

**PUBLIC RESPONSES TO
RIVER RESTORATION:
THE RIVER SKERNE,
AND THE RIVER COLE**

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Report to the River Restoration Project

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EXECUTIVE SUMMARY

INTRODUCTION

This summary presents the results of research into the public perception of river restoration works on the river Skerne in Darlington, County Durham, and the river Cole in the village of Coleshill on the Oxfordshire/Wiltshire border. The River Skerne and the River Cole are the two UK sites chosen for demonstration projects developing and testing state-of the art river restoration techniques by the River Restoration Project (RRP). The study on these rivers was funded as part of a wider study of local publics' responses to river restoration schemes by the Economic and Social Research Council (ESRC), with some additional funding from the RRP.

The study builds upon earlier research in Darlington by the Flood Hazard Research Centre (FHRC) carried out for and funded by the RRP, prior to the proposed restoration works being carried out (RRP, 1995). This pre-scheme survey then contributed to the public consultation on the river restoration scheme design and aimed to assess public use of, and response to, the river, the site and the proposed river restoration scheme. This report presents results from a second survey in Darlington which analysed public views after implementation of the proposals and provided an opportunity to re-contact respondents from the earlier survey to investigate how their perceptions changed on completion of the restoration works. Both surveys in Darlington aimed to investigate the value of the restored river to local people in economic terms. A total of 296 interviews were completed in the 1997 study, 260 in Darlington and 36 in Coleshill; the average length of interview was 45 minutes. Of the 260 Darlington respondents 136 (56%) had been interviewed in the previous survey.

The report of the surveys' findings comprises two parts. The first part compares the public perception results from the 1997 surveys between the two river restoration sites in Darlington and Coleshill. The second part of the report compares results from the 1995 and 1997 studies solely on the river Skerne, focusing on the public valuation of the restoration scheme.

PART I COMPARISON OF RESULTS FROM THE 1997 RIVER SKERNE AND RIVER COLE SURVEYS

Results from the 1997 surveys in Darlington and Coleshill show an overall positive reaction to the river restoration projects. However, respondents differed in their perceptions and views of the two restoration schemes. Many of these differences appear to relate to the contrasting locations of the two rivers, one in an urban context and one in a rural context. Attitudes towards restoration, therefore, may not only depend upon the scheme itself but also upon the type and quality of the surrounding local environment. Various other factors also influenced respondents' responses to questions about different aspects of the restoration schemes. These factors include respondents': age, sex, levels of education and income, proximity to the rivers, and general approval of the schemes. Details follow.

Use of the rivers (Section 3)

Both rivers had been visited by the majority of respondents in the surveys in the last 12 months: 81 % of Darlington respondents had visited the river Skerne, while 64 % of Coleshill respondents visited the river Cole.

Generally, the two rivers were visited quite frequently, Darlington respondents on the whole visiting more often than those in Coleshill, although visiting at both sites dropped slightly during winter. The main reasons given by respondents for visiting both of the rivers were: walking, walking the dog and for the wildlife. The reason why respondents in Darlington visit their local river more frequently could be due to a number of reasons: easier access than at Coleshill and more pronounced footpaths in places, the river area presenting a more rural landscape in an otherwise urban environment, and the river providing access to elsewhere. In the more rural environs of Coleshill residents may feel less of a need to 'escape' from an urban environment to the peace and quiet of the river. Moreover, Coleshill residents have a number of other local areas they could easily choose to visit, including the National Trust parkland, and are not restricted to the area surrounding the river Cole.

However, the results showed that although Coleshill respondents visit their river less often than respondents in Darlington, when they do visit they spend longer at the river. It could be, therefore, that Coleshill respondents make more of a point of visiting the river when they do visit. In addition, some respondents visit the river in the course of their work which could account for some of the longer reported visiting times.

Attractiveness of the rivers (Section 4.3)

The river Skerne in Darlington was liked by local residents for two main reasons: because it was a quiet and peaceful refuge away from the traffic and urban town centre, and it attracted an increasing amount of wildlife. Darlington respondents equated a visit to the river with visiting the countryside, and the river itself was thought to be a more interesting place to visit since the meanders had been introduced. Coleshill respondents also appreciated the peaceful and rural aspects of the river Cole along with the diversity of wildlife to be found there. Aspects of the river areas which were not appreciated by local residents in Darlington included dog fouling, poor footpaths in places, vandalism, and teenagers who congregate by the river. In Coleshill, respondents commented that the river banks were still too bare and that vegetation had not yet colonised them. Other respondents commented that fishing on the river Cole had been adversely affected.

Both of the rivers in the study were rated quite highly by local residents in terms of their attractiveness, particularly the Skerne (mean of 2.689 on a scale of -5 to +5, compared with 2.517 for the Cole). Given that the Cole is a rural river, its lower rating is perhaps surprising. But when considering the location of the rivers, it becomes more understandable that the river Skerne area would be considered attractive and valued for its visual amenity and recreation opportunities because it contrasts more strongly to the neighbouring built-up area than does the Cole. However, quite large proportions of respondents (19% at both sites) were unable to give a rating for the rivers' attractiveness, most of these being either non-visitors or those who lived at greater distances from the river.

Awareness of the restoration works (Sections 5.1-5.4)

Awareness of the two restoration schemes was high among survey respondents. Darlington respondents reported the highest level of awareness (92%), as 56% had already been interviewed in the earlier survey and were aware of the scheme. The high level of awareness in Coleshill (86%) is likely to be partly because the respondents live in a small village and news about the river works would spread quite quickly. Forty-eight percent of Coleshill respondents and 36% of those in Darlington reported personal observation as the means by which they first heard about the restoration works, which indicates that the RRP was not always instrumental in initially raising awareness of the projects, although 35% of Darlington respondents did state that they had received a newsletter or leaflet.

Indeed, the RRP was only mentioned by 6% of respondents at both sites when they were initially asked who was involved with the restoration works. Once prompted with the RRP's name high proportions of respondents, 61% in Darlington and 75% in Coleshill, did say that the RRP was involved. This low initial recognition of the RRP indicates that the organisation is not immediately associated with the restoration works. Given the high level of consultation regarding the two schemes, particularly in Darlington, these results are perhaps surprising, and suggests that a higher profile should be cultivated for any future restoration works.

Generally, respondents were quite aware of most of the changes to the rivers carried out as part of the restoration schemes, but were particularly aware of the introduction of meanders to the river channels, and of the new river channel at Coleshill.

What were the restoration works hoping to achieve? (Section 5.5)

Respondents differed in their views of restoration aims. In Darlington it was suggested that the scheme aimed to clean up and improve the area generally for the benefit of local people and in order to attract more visitors. Restoring the river to a more 'natural' condition and helping to alleviate flooding were also seen as aims of the project, along with the encouragement of more wildlife. In Coleshill, the scheme was perceived less as benefiting the local community and more as benefiting nature. For example, the re-creation of wetlands and the floodplain, improvements in river flow, vegetation and wildlife habitats were mentioned by respondents, as well as the aim of restoring the river to its earlier 'natural' course.

Approval of the restoration schemes (Section 7.3)

The results from the study reveal that the majority of respondents at both the survey sites approve of the restoration schemes. Darlington respondents in particular strongly approved of the changes (52% mostly approved and 30% strongly approved), although Coleshill respondents were rather more reserved (53% mostly approved and 17% strongly approved). Even among those respondents who did not think the schemes to be good value for money, the majority approved of the restoration changes. Those 8% of Darlington respondents and

25% of Coleshill respondents who did not approve of the schemes mostly gave their reasons as the costs of the restoration or because they had not seen the necessity of changing the river.

Despite the overall approval of the schemes, respondents did not report much change to their visiting patterns to the rivers since the restoration works (Section 5.9). In fact, Coleshill respondents showed the highest proportion of people who reported that they visit a bit more frequently, possibly due to access to some stretches of the river having been enhanced by the restoration works. However, the results indicate that the pleasure derived from visiting the two rivers has now increased since the restoration works have been completed, and especially so for respondents in Darlington. It was generally felt that the rivers 'fit in' well with their surrounding areas, while almost a quarter of respondents at both sites felt the rivers fitted in completely (Section 5.6).

Perceptions of the effects of the restoration schemes (Sections 6.1-6.5)

The two survey populations had different views regarding certain effects of the restoration schemes on the surrounding areas, which generally reflected the rural or urban context of each scheme. Recreational opportunities were largely felt to have been increased at the river Skerne, or to have remained the same, while at the river Cole they were felt more to have remained the same. Moreover, in Darlington the river landscape was perceived by the majority of respondents (63%) as becoming more attractive since the restoration, while in Coleshill views on the attractiveness of the river Cole's landscape were much more mixed; 28% felt the river to be more attractive, 22% felt it to be less attractive and the same percentage felt that it had remained the same.

Darlington respondents felt the restoration scheme to have had very positive effects in increasing wildlife and wildlife habitats. Seventy percent of Darlington respondents thought that more wildlife had been attracted to the area since the restoration works. In contrast to this, respondents in Coleshill were much more mixed in their opinions about the effects of the scheme on wildlife, with almost equal numbers feeling that wildlife had been increased or had been lost, and even more feeling that there had been no changes in wildlife. Some respondents felt the loss of wildlife was a temporary phenomenon associated with disturbance from the construction of the meanders.

On the question of safety, although 38% of Darlington respondents and 39% of those in Coleshill felt that safety aspects of the river had not changed, 30% of Darlington respondents reported that they feel their river to now be more safe since the restoration works, compared with 10% who felt it was less safe. In Coleshill the situation was reversed, with 28% of respondents feeling the river to be less safe, while only 14% felt it was more safe. These perceptions on safety can also be linked to respondents perceptions of flood risk since the restoration works. In Darlington 39% of respondents felt flood risk had decreased since the restoration works, while the opposite was the case at Coleshill, where 39% of respondents felt that the risk of flooding had increased. These perceptions of flood risk correspond to what respondents felt the schemes were trying to achieve. In Darlington it was largely felt that the restoration works would help alleviate flood risk, while in Coleshill many respondents felt that the objective of the scheme had partly been to recreate the original

floodplain, thereby increasing risk of flooding.

Perceptions on the objectives of river restoration (Sections 7.1-7.2)

Sixty four percent of respondents in Darlington felt that the restoration scheme there had partly or completely achieved its objectives. In Coleshill, only 36% of respondents felt this, and 50% reserved their judgement by saying that they felt it to be too soon to tell whether the scheme had achieved its objectives. However, 67% of Coleshill respondents did feel that the scheme's objectives were achievable on rivers in England generally, as did the majority of respondents in Darlington. Responses to an open question did, however, raise the issue of certain constraints being problematic, such as the availability of resources and the fact that many rivers flow through urban areas.

Views on the costs of the schemes (Section 5.7)

Views on the cost of the schemes were mixed. Many people commented in open questions that they felt the costs to be reasonable and justified, while others expressed indignation and stated that the costs were excessive. Although the results from the open question comments regarding the costs were not quantified, the general indication is that more people considered them to be acceptable than not acceptable. Moreover, when the costs were broken down as being per adult or per household the response was rather more positive, with the costs seen as being more acceptable.

Overall, the majority of respondents in Darlington (63%) reported that they felt the restoration scheme to be either quite good or very good value for money. However, Coleshill respondents were rather more cautious, with 42% thinking that it was too soon to tell (Section 5.8). This difference again appears to be linked to the locational context of the two schemes, as Coleshill respondents in particular appeared to feel that there was less need for a restoration scheme on an already rural river.

Views on consultation (Sections 8.1-8.5)

Over 60% of respondents at both survey sites reported that they thought local people had been consulted about the restoration works. Those respondents who had been directly involved in the consultation process reported either receiving letters, leaflets or RRP newsletters or taking part in public meetings or guided visits of the river sites. Other respondents had heard about the river works through local media coverage, from their local councils, or by seeing a notice board on site, or viewing the construction works themselves. Darlington respondents who had been interviewed in 1995 also included the earlier survey as part of the consultation process.

Overall, respondents in Darlington showed slightly higher percentages than Coleshill respondents (61% compared with 56%) who stated that they were satisfied with the consultation over the restoration scheme and many thought that consultation regarding the scheme could not have been improved. Although Coleshill respondents showed slightly

higher percentages than in Darlington who were very satisfied with consultation, they also showed higher percentages who were not at all satisfied.

Public consultation about river restoration schemes such as those investigated for this study was reported to be important by the majority of respondents in the study. However, not all respondents expressed a desire to be involved in the consultation process. Respondents at both sites made the point that they could have been more involved with the consultation process if they had chosen to, therefore, what is important is that people have the opportunity of being involved if they so wish. It was generally felt that information about such schemes should be widely disseminated to local residents through such means as letters or leaflets delivered to each household, thereby allowing people to have the choice over whether or not to become involved.

PART II COMPARISON OF RESULTS FROM THE 1995 AND 1997 RIVER SKERNE SURVEYS

Part II of this report compares the public's responses to, and preparedness to pay for river restoration of the river Skerne in the 1995 and 1997 surveys of Darlington residents only to assess the consistency of the responses and to evaluate the usefulness of the 1995 pre-scheme responses as a guide to responses after the implementation of the restoration scheme. This has been done by comparing:

- total sample responses from the 1995 and 1997 surveys;
- the aggregate responses of the 136 respondents participating in both the 1995 and 1997 surveys: (the re-interviewed);
- the paired responses of the re-interviewed, individual by individual, before and after scheme implementation.

In addition, the characteristics and responses of the re-interviewed were compared with those participating in one survey only to check whether the re-interviewed appeared to be a typical group or subject to experimental effects.

There were few marked differences in demographic characteristics between those participating in the 1995 and those in the 1997 surveys. Fewer men were interviewed in 1997 than in 1995 and amongst those re-interviewed. Those who agreed to take part in both surveys were not particularly atypical in terms of their demographic characteristics, and a comparison of their responses before and after the scheme was implemented is therefore valid. The re-interviewed were atypical in that they were more frequent visitors and walkers by the river but their ratings of the attractiveness of the river before and after scheme implementation did not differ significantly from those of other respondents. They did tend to take a more positive view of the effects of the scheme on wildlife and wildlife habitats, on recreational opportunities and on landscape in 1997 than did other respondents. The re-interviewed were significantly more approving of the scheme in 1997 and more prepared to pay in 1995 and 1997 than those interviewed only once. Thus, the re-interviewed were somewhat more favourable in their views on the scheme than those interviewed only once,

but the difference was not so marked as to make them completely atypical and a poor guide to local people in general.

Use of the river (Section 3)

Comparison of the results from the 1995 and 1997 surveys suggests that the implementation of the river restoration scheme had very little impact on river visiting in terms of the frequency, duration and purpose of visits and parts of the scheme section of the river visited. However, one significant change was the higher proportion citing 'wildlife' as the purpose of their visits to the river in 1997 (35%) compared with 1995 (17%).

Attractiveness of the river and scheme (Section 4.2)

Ratings of the attractiveness of particular sections and of the river overall given in the surveys before and after scheme implementation suggest that the river was seen as more attractive after restoration compared with its pre-scheme condition.

Perceived effects of the restoration (Section 4.4)

Respondents in the 1997 survey had a slightly less positive and more uncertain view of the effects of the scheme on wildlife and wildlife habitats, riverside safety for children and recreational opportunities than they had prior to scheme implementation. The most marked change was in the proportion regarding the river changes as offering increased recreational opportunities: 64% in 1995 compared with 40% in 1997. The immaturity of the scheme may account for greater uncertainty about the effects found in the 1997 survey compared with 1995. Broadly, apart from the effects on recreational opportunities, the scheme once in place appeared almost to have lived up to the high expectations Darlington residents had of it in 1995.

Approval for the scheme (Section 4.5)

Approval of the scheme in 1997 appeared to be slightly more qualified than before: 82% approved of the scheme overall, of which 52% 'mostly approved' but only 30% 'strongly approved' in 1997 compared with 92% favouring the proposals and 70% 'strongly in favour' of the proposals in 1995. However, although some respondents changed their views on the scheme and there was a more qualified response to the scheme once it was in place, the responses given on the basis of drawings and text about the proposals proved to be a fair guide to how people felt about the scheme once it had been implemented. Overall, the view of restoration was consistently favourable.

Monetary valuation of river restoration: Value of enjoyment 1995 (Section 5.1)

The sample sizes used in the 1995 and 1997 surveys were too small for a valid Contingent

Valuation Method (CVM) study to be carried out and the results on the economic benefits of restoring the river must be treated as exploratory and requiring confirmation by a large scale CVM survey.

