

RECREATION AND AMENITY SURVEYS OF
IDENTIFIED LOW FLOW RIVERS

AD

PART 1 : SURVEY REPORT
(Part 1 of 2)

NRA Thames 129



ENVIRONMENT AGENCY

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NRA-Thames Region

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SUMMARY

RECREATION AND AMENITY SURVEYS OF IDENTIFIED LOW FLOW RIVERS

This is the first part of a two part report in which the effects of reduced river flow of ten tributaries of the River Thames on recreation and amenity are examined. The examination was done by means of a physical river survey and conversations with NRA staff, BCU access officers and local authority officers. The results of the investigations were then fed into a scoring system producing values for the Recreation Parameter L3 and the Amenity Parameter L4, the results are shown below :

1. **River Gade to confluence with River Bulbourne.**
Recreation Parameter (L3) = 0
Amenity Parameter (L4) = 3
2. **River Bulbourne to confluence with River Gade.**
Recreation Parameter (L3) = 0
Amenity Parameter (L4) = 2
3. **Ampney Brook from Ampney Park to confluence with Thames.**
Recreation Parameter (L3) = 0
Amenity Parameter (L4) = 0
4. **River Cherwell from Grimsbury intake to Banbury SW outfall.**
Recreation Parameter (L3) = 0
Amenity Parameter (L4) = 4
5. **White Brook and Maidenhead Ditch.**
Recreation Parameter (L3) = 0
Amenity Parameter (L4) = 1
6. **River Beane.**
Recreation Parameter (L3) = 0
Amenity Parameter (L4) = 3

7. River Mimram.
Recreation Parameter (L3) = 0
Amenity Parameter (L4) = 1
8. River Wye above High Wycombe SW.
Recreation Parameter (L3) = 1
Amenity Parameter (L4) = 4
9. River Churn.
Recreation Parameter (L3) = 1
Amenity Parameter (L4) = 2
10. River Whitewater.
Recreation Parameter (L3) = 0
Amenity Parameter (L4) = 1

The findings varied from river to river with some currently being more affected by reduced flow than others. In terms of the Recreation Parameter L3 which looked at water contact recreation this was only found on two of the ten rivers surveyed due to the rivers' small channel size, channel vegetation, low bridges and other obstructions. Therefore for the rivers in general the amenity parameter must be considered of greater importance than the recreation parameter.

The level of public access through public rights of way or public open space was important but varied greatly from river to river. Some rivers such as the River Wye were much more urbanised than others, for example the River Whitewater, in this situation public access tended to be greater with a larger number of public open spaces. Pollution incidents located along the rivers tend to be a recurring feature of the survey with the amount of pollution being proportional to the amount of public access.

Although the scores calculated for the rivers did appear to be fairly representative the parameters did have a number of problems. No account was made of the location of pollution within the river channel, be it

alongside a well used public park or passed by a seldom used footpath. The surveyor also needs to make a subjective decision concerning the length of existence of any pollution incident.

A difference in the number of planning designations be it one or six is not taken into account and receives the same score. The parameters also do not make any allowances for the varied lengths of the river and two techniques to resolve this problem are examined. Various additions to the parameters are considered such as the ease of access of the river for people from urban areas.

The potential of the river for future amenity use should also be addressed. In terms of water contact recreation the closeness of possible alternative recreation sites should be analysed. Although the amenity parameter does take into account planning designations such as long distance footpaths no account is made of the existence of public rights of way, in rural areas in particular these tend to be the main form of access to the river.

The parameter scores do provide a reasonable impression of the rivers surveyed although the the parameters could be widened and improved.

1. INTRODUCTION

1.1 Background

The Recreation and Amenity surveys are part of a project during which ten identified low flow rivers were examined by each of the NRA functions within the region. The surveys were required in order to assess the impact of low flow upon the areas of NRA work. Following the surveys it was then possible to apply the Scott Wilson Kirkpatrick (SWK) "Recreation and Amenity" Parameters (L3 and L4) to the rivers. The results from the surveys were applied to the rivers to produce a resultant score which would then form part of the basis of an overall assessment of the rivers.

1.2 Rivers surveyed :

1. River Gade to confluence with River Bulbourne.
2. River Bulbourne to confluence with River Gade.
3. Ampney Brook from Ampney Park to confluence with Thames.
4. River Cherwell from Grimsbury intake to Banbury SW outfall.
5. White Brook and Maidenhead Ditch
6. River Beane.
7. River Mimram.
8. River Wye above High Wycombe SW.
9. River Churn.
10. River Whitewater.

1.3 Recreation parameter (L3)

The parameter L3, assesses the impact of low flows on water based recreational activities. Since the sport of angling is covered by parameter E2, that activity is not included in this assessment.

Recreational use may be passive or active. In general active use is associated with sports which require direct contact with water, such as: canoeing, sailing, rowing, boating, swimming, diving, water-skiing and windsurfing. These sports should have a higher score than passive recreational use, as any reduction in water quantity or quality as a result of low flows, can seriously affect participation in the sport. The scores should be awarded if the activity has been affected by a reduced volume or flow of water or a change in water quality due to low flows has occurred within the specified time period.

Score	Description
4	When three or more water contact recreational activities were unable to take place sometime in each year during a 5 year period.
3	Three or more water contact recreational activities were unable to take place at any time in any one month period.
2	One or two water contact activities were unable to take place at any time in any twelve month period.
1	Any water contact recreational activity was affected by low flows within the last five years. This includes a reduction in enjoyment of a sport, resulting from low river flows.
0	No change has been noted.

Fishing and angling are not included in the score of recreational activities in the above table.

The above score takes into account the present and (potential) use of the river for recreation. However if historical evidence exists, which can be authenticated, that an active water contact activity was possible on the river in the past (say 25 years) and there is a demand for that sport nationally or locally an additional score of +1 may be awarded as follows up to a maximum total of 4 for this parameter.

Score	Description
+ 1	The river was able to support a water contact recreational activity within the past 25 years, but this activity is no longer possible due to lower river flows.

The weighting of the recreation parameter (L3) is 30%.

1.4 Amenity parameter (L4)

This parameter L4 assesses the impact of low flows on the general amenity of the river by reference to bank side recreational pursuits and access to the river. Although low flows do not prevent walking, birdwatching, sightseeing and picnicking from taking place, the enjoyment of these recreational pursuits may be affected. Odour and visual impact are based on pollution and nuisance, as measured in some NRA regions. These will need to be recorded during the summer months at specified times, which it is suggested should be in the first week of August.

The parameter score is derived from the sum of scores, up to a total of 4, based on the following three components of the parameter.

1.5 River odour

Score	Description
2	Strong odour at channel edge eg sludge, sewage, chemical or farmyard wastes and noticeable at a distance of more than 10 metres from the channel.
1	Noticeable odour at the channel edge.
0	No noticeable odour.

1.6 Visual river channel

This includes unnatural water colour, farm wastes, foam, sewage, fungus, crude sewage, visible solids, rotting vegetation and also where refuse and litter are exposed or if no water is present.

Score	Description
3	Three or more of the above elements which persist over a period of several months, as a result of low flows or three or more of the above elements which occur intermittently.
2	One to three of the above elements which persist over a period of several months, as a result of low flows.
1	Two of the above elements which occur intermittently, as a result of low flows.
0	No visual problem.

1.7 Visual - river bank and adjacent land

An additional score of 1 can be awarded where the general public are encouraged to have access to the river as part of a wider planning designation such as public open space; or the provision of a long distance footpath or nature trail.

Score	Description
+ 1	Where planning designation encourages public use.

The weighting of the amenity parameter (L4) is 10%.

1.8 Report outline

Chapter two outlines the methodology used by the surveyor in terms of on the ground recording of information and the personal information contacts used.

Within the next chapter the report outlines the results of the surveys with the information being considered in the same categories as the SWK parameters, and divided into river by river sections.

In chapter four the report applies the Recreation and Amenity Parameters to the rivers and produces a resultant score for L3 and L4.

In the conclusions, chapter 5, the survey technique is examined followed by an analysis of the benefits and drawbacks and possible additions to the parameters. In section 5.5 the parameter scores are summarised.

Within the appendices the survey proforma and photograph log are reproduced.

2. METHODOLOGY

2.1 Survey

The initial examination of the rivers in question was conducted on foot by the surveyor. The analysis was done in order to discover the information required in order to apply the recreation and amenity parameters (L3 & L4). The findings were recorded on a survey proforma (Appendix 1) with the information being noted under the following categories :

Survey conditions

General description

Water contact recreation activity

River odour

Visual river channel

Visual - river bank and adjacent land

The various features were recorded with reference to their type, description, grid reference, map number and photograph number.

2.2 Maps

The maps used as the basis for the survey were Ordnance Survey 1:10,000 maps which are reproduced in part two of this report.

2.3 Photographs

During the river surveys photographs were taken to visually record the nature of the river and any particular features identified. A selection of the photographs taken are reproduced in part two of this report. As each photograph was taken the following information was gathered; description of view, grid reference and compass direction.

This information was recorded on a photograph log (Appendix 2).

2.4 Personal Information Sources

In order to extend the breadth of this research various personal information sources were contacted including NRA members of staff such as flood control staff, fisheries officers and catchment management planners with regional responsibilities. The views of both these officers, members of the public, local authority employees and British Canoe Union access officers gave the research a stronger historical viewpoint with any past recreational and amenity use being identified.

2.5 Applying the Parameters

Once the surveys were complete and the information collated and assimilated the SWK Recreation and Amenity Parameters (L3 & L4) could be applied.

The results from applying these parameters are shown in section 4 of this report.

3. SURVEY RESULTS

3.1 Format

The results of the recreational surveys are presented in individual sections each relating to a particular river. Within each river section the results are divided into the following classifications:

Survey conditions

General description

Water contact recreation activities

River odour

Visual river channel

Visual - river bank and adjacent land

There were no water contact recreation features, such as slipways, found on any of the rivers surveyed.

All relevant information has been cross-referenced to the maps and photographs, these are in Part 2 - Maps and Photographs Report.

