flood defence and agricultural requirements.

2.4 WATER RESOURCES

Within the plan area the Carboniferous Limestones and Sandstones of the Pennines form minor

aquifers. Springs and sinks are notable features where the rocks outcrop. Yields from these aquifers are generally low. The eastern end of the Greenhow mining area drains into the River Nidd by the Eagle Level adit. Water from the adit is used for public supply to Pateley Bridge.

Major aquifers exist in the Magnesian Limestone and Sherwood Sandstone. Water quality is generally good, though is sometimes 'hard' (ie holds a high content of dissolved rock). Water in the Magnesian Limestones may become very hard where the aquifer is confined by marls (clays), due to the presence of gypsum. There are high levels of iron, manganese, and nitrate in certain areas.

Groundwater levels recorded at sites in those areas of Magnesian Limestone and Sherwood Sandstone unaffected by groundwater abstraction, reflect the weather pattern of recent years. In the last thirty years, maximum groundwater levels were recorded in 1969 and 1980, and minimum levels in 1976 and 1992.

The steep and narrow valleys of the Nidd and Wharfe area cause the rivers to rise quickly in response to rainfall. The construction of reservoirs, particularly in upper Nidderdale, has had an effect in reducing flood flows, though changes in upland land use and drainage may increase runoff rates. Water from reservoirs and river abstractions in both the River Nidd and River Wharfe catchments is used to supply the West Yorkshire conurbations. This alters the natural flow regimes of the two rivers.

The main artificial influence on the River Nidd is Gouthwaite Reservoir, upstream of Pateley Bridge. Water is stored in Gouthwaite during the winter and spring, then released down the river during times of low flow to compensate for the loss of flow caused by Scar House and Angram Reservoirs situated at the head of the valley. Water collected in these two reservoirs is used mainly to supply Bradford. The largest artificial inputs of water to the river are from the two Harrogate Waste Water Treatment Works, which discharge into the Rivers Nidd and Crimple. During times of flood, river levels in the lower reaches of the Nidd are increased by water 'backing up' from the River Ouse.

Within the Wharfe catchment there are seven large reservoirs on three of the largest tributaries (Barden Beck, River Dibb and River Washburn). The small percentage of reservoir catchment (13.9%) does

not have a significant impact on flood flows in the River Wharfe. Low flows are significantly increased between Grimwith Reservoir (River Dibb) and Addingham (River Wharfe), due to augmentation releases from Grimwith to support the Lobwood and The Hollins public water supply abstractions. Elsewhere in the catchment, the reservoirs reduce flows on the tributaries, and abstractions on the main river can reduce flows below their 'natural' level.

2.5 SURFACE WATER QUALITY

Surface water quality is generally high in the Nidd and Wharfe area, with water being extensively used for potable supply, fish farming, high class coarse fisheries and game fishing.

Nevertheless, localised water quality problems exist. A number of sewage treatment works, and storm overflows on the sewerage system (which operate during times of heavy rainfall), affect stretches of watercourse in the river catchments, the problems being more acute around the main centres of population.

Discharges which give rise to the greatest water quality problems have been previously highlighted and prioritised by the Agency for improvement works by Yorkshire Water Services Plc under its Asset Management Plan Part 2 (AMP 2) spending programme. The improvements to Harrogate North and South sewage treatment works have been completed and will improve water quality downstream. As part of Yorkshire Water's AMP 3 review, a number of further improvement schemes are scheduled to take place in the Nidd and Wharfe catchments. Specific sites are still subject to negotiation with the company, but should be established in early 1999.

Whilst industrial activity is not extensive in the plan area, quarrying, paper/board manufacturing, brewing and fish farming are activities of particular importance and necessitate regular monitoring by the Agency to ensure that the impact of discharges on watercourses from these activities is controlled and minimised.

Water quality problems and pollution incidents associated with agricultural activity are also a regular cause for concern. Potentially harmful materials are stored on farms which, if released into watercourses, can have a devastating impact on

river life and water supplies. Regulations exist to reduce the risk of pollution from the storage of silage, slurry and agricultural fuel oil on farms, however legislation to control the use of sheep dips is limited.

Synthetic pyrethroid (SP) dips have largely replaced organophosphorous dips, which were linked to health problems in farmers. They are up to 1000 times more toxic to aquatic insects, crayfish and shrimps which, in turn, are important in supporting populations of fish, birds and otters. Sheep dips are thought to be the cause of crayfish kills and significant declines, and even absences of caddisfly, mayfly and stonefly nymphs in the upper reaches of the Nidd and Wharfe. The Agency continues to carry out focussed biological monitoring to assess the impacts of sheep dip on the controlled waters of the plan area.

2.6 AIR QUALITY

The majority of the Nidd and Wharfe plan area is rural, and air quality is little affected by heavy industrial sources. Air quality is affected by agricultural use, domestic fuel burning and road traffic. The impact on air quality of the smaller scale industrial activities which are regulated by local authorities will not be neglected.

The activities regulated by the Agency which impact upon air quality within the plan area are diverse and include the production of lime and the manufacture of chemicals. Pollutant releases to air from these processes are regulated at the source of origin and minimised within the duties of the Environmental Protection Act 1990.

Air quality is the responsibility of the local authority and may be assessed by using a combination of active and passive monitoring techniques. Only passive techniques are in use in this area. Harrogate District Council is taking part in the UK Nitrogen Dioxide Survey and is undertaking passive monitoring at twelve sites. Sites located inside the Nidd & Wharfe area include Harrogate and Knaresborough. Monitoring at these sites, to date, has not shown any breaches of air quality standards for nitrogen dioxide.

The City of Bradford Metropolitan Council undertakes monitoring for nitrogen dioxide at Ilkley. The remaining local authorities (Craven, Selby, The City of York and Leeds City) do not undertake air

quality monitoring inside the plan area.

As part of the Environment Act 1995, the Government published a National Air Quality Strategy. Local authorities will have to review the present and future air quality against standards and objectives contained within the strategy, and are required to achieve air quality standards by 2005. The Agency will work closely with the local authorities to help achieve National Air Quality Targets.

The local authorities and the Agency will form a local air quality forum. As part of their responsibilities under the National Air Quality Strategy local authorities have to formulate plans where there is potential for air quality standards to be breached. Where this is not the case air quality forums are being set up to discuss general issues.

Under Part I of the Environmental Protection Act 1990, local authority environmental health departments regulate air pollution from many industrial premises. Industrial activities undertaken at these premises have a lower potential to pollute than those activities regulated by the Agency. The activities are known as Part B processes and only the releases to air are controlled. Local authorities will be required to review present and future air quality against air quality standards and objectives prescribed in regulations made by the Government. Reviews to Air Quality Standards are in the form of Local Air Quality Plans for which the Agency will be a consultee.

2.7 WASTE ARISING

The main sources of controlled waste in this area are households. Only small amounts of industrial and commercial wastes are produced and the pattern of production follows the population distribution. The production of household waste per capita corresponds to the national average but the levels of industrial waste production are significantly lower. Much of the industrial waste produced is similar in nature to household waste or is made up of materials from the construction industry and is therefore relatively low in hazard.