The value of enjoyment (VOE) questioning approach was used in 1995 to obtain a monetary valuation of the recreational use of the Skerne riverside before and after restoration. A majority of river visitors (56%) were able to offer a value for their enjoyment of a visit to the river in its pre-restoration condition. The mean amount offered was £6.00 per visit (with no outliers excluded). The mean value of the enjoyment of a visit after scheme implementation was £7.65 per visit, so that the mean gain from the scheme was £1.90 per visit. These results must be treated with caution but they do suggest that there would be a substantial economic benefit from restoration, even if outliers were excluded and conservative assumptions were made about the number of visits to the River Skerne per annum and the status of those unable to offer a valuation.

Monetary valuation of river restoration: Preparedness to pay in 1995 and 1997 (Section 5.2)

Respondents in both the 1995 and 1997 surveys were asked in some form whether they would be prepared to pay for the scheme to restore the River Skerne. In neither survey did the sample size and the way in which the valuation questions were asked fully meet the standards and guidelines laid down for CVM studies by FHRC and others. Therefore, the results on preparedness to pay are exploratory and must be treated with caution until confirmed by a full scale CVM survey.

The 1995 survey showed that respondents might be more prepared to pay for a local scheme to restore the Skerne (62%) than for a national river restoration programme (to include the Skerne) (57%). However, a common response was for people to be prepared to pay for both a local and national scheme (33%) or neither (27%).

In 1995, 45% of Darlington respondents were definitely prepared to pay and a further 17% said that 'maybe' they would be prepared to pay. This gives a total of 62% who might be prepared to pay a small increase in national and local taxes each year for the scheme to restore the River Skerne. Despite a very different questioning approach, the proportion prepared to pay was remarkably similar in 1997, with 52% prepared to pay the average amount offered in 1995 of £22 per year extra in national and local taxes and a further 10% prepared to pay something less than that sum, again a total of 62%. An examination of the results on preparedness to pay of those who participated in both surveys shows the responses to be broadly consistent, with about three quarters of those who said they might be prepared to pay in the 1995 survey confirming this response in 1997. In comparing the results on preparedness to pay from the 1995 and 1997 surveys, it is important to be aware of differences in the presentation of the scheme in the surveys in 1995 and 1997 and in the scheme actually implemented, as well as different ways in which the preparedness to pay questions were asked in the two surveys.

The mean amounts offered in the 1995 and 1997 surveys were almost identical (£22 in extra national and local taxes per year in both cases). However this similarity may be due to the

questioning approach used in 1997 which focused on whether or not respondents were prepared to pay the 1995 average amount of £22. Furthermore, the mean amounts disguise the very different distributions of the amounts offered. The questioning technique employed in 1995 with two very widely different starting points (50p and £64) resulted in a much wider range of amounts offered (25 pence to £180) compared with the 1997 survey. The range of amounts offered in 1997 was narrower (ranging from £1 to £100). It appears therefore that the amounts people were prepared to pay may be strongly influenced by the methods used to elicit them and therefore results from the surveys should be interpreted with caution.

When the individual amounts specified by those who were prepared to pay something in both 1995 and 1997 were compared, there was only a weak correlation between the 1995 and 1997 offers. The t test for the paired difference showed a significant variation between the amounts given in 1995 and 1997. Again, it appears likely that the differences in the amounts offered may reflect the different elicitation questions. However, a majority of those interviewed in 1997 (52%) were prepared to pay the average amount of £22 offered by those prepared to pay in the 1995 survey. This can be taken as an endorsement of the pre-scheme response on preparedness to pay, so the results do suggest that substantial economic benefits could be generated by the river restoration scheme.

1. INTRODUCTION

1.1 Background and objectives of the research

This report presents the results of research on the public perception of river restoration. The study covers restoration works on the river Skerne in Darlington, County Durham, and the river Cole in the village of Coleshill on the Oxfordshire/Wiltshire border. The River Skerne and the River Cole are the two UK sites chosen for demonstration projects developing and testing state-of the art river restoration techniques by the River Restoration Project (RRP), the body responsible for designing and undertaking the river restoration works.

The RRP comprises people and organisations with an interest in furthering river restoration initiatives in the UK and more widely, and is supported and funded by the Environment Agency, English Nature, and the Countryside Commission. The Department of Agriculture for Northern Ireland is an Associate of the Project, while Northumbrian Water and Darlington Borough Council are additional supporters of the River Skerne scheme, and the National Trust has played a similar role on the scheme for the River Cole. The European Commission LIFE Programme also provided funding to support the demonstration project restoration works and some of the monitoring.

The two public perception surveys were funded as part of a wider study of local publics' responses to river restoration schemes by the Economic and Social Research Council (ESRC) (ESRC grant R000236740), with some additional funding from the RRP. The ESRC funded surveys were part of a wider project which, in addition to exploring local public's appreciation of, and involvement in, three restoration initiatives, aimed to contribute to the academic understanding of the contested status of environmental management with particular reference to theorisation of 'local' and the 'natural'.

The research reported in Part I of this report, therefore, focuses on comparing the public perception results across the two river restoration sites by examining the following:

- the use of the river corridors;
- perceptions of the attractiveness and appearance of the rivers and their surrounding areas at the two sites since the restoration works have been completed;
- awareness of the restoration works and who was involved in their implementation;
- awareness of the various changes made to the rivers as part of the restoration schemes;
- views on various aspects of the rivers since restoration;
- overall approval for the river restoration schemes, including their cost;
- involvement with, and views on, the consultation process.

The Darlington and Coleshill studies build upon earlier research by the Flood Hazard

Research Centre (FHRC) in Darlington in 1995 carried out for and funded by the RRP (RRP, 1995), prior to the proposed restoration works being carried out. The first pre-scheme survey was seen as contributing to the public consultation on the river restoration scheme design and on Darlington Borough Council's proposals for an additional footbridge and cycle and foot paths. In the study respondents were asked their perceptions on the proposed river restoration scheme and questioned on the value of the rivers to local people. This survey, along with the follow-up 1997 study, therefore aimed to assess public use of, and response to, the river, site and the river restoration scheme both before and after its implementation. The second survey in Darlington provided an opportunity to re-contact respondents from the earlier study to investigate how their perceptions may have changed with the completion of the restoration works. Both surveys aimed to investigate the value of the restored river to local people in economic terms. These aspects of the study are reported in Part II of the report and focus on before and after comparisons of the river Skerne restoration scheme.

1.2 Research Methods - Population and sampling

Structured quantitative surveys of local residents were carried out in 1997 at both sites to monitor the public's responses to the restoration proposals and works. The Darlington sample was made up of two parts. The first part comprised all those respondents interviewed in the 1995 survey who agreed to take part in a follow-up study, 235 in total. An attempt was made to reinterview as many as possible of these named individuals, 93%, who had agreed to a second interview.

The initial Darlington population sample was defined in the earlier study as those households living in roads, or parts of roads, within 400 metres from the section of the River Skerne between Skerne Bridge and Haughton Bridge (Figure 1.1). As there were few residential properties within 400 metres south of the river (being largely a trading estate), the boundary was extended to include those properties between the river and Haughton Road. A systematic random sample was drawn from the electoral register for Darlington in order to ensure that the sample was representative of the population as a whole and that the probability of selection was proportionate to the number of electors at each address.

The second part of the population sample for Darlington was drawn to allow for any 1995 respondents not now willing or able to take part in another survey. A further new systematic random sample was drawn from the electoral register for the same population to make up the numbers. The total population within the study area was 4,889, 183 more than in 1995. As around 300 additional addresses were felt to be necessary to achieve a total target of 250 interviews, a sampling interval of 16 was arrived at (4,889 divided by 300) and every sixteenth address was selected for inclusion in the survey. In total, 293 addresses were drawn for the new sample, 43 of which were omitted as they had been interviewed in the earlier survey. This left a total of 250 new addresses to target, along with the 235 previous addresses where respondents had agreed to be re-interviewed.

As the population of Coleshill was small it was decided to target all of the addresses within the village itself along with farms and other properties within about one mile of the river (Figure 1.2). A copy of the electoral register for Coleshill was obtained which revealed 133 named individuals. Eleven named individuals were excluded from the sample, either because

they were to be approached for the pilot survey or due to the fact that it was intended to include them in later qualitative interviews. This left 61 addresses from the register to be targeted. A number of addresses were also identified in the village which had not appeared on the electoral register, perhaps either because they were empty or because the occupant had not registered to vote. These addresses were also included in the sample, although not all of them were used.

As the electoral register for Coleshill only covered properties in the village itself and to the east of the river boundary line, any properties within one mile to the west of the river (as identified from a local map) were included in a different electoral ward. As this only involved a handful of properties it was decided to include them all in the sample. It was, however, not clear in many cases whether these were residential properties.

Interviewers at both sites were instructed to try to obtain a balance between male and female respondents as far as possible and only to approach members of the household aged 18 years or over. In addition, interviewers were instructed to call upon respondents at different times of the day and on different days of the week in order to target respondents who work during the day or who are only available at weekends.

1.3 Questionnaire design

As the 1997 survey was building upon the earlier study carried out in Darlington in 1995, parts of the basic design for the questionnaire was based upon the earlier version. The 1995 and 1997 surveys questionnaires therefore contained a core of about 15 common questions including several multi-part questions (excluding demographic questions) to permit before and after comparisons to be made.

The basic 1997 questionnaire for both Darlington and Coleshill was the same, with only minor site-specific differences in the wording of some questions. The one major difference between the questionnaires in Darlington and Coleshill was an additional set of questions in the Darlington questionnaire on the willingness to pay for river restoration which followed on from the 1995 study.

Pilot surveys were undertaken at both sites to test the effectiveness of the questionnaires. Eleven interviews were completed in Darlington between the 9th and 13th December 1996, with five being conducted in Coleshill on 19th December. Due to the length of the questionnaires the interviews were quite long, on average 62 minutes in Darlington (due to some additional questions) and 46 minutes in Coleshill. It was therefore decided to reduce or delete some questions, or parts of questions (particularly for Darlington), and therefore shorten the length of the questionnaires. Copies of the revised questionnaires are available from FHRC.

A number of 'open' questions were included in the questionnaires to allow respondents to add additional comments regarding certain issues and aspects of the rivers and restoration schemes. Where possible these comments were recorded verbatim by the interviewers to allow respondents to express their opinions in their own words. Some of these comments have been quoted in the report to help illustrate the points under discussion.

1.4 Fieldwork

The fieldwork for the surveys was carried out by ten local interviewers, seven in Darlington and three in Coleshill. Three of the Darlington interviewers had been employed on the 1995 survey and were familiar with the project. Briefing sessions for the interviewers were held in Darlington and Coleshill on 16th January 1997 and the interview period began on the following day, approximately 18 months after the start and 13 months after the completion of the main restoration works.

Introductory letters were delivered to addresses in the two sample areas and follow-up calls were made by interviewers to arrange an interview. The Coleshill fieldwork was completed by the end of February, however, due to problems with an interviewer in Darlington the fieldwork on the River Skerne was not completed until 12th March. A total of 260 interviews were completed in Darlington, 136 of which were re-interviews with named individuals from the 1995 survey. In Coleshill the total number of interviews completed was 36.

The average length of interviews was 45 minutes, although this varied depending upon such factors as respondents' age, level of interest, time of day, and the experience of the interviewer. The shortest interview time in Darlington was 19 minutes, while the longest was two hours. In Coleshill interviews ranged from 30 to 75 minutes. The majority of interviews at both sites were carried out during the week, the most popular days being Monday to Wednesday in Darlington and Wednesday in Coleshill.

1.5 Response to the surveys

Table 1.1 shows the response rates for the surveys. A total of 545 addresses were finally targeted at the two sites. The surveys hoped to achieve at least 250 interviews in Darlington and up to 50 in Coleshill. Empty properties, addresses which could not be found, and the few addresses which were not used due to the survey quota being met, were excluded from the calculations. No contact was made with the residents at over a quarter of addresses at the two sites, despite in some cases, up to four follow-up calls. If the no contact addresses are included in the analysis the response rates achieved are 55% in Darlington and 51% in Coleshill. Refusals were given at 19% of addresses in Darlington and 21% in Coleshill. However, at the 399 addresses where contact was made a much higher response rate of 75% for Darlington and 71% for Coleshill was achieved, with the refusal rates rising to 25% and 29% respectively. Although the interviewed population in Coleshill was very small, it did cover around half the households in the village.

In Darlington a total of 136 respondents, 58% of the 1995 sample consenting to reinterview, were successfully recontacted. Some interviews were completed with other individuals at the 1995 addresses where named individuals were unavailable or unwilling.

1.6 Data analysis

Data from the survey were analyzed using the Statistical Package for Social Scientists (SPSS)

software. Basic descriptive statistics such as frequency counts and mean values were produced for the survey as a whole and for the individual study sites. Comments from the 'open' questions have been incorporated into the report where appropriate. Due to time restrictions, these are based on the analysis of around 100 questionnaire responses and include all the questionnaires from Coleshill.

Additional cross-tabulations were carried out to test for associations between sets of variables. Chi-squared tests were applied to test the statistical significance of the data. Associations are described in the text as being significant where the chi-squared statistic is found to be significant at the 0.05 level or less. This means that there is at least a 95% confidence that the relationship found could not have occurred through chance. Some factors, such as age, income, level of education and proximity to the river were seen to demonstrate significant associations with other variables in a number of cases. Although the chi-squared test is a test of independence, it provides little information as to the strength or form of the association between variables. Moreover, as some of the data is based on relatively small sample sizes, particularly with regard to Coleshill respondents, it is therefore subject to quite large sampling errors which must be taken into account when interpreting the results.

2. PART I: COMPARISON OF RESULTS FROM THE 1997 RIVER RESTORATION SURVEYS IN DARLINGTON AND COLESHILL

Sue Tapsell, Sylvia Tunstall and Sally Eden

2.1 Characteristics of respondents

The characteristics of survey respondents are given in Table 2.1, only a few significant results are highlighted here. Despite interviewers being briefed to try to obtain an equal balance between male and female respondents, the results showed there to be a higher proportion of females than males at both sites. This could be due to more women being available for interviews during the day if not in full-time employment, or because all of the interviewers were female, and may therefore have preferred to interview female respondents. In Darlington, men did make up the largest group of respondents in the over 65 age range, while for those aged between 30 and 45 the majority were women.

The age of respondents ranged from 95 years old to 19 years, while the majority of respondents at both sites had completed their full-time education at 16 years of age or younger. Length of residence in the immediate river areas varied from only a few months to 93 years in Darlington and 75 years in Colehill. The mean length of residence was 23 years for Colehill and 20 years for Darlington.

Almost three-quarters of Darlington respondents owned their own house or flat, while this situation was reversed in Colehill due to the fact that all properties except three in the village are owned by the National Trust and rented from them. In Darlington, the majority of those respondents in the lowest income group (£5,000-10,000) rent from the local council, while 97% of those in the highest income group (£25,000 and over) owned their own homes. In addition, younger respondents aged under 30 showed the lowest level of home ownership and the highest either renting from private landlords or living with family. Colehill showed a higher proportion of older household members aged 65 and over, one third compared with almost a quarter in Darlington.

Various patterns were observable when looking at respondents' age and income. In Darlington, those respondents with higher levels of education showed higher income levels, however, they also showed the highest percentage of respondents who refused to give their income level. No Darlington respondents aged over 65 came into the highest income groups, while a quarter of them came within the lowest income group (the highest proportion of all age groups). A similar pattern was visible in Colehill.

Interviewers at each site were asked to note the proximity of the respondents' homes to the river. It must be noted, however, that these measurements are subjective and not accurate estimations. The mean proximity to the river for both sites was between 250 and 500 metres (Table 2.2).

In Colehill there was slightly higher support for environmental campaigning groups such as Greenpeace as well as support for angling clubs (Highworth being one mentioned), sailing clubs (such as Plymouth), and archaeological or historical societies (Table 2.3). Other groups mentioned included a tennis club, the British Field Sports Association, the RSPCA

and the Blue Cross. Sports club membership in Darlington included clubs such as athletics, badminton and golf. Angling clubs were also supported, both in Darlington and further afield. Perhaps not surprisingly, a rather higher percentage of male respondents belonged to sports clubs than female respondents. Other groups mentioned by Darlington respondents included the PDSA, RSPCA, Redwings Horse Sanctuary and the Neighbourhood Watch. It was generally those respondents who had completed their education later who showed the highest percentages supporting groups such as the RSPB, Friends of the Earth and Greenpeace nationally. Moreover, it was also those with higher levels of education who showed the highest percentage being members of sports clubs.