3.2 RIVER GADE TO CONFLUENCE WITH RIVER BULBOURNE

3.2.1 Survey conditions

Date of survey : 5th & 6th August 1993

Prevailing weather : warm and sunny with very occasional showers following overnight rain.

3.2.2 General description

The part of the River Gade surveyed flows from grid reference (0120,1391), north east of Hudnall, to its confluence with the Grand Union Canal in Hemel Hempstead at grid reference (0619,0527), photograph 12. The uppermost kilometre and a half of the river was dry to grid reference (025,125) from here south eastward the river is narrow but is an attractive feature with clear water.

Access to the river in its upper stretches is limited to road bridges and the occasional public right of way that crosses the river. As the river enters Hemel Hempstead it is prominent as it passes through Gadebridge Park, photograph 4, and another area of public open space, close to Hemel Hempstead High Street, photograph 7. South of the town centre the river loses its prominence to the end of the survey at the Grand Union Canal.

3.2.3 Recreation activity

There is at present no water contact recreational activity occurring on the River Gade. Following a telephone conversation with Jonathan Lee, Sports and Recreation Liaison Officer of Dacorum Borough Council it was apparent that they would like to construct a boating lake within Gadebridge Park. It would be financed by extracting gravel, with the lake being fed by the River Gade, there would first of all need to be a reduction in the variation of the river flows.

Mr Steve Finch Southern Region Access Officer for the BCU said that no access agreements exist for the River Gade.

3.2.4 River odour

There was no river odour on the stretch of the River Gade surveyed.

3.2.5 Visual river channel

There were a number of visual intrusions on the River Gade in particular on the stretch through Hemel Hempstead where the river is open for public use.

No water - downstream of grid reference (0223,1260), photograph 1.

Refuse - a number of tyres in channel adjacent to second hand tyre warehouse. Grid reference (0501,0920), photograph 3.

Refuse - litter in river at Gadebridge Park. Grid reference (0521,0815), photograph 5.

Refuse - shopping trolley on campus. Grid reference (0537,0744), photograph 6.

Refuse - individual examples throughout river in Hemel Hempstead.

Refuse - shopping trolley in river adjacent to park. Grid reference (0546,0615), photograph 9.

Refuse - Industrial trolley and bin at rear of factory units. Grid reference (0604,0537), photograph 11.

3.2.6 Visual - river bank and adjacent land

There are a number of areas of public open space through which the river Gade passes alongside or through.

The first of these as the river passes downstream is a small area of National Trust land adjacent to the river and with public access, this is at grid reference (0397,1027), photograph 2.

To the north of Hemel Hempstead is Gadebridge Park, Map 4, a Dacorum Borough Council provision consisting of playing fields, crazy golf, bowling green and general public open space. The park appeared to be very popular especially with families picnicking alongside the river. Pond dipping was observed taking place in Gadebridge Park, photograph 4. There were at least a dozen children and their associated families taking an active interest in the river. Due to the prominent position of the river flowing through the centre of Gadebridge Park and the obvious public interest shown in it the opportunity may exist to increase the potential of this stretch of river by the establishment of interpretive information boards. Dacorum Borough Council plan to stabilize the banks of the Gade and increase the popularity of this area.

The River Gade passes through the college campus and then close to the shopping centre, here the river feeds into a water feature consisting of a series of ponds culminating in a fountain. Alongside these ponds is a footpath to the west and to the east is a linear area of grass complete with seating, popular with shoppers and office workers, photograph 7.

Close to a large roundabout, grid reference (0545,0620), is a small area of parkland sponsored by Kodak, this area consists of mainly seating and flower beds with the river running alongside its eastern edge, photograph 8.

Near the survey's end on Durrants Hill Road, grid reference (0574,0556), the River Gade flows alongside the public house garden, photograph 10.

3.3 RIVER BULBOURNE TO CONFLUENCE WITH RIVER GADE

3.3.1 Survey conditions

Date of survey : 3th & 4th August 1993

Prevailing weather : warm with occasional light showers

3.3.2 General description

The whole of the river Bulbourne was surveyed from its source at grid reference (9619,0997), photograph 1, to its confluence with the river Gade at grid reference (0557,0572), photograph 8. For virtually all of its course the river Bulbourne flows close to the Grand Union Canal. Due to the canal's much larger size and its associated boating, recreational and amenity use the river tends to be of reduced importance and generally an inconspicuous feature. For a 500 metre stretch of the river downstream of Winkwell the river joins the canal, grid reference (0283,0633), and leaves it at grid reference (0330,0630). The river is particularly prominent through the public open space of Boxmoor, photograph 7, within Hemel Hempstead, and from here soon joins the River Gade.

Due to the generally urbanised nature of the river, through Berkhamstead, it is often visible only from road and footpath bridges. The river is only crossed by public footpaths as it passes through Boxmoor for much of its course though it passes close to and is visible from the canal towpath.

3.3.3 Recreation activity

There is no past, present or potential water contact recreational activity along the River Bulbourne.

Mr Steve Finch Southern Region Access Officer for the BCU said that no access agreements exist for the River Bulbourne.

3.3.4 River odour

There was no river odour along the River Bulbourne.

3.3.5 Visual river channel

There were only a small number of visual intrusions along the River Bulbourne, these were:

Rotting vegetation - 10 square metres of vegetation and litter adjacent to canal towpath and car park. Grid reference (9891,0809), photograph 2.

Refuse - traffic cone and litter trapped by tree. Grid reference (9898,0805), photograph 3.

Refuse - garden refuse and litter. Grid reference (0012,0742) photograph 4.

Refuse - garden vegetation into river at confluence of Bulbourne and Gade. Grid reference (0557,0572), photograph 8.

3.3.6 Visual - river bank and adjacent land

There are three areas of public open space along the River Bulbourne.

The first of these is The Moor, grid reference (9938,0805), a small recreation ground adjacent to the canal and the river and close to the centre of Berkhamstead and at the time of the survey being used by a travelling funfair.

To the west of Hemel Hempstead is a recreation ground which has the Bulbourne flowing along its southern edge, map 7, photograph 5.

The river is most prominent where it leaves its position adjacent to the canal and passes through the centre of Boxmoor, an area of public open space consisting of fields grazed by cattle and horses and managed by the Boxmoor Trust, maps 7 & 8, photograph 7. The public are free to use this area for informal recreation with the area designated to remain as green space as part of the provisions for the expansion of Hemel Hempstead. According to Jonathan Lee of Dacorum Borough Council the Boxmoor Trust are strongly independent even refusing financial assistance from the council.

The River Bulbourne flows through the gardens of two public houses the first at grid reference (0004,0744) and the second at grid reference (0432,0617), photograph 6.

3.4 AMPNEY BROOK FROM AMPNEY PARK TO CONFLUENCE WITH THAMES

3.4.1 Survey conditions

Date of survey - 13th & 16th August 1993

Prevailing weather - warm and sunny

3.4.2 General description

The Ampney Brook is an attractive rural stream flowing over a gravel bed from its source at grid reference (0619,0233) to where it joins the River Thames at grid reference (1120,9406), photograph 6. It flows through the small settlements of Ampney Crucis and the eastern edge of Down Ampney but for most of its course the stream flows through agricultural areas with little public access especially between the south east of Ampney St Peter and Down Ampney. Any public access that there is, is from road and public rights of way crossing points. From Sheppen Bridge, grid reference (1049,9516) to the River Thames a public footpath adjoins Ampney Brook to where it joins the Thames Path.

3.4.3 Recreation activity

In the view of Vaughan Lewis, NRA Fisheries Officer there are no past, present or potential water contact recreational activities along the Ampney Brook, apart from the occasional swimmer which the NRA doesn't encourage.

Mr Steve Finch Southern Region Access Officer for the BCU said that no access agreements exist for the River Gade.

3.4.4 River odour

There was no river odour noticed along the Ampney Brook.

3.4.5 Visual river channel

There are no visual eyesores along the Ampney Brook.

The drain feeding into Ampney Brook at Ampney Park, included in this survey, was dry. Grid reference (0576,0205), photograph 1.

3.4.6 Visual - river bank and adjacent land

There are no planning designations encouraging increased public use along the Ampney Brook.

The river does however pass alongside the gardens of the public house at grid reference (0664,0177), photograph 3.

3.5 RIVER CHERWELL FROM GRIMSBURY INTAKE TO SW OUTFALL

3.5.1 Survey conditions

Date of survey : 6th July 1993

Prevailing weather : hot with sunny periods

3.5.2 General description

The River Cherwell from the start point of the survey, grid reference (4721,4494), photograph 1, to Grimsbury Pumping station, grid reference (4591,4172) is lush, green and with clear water. Below this point water flow is greatly reduced with refuse visible in the shallow stream as it passes through Banbury. South of Banbury a sewage outfall, grid reference (4695,3970), photograph 9, from the nearby Spital Farm works increases stream flow, this inflow of brown water however serves to discolour the water from this point downstream to the end of the survey at Twyford Mill grid reference (4862,3749).

3.5.3 Recreation activity

There are at present no water contact recreation activities on the River Cherwell surveyed. This is due to the growth of vegetation such as reeds on the river bed, that have been encouraged by the low flow.

In the view of Dave Keeling, NRA Senior Pollution Officer, for at least 25 years no water contact recreation activity has occurred on this stretch of the Cherwell. This has been due to abstraction from the Cherwell being longstanding, with its associated low flows, and the closeness of the infinitely more navigable Oxford Canal.

Mr Steve Finch Southern Region Access Officer for the BCU said that no access agreements exist for the stretch of the River Cherwell surveyed.

3.5.4 River odour

There is noticeable river odour at the site of the sewage outfall, grid reference (4695,3970). It is only noticeable at the channel edge and the impact of this odour on the amenity parameter is reduced due to the lack of public access at this point.

3.5.5 Visual river channel

Along the course of the Cherwell surveyed various visual intrusions were noticed these were:

Foam - small amount at weir. Grid reference (4661,4341), photograph 2.

Refuse - traffic cone, trolley and tyre. Grid reference (4569,4164), photograph 6.

Refuse - building material. Grid reference (4592,4167), photograph 5.

Low water - maximum 15cm. Grid reference (4592,4167), photograph 5.