There are 36 licensed waste management sites in the plan area, which includes landfills, transfer stations, metal recycling sites, business units and civic amenity sites. The main landfill which is licensed to receive special, household and industrial

waste is Allerton Park near Knaresborough. There are two transfer stations which are permitted to receive special waste in Marston Moor: Leading Solvent Supplies and Genta Environmental Ltd.

The plan area has five civic amenity sites for household waste reception in Tadcaster, Harrogate, Thorp Arch, Otley and Ilkley. A range of other activities are exempt from the licensing regulations such as recycling centres, landscaping schemes and the disposal of small amounts of industrial effluent to agricultural land.

2.8 SOILS

Soils are usually associated with the underlying, or upstream, geology. Similarly, land use is often associated with the soil, which is the case for the Nidd and Wharfe area. The land use is predominantly rural, accounting for over 90% of the total area.

On the tops of the moors, where millstone grit is the underlying geology, the peaty soils are acidic, fibrous and often waterlogged. In recent decades, extensive moorland drainage has taken place, aimed at improving the use of the moorland for grouse and sheep rearing. Forestry is the other principal land use on this type of soil in the moorland areas.

In upper Wharfedale and Littondale, shallow peaty topsoil overlies the Carboniferous Limestone. The limestone is exposed at outcrops and crags on the valley sides and as karst pavement on the hill tops. The land use is good quality grazing and recreation. Alluvial and non alluvial soils on the floors of the valleys provide additional good quality grazing and permanent grassland.

In the middle reaches of the catchment, seasonally waterlogged soils overlying the millstone grit are extensively used for stock rearing with some cropping of cereals. Alluvial deposits in the valley bottoms are used for cropping where the risk of flooding is low.

Overlying the Magnesian Limestone, downstream of Knaresborough and Wetherby, are non alluvial brown earths of the Aberford soil series. Arable crops of cereals, beet and potatoes replace stock rearing as the main agricultural land use.

2.9 FISH

Fish populations of the rivers Nidd and Wharfe are generally of a high quality and are a reflection of good water quality and diverse physical habitat. Species distribution follows the classic zonation associated with changes in river width and gradient, with trout in the upper reaches, grayling appearing further down, then riverine cyprinids, such as barbel, and finally fish characteristic of slow flows, such as bream and roach. Bullhead, minnow and stone loach are found in the upper reaches of both rivers and most tributaries.

Trout and grayling occur in both rivers, from the upper reaches to their confluences with the River Ouse. However, the number of trout present reduces significantly in the Nidd downstream of Knaresborough and downstream of Wetherby in the River Wharfe. The presence of grayling reduces significantly downstream of Tadcaster on the River Wharfe and downstream of Tockwith on the Nidd. The headwaters of the River Nidd, upstream of Angram Reservoir, and several upper tributaries are virtually fishless, possibly due to acidity. Trout stocks are also poor in the River Nidd below Scar House Reservoir; some parts of the River Washburn; the River Skirfare; and some upper Wharfe tributaries, due to very low flows in dry periods. Some trout recruitment may occur in the River Nidd itself.

In the upper reaches of the rivers Nidd and Wharfe, and most of the tributaries, brown trout stocks are maintained by natural recruitment but, in the main rivers, downstream of Pateley Bridge and Kettlewell, the natural recruits are supplemented by stocking by angling interests, usually with fish of takeable size. Downstream of Knaresborough and Ilkley, little successful breeding occurs in the main river and most natural recruits are derived from the tributaries.

Gouthwaite Reservoir is noted for its grayling populations which migrate into the upper reaches of the River Nidd to spawn in spring. Both main rivers have good grayling populations, although there have been recent reports of declines of this species in some stretches of the River Wharfe. Generally, few grayling are found in the tributaries.

Coarse fish dominate the lower reaches of both rivers. In the River Nidd, dace, chub, gudgeon and the occasional roach occur downstream of Birstwith

Weir, which acts as a significant barrier to upstream fish movement. Downstream of Knaresborough, bream, barbel, perch, pike and ruffe are also common. In the River Wharfe, larger coarse fish are most abundant downstream of Otley, although significant numbers occur up to Ilkley and in some of the lower tributaries. Roach, dace, chub, gudgeon, barbel are common and some bream are also present. In recent years, numbers of dace have decreased, whilst those of perch have increased. Following a decline in the late 1960s and early 1970s, the numbers of roach have recovered. Recently, chub numbers have increased in the River Wharfe and pike have extended their distribution upstream of Harewood Bridge. Good recent recruitment will ensure fish stock remains good.

Eels were formerly abundant in the lower River Wharfe, but recent reports suggest a decline, and due to difficulties in ascending obstructions, few are present in the upper river. The greatest eel stocks are found in the tidal River Wharfe where they are exploited both by angling and licensed fyke netting. Flounders are common in the tidal reaches of the River Wharfe.

Many smaller still waters in the area contain important fish populations. Many of these lakes and ponds contain coarse fish, although some are managed as put-and-take trout fisheries. Rainbow trout are regularly introduced into some of the reservoirs in the catchments which are operated as put-and-take fisheries. Historically many of these still waters were created for purposes other than fisheries but, in recent years, increasing numbers of ponds have been designed and constructed specifically for angling.

2.10 NATURE CONSERVATION

There are many sites within the Nidd and Wharfe area designated as important for nature conservation. The upper reaches of the Wharfe lie within the Yorkshire Dales National Park and a large proportion of the upper Nidd and the Washburn fall within the Nidderdale Area of Outstanding Natural Beauty (AONB). Consequently these areas are relatively well protected from future development. There are over 40 Sites of Special Scientific Interest (SSSIs) and, as the number of designations suggest, the Plan area is of great conservation interest.

The importance of large parts of the Pennine uplands for birds such as golden plover and merlin is only

now being recognised.

Large sites within the LEAP Area are currently being designated as SSSIs as a prelude to Special Protection Area (SPA) designation under the European Wild Birds Directive 1979. These sites will form part of the European Natura 2000 network of sites, the process of designation (by English Nature) being due for completion by 2004. It is not clear at present how much of the plan area is to be designated in this way but much of the upland may be included.

The catchment of the River Nidd from its source just outside the Yorkshire Dales National Park down to Birstwith lies within the Nidderdale AONB, an area noted for its landscape features. This upland section of the river contains five SSSIs, all of which are located close to or adjacent to the river and are designated for a variety of reasons.

Moorland, reservoirs and woodland contribute to the conservation interest of the upper and middle River Nidd catchment downstream to Harrogate, especially the diverse range of migratory bird species. The trees lining the river bank are predominantly alder. Where the upland grassland is influenced by the underlying carboniferous rocks, limestone rich grassland has developed which is often of high conservation value.

As well as these designated sites of conservation interest, the River Nidd catchment has a large number of locally identified sites of high conservation value, such as the Nidd Gorge, near Knaresborough, which supports common sandpipers, dippers, kingfishers and deer, and is also of botanical interest.