3. USE OF THE RIVER

3.1 Frequency and length of visits

The results indicate that the section of the River Skerne covered by the survey had been visited by 81% of Darlington respondents in the last twelve months, while the River Cole had been visited by 64% of Coleshill respondents (Table 3.1). In Darlington, of the 50 cases (19% of respondents) who said that they had not visited the river during this time, 33 said that they had visited the river at some time in the past. For those who do not visit the river the main reasons given were lack of interest and poor health, often due to age. There were some differences in visiting the river in Darlington according to respondents age. Sixty-six percent of the older respondents, over 65, had visited the river in the past year compared with 80% of respondents in the younger age groups. Older respondents in Darlington (those aged over 65) showed the lowest percentages who have not visited the river, at 34%. In Coleshill, of the 13 cases who had not visited the river in the last 12 months over three-quarters said that they had visited in the past.

Of those visiting the river in Darlington in the last 12 months, the frequency of visits during the summer months (April to September) is reasonably high, the mean frequency being between weekly and fortnightly (Table 3.2). Almost half the respondents visit either on a daily basis or several times a week. Visiting in winter (October to March) is rather less frequent with 32% visiting either daily or several times a week, and with 19% saying that they never visit during winter. Mean visits during winter are between fortnightly and monthly. Older respondents showed the highest percentages who never visit the river, both in summer and winter, while those respondents aged under 30 showed the lowest percentages who visit the river on a daily basis. There were a few puzzling responses when looking at cross-tabulations of variables. A few respondents who had said that they had not visited the river in the past 12 months then went on to say that in summer and winter they visit on a regular basis, even daily or several times a week. These respondents could have been referring to visiting patterns in the past, but this is not clear.

Frequency of visiting in Coleshill was generally less frequent than in Darlington, with much higher percentages of respondents visiting only between one and three times a year and much smaller percentages visiting on a daily or weekly basis. The River Cole at Coleshill is not, therefore, as well used by the local population as is the River Skerne in Darlington, however, this may be due to the more limited public access to the river Cole in Coleshill and to the lack of footpaths.

Of the 225 Darlington respondents who answered the question, 14% spend up to 15 minutes when visiting the river, however 73% spend between 16 minutes to one hour (this was also the mean length of visiting time). Twelve percent of Darlington visitors stayed for between one and two hours. In Coleshill, however, the mean length of time spent visiting the river was higher at between 31 and 60 minutes, and 27% spent between one and two hours. Only two Coleshill respondents (7%) said that they visited the river for over four hours, but this could have been related to work, as several of the respondents were farm workers. It appears, therefore, that although Coleshill respondents might visit their river less often than those in Darlington, they often spend longer at the river when they do visit.

In Darlington, sections 4 and 5 of the scheme proved to be visited by the largest proportion of respondents (76% and 72% respectively), although sections 3 and 6 were also popular. Not surprisingly, section 1 received the least number of visitors (9%), possibly associated with the difficult access in this section (Table 3.3). A small number of non-visitors to both the river Skerne and Cole in the last 12 months also said that they visited the various sections of the rivers, although again these respondents were probably referring to past visiting patterns. In Coleshill all of the six sections of river were well visited by respondents, although section 1 showed the lowest percentage of visitors and section 3 the highest. No respondents aged under 30 visited sections 3 to 6 of the river.

3.2 Purpose of visits

The rivers are used for a variety of purposes by the local communities at both sites, the most popular (particularly at Coleshill) being walking (Table 3.4). Other popular reasons for visiting were to see the wildlife and dog walking.

Although many people in Darlington said that they visit the river, 45% said that they visit for access to elsewhere, and the highest proportion of these are respondents who live over 250 metres from the river. This does not mean, however, that they do not visit the river for other purposes. Other reasons for visiting the River Skerne included cycling (mostly respondents aged between 30 and 45 and in higher income groups), school visits, football and games, while for the River Cole fishing was mentioned by 12% of respondents and 13% (farmers and farm workers) said that they visit the river in relation to work. Walking or playing with children or grandchildren were also given by some respondents in Darlington as reasons for visiting the river, while in Coleshill mink hunting was mentioned. Some respondents who had not visited the river Skerne in the last year also gave walking, walking the dog, wildlife and access to elsewhere as reasons for visiting the river, presumably in the past. Respondents who live in riverside properties showed higher percentages who visit the river for wildlife live compared with those that live further from the river. Moreover, more men visit for wildlife than women.

4. VIEWS ON ASPECTS OF THE RIVER

4.1 What respondents like about the rivers

Respondents were asked in an open question what they liked or disliked about the stretch of river being studied for the survey. In Darlington the two most frequently mentioned aspects respondents liked were the fact that the river was a quiet and peaceful place for walking away from the traffic, and that it attracted an increasing amount of wildlife. Many respondents mentioned the ducks and swans in particular.

"It's nice and peaceful. I like walking where it is quiet".

"Freedom of traffic, open air".

"We like the wildlife. We go to feed the ducks".

"Nice with ducks and swans. Good for dog. Relaxing".

Visiting the river was equated with visiting the countryside by some respondents.

"You feel you have a bit of countryside in the town".

"The fact that you feel you are in the country".

Some of the likeable aspects of the river cited by respondents related to the changes that had been made as part of the River Restoration Project. These included the meanders, the improved wildlife habitats and cleanliness of the area:

"Nice to stroll along now it's a lot cleaner".

"It has been put back into its natural state".

"The children like the meanders, they imagine they are on a desert island".

"The way it has changed direction and the meanders".

"I like the wildlife and the plants. I think that there is less chance of it flooding now".

In Coleshill, not surprisingly, the rural aspects of the river were liked by respondents, including the wildlife. Some respondents also mentioned aspects associated with the restoration scheme.

"It's so peaceful, a pleasant area to walk, not overcrowded and the few bits of wildlife there and the plants changing colours through the seasons".

"Like to see the geese and swans. More here than in other places. All sorts of wildlife".

"I just love water and the countryside and the wildlife".

"There is more wildlife there now and there are kingfishers for the first time this year".

4.2 What respondents dislike about the rivers

The aspects of the river disliked by respondents in Darlington also reflected those given during the first survey (RRP, 1995). The most frequently cited aspects were the dog dirt, rubbish in the river, poor footpaths along sections 4 and 5, and teenagers and motorbikers hanging around the river.

"The dog dirt is terrible".

"The dog muck. It is just like a dog toilet down by the river".

"Footpaths are diabolical, not proper paths. With bad weather horses hooves have dug out great holes which are quite dangerous".

"The vandalism near Hutton Avenue bridge. Teenagers congregate in this area on an evening and at the weekend".

"I don't like the motorbikes using Hutton Avenue bridge and the surrounding area".

Some respondents still thought the river to be dirty.

"The river itself is very dirty in places, near Five Arches bridge".

"Water too dirty".

Although many people in Coleshill, when asked, could not think of anything that they disliked about the river, several comments were made relating to the changes that have been made.

"The new channel has not been seeded - it will be all thistles and rubbish. It should be seeded. Weeds should be sprayed. Should not have been changed. Seems to flood more".

"Looks too new. Banks look bare, although it has been a long time".

"As far as fishing is concerned it's ruined. It is like a channel, it just races through. It's like a ditch but as soon as the level of depth runs out of the pieces they have tried to hold it races again and is very shallow".

"From the point of view looking at it at the moment, the actual way they wanted it to flood doesn't appear to be working, but that really isn't a dislike I suppose".

4.3 Attractiveness of the rivers

Respondents were asked to rate their local river in its current state on its attractiveness, both overall and for individual sections, on a scale from -5 to +5 (very unattractive to very attractive). The mean rating for Darlington respondents for the stretch of river in the survey was 2.689, indicating that respondents feel the river to be quite attractive. However, many respondents gave a 'don't know' answer for this question when asked about individual sections of the river: 89% for section 1, 59% for section 2, and even for sections 4 to 6 a third of respondents or more said that they did not know.

Respondents gave section 1 the lowest rating for attractiveness, perhaps not surprising as this is also the least visited section of the scheme and where no major restoration works have been carried out. Section 3 received the second lowest rating, while sections 5 and 6 received the highest ratings (means of 2.982 and 2.901 respectively). Respondents living in riverside properties were much more able to give ratings on the attractiveness of the river when compared with respondents living further afield, with much lower percentages giving a 'don't know' answer. Riverside respondents also gave significantly higher ratings for section 6 of the river. Those respondents who had not visited the river in the last 12 months were much less able to rate the attractiveness of the sections of the river, the majority giving 'don't know' responses.

In Coleshill the mean rating for the River Cole was 2.517, slightly lower than for the River Skerne. This is perhaps surprising considering that the Cole is a rural river, but because the Skerne flows through an urban area it is perhaps more highly appreciated than a rural river, which could be taken more for granted by local residents. Section 1 of the Cole also received the lowest rating (mean 1.842), while the mean ratings for the other sections were very similar and ranged from 2.042 (section 3) to 2.739 (section 4). As in Darlington, between one third and a half of Coleshill respondents answered 'don't know' when asked about the attractiveness of individual sections of the river.

5. THE CHANGES TO THE RIVER

5.1 How heard about or noticed the changes to the rivers

Awareness of changes to the rivers on the two sites was high, 86% of respondents interviewed in Coleshill and 92% of respondents in Darlington said that they had heard about or noticed changes. Awareness of changes to the river in Darlington was higher among visitors than among those who had not visited in the past year. In Coleshill respondents aged over 65 and under 30 showed smaller percentages who had noticed or heard about the changes than respondents in the 30 to 65 age groups.

Personal observation and leaflets and letters played an important part in raising awareness of the scheme in Darlington, while smaller percentages cited signposts on the site and hearing about the scheme through family or friends (Table 5.1). Those respondents who had not visited the river in the last year in particular showed higher percentages saying that they had first heard about the changes through family, friends or neighbours. The local press, particularly the Northern Echo was also cited by respondents. Only three respondents had first heard about the changes by attending a meeting, and all of these were men.

Respondents aged over 65 showed a higher percentage than other age groups who had heard about the scheme through friends or neighbours. Those respondents living in riverside properties showed the highest proportions who had first heard about or noticed the changes to the river through personal observation, from the RRP, and by a letter or leaflet. These respondents were probably the most frequently targeted by the RRP's community liaison officer.

Clearly, the fact that 56% of Darlington respondents had been interviewed before appeared to influence the high awareness of the scheme, and many said that it was due to the previous survey that they were aware of the changes, rather than the ways suggested to them by the interviewers.

"Someone came round to see us. I can't remember who it was. It could possibly have been Middlesex University asking me to take part in a survey".

"Taking part in previous survey".

"A lady called but I can't remember which organization she represented".

Some of these respondents could also be referring to the RRP Community Liaison Officer who had also visited many of the nearby properties giving local residents information about the scheme, rather than the Middlesex University interviewers.

In Coleshill personal observation was the most frequently cited means by which people had become aware of the scheme to change the river, along with signposts on the site, the National Trust, and friends or neighbours. For younger respondents aged under 30, the majority had heard about the changes from their family. Some respondents had heard through attending a public meeting or through their family or parish council. A couple of

respondents said that they had heard about the changes through their work (farming) and the village shopkeeper was said to have placed a notice in the shop window. Several mentioned that they had either seen or heard the construction machinery at the site.

5.2 Changes noticed or heard about

Those respondents who had noticed or heard about changes to the river were asked to specify what these changes were. Initially the respondents were not prompted but were asked to mention the changes they could recall. When the respondents could think of no further changes they were prompted by the interviewer for any they may have missed, and were asked to say whether they had seen or heard about these changes.

Overall, awareness of the changes carried out was quite high for both sites (Table 5.2). Respondents in Darlington and Coleshill responded better when prompted on all changes to the rivers, with the exception of the creation of new meanders in the river channels. Overall, whether prompted or not, 84% were aware of the meanders, 72% were aware of works to the river banks, 72% the clearing of vegetation, and 59% were aware of the changes to the river bed. The new backwaters and wetland areas and new or improved nature sites had been seen or heard about by 60% of respondents, the new planting in or along the river by 54%, and 53% had seen or heard about variations in the river flow. Other changes reported by several respondents unprompted included "cleaner water", and a small weir near Five Arches bridge.

Respondents in riverside properties demonstrated a higher percentage showing awareness of changes such as new planting, works to river banks, and new or improved nature sites than those living further from the river. Those respondents who had not visited the river in the last 12 months showed significantly higher percentages who had neither noticed or heard about all of the changes to the river. Similarly, female respondents showed higher percentages than male respondents saying they had neither noticed or heard about all of the changes.

In Coleshill the additional channel and the new meanders in the old river channel were the most frequently cited changes (by 69% and 83% of respondents respectively). Seventy-five percent had heard about or noticed works to the river banks, 64% the clearing of vegetation, 61% the variation in river flow, 50% changes to the river bed, and 48% the new backwaters/wetland areas. Fewer respondents mentioned new planting in or along the river or new or improved nature sites. Respondents in the over 65 and under 30 age groups showed higher percentages who had neither noticed or heard about changes such as changes to the river bed and new backwaters/wetland areas. Over 65 respondents also showed significantly higher percentages who had neither noticed or heard about new or improved nature sites.

5.3 When were changes carried out?

To try to establish respondents' awareness of the timing of the restoration works, they were asked roughly when they thought the works had begun. Some respondents admitted that they

had no idea when the works had begun or said that they could not remember. In Darlington, however, around half of the respondents who had heard about or noticed the changes said around two years ago, 1995, which is correct; some even gave a specific month, such as June, July, or August, and some gave the season: spring, summer etc. However, many respondents said that the restoration works began "last year" or gave 1996. As the interviewing began in January 1997 it is possible that some respondents had not adjusted to being in a new year, and when saying 'last year' they could still have been referring to 1995. This is not clear.

A few respondents stated that the works began a few months ago. These respondents could have been referring to some of the later restoration works but not the initial construction stage. Other respondents gave a number of years ranging from 4 to 15. It could be that some of these respondents were thinking about earlier works at the site rather than the restoration works. The results from Coleshill reflected those of Darlington, with the majority of respondents giving a start time of one or two years ago.

5.4 Which organisations were involved with the changes to the rivers

In order to gauge the level of awareness of the organisations involved in the restoration works, respondents were asked in the survey to state which organisations they thought were involved with changing the river. Initially they were asked this unprompted, but once they could think of no other organisations the interviewer then prompted the respondent with any of the organisations not previously mentioned (Table 5.3).

In Darlington three organisations were initially mentioned by a quarter of respondents or more: Darlington Borough Council, the Environment Agency, and Northumbrian Water. Only six percent mentioned the River Restoration Project, which is perhaps surprising given the amount of publicity surrounding the project. However, when prompted by the interviewer 61% said 'yes' the River Restoration Project had been involved. Respondents living in riverside properties demonstrated significantly higher percentages mentioning the RRP, both unprompted and after prompting, while those who had not visited the river in the last 12 months showed higher percentages who did not know whether the various organisations mentioned were involved, as did more female respondents.

Interestingly 37% of Darlington respondents thought the National Trust to be involved in the project. This could be because they had read about the Trust's involvement with the Coleshill scheme and thought that it had also been involved with the Skerne scheme. The two partners where respondents showed the greatest numbers believing they were not involved were English Nature and the Countryside Commission. Over a third of respondents or more did not know whether several of the partners had been involved, while a quarter did not know if the RRP had been involved.

Other organisations given by Darlington respondents as being involved with the project included the National Lottery, Middlesex University, the British Trust for Conservation Volunteers, Darlington Angling Society, and Durham County Council. Respondents may have heard or read about the RRP's application for Lottery funding, and because Middlesex University carried out the first public perception survey it would seem reasonable for

respondents to think that the University is involved with the project.

In Coleshill the majority of respondents cited the National Trust unprompted when asked who was involved with the scheme for the River Cole, over half cited the Environment Agency, but only six percent mentioned the RRP. When prompted however, 75% of respondents said 'yes' to the RRP being involved and almost half agreed that the Countryside Commission and English Nature were involved. The percentages thinking the Countryside Commission and English Nature were involved were higher than in Darlington, probably because of the rural character of the Coleshill area (compared with urban Darlington) which may have prompted respondents to think the organisations would naturally be involved. Overall, 52% of respondents thought the local authority or council in the Coleshill area also to be involved in the project. When asked if they thought any other organisations were involved the Ministry of Agriculture, Fisheries and Food (MAFF) was also mentioned.