Refuse - trolley and metalwork. Grid reference (4592,4170), photograph 4.

Oil - small quantity of light oil on surface. Grid reference (4592,4170), photograph 4.

Refuse - trolleys, rubbish and kitchen sink. Grid reference (4596,4083), photograph 7.

Refuse - trolley and rubbish. Grid reference (4612,4016), photograph 8.

Foam & water discolouration - sewage outfall producing foam and brown water, discolouration continuing downstream. Grid reference (4695,3970), photograph 9.

The brown discolouration of the water was explained by Dave Keeling as being due to food plants in Banbury disposing of their waste water through the sewage system leading to 'coffee' coloured water. The impact of this colouring is on the amenity value of the right of way which crosses over the river via a footbridge at grid reference (4762,3898), photograph 10.

3.5.6 Visual - river bank and adjacent land

The River Cherwell to the north of Banbury passes through two areas of public open space. The first is Grimsbury Reservoir Park, map 2, which is provided by Cherwell District Council and Thames Water. Within this park there is a variety of recreational provisions such as a sailing club on the reservoir (photograph 3), fitness trail, information boards, flower meadow and angling provision including sites for the disabled. Paths from this area lead along and over the River Cherwell into Spiceball Country Park, map 2, an open space area close to the centre of Banbury.

There is a desire of Cherwell District Council which was expressed by Mr Jeremy Sacha, Landscape Services Manager, to improve the image of the river and its amenity value. Mr Sacha was hoping that this would be achieved via the Banbury Town Centre redevelopment which required enhancement of the Cherwell through Banbury, this proposal has however been scaled down. He still has a wish to improve the Cherwell River Corridor within Banbury, perhaps through a joint project with the NRA.

3.6 WHITE BROOK AND MAIDENHEAD DITCH

3.6.1 Survey conditions

Date of survey : 2nd July 1993

Prevailing weather : hot and sunny

3.6.2 General description

White Brook and Maidenhead Ditch are attractive and lush streams varying between 1 and 4 metres wide. Approximately 3 miles of its length were surveyed from the source of the White Brook from the River Thames, grid reference (9054,8327), photograph 1, to where Maidenhead Ditch passes under Ray Mill Road West, grid reference (8912,8197), photograph 4.

It is in an area of natural beauty and passes through National Trust and common land within which is a network of rights of way some of which run alongside the stream. The rights of way are well signposted and the paths are in a good state of maintenance with evidence of them being well used.

This area of countryside through which the stream passes is close to the urban centre of Maidenhead. Its proximity to the town provides a very important 'green lung' function with the streams enhancing its amenity value with its public use further promoted with the Green Way walk .

3.6.3 Recreation activity

There are no past, present or potential water contact recreational activities on White Brook or Maidenhead Ditch, due to its narrow stream width, shallow depth and low foot bridges, with in many places overgrowing vegetation. The streams were originally constructed to act as drainage ditches for the surrounding fields.

Mr Steve Finch Southern Region Access Officer for the BCU said that no access agreements exist for the White Brook and Maidenhead Ditch.

3.6.4 River odour

There was no river odour along the White Brook and Maidenhead Ditch surveyed.

3.6.5 Visual river channel

There were no signs of any visual intrusions along the White Brook and Maidenhead Ditch surveyed.

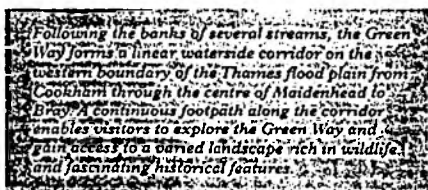
3.6.6 Visual - river bank and adjacent land

There are two types of planning designations applicable to White Brook and Maidenhead Ditch.

The first is the Thames Tow Path which crosses over the start of the stream at its outlet from the River Thames at grid reference (9054,8327), photograph 1.

The second is two areas of National Trust land, one area is Widbrook Common, to the east and west of Lower Cookham Road, grid reference (8965,8397), photograph 2. The stream passes through this area of common on which there is public access and public rights of way. The other area of National Trust land is North Town Moor, grid reference (8890,8260), map 2, which although it does not have Maidenhead Ditch passing through it, it provides an area of public open space with the stream close by.

The area which White Brook and Maidenhead Ditch pass through is along the route of The Green Way, an interpretive walk from Maidenhead to Cookham and back, the project is supported mainly by the Colne Valley Groundwork Trust. The Green Way Guide has been reproduced on pages 24 and 25.



Following the banks of several streams, the Green Way forms a linear waterside corridor on the western boundary of the Thames flood plain from Cookham through the centre of Maidenhead to Bray. A continuous footpath along the corridor enables visitors to explore the Green Way and gain access to a varied landscape rich in wildlife and fascinating historical features.

The Stream System

A series of watercourses forms the main focus of the Green Way Corridor. The River Thames feeds the stream system with water via the White Brook (or Widbrook), but water also drains into the Fleet Ditch and Strand Water from fields and springs around Cookham. The water then flows along the Maidenhead Ditch and the York Stream through the centre of Maidenhead, into the Cut and back into the River Thames south of Bray.

In the northern part of the Green Way, the watercourses are part of an ancient system of drainage ditches, important for draining water from fields to prevent them from becoming waterlogged and for receiving water from springs, particularly following heavy rainfalls. Through Maidenhead, the Maidenhead Ditch and York Stream form channels to receive flood waters.

Today, the stream system has become equally important in creating a green corridor for wildlife and recreation.

Wildlife along the Green Way

The Green Way provides homes for a rich variety of wildlife; habitats include hedgerows, scrub, woodlands, farmland, nature reserves with meadows and rough grassland, gravel lakes, ponds and streams.

Look for swans, mallards, moorhens and coots near water, and herons overhead. You may see ditchicks and kingfishers along the York Stream in Maidenhead town centre, grey wagtails under bridges or little owls perched in old pollarded willows at Braywick. Water rail and snipe are sometimes seen in cold weather and common sandpiper on passage. Summer visitors include willow and sedge warblers, chiffchaff and blackcap. All three woodpeckers are present. Listen for the green woodpecker near Strand Water.

Dragonflies and damselflies include Southern and Brown Hawkers, the spectacular Emperor dragonfly and the Banded Agnion, with its black-spotted wings and jewel-blue or green body. Most of the common butterflies are present. In summer sunny patches of nettles can be 'black' by hundreds of small tortoiseshell caterpillars.

Aquatic vegetation is at its best in high summer. White and yellow waterlilies grow in the deep waters of the Strand. Spiked arrow-head leaves, delicate-pink water plantain flowerheads, strong stems of bull reeds and small patches of the beautiful flowering rush emerge from shallower water. Above the water look for purple loosestrife, marsh woundwort, hemp agrimony and comfrey.

Exploring the Footpaths

The Green Way offers the chance to explore the countryside between Cookham and Bray. There are numerous access points with a number of car parks and links to public transport making the Green Way suitable for short strolls, circular walks or longer rambles linking into the Thames Path.

The paths provide easy level walking and are clearly signed and well maintained, although some of the northern paths can be muddy in winter. From North Town Moor southwards to Bray, the paths are surfaced without stiles and are ideal for walkers with push chairs. The paths within Braywick are suitable for wheelchair users.

From the River Thames at Cookham, much of the route is alongside a meandering stream and landscape of meadows, arable fields and gravel lakes. From open countryside, the route then winds through the urban fringe of Maidenhead and finally through the centre of the town until it emerges into Braywick Park. Three National Trust commons are to be found along the route: Cookham Moor, Widbrook Common (on which commoners grazing rights are still exercised) and North Town Moor.

There are splendid views across the fields up to the Mount at Cookham, whilst Cliveden House can be seen perched 200 feet above the River Thames. Some of the best views of the famous Hanging Woods of Cliveden can be enjoyed from the paths along the Green Way. Taplow Court is another imposing feature on the Cliveden escarpment, especially when floodlit at night.

Circular Walks

The Green Way offers a variety of circular walks which cater for all levels of ability. The shorter walks can be completed within half an hour or less, or extended to provide a walk of one or two hours. The main Green Way east and west routes are clearly signed with linking paths at intervals, which provide the walker with a choice of several circuits. The car parks at Cookham Moor and North Town Moor are the ideal starting points.

Further information

- 1 National Rivers Authority
An independent public body established in 1989 to safeguard and improve the natural water environment. For further information about the stream systems in the Green Way, please contact the Public Relations Officer. Telephone: (0734) 535000
- 2 The Thames Path
For a free leaflet providing details of the National Trail, please contact: Countryside Commission Publications, Priests' Lane, Levenshulme, Manchester, M19 3JP
- 3 The Maidenhead Civic Society
The society aims to protect and improve many aspects of the environment. Please contact the Membership Secretary.
Telephone: (0628) 36484

4 The East Berkshire Group of the Ramblers' Association
The group helps to protect and restore public rights of way and seeks to develop new footpaths. The group operates a Path Warden Scheme and undertakes practical conservation work. Regular walks are held to which newcomers are welcome and a series of local footpaths maps and booklets of short walks are available. Please contact the Membership Secretary.
Telephone: (0628) 478897

5 The Windsor and Maidenhead Urban Wildlife Group
The group works to protect and improve existing wildlife habitat and increase opportunities for wildlife. Activities include practical conservation work, walks, wildlife surveys and a wildflower nursery. Please contact the Membership Secretary.
Telephone: (0753) 861981

6 Braywick Nature Centre
The centre is owned and managed by the Royal Borough of Windsor and Maidenhead and forms a base for the Borough's Countryside Rangers. The Rangers provide advice and guidance on natural history and conservation, and run a programme of walks, talks and activities. The centre houses a permanent exhibition on Braywick Park and is open to the public on a regular basis.
Telephone: (0628) 777440

7 Bletchley Public Services Division
Consultants to the Royal County of Berkshire, responsible for the maintenance and protection of public rights of way. Leaflets are available giving information about walks from railway stations which link to the Green Way. If you find a problem on a public footpath, or for further information or leaflets, please telephone: (0734) 234939

This leaflet has been produced jointly by the Green Way Working Group:

Colne Valley Park Groundwork Trust
Arco Chemical Europe Inc.
East Berks Group of the Ramblers Association
Maidenhead Civic Society
Royal County of Berkshire
Royal Borough of Windsor and Maidenhead
Windsor and Maidenhead Urban Wildlife Group

This leaflet was funded by the Department of the Environment through the Groundwork Project Grant administered by the Groundwork Foundation with matching funding from: The Hitachi Europe Charitable Trust, Southern Electric and members of the Green Way Working Group.