The River Wharfe catchment contains 40 SSSIs, a National Nature Reserve and a Local Nature Reserve. In addition to these designated sites, there are a number of sites which have been identified by local authorities and other organisations as being of high conservation value. The river itself is an SSSI for 4.4 miles from Buckden to Kettlewell. Cowside Beck, in upper Wharfedale, lies within the Malham Arncliffe SSSI, which is covered by the 'Memorandum of Understanding on River SSSI'. This Memorandum is a national agreement of co-operation between English Nature and the Agency.

The upper catchment is a Carboniferous Limestone dale, including various cave systems and supporting

a diverse range of flora and fauna. The moorlands are noted for their upland wader populations, particularly of dunlin and golden plover. In the catchment outside of the Yorkshire Dales National Park, the areas of high conservation value are more scattered.

The middle parts of the River Wharfe area contain several sites designated as SSSIs for their geological, botanical and avian interest, including Strid Wood near Bolton Abbey and Eccup Reservoir. In the lower River Wharfe catchment, the valley is wide and flat and contains few, mostly small, designated sites of conservation importance.

There is evidence that both river corridors support legally protected (under the Wildlife and Countryside Act 1981) mammals such as the otter. Both rivers also support populations of native white-clawed crayfish (*Austropotamobius pallipes*). However, the presence of American signal crayfish (*Pacifastacus leniusculus*) in the River Wharfe and tributaries from Kilnsey Crag to Boston Spa is of some concern as they may affect the populations of native crayfish in the river.

Recent surveys of the River Wharfe in the Grassington and Harewood areas have shown a good population of the fine-lined pea mussel (*Pisidium tenuilineatum*). This finding is unusual as this species is normally associated with lowland rivers confined to central southern England and sites along the Welsh borders.

2.11 ARCHAEOLOGY

The landscape of Britain contains a rich heritage of historic and archaeological features. Archaeological evidence of past human existence is widespread in the rural landscape and rivers have been the focus for settlement life from prehistoric times to the present day. Watercourses have long been important for the supply of water for domestic use, as well as the movement of people and the generation of power. Many settlements owe their existence to the presence of watercourses and other favourable physical features.

The Nidd and Wharfe area has a rich and varied history and contains numerous Scheduled Ancient Monuments, with hundreds of sites currently unscheduled. The number of Scheduled Ancient Monuments is likely to increase as the local authorities continue to review sites.

Archaeological finds dating back to the Mesolithic period have been found in the Dales, and farming tools from the Neolithic and Bronze Ages have been found extensively in Nidderdale. Upper Wharfedale is rich in archaeological remains, such as burial mounds and henges, and there is much evidence of Iron Age settlements, such as Close Farm Settlement on the moors north of Grassington.

There are Roman towns and forts throughout the two catchments. Medieval castles and abbeys include Knaresborough Castle and Bolton Priory. There are also a number of notable battlefield sites, including Towton and Marston Moor, and several large estates and parklands of special historic interest throughout the area.

2.12 SETTLEMENTS AND LOCAL AUTHORITIES

The water catchment forms the boundary of the Plan except for the Agency function of waste regulation, whose boundary has been extended to include parts of Bradford and Leeds unitary authorities and parts of Craven and Selby district councils.

The main centres of population within the Plan area include Harrogate, Knaresborough, Wetherby, Tadcaster, Grassington, Otley and Ilkley; and parts of Bradford and Leeds. The area includes, in whole or in part, one county council, three unitary authorities, three district councils and the Yorkshire Dales National Park Authority.

Three districts within the County of North Yorkshire are included, in whole or in part, in the Plan: Craven, Harrogate and Selby. Much of this area, in particular Craven, is characterised by a dispersed settlement pattern of market towns, villages and hamlets. There are, however, some urban areas which are more densely populated such as Harrogate, Knaresborough and Tadcaster.

Although a small area (approximately 270 km²), the City of York Unitary Authority has a relatively large population.

The Yorkshire Dales National Park covers 1,760 km² and has a population of around 19,000 permanent residents, although it receives millions of visitors per year. Despite fluctuations in the numbers of visitors to the Park, the overall trend is one of a steady increase.

As of 1st April 1997, under the terms of the Environment Act 1995, all the National Parks in England and Wales assumed the role of the local planning authority as defined by the various Town and Country Planning Acts.

3.0 REVIEW OF THE FORMAL CONSULTATION PROCESS

The Agency launched the Nidd and Wharfe LEAP and Swale, Ure and Ouse LEAP consultation process in June 1997 at the Pavilions in Harrogate. A total of 95 people attended the launch representing a wide spectrum of interests, and press releases were issued to publicise the event.

The launch marked the start of a three month consultation period which ended on 30 September 1997. During the consultation period, approximately 500 Consultation Reports were distributed to interested parties, a total of 18 comments were received. Table 1 below details the types of organisations which responded.

Table 1: Response record

Consultee Type	Number of Responses by Type
Local Authorities	4
Public Bodies/Utilities/ Government Agencies	7*
Environmental/Nature Conservation Groups	2
Amenity/Recreation Groups	1
Educational Establishments/Museums	1
Industry	1
Others	2
TOTAL	18

* Includes the second response

In approximately a quarter of responses, concern was expressed that the resources the Agency would be able to commit would not be sufficient to address the proposed actions. It was suggested that proposed actions undergo a thorough cost benefit analysis. One quarter of responses also expressed interest in the partnership approach or a desire to enter into or continue in partnerships. Representations were made during the consultation process from local government bodies suggesting closer working on issues such as air quality and Local Agenda 21.

The drought was referred to in terms of reduced river flows and the potential impacts of pollution incidents. Consultees have concerns relating to the quality of watercourses in the plan area, with regard to consented discharges from fish farms, sewage treatment works, pollution from sheep dip use and misuse. Concern about spent sheep dip was

expressed, as was the perceived lack of awareness of the concept of waste minimisation and the whole area of landspreading of wastes. Fly tipping was another waste topic to which consultees referred.

Some consultees felt that the proposals for education and raising awareness were too specific and that the Agency should have a general aim to increase awareness of environmental topics. A suggestion was made that organisations could help the Agency in this aim. It was clear from some consultees that the topics of archaeology and heritage were not covered in sufficient detail.

The adequacy of flood protection was raised as a concern and it was also suggested that the Agency should consider removing flood banks in some situations. The second point is not one which the Agency could undertake under its present powers.

There are environmental issues which the Agency is able to influence but does not have any powers to exert any control over, for example litter abatement and traffic management. The topics were not thought to be covered in sufficient detail by some consultees.

4.0 ACTIVITY PLAN

Implementation

Implementation of the plan is based on the 7 key issues listed below. The background environmental information and the issues were discussed in detail in the Consultation Report and have been modified, where appropriate, in the light of the consultation responses. The resolution of these issues is considered necessary in order that the plan can be successful in achieving real environment improvements within the Nidd and Wharfe area.