5.5 What was the RRP hoping to achieve through the changes to the rivers

Respondents were asked in an open question what they thought the RRP was hoping to achieve through the changes being made to the rivers. Although some respondents said that they had no idea or did not know what the RRP was hoping to achieve, most respondents made at least one or two suggestions.

In Darlington the most frequent explanations given referred to cleaning up the river and surrounding area, improving the area generally for local people, and improving the area to encourage wildlife.

"Probably to smarten up the appearance and make it more pleasant for the walkers".

"To make it look better and do the place up".

"To make it a nicer place for people to go - to clean it up".

"To improve the flow of the river and to enhance the wildlife and generally make the area more pleasant".

"Clean it up - to make it look more like a river by meandering -to make marsh ponds for wildlife - to make it more pleasant for local and other inhabitants".

Many respondents also suggested that the changes were to restore the river to a more 'natural' condition.

"To make the river look like a more natural waterway. Also to improve the quality of the water".

"To bring the wildlife back and also to restore the river to its natural environment".

"To put the river back to its natural state".

"To make it look a bit more natural".

It was also suggested by a few respondents that the changes were to encourage more people to visit the river.

"More people would visit. To make it more accessible to everybody".

"More people to visit and enjoy it".

"Make it better for animals and encourage more visitors".

A few respondents felt that the changes were also related to preventing flooding and to making the area more like a nature reserve.

"To try and encourage more people down there and reduce the flooding".

"They were trying to reduce the flood levels and improve the environment".

"To make a nature reserve and also to check the flooding".

"To eliminate the flooding, to make it more like a nature reserve".

One or two respondents also made more cynical comments such as the objective of the changes being: "To spend money that they can't afford".

Coleshill respondents suggested a number of goals they thought the restoration works were hoping to achieve. These included improvements to river flow, to encourage wildlife and vegetation, and to recreate wetland areas and restore the river to a more 'natural' course, although just when and what the river was being restored back to seemed to be in doubt.

"To keep the river flowing better and clear - to improve it".

"Encourage wildlife with the wetlands. Encourage wild flowers".

"Cut down on pollution lower down the river. Put it back to the way it was in the 1800s".

"I suppose trying to get it back to the wetlands, to how it was 25-30 years ago, and trying to get the river to run its old course".

"Presumably hoping to restore a lot of the natural habitats that were there before the river was straightened in the 70s".

As in Darlington, another aspect mentioned by respondents in Coleshill was that of flooding. There seemed to be some confusion as to whether the scheme would prevent flooding or encourage it, although it appeared to be thought that the creation of water meadows or wetlands would flood more of the immediate farmland. One or two respondents felt that it was to prevent flooding further downstream and not in the immediate area of Coleshill. Others felt that it was meant to deliberately encourage more flooding along the stretch of the scheme.

"Stop flooding".

"They were trying to flood the land - in the winter it would come up and make the adjacent fields wet".

"Get the wetland back. Bring more wildlife and flowers".

"As I understand it, it was to flood the meadows and hold the water back".

"To make it flood again I think".

After being asked which organisations they thought to be involved and what they thought the projects were hoping to achieve, respondents were briefly told by the interviewer which organisations were actually involved and what changes had been carried out, or were planned.

5.6 Does river 'fit in' with its surroundings?

The vast majority of respondents at both sites felt that the river fits in with its surroundings (Table 5.4). For 57% of Darlington respondents and 58% of Coleshill respondents it was thought the river fitted in quite well, however, almost a quarter of respondents at both sites felt the river fitted in completely. Only a few percent of respondents felt the river did not fit in very well or did not fit in at all, while those who said that they did not know numbered 21% in Darlington and 12% in Coleshill. In Darlington, the majority of those who had not

visited the river in the past year did not know if the river now 'fitted in', however, a quarter of these respondents thought the river fitted in quite well.

When asked how the current river compared with before the changes were made, the responses were overwhelmingly positive in Darlington.

"It was grotty before, it is quite attractive now".

"It is much, much better. It is favourable".

"Before the changes you could not distinguish where the river started or ended. Now you can get as near to the river as you wanted".

"It was a channel for conveying water and preventing flooding. Now it is an interesting place to visit".

"It is a lot cleaner, clearer and there is more wildlife".

"Looks more like a river than a canal".

A few respondents did make comments indicating that they did not think the river to fit in any better now with its surroundings than before.

"I don't think there was much difference to it fitting in before or after the changes".

"It does look better but I thought that it was alright the way it was.

Several other Coleshill respondents also felt the River Cole had been fine before the changes were made.

"Fitted in well before - was established with reeds and wildlife".

"Not a lot of difference. They have made it a bit deeper and stemmed the flow down".

"Looked natural before. Looked straight before".

However, some respondents made additional comments indicating that they felt the river to be better since the changes.

"It looks nicer. It fits in very well".

"Better because it was just straight through there before".

"In some respects probably better because of tree planting".

"It is more noticeable now than before as you approach it - more interesting".

A few respondents felt that it was too soon to tell if the river fitted in as it was still looking "a bit raw".

5.7 Views on the cost of the changes

Having been informed about the changes respondents were asked how much money they thought had been spent on the changes to the river in their area. According to the interviewers, the majority of respondents found this question difficult and it appears obvious from some of the responses that most people, quite understandably, did not have any clear idea of the cost of such schemes. In fact, of the 246 respondents in Darlington who answered the question, 159 respondents (61%) said they did not know how much the scheme had cost. Of the 97 respondents who did give a figure this ranged from £7,000 to £75 million, both of which are highly unrealistic for the scheme in question. Only one of those respondents who completed their full-time education at the age of 17 or over gave a figure less than £100,000, while a higher percentage of female to male respondents did not know about the cost.

In Coleshill too respondents seemed unsure about the cost of the scheme, although the amounts given were not generally as extreme as in Darlington. A quarter of the 35 respondents in Coleshill who answered the question said that they did not know how much the scheme had cost. Of the 26 respondents who did give a figure, this ranged from £6,000 to £4 million.

At this stage the respondents were told the costs of the schemes by the interviewers. Darlington respondents were told that the changes so far had cost around £295,000 in total. The construction works cost around £190,000, and the design and supervision of the works cost about £75,000. The Coleshill respondents were told that the scheme cost around £255,000, with the construction works costing around £145,000 and the modelling, surveying and design around £110,000. Respondents were then asked in open questions what they thought about this.

The responses in Darlington were very mixed, with some respondents commenting very positively and others very negatively. Those that felt the cost of the scheme to be reasonable or very good made comments such as:

"That's quite reasonable when you think of all the people who have to be paid eg workmen etc."

"I think that is quite good".

"Not a lot".

"They worked when they were here. I can understand why it cost that amount".

"That's very good considering that they were working there for about six months".

"It seems alright, you work in millions these days".

"At present day costs it's nothing really".

"It is a lot of money. But it is quite reasonable when you think of how much the Dolphin centre cost".

Some respondents said that the cost was cheaper than they had expected, which is probably not surprising considering the high costs suggested by some respondents.

"That's cheaper than I would have thought".

"I'm surprised and yet I'm not, labour is dear. Actually I thought it could have been a bit more".

"I am pleased to hear it is less than I had anticipated".

Although some respondents felt the costs to be high, they also felt that the results had been worth the money spent.

"A lot of money but it is going to be worth it in the long run".

"A lot of money but if it improves things perhaps it is worth it".

"I think the money is better spent on the environment than on brick trains and cobbling market places".

However, not all the comments given by respondents in Darlington were positive. Some felt the costs of the scheme extortionate and a complete waste of money and appeared to think that the money could have been spent on other things.

"Too high - can't see where so much money has been spent".

"Ridiculous - the money could be better spent on something else".

"I think it is extortionate".

"Complete waste of money. They should spend it on something useful".

"It's a lot of money - perhaps it could have been put to better use eg other facilities in Darlington".

"A lot of money. Perhaps it could have been spent on roads in Darlington".

"Should have used unemployed people to do the work and give them a job - they should have been paid instead of receiving unemployment benefit".

Coleshill respondents also showed a mixed reaction to the project costs, with some thinking it reasonable and others not.

"That's fair enough, good value for money".

"Good value".

"I would have thought that was fair, with plant and everything these days".

"Well I think that's very good. With the London library, every time you hear it mentioned it's gone up a couple of million".

Some respondents were not convinced, and some even questioned the costs given.

"I do not believe it cost so little".

"Disgusting. Could have been put to better use and let nature take its course".

"I wouldn't say it was a waste of time but it is a lot of money for just one project".

"I think there are better causes but if it puts it back to how it used to be it will benefit the ecosystem, but it could have gone to the hospital".

"Um, a waste of money a lot of it. Was it totally necessary? Obviously the boffins know about it more than I do, but it seems a lot of money".

The respondents in both surveys were then told by the interviewers that the total sum cost of the scheme is equivalent to £3.90 per adult or £7.30 per household in Darlington and in Coleshill to £3 per adult, or £6.10 per household in the Vale of the White Horse.

Respondents were then asked what they thought of this.

When broken down like this, some respondents in Darlington appeared to feel the costs to be more reasonable.

"Not too bad when broken down".

"It doesn't sound too bad put that way".

"£7.30 is nothing really is it?"

"Reasonable. Sounds better like that and I expect it is good value".

However, even with the costs broken down some respondents did not change their minds about the scheme and were still not in favour.

"I still feel the money could have been spent more wisely".

"Utter rubbish - what a complete waste".

"I still feel it's a lot of money".

Despite being informed by the interviewers that the funding for the schemes had come from other sources and not the local population, some Darlington respondents still appeared to have misunderstood and felt that local residents were now to be asked to pay for the schemes.

"Funding should not come from the people in Darlington. It was understood that the project was financed by the European Commission".

"Disgusted with the amount and why this question arose because this money was a grant and the work would never have happened without the grant".

"The river was there for free, just because the powers that be decided to alter it - should we have to pay?"

"I don't see why it should come out of the ratepayers pocket".

"For people in this area it is very reasonable, but if you asked people in the Cockerton area or an area not near the river they would not be very interested to pay".

In Coleshill some respondents still did not think breaking down the costs involved by per adult or by household made any difference.

"Makes no sense".

"Still disgusting".

"Not a lot really but I think the money could have been spent on conservation elsewhere".

"We'll end up paying it on the poll tax eventually".

However, most respondents seemed to feel the broken down cost to be good. One respondent who felt the total costs to be "a waste of money" saw it differently when the costs were broken down: "It's not a lot to pay for the facility, if you put it that way".

Other respondents agreed, but as in Darlington appeared to take the suggestion of cost per household in the Vale of the White Horse quite literally.

"I suppose that doesn't sound so bad".

"Seems fair enough when put in this context - it doesn't seem bad".

"Puts a different perspective on it doesn't it? Because whether it was a worthy cause or not - we benefit in this village, but do other people in the Vale benefit?"

"Good, but does not affect people in the Vale of the White Horse".

"I think that is good, I really do. What we are getting back is going to be super when it's all finished".

5.8 Were the changes value for money?

Respondents were then asked whether they felt the schemes to have been good value for money. There were marked differences between Darlington and Coleshill respondents in response to this question, with Darlington respondents appearing to feel their scheme better value for money than respondents in Coleshill (Table 5.5).

Overall, 63% of Darlington respondents appear to feel the River Skerne scheme to have been good value for money. Of this figure, 21% felt the scheme to be very good value for money, and 42% felt it to be quite good value for money. Only 8% felt that it was not at all good value for money, while nine percent felt it to be not very good value for money. Twelve percent of respondents in Darlington thought that it was too soon to tell whether the scheme was good value for money. The vast majority of those who felt the changes to be good value for money also felt that the river fitted in completely or quite well - none felt that it did not fit in at all.

Respondents were much more cautious in Coleshill about saying whether they felt the scheme

on the River Cole to be good value for money. Forty-two percent felt that it was too soon to tell, while 42% felt that the scheme was good value for money (14% very good value and 28% quite good value). In Coleshill 8% of respondents felt the scheme to be not at all good value for money, while 6% thought that it was not very good value.

5.9 Perceived visiting patterns to the rivers since the changes

Respondents do not believe that the changes made to the rivers Skerne and Cole through the River Restoration Project to have significantly changed their visiting patterns to the rivers (Table 5.6). When asked whether they visited the rivers more or less frequently since the changes had been carried out, Coleshill respondents reported the most marked changes in visiting with 21% saying that they visit a bit more frequently and 6% visiting a lot more frequently. Twelve percent of respondents either visit a bit or a lot less since the changes, however the majority of respondents said that they visit about as often as before.

Darlington respondents also reported 12% visiting a bit or a lot less than before the changes with only 16% visiting a bit or a lot more. Seventy-one percent had not changed their visiting patterns.

Although some respondents do not now visit the rivers as often as before, the reason given for this by some had nothing to do with the changes to the river but more with changing circumstances at home. For example having less time, poorer health or the fact that their children were now older were mentioned by respondents. River Cole respondents said that the easier access since the changes was a reason for visiting the river more frequently and some said that they had visited the river to see the progress being made with the river works.

In Darlington, improved accessibility to the river was also mentioned as a reason why respondents visited more often. Other reasons included to see the increased wildlife, to watch the construction works, and because the river was now seen to be more interesting. However, reasons for visiting the river which were unconnected to the restoration works were also given. These related to using the river more for access to elsewhere and included now having to take young children to nursery or visiting a relative. In addition, respondents said that two new supermarkets had opened in the area, causing the river to be used by some locals as a short cut.

6. SINCE CHANGING THE RIVERS

Respondents were asked whether and how they felt the restoration works had affected various aspects of the river and surrounding areas. These included the safety aspects of the river, the recreational opportunities presented by the river, the wildlife habitat in or around the river, the river landscape, and the risk of flooding (Tables 6.1 to 6.5).

6.1 Effects of the changes on safety

When asked if they thought the restoration works had led to the river being more or less safe for children and other users than before, or if the changes had made no difference, 30% of Darlington respondents said that they thought it was more safe, while 10% felt that it was less safe. Respondents who had not visited the river in the last 12 months were much less able to answer the question, with 66% saying that they did not know.

When asked why they thought the river to be more safe a number of reasons were given by respondents.

"A lot cleaner. Not much litter around. So must be better for children".

"Because the angle of the banks have changed and it is not so steep".

"The water is cleaner and it isn't so overgrown near the edge, so people can actually see where the river starts".

"I think because more adults are using it. If children got into trouble, help would be nearby".

Over a third (38%) of the 259 valid cases in Darlington, however, did not think that the changes to the river had made any difference to safety and 22% did not know (the highest proportion of these being aged over 65).

"No difference - because it was a particularly dangerous river in the first place".

"Where you have rivers there will always be dangers".

"You can't improve safety because of the nature of kids".

"There is still plenty of access to the river".

"No boundaries up so nothing has changed".

Those in Darlington who felt the river to be less safe since the changes gave reasons such as steep banks, a deeper river, and easier access.

"The river is a lot deeper in places and children can get nearer to the edge".

"In some parts the banks slope away very steeply".

"It looks as if the river has been deepened, the banks are higher which is more dangerous for children".

Compared with Darlington respondents, a higher percentage of Coleshill respondents (28%) felt the river to now be less safe, and a much lower percentage (14%) felt the scheme for the river Cole had made the river more safe. A similar percentage of respondents as in Darlington (39%) felt there to be no difference in safety since the works had taken place, while 19% did not know.

"Same as before".

"They have dug it out but it is still open like it was before".

"Kids still play and leap about in the water".

Reasons given by respondents for the river Cole now being more safe included:

"Good for horses. New banks not so steep".

"More people will go down there. People will play in the shallow parts".

Those who felt the river Cole to be less safe since the works gave increased depth and access as the main problem.

"Deeper at bridge. Used to be ankle-deep at the bridge".

"Deeper structures by the bridge. Young children couldn't get out. The banks are too smooth. Even in the shallow parts a child would find it hard to get out".

"The banks seem rather steep in some of the new parts and slope swiftly into the river, and there is no protection and you are suddenly down".

"Because it is more accessible you can get right down to it - from the footpath there are walks down to the river. A three year old with us ran off and walked into the river, fortunately it wasn't deep".

Non-visitors to the river in the last 12 months showed significantly higher proportions who said that they did not know if the river was more or less safe since the changes.

6.2 Effects of the changes on recreation opportunities

Respondents were asked whether they felt that changing the rivers had resulted in increased or reduced recreation opportunities in the areas, or had it remained the same. In Darlington 40% of respondents felt that the scheme had led to increased recreational opportunities.