The Colne Valley Park Groundwork Trust is an independent charitable Trust, working in partnership with local people, local authorities, statutory bodies and industry to improve the environment and increase recreational facilities.

Colne Valley Park Groundwork Trust, Colne Valley Park Centre,
Denham Court Drive, Denham, Uxbridge, Middlesex UB9 5PG.
Telephone: (0895) 832662

The Green Way

A 5 mile waterside corridor from Cookham through the centre of Maidenhead to Bray



The Green Way

○ The Thames Link

The Yert Stream in Maidenhead has dried out in the summers from 1988-91. To protect the wildlife habitat and to maintain the Green Way as a wildlife corridor, the National Rivers Authority plans to increase water flows by creating a link to the River Thames via the Old Marsh Ditch. This connection with the Thames was blocked over 100 years ago - in 1877 the Thames Conservators were asked to block the river end of Old Marsh Ditch to prevent water flowing into Cookham Moor.

○ Fleet Bridge and the Causeway

The Thames and overflowing ditches often flooded the moor in Cookham and by 1770 a raised causeway supported by seven brick bridges had been built linking Cookham village to the road way through the pond. The present bridge over the fleet was given as a gift to the village in 1929 replacing many which had been swept away by floods.

○ The Commons

The Green Way provides a link between many of the old areas of common land in Cookham, Maidenhead and Bray, including Cock Marsh, Whitbrook Common and North T88th Moor, all owned by the National Trust. The Moor in Maidenhead was purchased by Maidenhead Corporation in 1928 from the Lord of the Manor of Cookham and remains a public open space. Queenslake Common south of Maidenhead was used as a landfill site, but has now been reclaimed to form part of Braywick Park.

Cock Marsh and Whitbrook Commons are enclosed commons of pasture for grazing. On the Whitbrook under the supervision of the Hayward, commoners graze their cattle from mid-May to mid-June in return for a seasonal fee. The money originally contributed to an Apprentice Charity for local boys but the charity's terms were changed in 1973 so that girls, as well as boys, could benefit. It is now the Cookham Educational Charity.

○ Boundary Stones

In 1934, Maidenhead Borough Council ordered from Johnson Brothers of London 4 dozen "Cornish" Boundary Stones for £18 (7/6 each or 37.5 new pence) to mark the borough boundary. Today 29 of the original stones survive, 5 of which are located within the area of the Green Way. These stones featured prominently in the historical and traditional ceremony of "Beating the Bounds" around Maidenhead.

○ Spencers Farm

This is the site of one of the earliest recorded settlements in Maidenhead, the Romano-British site of Elestone (Ellington). Although only faint traces of the settlement can be seen, excavations of the site have shown an early Norman Hall within a moat with signs of occupation from the 11th to 16th Centuries.



○ Maidenhead

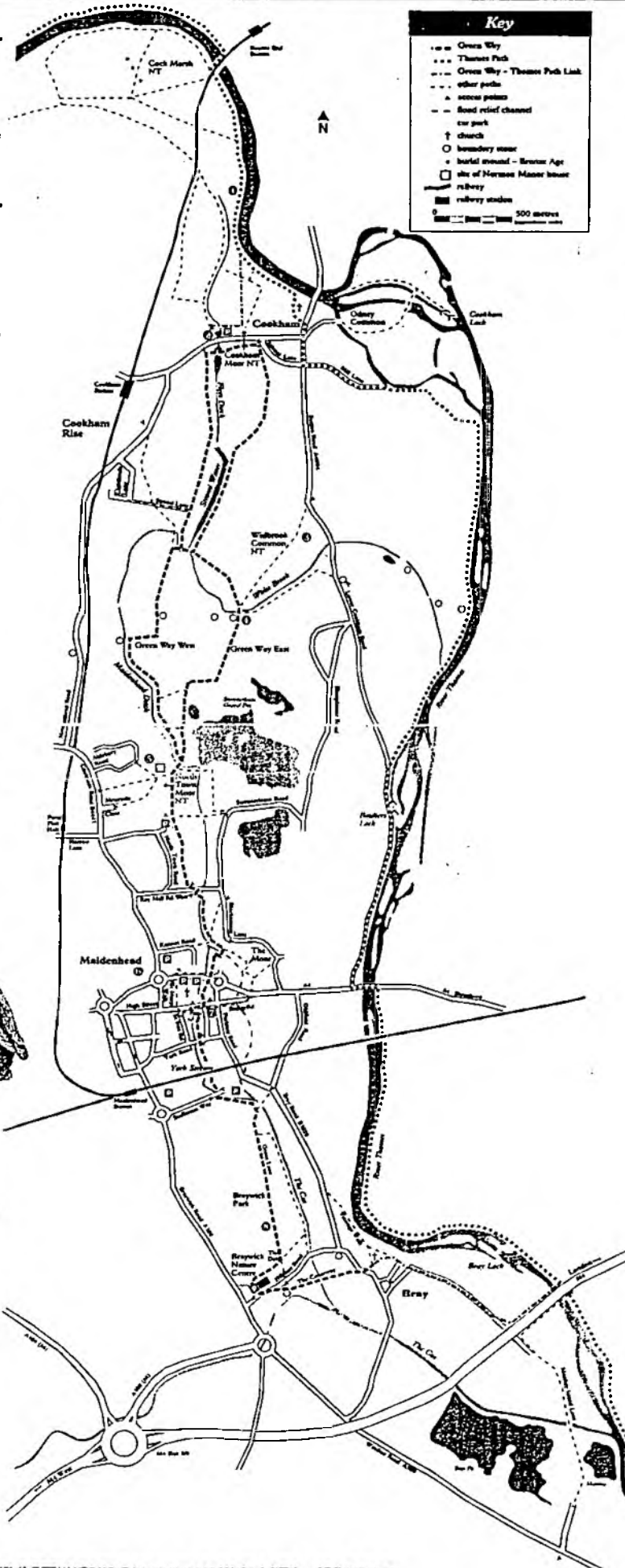
The only town in the Green Way is Maidenhead, with the picturesque villages of Cookham and Bray to the north and south. Cookham and Bray were royal manors in medieval times and Maidenhead grew as a coaching town on the border between them, where the main route west from London, the Bath Road, crossed the Thames. The growth of Maidenhead into a busy commercial centre compared with Cookham and Bray is due to this location.

○ Chapel Arches

In the centre of Maidenhead the Green Way crosses over a bridge on the High Street known as Chapel Arches, the only remaining evidence of a chapel built in 1269. A guild established there in 1451 collected tolls to maintain Maidenhead bridge. Around 1810 a wide stream flowed under these arches, but water now only flows under one arch. In the 1920s shops were built onto the bridge as part of the High Street.

○ Braywick Park

The Park was once part of the estate belonging to Braywick Lodge, which was occupied in the 19th century by John Habbert, a local philanthropist. In 1987, the park was extended by reclaiming the adjacent landfill site to make an area of public open space with wild flowers and trees and a new streamside path alongside the Cut. A new pond has been created in the Dell and the old stable block converted into Braywick Nature Centre.



3.7 RIVER BEANE

3.7.1 Survey conditions

Date of survey : 20th, 21st & 22nd July 1993

Prevailing weather : cool and showery

3.7.2 General description

The River Beane surveyed flows from a number of tributaries near the villages of Weston, grid reference (2749,2962), map 3, photograph 1 and Rushden, grid references (3045,3100) and (3148,3049), map 1. The river from the above points to grid reference (2891,2030), where the Stevenage Brook joins, is at most a trickle and in many places a dry river often with grass along the river bed, photograph 3. Public access in the upper stretches of the river is limited to roads and public rights of way, there is however a circular, waymarked, walk to the north of Aston.

From the grounds of Frogmore Hall, Map 7, downstream the river has a small flow with the channel full of rich vegetation. A footpath follows the river downstream from Woodhall Park to Goldings Estate in north Hertford. The stretch of public footpath from Stapleford to Waterford is designated as a nature trail.

The River Beane flows through the centre of Hertford to its confluence with the River Lee at grid reference (3300,1341), photograph 10. During its journey through Hertford the river is mainly only visible from road bridges until it reaches Hartham Common, grid reference (3270,1315), photograph 9, an area of public open space with the river as a prominent feature.

3.7.3 Recreation activity

There are no significant past or present water contact recreational activities along the River Beane. At the present time the British Canoe Union are lobbying for access to the river for canoeing from Waterford Common to Hertford. They wish to use the river on four weekend days per year between the hours of 12 am and 5 pm as well as when the river is in flood.

3.7.4 River odour

There was no river odour along the stretch of the River Beane surveyed.

3.7.5 Visual river channel

The main visual river channel feature noted during the survey was the absence of water in the river.

From the start of the survey at grid references (2749,2962), (3045,3100) and (3148,3049) to the ford at grid reference (2872,2147) there was no more than the occasional trickle of water. The prevailing weather at this time was also cool and cloudy with occasional showers. The absence of water was noticed at the following locations.

No water - Grid reference (2749,2962), photograph 1.

No water - Grid reference (3084,2983), photograph 2.

No water - Grid reference (2862,2157), photograph 3.

As well as no water, refuse and rotting vegetation were also noticed, these were at:

Rotting Vegetation - weeds and garden material. Grid reference (3004,1950), photograph 4.

Refuse - car battery. Grid reference (3129,1718), photograph 5.

Refuse - oil drum and traffic cones. Grid reference (3177,1299), photograph 6.

Refuse - isolated items of litter alongside Hartham Common. Map 12.

3.7.6 Visual - river bank and adjacent land

Along the course of the River Beane there are two types of planning designations encouraging increased public use.