All actions in the activity plan should be Specific, Measurable, Agreed, Realistic and Time based (SMART). The plan represents the non-routine investment of the Agency and others in the area.

The consultation process generally supported the issues raised by the Agency. Many of the original proposals for action have been carried through into the activity tables but a number of new actions have been added, and new approaches taken.

A number of proposals have not been transferred into the activity plan as many form part of the Agency's routine operations or statutory commitments.

Tables

The actions are presented with a target timetable and the responsible parties identified. Where possible, costs to the Agency have been outlined for the period covered by the plan. *This does not necessarily reflect the total cost of the schemes and is sometimes a projected estimate which will be more accurately costed at a later date.* These estimated costs usually exclude staff costs. This document is produced in good faith, recognising current priorities both within the Agency and other organisations.

Key

NWIA	action reference code
U	Unknown costs at present
k	£1,000
pa	Per annum

The timescales for actions may vary depending on the future political situation and changes within the economy. All changes will be highlighted in the Annual Review.

Methodology

The following tables have been designed for the ease of the reader. The meaning of the key columns is as follows:

<u>Actions</u>	The course of action that has been decided upon by the Environment Agency (following the consultation period). These actions work towards addressing some/all aspects of the perceived issues.
<u>Drivers</u>	This is the specific reason why we are undertaking the aforementioned action.
<u>Targets</u>	This is how the success of the action is measured.
<u>Benefits</u>	Both environmental and organisational - this will be the result of the Agency and partners meeting each stated target.

The actions have all been linked to one of the Environmental Strategy themes. Due to the predominantly rural nature of the plan no link has been made to the 'regulating major industry' theme.

List of Issues

1. Working effectively and efficiently in collaboration with other organisations and individuals.
2. Pollution Prevention.
3. Water Management - flood defences and water resources.
4. Waste Management and Contaminated Land.
5. Fisheries.
6. Air Quality.
7. Biodiversity.

Issue 1 - Working effectively and efficiently in collaboration with other organisations and individuals.

A number of joint initiatives have been made by the Agency and other groups and individuals aiming to improve the local environment and its enjoyment by the public. The Agency sees the strengthening of existing working relationships and forging new ones, through interaction with the public, as the way to ensure that the full benefits are derived from initiatives. The Agency is committed to working in partnership with others to effectively and efficiently improve the environment.

Further suggestions for joint approaches would be welcomed by the Agency.

Actions	Environmental Strategy Theme	Drivers	Targets	Benefits	Timescales	Lead Partners	Others	Cost (k)
<i>NW/A.</i> Bids have been submitted for EC Objective 5B, LEADER II and Yorkshire Dales Millennium Trust (YDMT) funds to provide and action an integrated, co-ordinated plan to protect, conserve and enhance the river and land within the Buckden and Kettlewell area of Upper Wharfedale for fish and other wildlife, and develop and sustain rural economic growth.	Integrated river basin management.	Requirement to determine best practice for upland river and riparian management.	Plan agreed and provided to partner organisations and the community.	Impact of gripping on water regime established and grips blocked as appropriate; river banks strengthened using sustainable techniques; enhanced gill habitats; protection for spring sources; assessing wetland creation potential; improvement to sheep dips; increased awareness to support a change to beneficial environmental management practices.	1998-2001	Agency National Trust EN YDNPA Community YWS Newcastle University Forestry Authority Tilhill Economic Forestry	FWAG YWT Angling Clubs	U
<i>NW/B.</i> YDMT have been granted monies by the Millennium Commission to distribute. The Agency will continue to support the Trust financially and with technical advice. Projects will include improvements to wildlife, landscape, the built environment and community facilities.	Enhancing biodiversity	Potential to further improve areas of the Wharfe catchment falling within the YDNPA.	Match fund some river based projects to maximise environmental gain.	Agency involved in collaborative projects for practical environmental improvements.	1999-2001	YDMT	Agency LEADER II EN YDNPA	10pa

Actions	Environmental Strategy Theme	Drivers	Targets	Benefits	Timescales	Lead Partners	Others	Cost (k)
<i>NW1C.</i> Provide technical advice on the Upper Nidderdale River Regeneration Project and help Harrogate Borough Council in the implementation.	Conserving the land; and managing freshwater fisheries.	Opportunity to improve the river environment and access to it through improvements to the Nidderdale Way.	Improved status of the area for nature conservation, fisheries and recreation.	Agency influenced projects carried out within the AONB area, improvements to environment, fisheries and recreation.	1998-2000	HBC	Agency AONB Steering Group	10pa

Issue 2 - Pollution prevention

The maintenance and improvement of the quality of the environment of the rivers in the Nidd and Wharfe catchment area are of strategic importance. In addition to being important fisheries of high conservational, ecological and recreational values, both rivers constitute a major source of drinking water. At several locations in the plan area busy trunk roads cross sensitive environments which are at risk of damage from spillages resulting from an accident. Public water supplies are also at risk as abstraction points are in close proximity to the road.

Actions	Environmental Strategy Theme	Drivers	Targets	Benefits	Timescales	Lead Partners	Others	Cost (k)
<i>NW2A.</i> Provide effective information and advice to farmers and contractors to promote the most effective use of sheep dips to reduce the release of sheep dip chemicals to watercourses.	Integrated river basin management.	Increased potential damage to the aquatic environment from sheep dip related incidents.	50 farm visits	Reduced risk of water pollution.	1998-1999	Agency	HSE MAFF NFU	Staff time only
<i>NW2B.</i> An assessment of risk to the major abstractions and the environment will be undertaken and a contingency plan put into place to enable responsible agencies to react in an agreed co-ordinated manner in the event of a major accident.	Managing our water resources.	Potential risk is acknowledged but has not been assessed.	Risk assessment undertaken and an agreed plan formulated.	Potential risk assessed and contingency plans put into place as required to protect public water supplies and the environment.	2000-2003	Agency	YWS Fire Services Highway Authorities	Staff time only

Issue 3 - Water Management - flood defences and water resources

In recent times, where development has taken place in the natural flood plain, properties will be at risk from flooding unless works are undertaken to reduce this risk. It is not practical, cost effective nor environmentally acceptable to protect all vulnerable properties. However, where the Agency's powers and funding will allow, the Agency will undertake a priority-based programme to provide effective protection for people and property against flooding. This is achieved by the construction and maintenance of flood defences and through the provision of effective and timely flood warnings.

Large volumes of water, required to supply the towns in the Plan area and the nearby conurbations, are abstracted from the Nidd and Wharfe river catchments. Abstractions also occur for industrial and agricultural processes. These abstractions must be managed so as to minimise damage to the environment. There is a need to work closely with large volume abstractors, such as water companies, to ensure that they are making efficient use of water resources through demand management control, while minimising adverse environmental effects of their activities.