"You see more people over there now. Children are playing ball games and adults are enjoying the river".

"People are more likely to go for walks when the river is cleaner and the grass is kept under control".

"It is more interesting so it makes you want to go to the river".

"People are arriving to look at the wildlife".

"See more people walking on a spring evening. River is more open and can see more - wildlife has attracted people".

"Better for runners as footpaths have been tidied".

"The children would now be able to paddle and go fishing".

However, almost as many respondents (37%) did not feel the changes to the river had affected the recreation opportunities, and that they had remained the same as before.

"You still can't swim or have a boat in the river".

"Nothing has been developed to increase recreation".

"Not noticed any vast changes in activities on river, although when the weather was fine I did notice a few more walkers".

"Can still do the same activities".

Only five percent of Darlington respondents felt recreation opportunities had been decreased, one reason given for this was that there is now less grass to play on, and 19% did not know. As with the safety aspects of the river, the majority of respondents who had not visited in the past year gave a 'don't know' response to this question. On the whole, more male respondents felt that recreation opportunities had been increased than female respondents, the latter showing higher percentages feeling that the opportunities had remained the same or saying that they did not know.

In Coleshill the majority of respondents (53%) felt that the restoration scheme had not changed recreational opportunities, a higher percentage than in Darlington. This is probably due to the fact that the area, being rural and adjacent to National Trust parkland, was already

perceived as offering substantial recreational opportunities.

"People still fish there".

"About the same amount of fishermen down there".

"I wouldn't have said I have seen an increased amount of visitors or fisherman".

Increased recreation opportunities cited by 25% of respondents included improved fishing, better play opportunities for children, and better walking.

"Better for fishermen, but they do fish the old bit".

"More fishermen. More walkers. Have seen canoes".

"Children can play by the water. More attractive for walking".

"I understand the National Trust are going to build a car park for people to the park and walk around the river, so it is bound to bring activities in".

For the eight percent of Coleshill respondents who felt that the scheme had resulted in reduced recreation opportunities, fishing also appeared to be the main concern.

"From a fisherman's point, to fish section 5 is hopeless, it's like a ditch - not deep enough".

"For fishing it has decreased for the moment. Things may change again".

6.3 Effects of the changes on wildlife and wildlife habitat

There were significant differences in the perception of the effect of the restoration works on wildlife habitat between the Darlington and Coleshill respondents. In Darlington the scheme was seen to have resulted in an increase in wildlife and wildlife habitat by the majority of respondents (70%) compared with 28% of respondents in Coleshill. Even half of those Darlington respondents who had not visited the river in the past year felt that wildlife and wildlife habitat had increased since the river works.

According to respondents in Darlington a number of different species of wildlife have been attracted since the scheme was constructed, or have been seen in increasing numbers, including a kingfisher.

"Lots more wildlife: rabbits, birds, fish, dragonflies, ducks".

"Swans have now come and Canada geese have arrived which is great".

"There are a lot more ducks. There seem to be more fish jumping about in the river".

"Newts have now become part of the wildlife ...".

"There are now swans (possibly nesting), ducks, water hens, fish, even a kingfisher".

"More ducks and still a few rats about".

"There is an increase in the wildlife due to the constructing of meanders which attract wildlife".

Coleshill respondents made additional comments on increased wildlife habitat such as:

"They have restored the variety of habitats with the backwaters, whereas before it was all very uniform".

"The swans are back here now and you could see the ducks were sitting on the ice in the cold weather".

However, a quarter of Coleshill respondents felt the works to have resulted in a loss of wildlife and wildlife habitat, while only three percent of Darlington respondents felt this. Some of the loss in Coleshill was perceived to be related with fishing, which was said by some respondents to have deteriorated since the scheme construction.

"Even though the kingfishers are back other birds haven't reappeared, and not so many fish in the water".

In Darlington it was felt that wildlife may have been scared away by the construction works.

"There are ducks there now, but the construction works might have frightened some wildlife away".

"They have lost wildlife during construction".

However, some Coleshill respondents stated that although in the short term they felt the wildlife to have suffered due to the disturbance associated with construction, in the longer term they felt that habitat conditions would probably be improved and would eventually lead to an increase in wildlife.

Coleshill respondents also showed a higher percentage (31%) who felt the wildlife and wildlife habitat not to have been changed by the scheme; this figures compares with 12% for Darlington respondents. This is possibly because some respondents felt the wildlife habitat to have been adequate before the scheme and had not expected the project to have made much difference. Coleshill respondents who felt that there had been no change in wildlife habitat made various comments.

"There wasn't a great deal before - if it does flood and stays flooded there might be more".

"I haven't seen any more wildlife as yet".

"Would not expect it to be different".

It appears therefore that the public in Darlington perceive their scheme to have had a large impact on wildlife, providing more diverse habitats and generally attracting more wildlife to the urban area. In Coleshill, as the river flows through a rural area which is perhaps considered to provide better wildlife habitats, the restoration scheme is seen as having less wildlife impacts.

It was felt by respondents at both sites that more time was needed to allow regeneration of vegetation and a maturing of the riverine habitats before more wildlife will be attracted. However, Coleshill respondents appeared to see the potential for increased wildlife in the future.

"Too soon to say how much wildlife will come".

"I suppose if it grows up again as it was the weeds will grow and more coots will come because there will be more cover for the birds".

"I am sure that it would [increase wildlife habitat] in the future. More water expanse for the birds and they will nest in the banks".

6.4 Effects of the changes on river landscape

As with the effects of the schemes on wildlife, the perceived effects on river landscape also differed considerably between the two scheme locations. Darlington respondents generally saw their scheme as having a more dramatic and positive impact upon the landscape of the river area than did Coleshill respondents. Again, this is hardly surprising given the urban character of the area. In Darlington 63% of respondents said that they thought the river landscape had become more attractive since the restoration works. The new meanders and backwaters and clearing of weeds and other vegetation were the main reasons given by respondents, plus the fact that the river now appeared more 'natural'.

"They have got rid of the horrible tall weeds. You can now see the river".

"It is more interesting to look at since they have changed the shape of the river".

"Squiggly bits are cool. The area where river meanders looks attractive".

"More greenery and island has been put in - not just mud now".

"Because it has been naturalised it isn't one long river".

"Cleaner - looks more natural than it did".

Only 4% of Darlington respondents felt the scheme had resulted in the landscape becoming less attractive, and this was often seen as a temporary situation.

"When it has been planted it should be a lot more attractive but at the moment it is less attractive".

Of those respondents who felt the landscape of the river Skerne to have remained the same, comments included:

"Changes are not very noticeable at this time of the year".

"They have done nothing to enhance the pleasures of people eg the odd picnic table where you could watch the wildlife. There are not any seats".

"The same - apart from the meanders".

Of those respondents who had not visited the river in the past year, 30% felt that the river landscape was now more attractive, although 58% said that they did not know. It is hard to tell how these respondents thought the landscape to be more attractive if they had not seen it, however, they could be repeating what other people had told them. Female respondents tended to be more uncertain than male respondents regarding the river landscape, with higher percentages either not knowing or feeling that it had remained the same.

In Coleshill, opinion was more divided on the effects of the scheme on the river landscape. Almost a quarter of respondents felt the landscape to be less attractive and the same number felt there to have been no change. Just over a quarter felt the landscape to be more attractive, while the same percentage did not know.

"More attractive with the bends and the corners".

"They have planted those other trees down along there, only had a few willows, it was all open".

"I think in the future it will be more attractive - at the moment it is still very raw. It has a potential increase in attractiveness".

"Not attractive at the moment but will be OK when it is finished".

6.5 Effects of the changes on flood risk

The effects of the restoration schemes on flood risk, as perceived by the respondents, also showed large divergencies between the Darlington and Coleshill sites. Generally speaking, respondents in Darlington felt the flood risk to have decreased, while in Coleshill the reverse was the case.

In Darlington the scheme was seen as resulting in a decreased flood risk by 39% of respondents, while 35% said that they did not know. Respondents who had not visited the river in the last 12 months in particular showed around three-quarters saying that they did not know about the flood risk.

When asked in what way they felt the flood risk to have decreased various reasons were given, although there seemed to be some disagreement as to whether the river now flows faster or more slowly.

"River doesn't seem to have got as high, so something is right".

"Sides have been barked up so river can take more water - the floor of the river is different as it has been stepped".

"They have made the banks more gradual. The water flows into the meanders more towards the centre".

"Because the bends have been put in, the river flows slower".

"The river seems wider now so there is more room for it to flow away".

"Because the banks seem to have been widened. I have seen the river when it has been raining a lot and it doesn't seem to be as high - it runs much faster".

Twenty-two percent of Darlington respondents felt the scheme had not affected flood risk in the area and only 4% felt the flood risk had been increased. As far as income was concerned, those in the higher income group of £20,000-25,000 showed higher percentages who felt the flood risk to have decreased. However, a number of respondents did comment

that it was difficult to tell how flood risk had been affected as rainfall had been low for a long time.

"Only know what my sister has said that it now floods more".

"I think this problem was solved before restoration. We haven't had much rain since work completed".

"It wasn't bad before and we haven't had too much rain to make a significant impact".

"There haven't been any big floods".

In Coleshill 39% of respondents felt the flood risk in the areas to have been increased due to the scheme. This was partly to do with the re-creation of the floodplain and local residents' perception that one of the scheme's objectives was to increase the level of flooding.

"This is the purpose of it being done. Slowing the water down".

"Last time it rained the flooding was worse than before".

"Fields in the locality have flooded".

"Only from listening to the farmers, they seem to think it will increase the floods".

Although 14% of respondents felt the flood risk to have been decreased, few comments were made concerning the reduced risk; only one respondent commented that it "seems to be better now". Nineteen percent of Coleshill respondents did not think the flood risk had changed, while 28% said that they did not know. Interestingly, respondents who had visited the river Cole in the last year showed higher proportions who felt the flood risk to have been increased, while those who had not visited in the last year demonstrated higher proportions who felt the risk either to have decreased or who said that they did not know.

As in Darlington, some Coleshill respondents felt that the lack of rain since the construction of the scheme had made it hard to tell what the effects on flood risk had been.

"Not likely to flood round here. No change whatsoever.

"There was always lots of flooding".

"We've not had a lot of rain have we to tell".

6.6 Other gains or losses resulting from the schemes

Respondents were encouraged to comment on any other gains or losses they felt had resulted from the restoration schemes, and to whom they applied. Although many respondents simply repeated comments they had already made, some did suggest additional gains and losses.

In Coleshill, farmers, fishermen and the football club were seen to have experienced various gains and losses.

"Farmers have lost and gained, but they are only tenants. Some farmers have lost some land, other have gained some, but it is not land which is owned by them, so should not affect them too much".

"Slightly easier access for us [farmers] because they have put fords in the river. To come in from another field with our farming tackle and would save accidents from the blind access".

"Difficult to get cattle across - although there wasn't a bridge there at all before".

"The farmers will claim losses due to flooding".

"If it works the football club loses out because it could flood the football pitch and unless they stock the slower parts of the river they will have lost fishing".

"Good for fishermen".

In Darlington the gains appeared to be focused on the local community, that everyone would gain from the scheme, local people and wildlife.

"Gains for everybody visiting - it was derelict lands that has been made to look nice".

"It's just for people who are interested in nature, it is a gain because there is more wildlife".

"More people and a lot of people walk on the other side and when the bridge is built it will be a lovely walk to go right around".

"On the gain side, you can see more wildlife and it is more pleasant to walk down there".

"I don't think we have lost anything. Just an overall gain for everyone".

As far as losses were concerned only a few comments were made:

"Keepsafe planting area as before - continually in mud on that side of the river".

"Lost access because of banks, children cannot sledge in places where trees have been planted".

Some people did voice other concerns they had regarding the scheme. These included problems of access for wheelchair users, concern about vandalism and the safety of the swans, preference for a new footbridge in section 6 rather than a refurbished one, and the provision of bins for dog waste.

7. ACHIEVEMENT OF OBJECTIVES AND APPROVAL OF SCHEMES

7.1 Were the objectives of changing the rivers achieved?

Respondents were told that one of the objectives of changing the river in their area is to restore it to a more 'natural' state, by restoring its physical character as well as the wildlife habitats, water quality, river banks and landscape. They were then asked whether they felt that the project had achieved this objective (Table 7.1).

Encouragingly, only 4% of Darlington respondents and 6% of Coleshill respondents felt that the objective had not really been achieved or had not been at all achieved.

In Darlington, almost 64% of respondents thought that the objective had been either partly achieved (48%) or completely achieved (16%), while in Coleshill the percentage was lower, at 28% for partly achieved and 8% completely achieved. In Darlington respondents in riverside properties demonstrated higher percentages feeling that the objectives had been completely and partly achieved. Moreover, all of the respondents who felt the changes to be good value for money felt that the objectives had been completely or partly achieved. Over half of the respondents who had not visited in the last year could not say whether the objectives had or had not been achieved.

According to one Coleshill respondent the River Cole had been natural before the project. In Coleshill it was respondents still in full-time education who felt that the objectives had not been achieved, while 100% of those who had completed their education between the ages of 17 and 19 felt the objectives had been achieved.

When asked why they thought the objective to have been completely achieved, Darlington respondents cited a number of reasons.

"It is a more natural river now with meanders and extra wildlife".

"Certainly looks more natural now that it has got little islands and wildlife is better".

"The banks are greatly improved".

"Looks better, more birds and different types of birds and rabbits and a fox".

For those who felt the objective to have been only partly achieved comments included:

"The other side is better, chopped trees down. This side the nettles and bramble bushes in summer are awful".

"The vegetation has not grown very much".

"It would be nice if there was a decent footpath and a seat to sit on".

"It is not fully back to what it used to be years ago".

"May look cool but has its faults - not entirely natural and not blending in completely".

"It's early days to judge and I think in a couple of years everything will be well established".

It was also felt by 22% of respondents in Darlington that it is still too soon to tell whether the objective has been achieved.

"It is still ongoing so it is too soon to tell".

"I think you need a couple of years to get established".

In Coleshill, the largest proportion of respondents (50%) felt that it was too soon to tell if the objective had been achieved due to the fact that the vegetation and scheme in general still needed time to mature. The lack of rainfall since the scheme's construction had led some respondents to say that they felt the objective to have been partly achieved, due to the fact that they felt it to be too soon to fully meet the objective.

"No vegetation yet".

"I don't know whether it will work yet."

"It will be several years before you can tell".

"The idea I was under was that we were going to see more flooding but we haven't seen that yet, but this is because of lack of rainfall".

7.2 Are objectives achievable generally in England?

Respondents were asked whether they felt the objective of the schemes to be achievable generally on England's rivers. The majority of respondents did think this to be achievable, either completely or partly (Table 7.2). Darlington respondents were slightly more positive about this than those in Coleshill. Those in Darlington who felt the objective to be completely achievable commented that time, money and technology were necessary for the

objectives to be achieved.

"I think if they have plenty of funds it will work".

"If they can do it for other rivers they can do it anywhere, providing the money is available".

"Depends on time and money".

"Seen other projects where they have turned a wilderness into a landscaped area. Nothing is impossible".

"I don't see why it can't be completely achievable with today's technology".

Those who felt the objective only partly achievable on rivers in England mentioned various constraints likely to affect restoration schemes in some locations. These included the difficulties associated with restoring some urban rivers, and the differences between restoring a short stretch of a river compared with a river as a whole.

"Because of the industry upstream it is never going to be completely clean".

"Basically because they are concentrating on one stretch of river".

"In cities not very practical".

"Very difficult through a town. Can enhance the area. Still going to be better".

"It relates to a very small segment of the total river length in an urban area".

Similar reasons were given by those few Darlington respondents who felt the objective not really to be achievable in England due to the problems in built-up areas, and according to one respondent because rivers look too artificial when restored. Colehill respondents cited similar arguments:

"It depends on the type of river and where it is. So many town rivers".

"In some areas it would be impossible to carry out a project because of riverside development and flood risks".

"The state of the water - all the effluent comes from Swindon, so it could make it difficult".

7.3 Approval of the changes to the rivers

Respondents were asked now that the changes to the river have been made, did they approve or disapprove of them overall. Differences were evident between respondents at the two sites (Table 7.3).

Results show that in Darlington respondents mostly (52%) or strongly (30%) approved of the scheme while only six percent did not really approve and two percent strongly disapproved, largely because of the cost of the scheme. Even among those respondents who felt the scheme not to have been very good value for money, 71% still mostly approved of the changes made. Respondents who had visited the river in the last 12 months showed higher percentages approving of the changes than non visitors, many of whom did not know whether they approved of the changes or not. Similarly, those respondents aged under 30 also showed higher percentages saying that they did not know.