The first of these is the Gravel Walk Nature Trail, which runs from Stapleford to Waterford, photograph 7, map 10. The waymarked walk has been prepared for Stapleford Parish Council by the Herts and Middx Wildlife Trust. It consists of a series of numbered posts along the path each relating to a particular feature of interest. The walk is described in the free leaflet, reproduced on pages 30 and 31, and available from outside the church. The walk can be continued northwards from Stapleford along the river to Home Farm, forming an attractive and lengthy riverside walk. The main problem is the lack of parking near Home Farm.

The other planning designation is that of public open space, the Beane passes through two such areas. All these sites are used regularly.

The first is Waterford Marsh, map 11, a Stapleford Parish Council provision and also part of the countryside stewardship scheme with the whole area open for public use, photograph 8 .

The second is Hartham Common, map 12, a recreation ground near to the centre of Hertford which has the River Beane running alongside its northern edge, a popular site for picnicking, photograph 9.

The Beane also passes through the Goldings Estate, map 11, owned by Hertfordshire County Council, within these grounds there is permissive public access and a Tree Walk through the grounds.

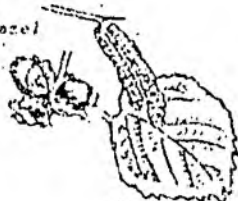
The alder is another typical chalk riverside tree. It has catkins in spring and develops little 'cones' like fir cones which stay on the tree for some time. The tiny seeds have air bladders which enable them to float to a new home. The tree's roots help to stabilise river banks, and the finer roots have nodules which help to feed the tree in much the same way as the root nodules of peas and beans. Alder is the wood which clogs are made of and straight poles were used for turnery, especially for bobbins. Its charcoal was used to make gunpowder.



6. FOXLEYS WOOD - Oak/Hazel

Foxleys Wood is an ancient woodland - there has probably been woodland here since it first started to grow after the Ice Age. This makes it very valuable for wildlife, and everything in it tells the story of its history and geology - the trees, the way they have been cut, the soil structure, the 'humps and bumps' and the woodland herbs.

Hazel



This section of the wood consists of oak trees with hazel coppice inbetween. In a traditional system, the oak trees would have been felled when mature for building or shipbuilding. The hazel would have been coppiced on a regular

cycle for making hurdles and thatching spars. Coppicing, cutting at or near ground level encouraging new growth, is an ancient and very extensive form of woodland management. A happy consequence of coppicing was that it caused a flush of bloom of woodland flowers. The growing coppice also helped to 'promote' or 'stretch' the young oak trees so they produced a more valuable length of timber. These days conifers are often used to do this, but are very harmful to the plants trying to grow underneath.

Wood
melick

This wood is rich in wild flowers - violets, primroses, wild garlic, yellow archangel, wood melick grass and many others, as well as the carpets of bluebells growing amongst the sheets of dogs mercury. These are all typical flowers of ancient coppiced woodlands.

Dogs
mercury

7. SPRINGS

Wild
Angelica

Here the mixture of geological layers - chalk, gravel and clay - results in ground water seeping out as springs. A number of moisture loving plants grow here, such as the meadowsweet, yellow iris, hump agrimony, wild angelica, and mosses. Perhaps this extra dampness also accounts for the patch of wild garlic growing nearby.

8. FOXLEYS WOOD - Oak/Hornbeam

We seem to have a sudden change. The hazel is replaced by hornbeam and in the spring you can see the delicate wood anemone and eye-catching goldilocks buttercup, which looks as though some of its petals have been eaten away. Can you think of any reasons for this change? Geological clues may lie all around you.

Hornbeam is a southern tree in Britain and is very much a Hertfordshire speciality. The wood is an excellent firewood and was coppiced for this reason. Locally it used to be valuable in the maltings, and is thought to have imparted a particular taste to the beer. The wood is by far the hardest British timber and in the past was used for making small items such as cogs, screws, pulley blocks and mallets where hardness was important.

If you look at many of the coppice stools, you will see the cluster of stems has spread outwards from the centre. This is because, over time, a coppice stool rots in the middle, but the rootstock remains intact and in this way the stools can reach a very great age. Some ash tree stools in woodlands in Essex are some 20 feet across and are thought to be over 700 years old. Hornbeam grows much more slowly than ash. How old do you think these hornbeam stools are?

When coppiced woodlands are no longer coppiced, they fall into decay, but a revival of open fires and wood burning stoves is once again creating a market. Shooting interests have also ensured the continuation of the coppice cycle in some woodlands as the new growth provides good cover for pheasants. This same cover can also provide a home for nightingales.

Goldilocks
buttercup

Hornbeam



Coppice stool



GRAVEL WALK NATURE TRAIL STAPLEFORD



Prepared for Stapleford Parish Council
by Carol Grafer, Herts & Middx Wildlife Trust
revised August 1989

Cartoon by Cliff Sengull



Gravel Walk is the apt name given to this footpath by children who used to walk along it to school between Waterford and Stapleford. The chalk is also very near the surface as you can see from an uprooted spruce tree near the path in Foxleys Wood.

1. CHURCHYARD & PADDOCK

Meadow saxifrage

Some areas of grass are cut only once or twice a year and show that the churchyard is a genuine remnant of the ancient, flower-rich grassland which must have once covered the Beane Valley all the way from Stevenage to Hertford. The 'scar' of the flowers must be the rare meadow saxifrage which lifts its delicate white flowers above the grass in spring. Cuckooflower, harebells, salad burnet, ox-eye daisy and many other flowers grow here too. What can you find?

Dead logs, comb stones and churchyard trees, particularly yew, are also valuable for wildlife such as insects, lichens and birds.

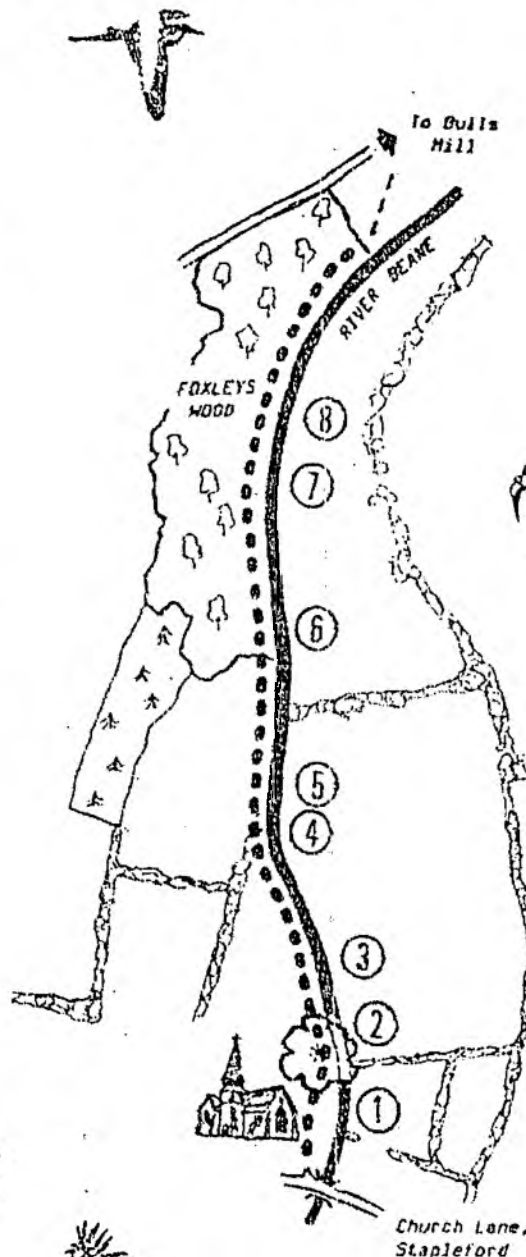
2. OAK TREE - A MINIATURE NATURE RESERVE

This is the first of several old oak trees which you will see on the way into the wood. They are so old that they are beginning to die back and some of them have hollows in the trunk. They have plenty of life left in them yet though, and may shelter many insects, birds, owls and even bats. Oak trees support the richest diversity of insect life of any British tree.

Forix moth caterpillars are often found dangling from oak trees. In some years there are so many of these caterpillars that they can completely strip trees of their leaves. Foresters don't like them, but the blue tits and other birds do!

Ivy is all too often removed from trees because it looks untidy. It does not kill trees and provides a late summer source of nectar which is in short supply at this time. It also provides extra nooks and crannies for insects.

Long-tailed tits and many other birds can be seen along this section. In summer the song of various warblers adds to the birds' musical symphony. In spring cuckoos can clearly be heard. In damp weather you may come across the rather unusual and very large, whitish Roman Snail along the hedgebanks.



Please keep to the footpath and follow the Country Code. Leave flowers for others to enjoy.

3. RIVER BEANE

Water crowfoot

All along this walk on your right is the River Beane - a clear chalk stream with a gravelly bottom. These kinds of streams are usually teeming with plant and animal life. The water plants, especially the huge banks of water crowfoot (a relative of the buttercup) which you can see in the clear water, are underwater forests which harbour myriads of aquatic insects.



Kingfisher

A kingfisher might catch your eye as a spectacular flash of blue as it flies along the river.

You may also be lucky enough to see water voles, voracious vegetarians which are responsible for the many holes in the river bank. They are not rats, but large rat-sized relatives of the much smaller bank vole.



Water vole

A lush tangle of plants grows on the river banks, including meadowsweet, rosebay willowherb (also called fireweed as it is one of the first plants to colonise the ground after a fire), its relative the great hairy willowherb (or codlins 'n' cream), and figwort. Another very noticeable plant is the Himalayan balsam, or policeman's helmet, a fairly recent arrival in Britain, which is very invasive but much loved by bees. Its seed pods 'ping' open when ripe to scatter seeds over a wide area.

Himalayan Balsam

4. WILLOWS

In front of you is a large crack willow tree. Its brittle twigs 'crack' at the joints and break off very easily, often falling into water and being carried to where they can grow into a new tree. Crack willows are very characteristic of Hertfordshire's rivers, especially 'pollards'.

Pollarding is an ancient form of cropping - cutting trees back at head height, above the reach of cattle, the new growth providing the next crop in another few years time. This practice also prolonged the life of the tree. The produce was used for weaving into fencing hurdles, hedging and rough baskets. Other kinds of willows are used for finer basketry.