Following a request by MAFF in 1994, English Nature produced a list of designated wetlands, where water levels are critical to the maintenance of the interest for which the site was notified. Where wetlands are located on a main river site and there are control structures or maintenance practices that affect the control of water levels on the site, the Agency must strive to produce an agreed Water Level Management Plan (WLMP). The purpose of WLMPs are to provide a formal means by which the interests of a range of activities in an area, including conservation, agricultural, riparian landowners, flood defence and water resources can be balanced and integrated.

Actions	Environmental Strategy Theme	Drivers	Targets	Benefits	Timescales	Lead Partners	Others	Cost (k)
NW3A. Complete environmental monitoring and studies, assessing the impact of both the 1995/6 drought and the variations to YWS abstraction licences granted in 1996 for a period of three years.	Managing our water resources.	To implement the findings of the Uff inquiry into the drought of 1995/6.	Monitoring completed.	Sound scientific data available.	1996-1999	Agency	YWS	Staff time only
NW3B. Determine new licence applications or variations to existing licences if submitted by YWS, utilising the findings of action NW3A.	Managing our water resources.	Requirement to balance the need for public water supply and those of the River Wharfe.	Licences determined within three months, and reduced need for emergency measures during droughts.	Water resource safeguarded.	1998 - 1999	Agency	YWS	Staff time only
NW3C. Carry out a feasibility study for the provision of new flood warnings for: Aberford, Collingham Beck, Burnsall and Lower Wharfe Ings on the River Wharfe. The feasibility study will include: the suitability of locations to provide sufficient lead time, access to land and costs.	Integrated river basin management.	Absence of timely flood warnings for at risk areas.	Provision of a timely warning for at risk areas if study suggests feasible.	Public able to make informed decisions on action they may wish to take to reduce potential flood damage.	1999-2001	Agency County Emergency Planners Police	Property Owners	10
NW3D. Provide a flood defence scheme for Pateley Bridge.	Integrated river basin management.	Existing flood protection is below standard.	Raise flood protection to a level of 1:100 year standard.	Decreased frequency of flooding to property.	Mar 2000	Agency MAFF	English Nature English Heritage	1050

Actions	Environmental Strategy Theme	Drivers	Targets	Benefits	Timescales	Lead Partners	Others	Cost (k)
NW3E. Production of WLMPs for Aubert Ings SSSI in the Nidd area and the River Wharfe SSSI.	Integrated river basin management.	Designated wetland habitats require careful and co-ordinated management.	Production of plans containing an agreed water level management strategy.	Management of land drainage for the benefit of conservation and existing land use.	Dec 1998	Agency English Nature MAFF	LAs YDNPA Conservation Groups Landowners	10

Issue 4 - Waste Management and Contaminated Land

Landfill gas is produced by the digestion of putrescible matter in waste deposited on landfill sites. Unless this gas is recovered, it impacts on local air quality and may cause a hazard to health. Contaminated land is of particular importance because of its potential impact on the environment arising from the escape of contaminants to surrounding land, groundwater and adjacent watercourses.

Actions	Environmental Strategy Theme	Drivers	Targets	Benefits	Timescales	Lead Partners	Others	Cost (k)
NW4A. Influence site operators to explore the potential for energy production at landfill sites.	Addressing climate change.	Dependency on fossil fuels and the contribution of greenhouse gas to climate change.	Gas utilisation schemes agreed at two sites.	Energy recovered and utilised.	1998-1999	Site operators	Agency DETR	Staff time only
NW4B. Provide advice to site owners on how to assess, alleviate and remediate contaminated sites.	Conserving the land.	Sites have the potential to pollute air land and water and represent a hazard to human health.	4 sites remediated.	Reduced pollution - greenhouse gases minimised, energy recovered, harmful effects of landfill gas mitigated, improved quality of air land and water.	2003	HBC	Agency	Staff time only

Issue 5 - Fisheries

A thriving fishery is important to the Nidd and Wharfe area, and there are opportunities for the Agency to improve the fishery. There is scientific proof that coarse fish are prevented from following their natural migratory passage up river by the existence of man made structures.

The Agency has identified new approaches to protection as a result of the global decrease in salmon stocks, and preventative measures will be undertaken while the fish are within the Agency's jurisdiction. Escaped farm fish can have adverse effects on native fish stocks as they predate on the young of native species, compete for food and threaten the genetic integrity of stocks. Native fish can also be lost to fish farms and water undertakers intakes.

Actions	Environmental Strategy Theme	Drivers	Targets	Benefits	Timescales	Lead Partners	Others	Cost (k)
<i>NW5A.</i> Implement measures to improve fish passage and flow measurement at Skip Bridge gauging station on the River Nidd.	Managing our freshwater fisheries, and managing our water resources.	Upstream movement of fish is currently restricted by weir and existing flow measurement is limited to low flows.	Free passage of fish at this site and measurement of the full range of flows.	Natural and sustainable repopulation of the upstream river and improved quality of flow data.	1998-2000	Agency		100
<i>NW5B.</i> Undertake a special assessment of fish farms and Yorkshire Water's intakes in the Nidd and Wharfe catchments, create a priority list in preparation for new powers the Agency gains on 1 January 1999* in order to minimise the impact of fish farms and abstraction intakes. Sites where migratory fish are known to be present will be assessed first, followed by all other affected waters. Establish a liaison process with operators to initiate improvements action as required. * <i>Section 14, Salmon and Freshwater Fisheries Act as modified by the Environment Act.</i>	Managing our freshwater fisheries.	Loss of native fish and threat to integrity of genetic gene pool.	Fish farms and Yorkshire Water compliant with legislation leading to prevention of salmon or migratory trout entering supply intakes and the fish farms and the egress of farmed fish.	Further protection of wild migratory salmonid stocks.	1998-1999	Agency	Fish Farm Operators YWS MAFF British Trout Producers	Staff time only

Actions	Environmental Strategy Theme	Drivers	Targets	Benefits	Timescales	Lead Partners	Others	Cost (k)
NW5C. Promote the development of self-sustaining fish stocks in the Nidd and Wharfe, by improving riparian and aquatic habitats, encouraging catch and release fishing, and by discouraging restocking by angling clubs to minimise the spread of parasites and disease.	Managing our freshwater fisheries.	Requirement to provide guidance to angling clubs on best practice.	Self-sustaining fish stocks and genetic integrity of stocks protected.	Improving healthy fish populations and the gene pool protected.	Ongoing	Agency	Angling Clubs	20

Issue 6 - Air quality

At a strategic level it is important that the Agency is aware of the potential impacts of releases to air from coal fired power stations located close to the plan boundary on the Nidd and Wharfe environment.