Those who strongly approved in Darlington generally felt that the scheme had greatly improved the local environment.

"It has made a significant improvement to the section of river within the small urban area".

"Any improvements must make the area a better place for everyone".

"It looks more natural and it is interesting to visit".

"It is a tremendous improvement - it was a wilderness before".

Of those respondents who mostly approved of the changes, some still had reservations.

"Anything that makes it cleaner or more attractive must be better".

"It is a far better place, it is tidier, cleaner and much more pleasant".

"Improvement has been to the appearance and clarity of river but soil has been dumped in unsuitable places".

"I wasn't really interested in the first place but now it has been done I have got to say that it looks good".

"Certain aspects as previously mentioned eg safety".

Coleshill respondents showed a lower proportion who strongly approved of the River Cole scheme (17%) than respondents in Darlington and a higher proportion (19%) who do not really approve of the scheme. However, 53% said that they mostly approved. Those who did not really approve made very similar comments to those in Darlington in that they thought the scheme to be too expensive or that they did not see the necessity of carrying out

the project. One or two commented that they did not approve of trying to change nature. Overall, those who felt the changes to have been very good or quite good value for money also said that they completely or mostly approved of them. Those who did approve mentioned improvements in the river environment.

"You do need to make a few changes, you've got to improve the wildlife and if that's the intention then good".

"They are trying to bring things back as natural as they can and if its going to bring back wildlife then I'm all for that".

"I agree with the thinking, I hope it comes to fruition and increases water fowl, flora and fauna".

7.4 Ways in which restoration could have been done better

Respondents were given a chance to comment on whether they thought that the restoration could have been done better, and if so how. In Darlington many respondents did not think it could have been done better and made no extra comments. Others felt that they were not qualified to comment, or that they did not think it had needed doing anyway. For those who did feel that improvements could have been made comments included improved timing of the construction works, and comments on the bridges, footpaths and landscaping.

"Management of time to complete the project. There has been long periods of non-activity".

"I would like to see a footpath on the north bank running parallel to the one proposed on the southern bank".

"Hutton Avenue bridge should be a new bridge and not a refurbished one because it is used by many people. Also this should be done before the new proposed bridge in section 4. The proposed footpath should be extended to Five Arches bridge".

"I'm no expert but footpaths could have been made of a different substance".

"The dumped soil could have been spread more evenly".

"There are still some rough patches remaining from previous works".

"Certain areas should be left wild and not so open".

In Coleshill the only concrete suggestions for improving the restoration concerned seeding and flooding.

"Banks should be seeded. Naturally seeded banks will be washed away in the rain".

"Section 5 should have been wider. The fields will not flood, which is what they wanted".

"Think it should be flooded further up - there is not enough water".

8. CONSULTATION AND INVOLVEMENT WITH SCHEMES

One of the aims of the public perception study was to ascertain people's awareness of the levels of public participation and consultation associated with the two restoration schemes. Another aim was to determine how people were involved with consultation, if at all, and how satisfied they have been with the consultation process.

8.1 Were local people consulted at the time?

Respondents at both survey sites were asked whether they felt that local people were consulted about the project at the time. The majority of respondents in both Darlington (63%) and Coleshill (64%) said that local people were consulted (Table 8.1). However, Darlington respondents showed higher percentages who said that local people were not consulted, while a higher percentage of Coleshill respondents said that they did not know. Darlington respondents aged under 30 showed higher percentages who said that they did not know whether local people were consulted when compared with older respondents, and the same was the case for non-visitors when compared with visitors.

8.2 How respondents participated in or heard about the river works

Respondents were presented with a list of ways in which people could have been involved with, or heard about, the river works and were asked for each one of these whether they could indicate their level of involvement. For each type of consultation respondents were asked to say whether they had been involved, whether they had heard about it but had not been involved themselves, or whether they had neither been involved or heard about it (Table 8.2).

In Darlington the most frequently mentioned ways in which respondents said they were involved with the river works were: seeing construction at the site, letters or leaflets, seeing the notice at the site, the local press, and the RRP newsletter. Other respondents said that they had been involved through listening to local radio and television programmes and through the local council. Only 7% percent of respondents had attended a public meeting, while 12% had visited the exhibition at the local library and four percent had taken part in guided visits. Other ways in which Darlington respondents said that they were involved with the works mainly included taking part in the previous public perception survey, which was mentioned by a number of respondents.

For those in Darlington who had heard about ways in which people could have been involved with the river works, rather than being involved with them themselves, public meetings showed the highest percentages, followed by the local press. Other respondents said that they had heard about an exhibition, the local council, radio and TV coverage of the scheme, the notice on the site, as well as letters and leaflets. Moreover, more people said that they had heard about the exhibition and guided visits than those who said they had actually taken part in these events.

Various factors can be seen to have affected respondents participation in and awareness of

the river works. Respondents in riverside properties showed higher proportions attending public meetings as well as hearing about them, while no respondents living over 500 metres from the river attended a public meeting and the majority had not heard about them. In addition, those in riverside properties reported higher percentages receiving a RRP newsletter, being involved or hearing about the works from the local council, local radio or TV programmes, guided site visits and an exhibition. In addition, visitors to the river reported higher degrees of participation in, and awareness of, the consultation process than non-visitors. This was particularly evident when asked about seeing the construction works and the notice on the site. It is puzzling, however, that 22% of non-visitors said that they had been involved by seeing the construction works, and 12% by seeing the notice on site.

Darlington respondents in the higher income groups also showed higher percentages than those in the lower income groups who had been involved with or heard about the river works through an RRP newsletter, through their local council, by visiting the exhibition, and through seeing the construction works and the site notice.

In Coleshill, the most frequent form of involvement was again seeing the construction works followed by letters or leaflets, although it can be questioned whether seeing the construction is the same as being involved. However, 39% of respondents had been involved through the National Trust (being Trust tenants), and almost a third had received RRP newsletters. There had also been a higher involvement through the Parish Council in Coleshill as well as a higher participation in guided site visits. Local press coverage accounted for a lot less involvement than in Darlington although radio and television involvement was almost the same.

For those in Coleshill who had heard about, rather than being involved with, various consultation measures, public meetings were again the most common way of hearing about the project. This was followed by radio and television, the local press and the National Trust. Quite high percentages of respondents at both sites had neither heard about or been involved with many of the forms of consultation suggested.

8.3 Levels of satisfaction with consultation

Respondents were therefore asked how satisfied they were with the consultation for the river works over the last few years. The majority of respondents professed to be either quite satisfied or very satisfied with consultation (Table 8.3). In Darlington 14% of respondents were very satisfied and 47% were quite satisfied. Even a majority of respondents who felt that the changes to the river were not at all good value for money were mostly satisfied with the consultation. Similarly, 46% of non-visitors said that they were completely or mostly satisfied with consultation, although 36% said that they did not know.

When asked why they were very satisfied with the consultation respondents gave a number of explanations:

"We were bombarded with information about the river project".

"I was interviewed at the beginning and I knew what was going on".

"We were kept informed of what they were going to do".

"Plenty of information about if you were interested".

Those who said that they were quite satisfied offered similar explanations.

"We were offered the opportunity to submit plans".

"We got leaflets and things".

"They seem to have taken notice of what I said in the last interview eg footbridge near Five Arches".

"They let us know what was going on. We were kept informed as well as through the notice board on site".

A few respondents had some suggestions to make regarding the consultation process.

"We got some information but we would have liked to have heard about public meetings".

"Could have had personal letters to each house in area".

"An angling club should have been asked to participate to stock it with fish".

However, 19% of Darlington respondents said that they were not very satisfied with the consultation for the scheme, 9% saying that they were not at all satisfied. Those Darlington respondents who were not at all satisfied with consultation appeared to be largely those who, for one reason or another, had not been consulted.

"We haven't really been consulted".

"I was not consulted at all".

A few Darlington respondents made the point that there had been plenty of information available, if people had chosen not to avail themselves of the opportunity they only had themselves to blame.

"There were opportunities for me to get involved but I was too busy".

"We knew about it and were told if we wanted to know any more we were advised where to go".

These views were also repeated in Coleshill, where it was stated that some local residents had chosen not to get involved with the project.

"I suppose I should have gone to the meeting when they had them and I would have found out more then".

"Did not want to be involved".

Many of those in Darlington who were not very satisfied with the consultation said that they had not received any information other than from the previous public perception survey:

"We haven't really had a consultation with anyone other than the previous survey".

"Nobody came apart from someone who asked me to take part in a survey".

In Coleshill a slightly higher percentage of respondents than in Darlington (17%) were very satisfied with the consultation about the river works, while 39% said they were quite satisfied.

"We did hear what was going on and did see it, and because of my work we went over it a couple of times".

"I had leaflets - the general press".

"We heard more because I work for the National Trust".

"We were consulted - there were meetings".

"We were kept informed, none of us were in the dark".

"Did not interfere with us".

However, 17% percent of respondents in Coleshill stated that they were not at all satisfied with the consultation process, while 14% were not very satisfied.

"Could have known a bit more. The people who were doing it should have told us more".

"Knew nothing about it".

"I thought we would have more input and say as regards our views on it".

"I think no consultation before the work started - from the RRP".

Finally, a slight amount of apathy was demonstrated by some respondents on both sites, with several commenting that they felt the schemes would have gone ahead no matter what local people thought.

"Weren't really informed other than previous survey. They were going to do it regardless of what we thought" (Darlington).

"If I had had a say I don't think it would have made a difference" (Coleshill).

8.4 How could consultation have been improved?

Respondents were asked how, if at all, did they think that consultation could have been improved. For a great many respondents in Darlington it was thought that the consultation could not be improved.

"I don't think it could have been improved".

"I don't know if there is anything further that could have been done".

"I wouldn't say it could have been improved".

Of those who had suggestions to make concerning consultation the majority of these requested more information such as letters, leaflets, meetings etc.

"By having a leaflet put through the door".

"I think there could have been a public meeting".

"I would have been helpful if we had more information about an exhibition".

"We could have been shown examples of before and after in other places that have experience of river restoration projects".

"By having information through the door or a questionnaire to fill in yourself".

"I knew very little, so perhaps more TV/press coverage".

"Could have taken more people on guided tours".

"If they had drafted local residents on a panel or committee, then they could have had a say and represent local people".

Respondents in Coleshill who felt that the consultation could have been improved made similar suggestions to those from Darlington:

"Think fishermen should be consulted".

"More newsletters - updates".

"Public meetings".

"I suppose a questionnaire to each household".

8.5 The importance of consultation

When asked how important they felt it was to be consulted over, and involved with, projects such as the restoration schemes, the findings revealed that the majority of respondents felt it to be important. On being asked to rate the level of importance on a scale of 0 (not at all important) to 10 (very important) the mean rating in Darlington was 7.976 and in Coleshill 7.943. Seventy-five percent of respondents in Darlington gave a rating of seven or over and 30% gave a rating of 10, very important.

Riverside respondents in Darlington were seen to give higher ratings than those living further from the river: 95% gave a rating of eight or over compared with 60% for those living over 500 metres from the river. Non-visitors to the river in the last year were less sure about the importance of consultation, and less gave higher ratings than those visiting the river. None of the respondents aged under 30 gave a rating of less than five. In Coleshill there were no ratings given under four, 66% gave ratings of eight or over and 29% gave a rating of 10, indicating that consultation was generally seen as being important.

8.6 Interest in future involvement about the river

Considering the generally high interest in, and approval of, the two restoration schemes, interest in taking a more active part in decision-making about the local rivers and management of the sites was quite low; interest was lower in Coleshill than in Darlington (28% compared with 35%) (Table 8.4). At both sites, visitors to the river in the past 12 months not surprisingly showed a higher percentage expressing interest in taking a more active part in decision-making than non-visitors.

The proportion of respondents expressing interest in taking part in another follow-up survey in the future was promising, with 84% in Darlington and a lower but still reasonably high 64% in Coleshill. In Darlington, interest in a follow-up survey was seen to decline with increased age. In Coleshill, too, older respondents aged over 65 showed less interest in another survey, while those in the 30 to 65 age groups showed the highest interest. In Darlington, even for those respondents who did not feel the changes to the river to be good value for money, the majority expressed an interest in taking part in another survey. Moreover, 70% of non-visitors in Darlington showed an interest in a follow-up future survey, although the percentage was lower in Coleshill, at 31%. Darlington respondents in the lowest income group showed the highest percentages both not interested in taking a more active part in decision-making about the river and not being interested in taking part in another follow-up survey.

9. SUMMARY AND CONCLUSIONS

Part I of this report focused upon the results of the two 1997 public perception surveys, comparing the results of the findings across the two sites. Results from the studies in Darlington and Coleshill show an overall positive reaction to the river restoration projects. Significant differences between respondents at the two restoration study sites were demonstrated regarding perception of, and views on, the restoration schemes. Many of these differences appear to relate to the contrasting locations of the two rivers, one being urban and the other rural. The context within which rivers are located seems to be an important factor influencing local residents' perception of and attitudes towards river restoration schemes. It can be suggested, therefore, that attitudes towards restoration may not only depend upon the scheme itself but also upon the type and quality of the surrounding local environment. Other factors seen to influence respondents' perceptions and answers to questions on different aspects of the restoration schemes include respondents': age, sex, levels of education and income, proximity to the rivers, and general approval of the schemes.

9.1 Use of the rivers

Respondents in Darlington and Coleshill visit their local rivers quite frequently. Darlington respondents on the whole visit more often than those in Coleshill, although visiting at both sites drops slightly during winter. The main reasons given by respondents for visiting both of the rivers were: walking, walking the dog and for the wildlife. The reason why respondents in Darlington visit their local river more frequently could be due to a number of reasons: easier access than at Coleshill and more pronounced footpaths in places, the fact that the river area presents a more rural landscape in an otherwise urban environment, and the fact that the river is used by many as access to elsewhere. In Coleshill, as residents live in a rural area they may feel less of a need to 'escape' from an urban environment to the peace and quiet of the river. Moreover, Coleshill residents have a number of other local rural areas they could easily choose to visit, including the National Trust parkland.

However, the results showed that although Coleshill respondents may visit their river less often than their counterparts in Darlington, when they do visit they may spend longer at the river. Although some Coleshill respondents visit the river in the course of their work, it could be suggested that Coleshill respondents make more of a point of visiting the river when they do visit than do visitors to the river Skerne.

9.2 Attractiveness of the rivers

Respondents in Darlington like the river Skerne for two main reasons: the fact that it is a quiet and peaceful refuge away from the traffic and urban town centre, and that it is attracting an increasing amount of wildlife. Darlington respondents equated a visit to the river with visiting the countryside, and the introduction of meanders was thought to make the river a more interesting place to visit. Coleshill respondents also appreciated the peaceful rural aspects of the river Cole along with the diversity of wildlife to be found there. Aspects of the river areas local residents in Darlington do not like include dog fouling, poor footpaths in places, vandalism, and teenagers who congregate by the river. In Coleshill, some

respondents commented that the river banks were still too bare and that fishing on the river Cole had been adversely affected.

The rivers in the study were rated quite highly by local residents in terms of their attractiveness. Overall, the river Cole was rated slightly less highly than the river Skerne. Given that the Cole is a rural river, this is perhaps surprising. But when put into context, looking at the location of the rivers, it becomes more understandable that the river Skerne area would be considered attractive and valued for its visual amenity and recreation opportunities when compared to the neighbouring built-up area. Quite large proportions of respondents, however, were unable to give a rating for the rivers' attractiveness, most of these being either non-visitors or those who lived at greater distances from the river.

9.3 Awareness of the restoration works

Awareness of the two restoration schemes was high among survey respondents. Darlington respondents reported the highest level of awareness, many having been interviewed in the earlier survey. The high level of awareness in Coleshill is likely to be partly due to the fact that respondents live in a small village and news about the river works would spread quite quickly. A high percentage of respondents at both sites reported personal observation as the means by which they first heard about the restoration works, which indicates that the RRP was not always instrumental in initially raising awareness of the projects, although many Darlington respondents did state that they had received a newsletter or leaflet.

Only 6% of respondents originally named the RRP when initially asked who was involved with the restoration works, although this figure increased substantially when respondents were prompted. This low initial recognition of the RRP appears to show that the organisation is not immediately associated with the restoration works. Given the high level of consultation regarding the two schemes, these results are surprising, and indicate that a higher profile might need to be cultivated for any future restoration works.