Willow pollard

3.8 RIVER MIMRAM

3.8.1 Survey conditions

Date of survey : 28th, 29th & 30th July 1993

Prevailing weather : occasional showers and sunny periods

3.8.2 General description

The River Mimram was surveyed from the north west of Whitwell grid reference (1758,2179), photograph 1, to where it flows under the A414 in Hertford grid reference (3235,1241), photograph 8. Throughout the course surveyed the river is clear and flowing well with water levels being reported by NRA river bailiffs as being higher than last year. The river supports a water cress farm and a fish farm on its upper stretches.

Access to the river is mainly limited to road and public right of way crossing points with the river passing through only two small areas of public open space. The other area of open space within which the lake is a prominent feature are the grounds surrounding Digswell Lake, to the north of Welwyn Garden City. This is an area of attractive open space but is only open to members of the Digswell Lake Society.

To the west of Hertford is the Panshanger Estate with the River Mimram passing through the centre of it, within this estate there is only one public right of way which skirts the river. Through the use of a large number of notices emphasising the private nature of the grounds the public are actively 'encouraged' to stay on the footpath, photograph 7. There is only public access to the river at a limited number of viewing points as the river enters Hertford from the west.

3.8.3 Recreation activity

There are no past, present or potential water contact recreational activities along the stretch of the River Mimram surveyed.

3.8.4 River odour

There was no river odour along the stretch of the River Mimram surveyed.

3.8.5 Visual river channel

When considered in its entirety the River Mimram is visually an extremely attractive river and during the course of this survey only a few visual intrusions were noted.

Refuse - Shopping trolley in river at ford and rubbish on bridleway, 50 metres away from the river. Grid reference (2103,1753), photograph 2.

Refuse - Traffic cone - Grid reference (2475,1497).

3.8.6 Visual - river bank and adjacent land

There are two small areas of public open space alongside which the river Mimram passes.

The first area is near the centre of Welwyn and consists of a grassy area and seats, grid reference (2290,1655), photograph 3, this is provided by Welwyn Hatfield District Council.

The second is the playing fields and tennis courts adjacent to the viaduct, grid reference (2460,1490), this has the river flowing along its southern edge and is complete with seating viewing the river, photograph 6.

The other area which is not open to the public is Digswell Lake, map 8, photograph 5, but access to its grounds can be gained by joining the society.

The river also passes alongside the public house gardens within Welwyn at grid reference (2299,1623), photograph 4.

The Panshanger Estate area is owned by Redland, a construction company, and has limited public access. Chris Catling NRA Conservation Officer for the North East Region explained that Redland have planning permission to extract gravel from the site. There is also a section 106 agreement relating to this permission detailing that following extraction the area will become a nature reserve to be managed by the Herts and Middlesex Wildlife Trust, this is likely to provide opportunities in the future for increased public access to the estate. At present there is a small picnic area, provided by Redland, on the edge of the estate at grid reference (3072,1250).

3.9 RIVER WYE ABOVE HIGH WYCOMBE SW

3.9.1 Survey conditions

Date of survey : 7th July 1993

Prevailing weather : sunny and warm

3.9.2 General description

The source of the River Wye is to the north east of West Wycombe, grid reference (8225,9500), where the stream is wide and shallow with plenty of in channel vegetation. The river soon passes through West Wycombe Park a National Trust property with its stately home and landscaped gardens. The grounds have in their midst a lake fed by the Wye, photograph 1 and are open to the public at certain times in the summer, subject to the payment of an admission charge.

The river on its journey through High Wycombe is often divided into two separate courses and for most of the time is culverted. According to Graham Scholey, NRA Conservation Officer, there are plans along with flood defence for river bed enhancement works on a three to four hundred metre stretch of the river to the north east of Kings Mead, map 6. The Wye flows through or adjacent to a number of public open spaces along the valley floor, as is seen in section 3.9.6.. The survey of the River Wye ends at Loudwater to the south east of High Wycombe, grid reference (9025,9048).

A study of the River Wye has recently been carried out by Roz Saunders, Environmental Projects Officer of Wycombe District Council. The River Wye Study looked at the ecological, landscape and amenity value of the river.

3.9.3 Recreation activity

The River Wye feeds the lake in West Wycombe Park this appears suitable for rowing boats although at present it is used only by the Dashwood family who live in the house, photograph 1.

Within the public open space called The Rye, in the centre of High Wycombe, the River Wye feeds an area of open water called The Dyke which is 800 metres by 25 metres. On The Dyke, photograph 7, rowing boats can be hired, to be used on about two thirds of the lake, from the Boat House at grid reference (8688,9259), where there is also a small cafe, photograph 6.

The present managers of the boat hire business were questioned as to whether the boating was affected by low water levels. They had however only been running the business since December and as yet they had not been affected by reduced water levels and were therefore unable to express an accurate view. They were more concerned about the amount of weed present within The Dyke which at present was having more of an effect on their business, by obstructing oars, than reductions in water level. Within the Dyke there were also large numbers of fish easily visible from the path enhancing the amenity value of this waterside walk.

Due to the narrowness of the river caused by the vegetation growth and its culverted state no water contact recreational activities are possible on the Wye apart from the above.

Mr Steve Finch, Southern Region Access Officer for the BCU, said that no access agreements exist for the stretch of the River Wye surveyed.

3.9.4 River odour

The only site on the River Wye where there is noticeable river odour is within the West Wycombe estate. A footpath crosses over the Wye at grid reference (8385,9429), underneath the bridge is a narrow sluice with a build up of vegetable matter on the upstream, western, side of the bridge, photograph 2. This vegetable matter is slowly decomposing and is giving off an odour which is noticeable at the channel edge.

3.9.5 Visual river channel

Along the course of the River Wye surveyed various visual intrusions were noticed these were :

Rotting vegetation - see 3.9.4 above. Grid reference (8385,9429), photograph 2.

Foam - small quantity. Grid reference (8429,9399), photograph 3.

Refuse - corrugated metal, etc in stream. Grid reference (8462,9377), photograph 5.

Refuse - isolated cans and litter alongside The Rye. Grid reference (8770,9216), photograph 8.

Refuse - isolated cans and litter alongside Kings Mead. Grid reference, (8927,9155).

3.9.6 Visual - river bank and adjacent land

The length of the River Wye surveyed is predominantly urban however the river does pass through a number of public open spaces.

At West Wycombe the Wye passes through the National Trust property of West Wycombe Park which at certain times is open to the public, map 1, photograph 1.

The next area of public open space is at the corner of Mill End Road and Gillets Lane, grid reference (8452,9395), where a small landscaped park with seating has been created by the local council with the Wye stream providing a key feature, photograph 4.

To the east of the schools in Mill End Road is a recreation ground grid reference (8475,9382), which has the Wye to the north and south of it in narrow culverted streams.

At the south east of High Wycombe and close to the town centre is an open space called The Rye, grid reference (8730,9250), with the Wye flowing along the north and south edges of the park, photograph 9.

The River Wye flows along the southern edge of the gardens of the public house at grid reference (8923,9157), to the north of Kings Mead.

Downstream of Wycombe Marsh is the public open space of Kings Mead, grid reference (8940,9134), complete with tennis courts, fitness trail and cricket pitch. The two branches of the River Wye flow on the north east and south west sides of the park, photograph 10.

Close to the confluence of the two branches of the Wye is a small park and children's adventure playground, grid reference (9008,9050), with the Wye flowing along its northern edge.

3.10 RIVER CHURN

3.10.1 Survey conditions

Date of survey : 12th, 13th, 14th, & 16th July 1993

Prevailing weather : changeable with sunny periods and heavy showers

3.10.2 General description

The River Churn rises in the hills south of Cheltenham close to the hamlet of Coberley at grid references (9472,1644), photograph 1 and (9662,1695), photograph 2, amongst steep sided valleys within the attractive Cotswold countryside. It is a clean river with clear water supporting trout in a number of places and only a small amount of visual pollution in terms of foam and refuse with no odour throughout the course of the river surveyed.

Public access to the river is mainly via public rights of way within its upper and lower stretches whilst in the middle section views of the river are only possible from road bridges. The River Churn flows inconspicuously through Cirencester and close to the A419(T) road. From South Cerney southwards the Churn passes through the Cotswold Water Park with various rights of way following most of its course to Cricklade and the end of the survey at grid reference (1025,9403).

3.10.3 Recreation activity

In the view of Vaughan Lewis, Fisheries Officer, the only water contact recreation activities that have occurred on the River Churn is canoeing on the stretch of river close to Spine Road, downstream of South Cerney. This was further investigated via contact with Graham Lodge, manager of the South Cerney Water Sports Centre, map 15. He has worked at the centre for the last fourteen years and in his subjective view the river flows have generally reduced in this period. The centre has however used the river, behind its buildings, for canoeing at certain times of the year when there has been sufficient water. This tends to be either early spring, late autumn or when the river is in spate. The river in the past has also been used by canoeing clubs for Boxing Day trips. In the view of Mr Lodge the river is not particularly suitable for canoeing with the centre users tending to travel instead to the Rivers Wye or Severn.

The Cotswold Water Park, through which the Churn passes does support a large number of water based recreation activities including windsurfing, water skiing, sailing, canoeing and jet skiing.

3.10.4 River odour

There was no river odour noticed along the course of the River Churn.

3.10.5 Visual river channel

Along the course of the Churn surveyed there were only a few examples of visual eyesores.

There was a small quantity of foam at grid reference (0214,0730), photograph 5.

Adjacent to the area of public open space south of Cirencester at grid reference (0335,0091) there was a number of traffic cones and litter in the river, photograph 7. The traffic cones probably came from the nearby Tesco Superstore construction site and are therefore likely to be only a temporary occurrence.

Within the Cotswold Water Park and visible from the public footpath were two items of refuse in the river.

The first was a tyre at grid reference (0720,9672), photograph 10.

The second, a mooring buoy at grid reference (0735,9659), photograph 11.