Actions	Environmental Strategy Theme	Drivers	Targets	Benefits	Timescales	Lead Partners	Others	Cost (k)
NW6A. Assess the impact of coal fired power stations outside the plan area upon air quality in the Nidd and Wharfe.	Improving air quality.	Perceived impact on air quality.	Impact modelled and assessed. Relevant information provided to the local authorities.	Providing a better understanding of the key sources of pollution and therefore assist in developing local authorities action plans for improvement in air quality. Improved working relations with local authorities to assist them in meeting the air quality targets for 2005.	Ongoing	Agency	LAs	U

Issue 7 - Biodiversity

The United Kingdom Government signed up to the Biodiversity Action Plan at the Rio Summit in 1992 in recognition of the global threat to biodiversity. Biodiversity Action Plans will be drawn up locally by the relevant planning authority. In the plan area the Agency is the lead partner and contact point for the Fresh Water Pea Mussel; is the contact and joint lead partner with the Wildlife Trusts for the Otter; is the contact for the Water Vole; is the joint lead partner with MAFF for the Thwait Shad; and is the contact for the White Clawed Crayfish.

The Agency seeks to promote the aims of the UK Biodiversity Action Plan in the Nidd and Wharfe area.

Actions	Environmental Strategy Theme	Drivers	Targets	Benefits	Timescales	Lead Partners	Others	Cost (k)
NW7A. Survey all Agency maintained river sites in the Nidd and Wharfe area for water voles.	Enhancing biodiversity.	Extent of water vole population is uncertain.	Surveys completed.	Data available to use in species action plan and the LBAP.	2000-2003	Agency		U
NW7B. Evaluate species data held by the Agency to identify species of National/Regional/Local importance which are known to exist in the Nidd and Wharfe area. eg: otter, water vole, pea mussel and native crayfish.	Enhancing biodiversity.	Need for sound scientific data.	Data collated and evaluated and utilised in the production of the relevant species action plans.	Information and actions available for the Local Biodiversity Action Plans to be produced by LAs.	1998-2003	Agency	BAP Steering Group EN MAFF Academic bodies Voluntary Sector Non Governmental Bodies	Staff time only
NW7C. Contribute to the formation of the Local Biodiversity Action Plans (LBAPs) through the provision of technical advice.	Enhancing biodiversity.	Timely provision of data to ensure the Agency's objectives are incorporated.	All relevant data incorporated.	Increased co-operation with LAs, information available to enable LAs to make informed decisions on biodiversity.	1998-2003	LA YDNPA	Agency Conservation groups YWT EN	Staff time only
NW7D. Implement action plans for species which the Agency is the lead organisation in the Nidd and Wharfe area: water vole, pea mussel and native crayfish: implement the Nidd and Wharfe otter action plans in conjunction with the Yorkshire Wildlife Trust.	Enhancing biodiversity.	Need to protect and enhance populations of these species.	Action Plans implemented.	Conservation of target species.	1998-2003	Agency	YWT LAS YDNPA EN MAFF Game Conservancy	U

5.0 PROTECTION THROUGH PARTNERSHIPS

The Agency is well placed to influence many of the activities affecting the environment through the Environment Act 1995 and other legislation. The Agency must work with a number of other organisations to ensure that the actions listed in Section 4.0 are implemented in order that the key objectives and the long term vision for this area can be realised. The Agency is working closely with local authorities in particular to ensure that this happens. The Agency also seeks to increase the number of partnership opportunities with statutory and non-statutory groups to undertake improvement projects and to develop a wider public awareness of environmental issues.

Further partnership proposals are welcomed.

5.1 EDUCATION

Awareness of educational issues is of paramount importance for successful environmental management. The Agency will seek to educate and influence individuals, groups and industries to promote environmental practice. The Agency will work in partnership with statutory and voluntary groups to undertake improvement projects and develop a wider public awareness of environmental issues.

The Agency will actively work within educational establishments and with groups that work with young people. It will be encouraging young people to be aware of their actions and the effects they have on the environment.

5.2 KEY PARTNERSHIPS

This section covers the role of the local authorities in relation to land use planning, air quality, waste management and flood defence. It also recognises some of the key groups and organisations which play an important role in protecting the local environment.

Development Planning

Land use is one of the single most important influences on the environment. It follows, therefore, that land use change has important implications for the environment which can be both positive and negative. Land use planning is administered by the

county, district and unitary planning authorities and the National Park Authorities. Control of land use change is achieved through implementation of the Town and Country Planning Acts and a range of Government planning guidance. This guidance highlights the importance of communication between local planning authorities and the Agency and also the relationship between land use and the environment.

The Agency is committed to developing close working relationships with the local planning authorities to promote effective links between planning and environmental protection.

Development Plans

Regional Planning Guidance for Yorkshire & Humberside (RPG12) was issued by the former DoE in March 1996 after consultation with, amongst others, the local planning authorities and one of the Agency's predecessors, the NRA. The RPG sets out the broad planning objectives for the area.

County council structure plans, district council local plans and unitary authority development plans must be produced by planning authorities. These plans set out the development objectives and are prepared in accordance with the RPG. They provide a framework for land use change and are a key consideration in the determination of planning applications. The Agency is a statutory consultee for all these plans which allows the Agency's views to be considered by the councils when formulating development plan policies and allocating land for development.

Development plans guide future development. Through the consultation process, the Agency encourages local planning authorities to adopt policies which protect the environment from any of the potentially harmful effects of development.

The NRA produced a set of statements in its documents, 'Guidance Notes for the Local Planning Authorities on the Methods of Protecting the Water Environment through Development Plans'. These statements provide a general guide for local planning authorities regarding the policies which should be included in the various plans and why they are important. This guidance is currently being updated by the

Agency.

Development Control

The Agency is also a statutory consultee for certain categories of planning application and councils have discretionary powers regarding the referral of other matters. This allows the Agency's views to be considered by the council prior to planning applications being determined.

It is primarily land use change in the long term and the opportunities presented by re-development that will help to tackle the issues of urban run-off, contaminated land and the rejuvenation of river corridors.

National Park Authority Management Plans

National Park Authorities have a duty to prepare and publish a management plan which formulates its policy for the management of the Park.

Local Agenda 21

Local Agenda 21 was one of four main agreements signed at the Rio Earth Summit by representatives of 150 countries, including the UK Government. It is intended to be:

'A comprehensive programme of action needed throughout the world to achieve a sustainable pattern of development for the next century.'

Local Agenda 21 includes initiatives to further the concept of sustainability and includes waste management issues and the promotion of environmental awareness. In 1994, the Government produced a national sustainable development strategy and action plan for the UK. Most local authorities are working with local communities to produce their own Local Agenda 21 programmes in order to promote sustainable development and to improve quality of life. Local Agenda 21, which is a 'grassroots' mechanism looks to local people to find positive ways of living in a more sustainable manner in their area. The Agency will work with local authorities to protect and improve the local environment and support Local Agenda 21 initiatives. LEAPs provide proposals for action which can be fed directly into Local Agenda 21 Action Plans.

Air Quality

The role of regulating processes which affect air quality is shared between local authorities and the Agency. The local authority role is two fold, as it regulates Part B processes which have less potential to damage the environment than Part A processes, and through transport planning. The Agency's role in relation to air quality is to regulate Part A processes. The two organisations need to collaborate in order to achieve a co-ordinated approach and hence greatest benefits.