Generally, respondents were quite aware of most of the changes to the rivers carried out as part of the restoration schemes, but were particularly aware of the introduction of meanders to the river channels, and of the new river channel at Coleshill.

9.4 What were the restoration works hoping to achieve?

Differences in response were observable at the two restoration sites regarding respondents' perceptions of the aims of the works. In Darlington the general view was that the scheme aimed to clean up and improve the area generally for the benefit of local people and in order to attract more visitors. Restoring the river to a more 'natural' condition and helping to alleviate flooding were also seen as aims of the project, along with the encouragement of more wildlife. In Coleshill, the scheme was perceived less as benefiting the local community and more as benefiting nature. For example, the re-creation of wetlands and the floodplain, improvements in river flow, vegetation and wildlife habitats were mentioned by respondents, as well as the aim of restoring the river to its earlier 'natural' course. The RRP consider the Skerne scheme to be the 'public' scheme, while the Cole scheme is considered to be the

scientific scheme for more detailed monitoring. These perceptions are also observable from the local communities' reactions to the two schemes', however, it is unclear whether the RRP is partly responsible for these perceptions, in the way the schemes have been publicised, or whether respondents had picked up on these ideas themselves.

9.5 Approval of the restoration schemes

The results from the study reveal that the majority of respondents at both sites approve of the restoration schemes. Darlington respondents in particular strongly approved of the changes, although Coleshill respondents were rather more cautious. Even among those respondents who did not think the schemes to be good value for money, the majority approved of the restoration changes. Those who did not approve of the schemes mostly gave their reasons as the costs of the restoration or the fact that they had not seen the necessity of changing the river.

Despite the overall approval of the schemes, respondents' visiting patterns to the rivers since the restoration works were not reported to have changed. In fact, Coleshill respondents showed the highest proportion of people who visit a bit more frequently, possibly due to easier access to the river since the restoration works. However, the results indicate that the pleasure derived from visiting the two rivers has now increased since the restoration works have been completed, and especially so for respondents in Darlington. It was generally felt that the rivers 'fit in' well with their surrounding areas, while almost a quarter of respondents at both sites felt the rivers fitted in completely.

9.6 Perceptions of the effects of the restoration schemes

Some significant differences were observed between the two survey populations regarding certain effects of the restoration schemes. Again, these differences need to be placed within the rural-urban contexts of the schemes. Recreational opportunities were largely seen to have been increased at the river Skerne, or to have remained the same, while at the river Cole the highest proportion of respondents reported recreational opportunities to have remained the same. Moreover, in Darlington the river landscape was perceived by the majority of respondents as becoming more attractive since the restoration, while in Coleshill views on the attractiveness of the river Cole's landscape were much more mixed.

One of the ways in which Darlington respondents felt the restoration scheme to have had very positive effects was in the perceived increase in wildlife and wildlife habitats since the works were completed. The majority of Darlington respondents thought that more wildlife had been attracted to the area since the restoration works. In contrast to this, respondents in Coleshill were much more mixed in their opinions about the effects of the scheme on wildlife. Some respondents felt that the loss of wildlife was a temporary phenomenon associated with the disturbance of construction.

Although equal percentages of respondents at both sites felt that safety aspects of the river had not changed, a higher proportion of Darlington respondents reported that they feel their river to now be more safe since the restoration works, while Coleshill respondents showed

similar proportions who felt their river to now be less safe. These perceptions on safety can also be linked to respondents perceptions of flood risk since the restoration works. In Darlington higher percentages reported that they felt flood risk had decreased since the restoration works, while the opposite was the case at Coleshill. The perception of changes in flood risk at the two sites can also be seen to correspond with what respondents felt the schemes were trying to achieve. In Darlington it was largely felt that the restoration works would help alleviate flood risk, while in Coleshill many respondents felt that the objective of the scheme had partly been to recreate the original floodplain.

9.7 Perceptions on the objectives of river restoration

The restoration scheme in Darlington was perceived by local residents to have largely achieved its objectives. Most respondents either felt the objectives to have been partly or completely achieved. In Coleshill, the proportion of respondents feeling this was half that of Darlington, and the largest percentage of respondents reserved their judgement by saying that they felt it to be too soon to tell whether the scheme had achieved its objectives. However, the majority of Coleshill respondents did feel that the scheme's objectives were achievable on rivers in England generally, as did the majority of respondents in Darlington. It was acknowledged, however, that certain constraints would be problematic, such as the availability of resources and the fact that many rivers flow through urban areas.

9.8 Views on the costs of the schemes

Views on the cost of the schemes were mixed across the two study sites. Many people felt the costs to be reasonable and justified, while others expressed indignation and stated that the costs were excessive. Although the results from the open question comments regarding the costs were not quantified, the general indication is that more people considered them to be acceptable than not acceptable. Moreover, when the costs were broken down to per adult or per household the response was more positive, with the costs seen as more acceptable.

Overall, the majority of respondents in Darlington reported that they felt the restoration scheme to be either quite good or very good value for money, however, Coleshill respondents were rather more cautious, with equal numbers thinking that it was too soon to tell. This again appears to be linked to the locational context of the two schemes, as Coleshill respondents in particular appeared to feel that there was less of a need for a restoration scheme on an already rural river.

9.9 Views on consultation

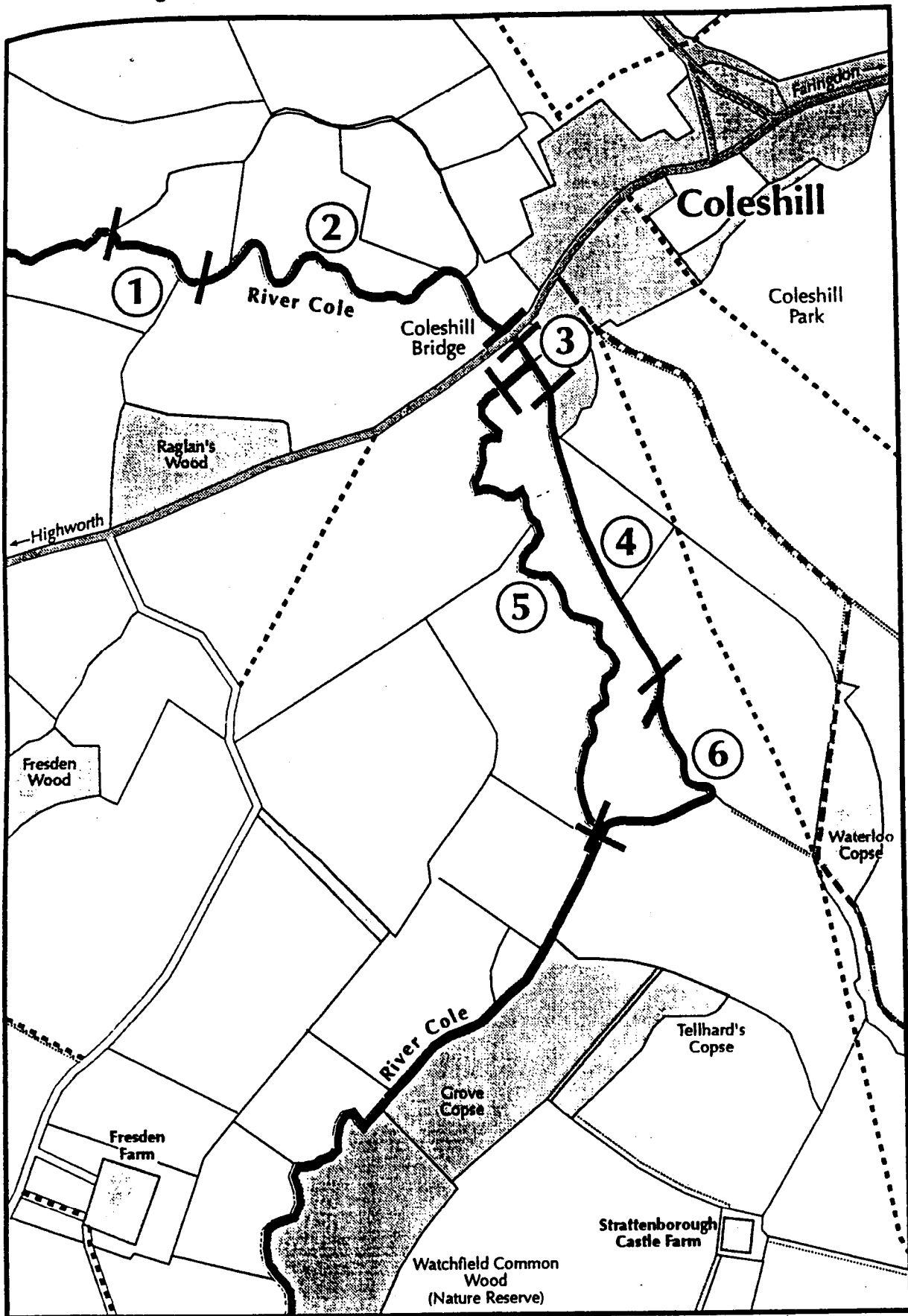
Over 60% of respondents at both survey sites reported that they thought local people had been consulted about the restoration works. Those respondents had who been directly involved in the consultation process reported either receiving letters, leaflets or RRP newsletters or taking part in public meetings or guided visits of the river sites. Other respondents had heard about the river works through local media coverage, from their local councils, or by seeing a notice board on site, or viewing the construction works themselves.

Darlington respondents who had been interviewed in 1995 also included the earlier survey as part of the consultation process.

Darlington respondents showed higher percentages overall than Coleshill respondents stating that they were satisfied with the consultation over the restoration scheme and many thought that consultation regarding the scheme could not have been improved. Although Coleshill respondents showed slightly higher percentages than in Darlington who were very satisfied with consultation, they also showed higher percentages who were not at all satisfied. The majority of respondents in the study reported feeling that public consultation about river restoration schemes is important, although not all respondents expressed a desire to be involved in the consultation process. Respondents at both sites made the point that they could have been more involved in consultation, if they had chosen to be. Therefore, what is important is that people have the opportunity of being involved if they so wish. It was generally felt that information about such schemes should be widely disseminated to local residents through such means as letters or leaflets delivered to each household, thereby allowing people to have the choice over whether or not to become involved.

Figure 1.2

Restoration plan of River Cole, Coleshill



Woodland
 Buildings
 Roads
 Footpath
 Bridleway
 Track

Figure 1.1

Restoration plan of River Skerne, Darlington

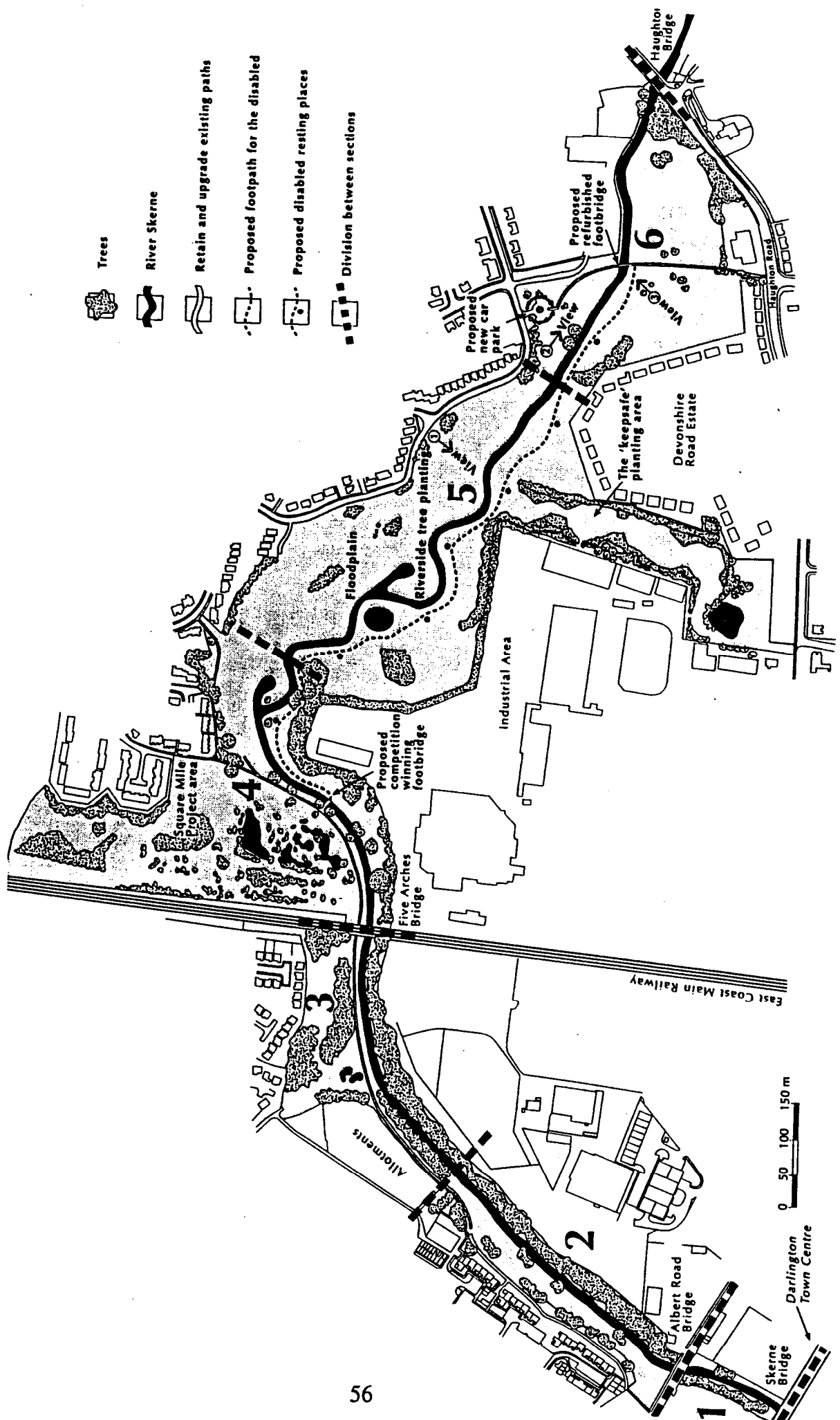


Table 1.1 Response rates for surveys

Response rates including 'no contacts'	Coleshill	Darlington
No. of addresses approached	70	475
No. of interviews	36 (51%)	260 (55%)
No. of refusals	15 (21%)	88 (19%)
No contacts	19 (27%)	127 (27%)

Response rates excluding 'no contacts'	Coleshill	Darlington
No. of addresses approached	51	348
No. of interviews	36 (71%)	260 (75%)
No. of refusals	15 (29%)	88 (25%)

Table 2.1 Characteristics of respondents

Sex	Darlington %	Coleshill %
Male	41	42
Female	59	58
No. of valid cases	260	36

Age	Darlington %	Coleshill %
Under 30	10	11
30-45	34	34
46-65	35	28
Over 65	22	28
No. of valid cases	259	36

Age completed full-time education	Darlington %	Coleshill %
Still in full-time education	1	6
16 and under	77	67
17-19	17	14
20-23	5	14
Over 23	1	0
No. of valid cases	260	36

How long lived in immediate area	Darlington %	Coleshill %
One year or less	3	6
2-5 years	15	17
6-10 years	25	17
11-20 years	26	9
21-30 years	12	23
31-50	11	23
Over 50 years	9	6
No. of valid cases	260	35

Tenure	Darlington %	Coleshill %
Own house/flat	73	3
Rent from council	16	0
Other (private landlord/ live with family)	12	97
Valid no. of cases	260	36

Household's annual income from all sources before deductions	Darlington %	Coleshill %
Under £5,000	10	3
£5,000-£10,000	10	17
£10,001-£15,000	11	11
£15,001-£20,000	7	25
£20,001-£25,000	8	6
£25,000 and over	11	6
Refused	29	17
Don't know	15	17
No. of valid cases	260	36

No. of people in household	Darlington %	Coleshill %
1	14	31
2	37	33
3	19	11
4	22	17
5	8	6
6	0	3
7	0	0
8	0	0
No of valid cases	260	36

Ages of people in household	Darlington %	Coleshill %
Children aged 10 and under	24	14
Children aged 11 to 17	21	11
Adults aged 18-64	84	78
Adults aged 65 and over	23	33
No. of valid cases	259-260	36

Table 2.2 Proximity to the rivers

Locations	Riverside %	Within 250m %	250-500m %	Over 500m %	Total no. of cases
Darlington	8	39	31	22	260
Coleshill	0	36	25	39	36