Near the end of the survey there is a old refrigeration unit which has been dumped in the field designated as part of the Countryside Stewardship Scheme, grid reference (1017,9424), photograph 12:

3.10.6 Visual - river bank and adjacent land

There are three planning designations along the River Churn which are encouraging public use.

Firstly, there is an area of public open space to the south of Cirencester, map 11, photograph 8, which is adjacent to the Tesco under construction, also adjoining this parkland area is a service area for the A419(T) complete with car parking and cafe.

To the south east of South Cerney is the Cotswold Water Park, maps 14 and 15, a Gloucestershire County Council planning designation with a number of disused gravel excavations being used for a variety of water sports. The Park also has wildlife areas and well signposted public rights of way, a number of which follow the river's course, photograph 9.

The third area of planning designation is a field to the north of Cricklade, map 18, which is part of the Countryside Stewardship Scheme, on which public access is allowed.

As the River Churn flows through North Cerney it passes through the gardens of the public house at grid reference (0193,0792).

3.11 RIVER WHITEWATER

3.11.1 Survey conditions

Date of survey : 10th, 11th, & 12th August 1993.

Prevailing weather : cool with sunshine and occasional showers.

3.11.2 General description

The River Whitewater is an attractive chalk stream which rises near Bidden at grid reference (7080,4920), photograph 1 and flows to its confluence with the River Blackwater at grid reference (7415,6357), photograph 10. The river has a rural aspect, passing through areas of countryside and the occasional small hamlet. The river is clean and clear, photograph 8, and complete with easily visible trout up until its confluence with the River Hart, from here downstream the water is cloudy and the river gives off a slight odour. Public access to the river is limited to occasional crossings by roads and public rights of way, with more frequent public access in its upper stretches, photograph 2.

During the survey on the 10th August 1993 a pollution incident involving oil was noticed by the surveyor at Poland Mill, grid reference (7430,5315), photograph 4, and reported to Pollution Control. Further investigation by the Pollution Control Officer revealed that a spillage had occurred earlier that day during the topping up of an irrigation pump fuel tank, close to the river at grid reference (7391,5277). The Pollution Control Officer cautioned the farmer involved and took water samples for analysis, this hopefully, although a fairly serious spillage, was a one off incident.

3.11.3 Recreation activity

There is no present or potential water contact recreational activity on the River Whitewater. The draft catchment management plan does however mention the possibility of canoeing occurring on the River Whitewater.

Mr Steve Finch, Southern Region Access Officer for the BCU, said that no access agreements exist for the River Whitewater.

3.11.4 River odour

There was a slight bankside odour noticeable downstream from where the River Hart joins this River Whitewater at grid reference (7415,6087), photograph 9, this is due to sewage outfalls into the River Hart.

3.11.5 Visual river channel

As a whole the River Whitewater is an extremely visually attractive river there was however a small amount of foam evident at the weir at grid reference (7352,6011), photograph 7. The only other visual eyesore was the cloudiness and brown discolouration of the water downstream of the Whitewater's confluence with the Hart, as covered above.

3.11.6 Visual - river bank and adjacent land

There is one planning designation along the Whitewater which effects public use while not necessarily encouraging its increase. This is the Greywell moors nature reserve which is a marshy fen fed by the River Whitewater and is to the south east of Greywell, map 5, photograph 3.

The River Whitewater passes alongside the gardens of the public house at grid reference (7372,5483), photograph 5.

4. PARAMETER RESULTS

4.1 Introduction

In this section of the report the SWK parameters L3 and L4 will be applied in accordance with the information gained by the river surveys and conversations. In general the parameters are only applicable if recreation or amenity have been affected by low flows, therefore whilst undertaking the surveys it was assumed that a state of low river flow existed on the river at the present time. For example if refuse was visible on the bed of the river then this has been deemed to be visible due to low river flows. The parameters also require the surveyor to have an historical knowledge of the river, for example if visible river pollution has persisted for a period of several months. In these cases the incidences of visible pollution and river odour have been assessed individually on their merits with common sense being applied as to whether these elements are an isolated and infrequent occurrence or alternatively likely to occur continuously or on a frequent basis.

In this section of the report each river has been analysed individually with the two parameters L3 and L4 being examined for each river. For each of the parameters a score has been given in accordance with the guidelines, outlined in section 1, and the reason given for this decision, in line with the survey information recorded in section 3.

4.2 RIVER GADE TO CONFLUENCE WITH RIVER BULBOURNE

4.2.1 Recreation Parameter (L3)

Water contact recreational activity

Score - 0

Reason - No water contact recreation activity occurs on the River Gade.

No past water contact recreation activity

L3 Total Score = 0

4.2.2 Amenity Parameter (L4)

River odour

Score - 0

Reason - No river odour

Visual river channel

Score - 2

Reason - Both no water upstream and refuse particularly within Hemel Hempstead exist, and are likely to persist for several months. Particular refuse incidents may be cleared but further incidents are likely to occur. Some of the refuse cited has been in situ for a reasonable period of time.

Visual - river bank and adjacent land

Score - 1

Reason - The River Gade passes through a number of areas of public open space.

L4 Total Score = 3

4.3 RIVER BULBOURNE TO CONFLUENCE WITH RIVER GADE

4.3.1 Recreation Parameter (L3)

Water contact recreational activity

Score - 0

Reason - No water contact recreational activity occurs on the River Bulbourne.

No past water contact recreation activity

L3 Total Score = 0

4.3.2 Amenity Parameter (L4)

River odour

Score - 0

Reason - No river odour

Visual river channel

Score - 1

Reason - Due to the small scale of the refuse and its isolated incidence the rotting vegetation and refuse appear to be an intermittent problem. The visual problem of rotting vegetation is likely to be exacerbated by reduced flow.

Visual - river bank and adjacent land

Score - 1

Reason - There are three areas of public open space through which the River Bulbourne passes.

L4 Total Score = 2

4.4 AMPNEY BROOK FROM AMPNEY PARK TO CONFLUENCE WITH THAMES

4.4.1 Recreation Parameter (L3)

Water contact recreational activity

Score - 0

Reason - No water contact recreational activity on the Ampney Brook.

No past water contact recreation activity

L3 Total Score = 0

4.4.2 Amenity Parameter (L4)

River odour

Score - 0

Reason - No river odour

Visual river channel

Score - 0

Reason - There are no visual intrusions along the course of the Ampney Brook. The dryness of the tributary at grid reference (0576,0205) would be expected as the stream is ephemeral.

Visual - river bank and adjacent land

Score - 0

Reason - There are no planning designations which encourage increased public use of the land alongside Ampney Brook, apart from the public house gardens. These are however considered not sufficient to warrant the awarding of a score of 1 as the gardens are only open to customers.

L4 Total Score = 0

4.5 RIVER CHERWELL FROM GRIMSBURY INTAKE TO BANBURY SW OUTFALL

4.5.1 Recreation Parameter (L3)

Water contact recreational activity

Score - 0

Reason - No water contact recreation activity occurs on the River Cherwell.

No past water contact recreation activity

L3 Total Score = 0

4.5.2 Amenity Parameter (L4)

River odour

Score - 0

Reason - The only river odour is at the site of the sewage outfall and there is no public access at this point, it is also not caused by low flow conditions.

Visual river channel

Score - 3

Reason - Along the course of the River Cherwell surveyed a variety of visual intrusions were identified. These were foam, refuse, oil and unnatural water colour. With these four elements which may persist over a period of several months or occur intermittently the maximum score of 3 should be awarded.

Visual - river bank and adjacent land

Score - 1

Reason - The River Cherwell passes through two areas of public open space.

L4 Total Score = 4

4.6 WHITE BROOK AND MAIDENHEAD DITCH

4.6.1 Recreation Parameter (L3)

Water contact recreational activity

Score - 0

Reason - No water contact recreational activity on the White Brook or Maidenhead Ditch surveyed.

No past water contact recreation activity

L3 Total Score = 0

4.6.2 Amenity Parameter (L4)

River odour

Score - 0

Reason - No river odour

Visual river channel

Score - 0

Reason - No visual intrusions along the stream

Visual - river bank and adjacent land

Score - 1

Reason - The White Brook and Maidenhead Ditch surveyed flow through an area of National Trust open space and flow alongside the Green Way interpretive walk.

L4 Total Score = 1

4.7 RIVER BEANE

4.7.1 Recreation Parameter (L3)

Water contact recreational activity

Score - 0

Reason - Although there are currently plans to gain an access agreement to canoe on a stretch of the river there is no evidence that this is affected by low flows.

No past water contact recreation activity

L3 Total Score = 0

4.7.2 Amenity Parameter (L4)

River odour

Score - 0

Reason - No river odour

Visual river channel

Score - 2

Reason - The visual elements of no water, rotting vegetation and refuse in some instances are likely to persist for a period of several months and items such as traffic cones are visible.

Visual - river bank and adjacent land

Score - 1

Reason - The River Beane passes adjacent to two areas of public open space and also alongside the Gravel Walk Nature Trail.

L4 Total Score = 3

4.8 RIVER MIMRAM

4.8.1 Recreation Parameter (L3)

Water contact recreational activity

Score - 0

Reason - No water contact recreation activity on the River Mimram.

No past water contact recreation activity

L3 Total Score = 0

4.8.2 Amenity Parameter (L4)

River odour

Score - 0

Reason - No river odour

Visual river channel

Score - 0

Reason - Although two isolated cases of refuse were seen by the surveyor they must be regarded as intermittent and unlikely to persist. Thus it must be concluded that a score of 0 and no visual problems is appropriate.

Visual - river bank and adjacent land

Score - 1

Reason - The River Mimram passes alongside two small areas of public open space.

L4 Total Score = 1

4.9 RIVER WYE ABOVE HIGH WYCOMBE SW

4.9.1 Recreation Parameter (L3)

Water contact recreational activity

Score - 1

Reason - The boating on The Dyke would have been affected by the reduced flows of the River Wye in the past five years.

No past water contact recreation activity

L3 Total Score = 1

4.9.2 Amenity Parameter (L4)

River odour

Score - 1

Reason - There is odour noticeable from the footpath due to rotting vegetation.