Waste Management

Local authorities are the key players within the waste management system and, as planning authorities, determine the location of waste management facilities in accordance with policies contained in the waste local plan and the county structure plan. Local authorities are instrumental in determining regional waste management requirements. It is essential that the Agency continues to work closely with planning authorities in order to further the concept of sustainable waste management.

Flood Defence

The Agency has specific powers relating to main rivers which enable them to undertake maintenance, improvement works, construct flood defences and control work by others. We also have powers to provide warnings for areas at risk from flooding. All these activities require close liaison between other private and public groups.

Local Community

The local community has its own aspirations for its environment. In order to protect the environment, the Agency needs the support of the community to tackle issues such as pollution, fly tipping, environmental protection and enhancement.

The Agency is particularly keen to work with local communities, involving them in activities to assist the Agency to protect the local environment.

6.0 FUTURE REVIEW AND MONITORING

The Agency will be jointly responsible, with other identified organisations and individuals, for implementing this Action Plan. Progress will be monitored and reported annually by the Agency to all the key partners and other interested parties. The first Annual Review is due in September 1999. These Annual Reviews will examine the need to update the Action Plan in the light of local change. The life of the Action Plan is five years after which time a major revision will normally be undertaken.

If you require any further information or wish to make any comments, please contact:

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Appendices

Appendix A: The Environmental Strategy for the Millennium and Beyond

Appendix B: Organisations and individuals who participated in the consultation process by making a response

Appendix C: Membership of the North Yorkshire Area Environment Group

Appendix D: Glossary of Terms

Appendix E: Abbreviations

Appendix A: The Environmental Strategy for the Millennium and Beyond.

As detailed in the publication, 'An Environmental Strategy for the Millennium and Beyond', the Agency's principal and immediate environmental concerns relate to:

- i. addressing the causes and effects of climate change;
- ii. helping to improve air quality;
- iii. managing our water resources;
- iv. enhancing biodiversity;
- v. managing our freshwater fisheries;
- vi. delivering integrated river-basin management;
- vii. conserving the land;
- viii. managing waste; and
- ix. regulating major industries effectively.

Specific actions have been drawn up for each of the above nine themes and an example for each is given below:

Addressing the causes and effects of climate change	Develop methods to improve our estimates of the emission of methane into the atmosphere from landfill sites.
Improving air quality	Ensure emissions from the major industrial processes to the atmosphere are reduced.
Managing our water resources	Encourage a more efficient use of water by the public and a change in public attitude to water usage.
Enhancing biodiversity	Play a full and active part in delivering the UK's Biodiversity Action Plan by acting as the 'contact point' for the chalk rivers plan and for the 12 species of aquatic animals and plants, including the otter, the water vole and rare species of fish, and by acting as the 'lead partner', either singly or in collaboration with others, for 10 of them.
Managing our freshwater fisheries	Monitor every river fishery over a five year rolling cycle.
Delivering integrated river-basin management	Ensure that all waters are of sustainable quality for their different uses.
Conserving the land	Influence the Town and Country Planning Systems to prevent developments in the wrong places.
Managing waste	Develop an overall database of waste arisings and disposals.
Regulating major industries	Develop pollution prevention control tools, including projects relating regulation to emission, efficiency and economic benefits (3Es project).

Appendix B: Organisations and individuals who participated in the consultation process by making a response.

Agricultural Development and Advisory Service (ADAS)
Bradford Waltonians Angling Club
British Waterways, North East Region
Global Environmental Waste Management Services
Government Office for Yorkshire and the Humber
Harrogate Borough Council
Leeds City Council
Ministry of Agriculture, Fisheries and Food (MAFF)
North Yorkshire County Council
The Inland Waterways Association
Tidy Britain Group
Wharfedale Environment Trust
Yorkshire Dales National Park Authority
Yorkshire Water Services
Yorkshire Wildlife Trust

Dr AJ Howard
JM Hodgson

Appendix C: Membership of the North Yorkshire Area Environment Group.

Member	Representing
*Malcolm Bayford (Chair)	Regional Environmental Protection Advisory Committee/National Power
*John Shillcock	Regional Fisheries Ecology and Recreation Advisory Committee/Fisheries
Cllr Robert Heseltine	Regional Flood Defence Committee/Chairman Yorkshire Dales National Park Authority
Cllr Roy Wilson	Joint Leader, North Yorkshire County Council
Cllr Martin Brumby	City of York Council
Cllr Thomas Mould	Harrogate Borough Council
*Jeff Gyllenpetz	Generation Manager, Drax Power Station
Gcoff Roberts	Project Manager, Yorkshire Water Services Ltd
*Tom Diggle	General Manager, Global Environmental
Phil Lyth	Farm Conservation Adviser, FWAG
Len Evans	Farmer/Environmental Planning Consultant
Jeffrey Lunn	Manager, North and East Yorkshire Team English Nature
*Dr Norman Taylor	Former University Senior Lecturer now Consultant and Executive Member, Yorkshire Sports Council
Dr Jonathan Parsons	Water Resources Officer, Salmon and Trout Association York and District Branch
David Andrews	Head of Marketing Operations, Yorkshire Tourist Board
Dr Colin McClean	Environmental Department, University of York
Rachel Ross	Housewife/Open University Student/Voluntary Environmentalist
Graham Wilford	Managing Director, The York Waterworks Plc
Norma McGrory	Housewife/Homehelp

***Members of the Nidd and Wharfe Sub-Group**

Appendix D: Glossary of terms.

Abstraction. Removal of water from surface or groundwater.

Abstraction licence. Licence issued by the Environment Agency under Section 38 of the Water Resources Act 1991 to permit water to be abstracted.

Action. The course of action that has been decided upon by the Environment Agency (following the consultation period). These actions work towards addressing some/all aspects of the perceived issues.

Adit. An almost horizontal shaft into a mine, for access or drainage.

Alluvial soils. Fine grained fertile soils deposited by flowing water.

Area of Outstanding Natural Beauty. Areas of Outstanding Natural Beauty are designated under the National Parks and Access to the Countryside Act 1949 by the Countryside Commission. Their primary purpose is to conserve the natural beauty of selected landscapes.

Avian. Relating to birds.

Benefit. Both environmental and organisational - this will be the result of the Agency and partners meeting each stated target.

Biodiversity. The diversity of all living things.

Bronze Age. c2000 - 650 BC, time of extensive use of bronze (tin and copper alloy).

Carboniferous. Strata of rock dating from the geological time period of between 345-280 million years ago.

Carrier Registration. Requirement under the Control of Pollution (Amendment) Act 1989 that those who carry controlled waste in the course of business, or otherwise for profit, must register with the Agency.

Catchment. The total area of land which contributes surface water to a specific watercourse or water body.

Climate change. A perceived or observed change over the longer term to current weather conditions.

Coarse fish. Freshwater fish other than fish of the salmon family and eels.

Controlled washlands. Area of floodplain where water is stored in time of flood. Such an area may have its effectiveness enhanced by the provision of structures to control the amount of water stored and the timing of its release to alleviate peak flood flows in areas downstream.