Visual river channel

Score - 2

Reason - Some of the visual elements present on the river such as rotting vegetation, foam and refuse are likely to persist over a period of several months.

Visual - river bank and adjacent land

Score - 1

Reason - The River Wye surveyed passes through a number of public open spaces.

L4 Total Score = 4

4.10 RIVER CHURN

4.10.1 Recreation Parameter (L3)

Water contact recreational activity

Score - 1

Reason - Canoeing on the River Churn has been affected by low flows in the past five years.

No past water contact recreation activity

L3 Total Score = 1

4.10.2 Amenity Parameter (L4)

River odour

Score - 0

Reason - No river odour

Visual river channel

Score - 1

Reason - The foam and refuse identified appear to be only a minor problem and likely to occur intermittently thus warranting a score of 1. The refrigeration unit, although an eyesore close to the river, was situated on the river bank and therefore not affected by low flows in the river channel.

Visual - river bank and adjacent land

Score - 1

Reason - The River Churn flows through two areas of public open space, the public are also encouraged to use the Cotswold Water Park for recreation.

L4 Total Score = 2

4.11 RIVER WHITEWATER

4.11.1 Recreation Parameter (L3)

Water contact recreational activity

Score - 0

Reason - No water contact recreation activity occurs on the Whitewater.

No past water contact recreation activity

L3 Total Score = 0

4.11.2 Amenity Parameter (L4)

River odour

Score - 1

Reason - Downstream of the River Whitewater's confluence with the River Hart there is a slight bankside odour.

Visual river channel

Score - 0

Reason - There was only a small amount of foam evident at one location and the discolouration of the water downstream of the River Whitewater's confluence with the River Hart can not be accounted for by low flow.

Visual - river bank and adjacent land

Score - 0

Reason - Although the River Whitewater passes through the Greywell Moors Nature Reserve the public are encouraged to stay on the public rights of way and not stray into the reserve.

L4 Total Score = 1

5. CONCLUSIONS

5.1 Survey Considerations

Throughout the course of the survey it was found that the river levels were in general higher than in previous years, certain rivers, for example the Cherwell and Beane were however subject to very low or nil river flows on some stretches.

The vast majority of the river courses surveyed were not of a sufficient channel size and water depth to enable any type of water contact recreation to occur. The most likely sport that could happen at certain times on a number of these rivers is canoeing. However although some of these rivers have been canoed in the past no access agreements exist with the riparian landowners. On rivers such as the Whitewater there is also little chance of access being granted due to the high quality of the angling, in this case an EC designated salmonoid fishery to its confluence with the River Hart.

For all of the ten rivers surveyed the amenity aspect of the survey must be considered of greater relevance than water contact recreation. The rivers do however vary greatly in their accessibility to the general public. This tends to be achieved via public rights of way or public open space, Ampney Brook for example however passes through no areas of public open space and public footpaths only follow the river's course for a limited distance. Other rivers such as the River Wye, through High Wycombe, can be viewed from public areas for virtually all of their course passing through a number of public open spaces. This disparity of access causes problems both for the surveyor on the ground and in applying the parameters as shall be discussed later.

5.2 Benefits of the SWK Recreation and Amenity Parameters

The Recreation and Amenity Parameters L3 and L4 do appreciate that low river flow has more of an effect on water contact recreational activity than it does on passive recreational pursuits such as walking. By considering recreation pursuits the parameter L3 is able to take into account the impact of a reduction in river flow on recreational activity. The parameter also takes into account the three possibilities of past, present and potential water contact recreational pursuits. The importance of water contact pursuits for any particular river is further considered when the weightings of the parameters L3 and L4 are compared. The parameter L3 has a weighting of 30% compared to only 10% for the Amenity parameter L4.

When the final scores for the rivers are considered it is apparent that they appear to give a reasonably representative view of the river. Those rivers that have a solitary water contact recreation activity, such as canoeing on the Churn, score 1. When considering amenity, rivers such as the Wye which has odour, visual elements and planning designations score a maximum of 4, as they have a number of amenity problems and the public are encouraged to use the river bank. The opposite can be said of the Ampney Brook which has no river odour, no visual elements and nowhere along its length do planning designations encourage the public to the river bank. The Ampney Brook under the parameter L3 has a score of 0.

5.3 Drawbacks of the SWK Recreation and Amenity Parameters

Within most of the rivers surveyed some form of visual pollution was identified. Firstly there is the problem of trying to identify whether or not the elements seen have persisted from some time in the past or are likely to continue into the future. Alternatively the pollution elements seen may only occur intermittently, with the surveyor needing to make a decision as to their longevity following only one site visit.

In terms of public amenity the location of pollution incidents may be regarded as being more important than their substance. On the River Cherwell shopping trolleys and traffic cones are visible from Spiceball Country Park and near to Banbury town centre, these are viewed by a large number of people each day. Also on the Cherwell is a sewage outfall which results in water discolouration, but there is no public access to the river. In terms of the way the parameters assess these two, there is no difference, the methodology should be developed to take into account these differences.

The rivers surveyed were of very different lengths varying from the White Brook and Maidenhead Ditch at about 3 miles to the River Churn, approximately 22 miles in length. The parameters are not being used to compare like with like, it must be considered that there is likely to be more pollution on a river which is seven times longer than another.

Problems also occur when looking at planning designations irrespective of the length of the river. The River Wye surveyed flows through five areas of public open space and National Trust grounds that are open to the public at certain times. The River Mimram passes alongside only two small areas of public open space. Despite the disparity in the number of planning designations the two rivers receive the same score according to the provisions of the visual - river bank and adjacent land part of the amenity

parameter, ideally the two should receive a different score.

What is therefore necessary is one of two options to reduce this disparity.

Firstly the river could be split into measured sections, but how are the boundaries to be decided upon? A splitting up of the river into 1 kilometre sections would lead to subjectivity in the choice of the boundaries and problems where features such as open spaces cross boundaries, would they therefore occur in two sections, and be counted twice?. The score for the river could then be calculated according to, for example, the number of sections which contained odour and the percentage of the total sections further calculated and the score thus assessed.

Secondly, the rivers could be scored by a different system in which for example, the number of planning designations encouraging public use or pollution elements are considered in terms of number per kilometre. Each category of the river survey could be scored with a higher number of observations per kilometre gaining a higher score, to be reflected in the percentage score for that parameter, in this case L4, as envisaged by SWK. Such a technique does however need further investigation as to its scoring system in order that a score of 0.5 per kilometre of planning designations increasing public use can be compared with a score of 0.1 per kilometre.

Due generally to narrow stream width and associated depth of water, there was no water contact recreation activity, past, present or potential on eight out of ten rivers surveyed. There may therefore be a case for the development of a different set of parameters depending upon whether the river is suitable for amenity use only or for water contact recreation as well. In the case of the parameter L3 this was seldom successfully applied as the surveyor was soon able to establish that no water contact recreation activity was possible on the river. The parameter L3 seems to be suitable when considering a river such as the Thames and its variety of water based

sports, however for its tributaries it appeared that the Amenity Parameter could be expanded to take into account a number of additional amenity features and factors, some possibilities are explained in section 5.4 below.

5.4 Parameter Additions

The existence of visual pollution incidents, river odour and planning designations should be considered in terms of their accessibility and closeness to urban areas. Where for example areas of public open space are close to a town centre, as with Gadebridge Park in Hemel Hempstead, rather than small seldom used Countryside Stewardship areas, then the scoring system of the Amenity Parameter should reflect this. A higher score should be applied when public access is easier and usage greater.

The Recreation Parameter L3 takes into account the potential of the river for active recreation there is however a need for the Amenity Parameter L4 to take in to account future proposals which would enhance the amenity value of the river. Examples of this include the eventual plans to open up the Panshanger estate, through which the Mimram passes, as a nature reserve, following gravel extraction.

In certain instances the river which is being surveyed may be one of a number of close and better resources, this particularly applies to active water recreation. For example, due to the poor quality of the canoeing on the River Churn and its general unsuitability for groups, staff of the the South Cerney Water Sports Centre are more likely to travel to the River Severn or the River Wye than use the Churn even if was not subject to low flows. The parameters therefore need to take into account similar facilities and the standard of those on the river being surveyed.

The visual - river bank and adjacent land part of the Amenity parameter takes into account :

'where the general public are encouraged to have access to the river as part of a wider planning designation such as public open space; or the provision of a long distance footpath.'

This part of the parameter does not however take into account the existence of public rights of way. For most of the rivers surveyed these were the main form of public access to the river and their existence, status and amount they follow the river or merely cross it should be taken into account as part of the Amenity Parameter.

Although the Recreation and Amenity Parameters could be adapted to give a more accurate picture of the river, the scores produced and outlined in section 4 do give a reasonably accurate view of the recreation and amenity situation as it applies to each river.

5.5 Parameter score summary

The Recreation (L3) and Amenity (L4) parameter scores for the ten rivers surveyed are:

1. **River Gade to confluence with River Bulbourne.**
Recreation Parameter (L3) = 0
Amenity Parameter (L4) = 3
2. **River Bulbourne to confluence with River Gade.**
Recreation Parameter (L3) = 0
Amenity Parameter (L4) = 2
3. **Ampney Brook from Ampney Park to confluence with Thames.**
Recreation Parameter (L3) = 0
Amenity Parameter (L4) = 0
4. **River Cherwell from Grimsbury intake to Banbury SW outfall.**
Recreation Parameter (L3) = 0
Amenity Parameter (L4) = 4
5. **White Brook and Maidenhead Ditch.**
Recreation Parameter (L3) = 0
Amenity Parameter (L4) = 1
6. **River Beane.**
Recreation Parameter (L3) = 0
Amenity Parameter (L4) = 3
7. **River Mimram.**
Recreation Parameter (L3) = 0
Amenity Parameter (L4) = 1
8. **River Wye above High Wycombe SW.**
Recreation Parameter (L3) = 1
Amenity Parameter (L4) = 4
9. **River Churn.**
Recreation Parameter (L3) = 1
Amenity Parameter (L4) = 2
10. **River Whitewater.**
Recreation Parameter (L3) = 0
Amenity Parameter (L4) = 1

Appendix 1

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