Controlled waste. Household, commercial or industrial waste, excluding waste from mines and quarries and waste from premises used for agriculture within the meaning of the Agricultural Act 1948.

Controlled Waste Transfer Notes. When waste changes hands a transfer note, including a written description of the waste, must be completed and signed by both parties. Copies of the transfer note must be kept for at least two years. (Part of the "Duty of Care", Section 34, Environmental Protection Act 1990.)

Driver. This is the specific reason why we are undertaking the aforementioned action.

Duty of Care. Key provision under the Environmental Protection Act 1990 which controls the proper keeping, control and transfer of waste. Cradle to grave approach to waste management.

Effective rainfall. The rain which reaches rivers or aquifers, as opposed to that which is returned to the atmosphere due to transpiration by plants or evaporation.

European Natura 2000. This programme aims to form a network of sites which are designated under the European Habitats Directive and the European Wild Birds Directive by 2004.

Fyke netting. Fishing with specialised small trap net which is designed to catch eels.

Game fishing. Fishing with rod and line for salmon, migratory trout and trout.

Global warming. A result of increased emissions of greenhouse gases. A potential cause of climate change.

Greenhouse gases. Gases affecting the ozone layer are commonly referred to as greenhouse gases -

carbon dioxide, carbon monoxide and methane.

Groundwater. Water which is contained in saturated underground strata.

Henges. Late Neolithic/Early Bronze Age large circular earthworks, often with two opposing doors, probably used for ceremonial or ritual purposes.

Iron Age. c650BC - 43AD, period of extensive use of iron (up to the Roman invasion of Britain).

Karst. Characteristic scenery of a limestone region, including underground streams and gorges.

Landfill. The deposition of waste onto or into land in such a way that pollution or harm to the environment is prevented and, through restoration, to provide land which may be used for another purpose.

Landfill Gas. A by-product from the digestion by anaerobic bacteria of putrescible matter present in waste deposited on landfill sites. The gas is predominantly methane (65%) together with carbon dioxide (35%) and trace concentrations of a range of other vapours and gases.

Lead organisation. In terms of the actions which organisation will take the lead or is responsible for implementation.

LEAPs. A Local Environment Agency Plan is the Agency's integrated local management plan for identifying and assessing, prioritising and solving local environmental issues relating to the Agency's functions whilst taking into account the views of the Agency's local customers.

Local Agenda 21. Agenda 21 is part of a programme of action agreed at the Rio Earth summit by world leaders, intended to bring about sustainable development. Local Agenda 21 is the part of the action programme which requires local action: it looks to local government to provide the lead.

Local Biodiversity Action Plans. Local Planning Authorities are responsible for developing strategies, plans or programmes for the conservation and sustainable use of biological diversity.

Local Nature Reserve. Sites designated by English Nature and the Local Planning Authority, under the National Parks and Access to the Countryside Act 1949 and managed by the Local Planning

Authority.

Magnesian Limestones. A thin bedded dolomitic limestone which outcrops in the LEAP area along the western edge of the Vale of York.

Main river. Some, but not all watercourses, are designated as 'main river'. Main river status of a watercourse must first be approved by MAFF. Statutory (legally binding) maps showing the exact length of the main rivers are held by both MAFF in London and the Agency in Regional Offices. The Agency has the power to undertake works to improve drainage or to protect land and property against flooding, on watercourses designated as main river. The Agency does not have legal power to spend public funds on drainage or flood protection works on watercourses not designated as main river.

Meandering. To follow a winding course.

Mesolithic. c8000 - 3500BC, the Middle Stone Age, the time between the last Ice Age and the first farming cultures.

National Nature Reserve. An area of land designated by English Nature under Section 35 of the Wildlife and Countryside Act 1981. These are managed by, or on behalf of, English Nature specifically for wildlife conservation purposes.

Natural recruitment. Fish that are bred naturally in the river.

Neolithic. c3500 - 2000BC, the New Stone Age, the first farming cultures before the use of metals.

Objective 5b funding. European Communities programme to grant aid works for environmental, social and economic improvements in upland areas.

Permo-Triassic. Strata of rock dating from the geological time period of between 280-205 million years ago.

Potable. Drinkable.

Prescribed process. A process which falls under the jurisdiction of the Environmental Protection Act 1990.

Radioactive substances. There are a limited number of Radioactive Substance Act Certificates held in the Nidd and Wharfe plan area. These are

primarily for hospital and educational establishments to use very small amounts of radioactive material for treatment and research.

Riparian. Relating to a river bank.

Riverine cyprinids. Members of the carp family, eg chub, dace, barbel etc living in rivers.

Salmonid stocks. Salmon and trout stocks.

Scheduled Ancient Monuments. An archaeological feature given statutory protection under the Ancient Monuments and Archaeological Areas Act 1979.

Sherwood Sandstone Group. A thick sequence of marls and medium grained sandstones underlying the Vale of York.

Sinks and swallow holes. Holes down which surface water proceeds underground.

Sites of Special Scientific Interest. A site given statutory designation by English Nature or the Countryside Council for Wales, because of its particular importance for nature conservation.

Special Protection Areas. Internationally important sites designated under the EC Wild Birds Directives.

Sustainable development. Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Targets. This is the specific reason why we are undertaking the action.

Topography. The land forms or surface configuration of a region.

Tributaries. A stream or river which feeds into a larger one.

Water resources. Sources of water which may support abstraction.

Appendix E: Abbreviations.

AEGs	Area Environment Groups
AMP	Asset Management Plan
AOD	Above Ordnance Datum
AONB(s)	Area(s) of Outstanding Natural Beauty
CWTN	Controlled Waste Transfer Notes
DOC	Duty of Care
DoE	(Former) Department of the Environment, now Department of the Environment, Transport and the Regions (DETR)
EN	English Nature
FWAG	Farming and Wildlife Advisory Group
HBC	Harrogate Borough Council
HSE	Health and Safety Executive
IPC	Integrated Pollution Control
IPPC	Integrated Pollution Prevention Control
LA(s)	Local Authorities
LA21	Local Agenda 21
LBAP(s)	Local Biodiversity Action Plan(s)
LEAP(s)	Local Environment Agency Plan(s)
MAFF	Ministry of Agriculture, Fisheries and Food
NFU	National Farmers Union
NRA	(Former) National Rivers Authority
RPG	Regional Planning Guidance
SPA(s)	Special Protection Area(s)
SSSI(s)	Site(s) of Special Scientific Interest
WLMP(s)	Water Level Management Plan(s)
YDMT	Yorkshire Dales Millennium Trust
YDNPA	Yorkshire Dales National Park Authority
YWS	Yorkshire Water Services
YWT	Yorkshire Wildlife Trust

MANAGEMENT AND CONTACTS:

The Environment Agency delivers a service to its customers, with the emphasis on authority and accountability at the most local level possible. It aims to be cost-effective and efficient and to offer the best service and value for money.

Head Office is responsible for overall policy and relationships with national bodies including Government.

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0645 333 111

The 24-hour emergency hotline number for reporting all environmental incidents relating to air, land and water.

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