Table 2.3 Membership and support of organisations

Organisations	Darlington %	Coleshill %
National Trust	5	47
World Wide Fund for Nature	3	6
Royal Society for the Protection of Birds	5	3
Local Wildlife Trusts	0	0
Friends of the Earth nationally	1	3
Friends of the Earth locally	0	0
Greenpeace nationally	2	6
Greenpeace locally	1	6
Angling club	4	6
Sailing club	0	6
Sports club	15	8
Local residents/tenants or Community Association	3	0
Archaeological/historical society	0	6
Other	7	11

Table 3.1 Visits to the rivers in last 12 months

Whether visited in last 12 months	Yes %	No %	No. of cases
Darlington	81	19	260
Coleshill	64	36	36

Ever visited river	Yes %	No %	No. of cases
Darlington	66	34	50
Coleshill	77	23	13

Table 3.2 Frequency of visits to the rivers

Frequency of visits during summer	Darlington %	Coleshill %
Daily	23	6
Several times a week	25	16
Weekly	15	6
Fortnightly	6	6
Monthly	8	16
2/3 times a year	13	22
Once a year	3	22
Never	7	6

Frequency of visits during winter	Darlington %	Coleshill %
Daily	18	3
Several times a week	14	9
Weekly	10	12
Fortnightly	7	6
Monthly	10	6
2/3 times a year	17	24
Once a year	6	15
Never	19	24

No. of valid cases	242	32-33
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* Figures rounded to nearest decimal point

Table 3.3 Sections of rivers visited

Darlington: Sections	No. of cases	Percentage of cases
Section 1	21	8.8
Section 2	95	39.4
Section 3	166	68.9
Section 4	184	76.0
Section 5	175	72.3
Section 6	164	68.0
Valid no. of cases	238-242	

Coleshill: Sections	No. of cases	Percentage of cases
Section 1	17	51.5
Section 2	21	63.6
Section 3	23	69.7
Section 4	21	63.6
Section 5	20	60.6
Section 6	20	60.6
Valid no. of cases	33	

Table 3.4 Purpose of visits to rivers and nearby open spaces

Purpose of visit	Darlington %	Coleshill %
Walking	64	79
Walking dog	34	33
Wildlife	35	15
Access to elsewhere	45	6
Fishing	1	12
Cycling	8	3
Sitting	3	6
Playing	5	0
Boating/canoeing	-	-
Jogging	2	3
Voluntary/conservation work	-	-
School visit	5	0
Football/games	4	0
In relation to work	-	13
Other	4	18

No. of valid cases	235-241	32-33
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Table 5.1 How first heard about or noticed changes made to the rivers

How heard about/noticed changes	Percentage of cases hearing/noticing changes	
	Darlington	Coleshill
Personal observation	36	48
Medway River Project	-	-
River Restoration Project	6	0
Leaflet/letter	35	-
Family	3	16
Signpost on site	12	39
National Trust	-	39
Parish/local council	5	13
Friends/neighbours	11	36
Attended meeting	1	16
Can't remember	1	0
Other	48	26

Valid no. of cases	234-238	30-31
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Table 5.2 **Changes to rivers heard about or noticed by respondents**

Changes to river	% Yes - Unprompted by interviewer		% Yes - Prompted by interviewer		% No - Prompted by interviewer		% Don't know	
	D' ton	C' hill	D' ton	C' hill	D' ton	C' hill	D' ton	C' hill
Clearing of vegetation	22	14	50	50	28	36	1	-
New planting in or along river	18	8	36	25	44	64	1	3
Natural regeneration of vegetation	-	-	-	-	-	-	-	-
New bends/ meanders in river channel	59	-	25	-	15	-	0	-
Additional river channel	-	22	-	47	-	22	-	8
New bends/ meanders in old channel	-	50	-	33	-	17	-	-
Works to river banks	24	19	48	56	26	25	3	-
Changes to river bed	28	3	31	47	34	44	7	6
New backwaters/ wetland areas	20	6	40	42	35	47	5	6
Variations in river flow	10	22	43	39	42	36	5	3
New/improved nature sites	21	6	39	25	35	58	6	11
Other	19	25	4	0	75	75	2	-

Table 5.3 Which organisations were involved in changing the rivers?

Organisations involved with changes	Yes - Unprompted by interviewer		Yes - Prompted by interviewer		No - Prompted by interviewer		Don't know	
	D' ton %	C' hill %	D' ton %	C' hill %	D' ton %	C' hill %	D' ton %	C' hill %
Local authority/ council	-	19	-	33	-	31	-	17
Kent County Council	-	-	-	-	-	-	-	-
Tonbridge and Malling Borough Council	-	-	-	-	-	-	-	-
Maidstone Borough Council	-	-	-	-	-	-	-	-
City of Rochester Upon Medway	-	-	-	-	-	-	-	-
Darlington Borough Council	40	-	45	-	7	-	8	-
Environment Agency/National Rivers Authority	33	56	53	36	5	8	9	-
Medway River Project	-	-	-	-	-	-	-	-
River Restoration Project	6	6	61	75	7	6	26	14
National Trust	4	83	33	14	28	3	36	-
Wildlife Trust	-	-	-	-	-	-	-	-
English Nature	1	6	33	46	27	20	39	29
European Commission	16	14	38	51	13	14	32	20
Countryside Commission	2	9	29	49	27	20	42	23
Local landowners	-	-	-	-	-	-	-	-
Northumbrian Water	31	-	52	-	6	-	11	-
Other	12	14	2	0	84	86	2	-

Table 5.4 How well do rivers 'fit in' with their surroundings?

How does river 'fit in'?	Darlington %	Coleshill %
Fits in completely	21	24
Fits in quite well	57	58
Doesn't fit in very well	1	3
Doesn't fit in at all	0	3
Don't know	21	12
No. of valid cases	245	33

Table 5.5 Have the changes to the rivers been good value for money overall?

Value for money	Darlington %	Coleshill %
Very good value for money	21	14
Quite good value for money	42	28
Not very good value for money	9	6
Not at all good value for money	8	8
Too soon to tell	12	42
Don't know	8	3
No. of valid cases	260	36

Table 5.6 Frequently patterns since schemes completed

Frequency of visits	Darlington %	Coleshill %
Visit a lot more frequently	7	6
Visit a bit more frequently	9	21
Visit about the same as before	71	61
Visit a bit less frequently	9	9
Visit a lot less frequently	3	3
Don't know	1	-
No. of valid cases	244	33

Table 6.1 Are the rivers more or less safe since the changes?

Safety	Darlington %	Coleshill %
More safe	30	14
Less safe	10	28
Made no difference	38	39
Don't know	22	19
No. of valid cases	259	36

Table 6.2 Has changing the rivers resulted in increased or reduced recreation opportunities?

Recreation opportunities	Darlington %	Coleshill %
Increased opportunities	40	25
Reduced opportunities	5	8
Has remained the same	37	53
Don't know	19	14
No. of valid cases	260	36

Table 6.3 Has changing the rivers resulted in a loss or an increase in wildlife habitat?

Wildlife habitat	Darlington %	Coleshill %
Loss in wildlife and wildlife habitat	3	25
Increase in wildlife and wildlife habitat	70	28
No change	12	31
Don't know	15	17
No. of valid cases	259	36

Table 6.4 Have the changes to the rivers resulted in the river landscapes becoming more or less attractive?

River landscape	Darlington %	Coleshill %
More attractive	63	28
Less attractive	4	22
Has remained the same	14	22
Don't know	19	28
No. of valid cases	259	36

Table 6.5 Have the changes to the rivers resulted in increased or decreased floodrisk?

Flood risk	Darlington %	Coleshill %
Increased flood risk	4	39
Decreased flood risk	39	14
No change	22	19
Don't know	35	28
No. of valid cases	259	36

Table 7.1 Has the project achieved its objectives?

Achievement of objectives	Darlington %	Coleshill %
Completely achieved	16	8
Partly achieved	48	28
Not really been achieved	3	3
Not achieved at all	1	3
Too soon to tell	19	50
Don't know	13	8
No. of valid cases	260	36

Table 7.2 Is the objective achievable in England generally?

Is objective achievable	Darlington %	Coleshill %
Completely achievable	25	14
Partly achievable	47	53
Not really achievable	7	11
Not at all achievable	1	8
Don't know	20	14
No. of valid cases	260	36

Table 7.3 Do you approve or disapprove of the changes overall?

Approve/disapprove	Darlington %	Coleshill %
Strongly approve	30	17
Mostly approve	52	53
Do not really approve	6	19
Strongly disapprove	2	6
Don't know	10	6
No. of valid cases	260	36

Table 8.1 Do you think that local people were consulted about the project at the time?

Were local people consulted	Darlington %	Coleshill %
Yes	63	64
No	26	17
Don't know	11	19
No. of valid cases	259	36

Table 8.2 How did you hear about/were involved with river works?

How heard/ involved	Involved		Heard about but not involved		Neither heard about or involved		Don't know	
	D' ton %	C' hill %	D' ton %	C' hill %	D' ton %	C' hill %	D' ton %	C' hill %
Public meetings	7	17	36	45	53	36	4	3
Letters/ leaflets	57	53	13	14	25	33	5	-
MRP news-letter	-	-	-	-	-	-	-	-
RRP news- letter	44	31	9	11	38	50	10	8
Parish council	-	19	-	17	-	61	-	3
National Trust	-	39	-	22	-	36	-	3
Local council	14	-	17	-	60	-	9	-
Local press	49	19	11	25	26	56	4	-
Radio/TV	19	17	16	36	58	47	7	-
Guided visits	4	25	14	17	76	58	7	-
Exhibition	12	-	18	-	64	-	7	-
Notice on site	53	-	14	-	38	-	5	-
Voluntary/ conservation	-	-	-	-	-	-	-	-
Saw construction	58	64	15	17	22	19	4	-
Other	13	6	0	6	81	89	5	-

Table 8.3 How satisfied were you with the consultation for the river works?

Satisfaction	Darlington %	Coleshill %
Very satisfied	14	17
Quite satisfied	47	39
Not very satisfied	19	14
Not at all satisfied	8	17
Don't know	12	14
No. of valid cases	260	36

Table 8.4 Interest in future involvement with the river

Interest	Percentage of respondents answering YES	
	Darlington	Coleshill
Interested in taking more active part in decisions about river and in management of the site	35	28
Interested in taking part in another follow-up survey in the future	84	64

PART II: RESULTS FROM THE 1995 AND 1997 RIVER SKERNE SURVEYS

Sylvia Tunstall, Sue Tapsell and Sally Eden

1. AIMS AND OBJECTIVES

This second part of the report presents a comparison of the results from the surveys of the of local residents in Darlington undertaken before the river restoration scheme works were started (the 1995 survey) and after the restoration scheme was implemented (the 1997 survey). This comparison was made in three ways:

- first, the total sample responses to the first (1995) and second (1997) surveys were compared. These data could be affected by variations in the characteristics, behaviour and attitudes of the respondents sampled in the first and second surveys since part of the total sample in each survey consisted of respondents interviewed in only one of the surveys and not common to both.
- Second, the aggregate responses of those 136 respondents interviewed in both the 1995 and 1997 surveys (described throughout as the re-interviewed) were compared which eliminated the effect of variation due to the differences in the samples as only the same individuals were included in the comparison. The aggregation, however, may conceal considerable variation in the individual responses over time: people may change their minds but the individual changes may balance out and therefore, not be apparent in the aggregate results.
- Third, the responses given by individuals who participated in both the first and second surveys were compared on an individual basis to check for individual variation in response over the surveys. This analysis gives the most precise measure of stability or change in response over time.

In an ideal situation, the research design would have included a control group not subject to a changed river environment to control for variation due to other effects. This was not practical in the circumstances of the river restoration project.

In comparing the responses of the re-interviewed before and after scheme implementation, it was important, too, to consider to what extent those who agreed to participate twice were a selected group atypical of respondents in general by comparing the characteristics and responses of the re-interviewed with the responses of those contacted only once. It was possible too that there were experimental effects at work and those who took part in both surveys were different because of this participation which may have served to interest respondents in the changes in the river.

The data from the 1995 and 1997 surveys have been examined to compare the visiting behaviour, the appreciation of the river and the expectations of the effects of the restoration scheme and preferences for restoration before and after scheme implementation. Finally, some indications of the monetary value attached by respondents to the river restoration scheme have been sought in the two surveys. Full details of the results of the 1995 survey are presented in RRP 1995.

2. CHARACTERISTICS AND ATTITUDES OF RESPONDENTS IN 1995 AND 1997 SURVEYS

A comparison of the characteristics of 1995 and 1997 survey respondents reveals few significant variations between the respondents in the two surveys as a whole and between those re-interviewed and those participating only once (Table 2.1). However, interviewers in 1995 were more successful than in 1997 in achieving a balance in the number of men and women interviewed. This was partly due to greater success in re-interviewing women than men but also to failure to contact men in sufficient numbers within the sample newly drawn for the 1997 survey. This imbalance would only be of significance to the comparison if there were clear differences in the responses on key variables such as support for the scheme and valuations according to gender.

In terms of age of respondents, their age on completing full time education and length of residence in the area, no differences were found between the 1995 and 1997 survey respondents and the re-interviewed and those participating in one survey only. Similarly, the size and composition of respondents' households in the 1995 and 1997 surveys were broadly similar with slightly more one and two person households included in 1997. The re-interviewed were significantly more likely to come from larger households with three or four members rather than two members than those only interviewed once in 1995 or in 1997.

The 1997 survey included slightly fewer owner occupiers than the 1995 survey. The re-interviewed were significantly more likely to own their homes than others interviewed in 1995 and there was the same tendency although the difference was not significant in 1997.

Where reported, income levels appeared to be similar in the 1995 and 1997 surveys although with about 45% in both either unable or unwilling to divulge household income, the proportions may not be representative. The main significant difference between the re-interviewed and those participating in the surveys only once was in the proportion of refusals in 1997: those interviewed for the first time in that year were particularly reluctant to give the income details.

In terms of their location in relation to the river, there were significant differences between those re-interviewed and those interviewed in 1997 only. The same variation was not found in 1995. The proximity to the river is based on interviewer and respondent judgement rather than measurement on maps and there is some evidence of interviewer variability in the classification of addresses.

Surprisingly, respondents attached less importance to being consulted in the 1997 survey, after they had had the opportunity to be involved in the consultation programme on the river restoration scheme compared with 1995 pre scheme survey. This was as true of the re-interviewed as of those who participated in only one survey although those who only took part in the 1997 survey were least likely to regard consultation as very important or nearly so (Table 2.2).

In contrast there were no differences in the proportions interested in participating in decision making regarding the river in the pre and post scheme surveys. Those who took part in both surveys were slightly more interested in such participation than others who took part once

but the difference was not statistically significant. Thus the re-interviewed were not a selected group in terms of their attitudes towards consultation and participation in decision making on the river and river restoration. By definition, however, they were significantly more willing to participate in a further survey in both the 1995 and 1997 surveys (Table 2.3)

Thus there were few very marked differences in the demographic characteristics and attitudes of the survey respondents in the 1995 and 1997 surveys overall and as between those re-interviewed and those interviewed only once. Those who agreed to take part in both surveys were not particularly special or selected in terms of their characteristics and certain attitudes and a comparison of their responses before and after the scheme can be considered valid for these reasons.

3. USE OF THE RIVER IN THE 1995 AND 1997 SURVEYS

3.1 Frequency and duration of visits

Generally, a comparison of the results from the 1995 and 1997 surveys suggests that the implementation of the scheme had a very limited impact on visiting behaviour. Of course, factors unrelated to the river restoration scheme such as changes in family circumstances, work and leisure activities over the intervening months may have affected river visiting. The great majority of local residents in the surveys reported visiting the river within the twelve months prior to the survey (85 % before and 81 % after the scheme implementation). Summer and winter visiting frequencies were stable with 63 % reporting at least weekly visiting in summer in both surveys; for winter, the proportions were 44 % before scheme implementation and 41 % after (Tables 3.1-3.3).

In the 1995 survey, the re-interviewed were significantly more likely to have visited the river in the last twelve months than were those only interviewed in 1995. But this difference was not present in the 1997 survey. Similarly, in 1995 the re-interviewed were more frequent summer and winter visitors than those only interviewed in 1995 but this difference was not found in 1997. There are some indications, therefore, from the 1995 survey that re-interviewed were somewhat keener river visitors than other 1995 respondents and were atypical in that respect.

When the reported visiting in 1995 and 1997 of those interviewed in both surveys is compared, there would appear to have been a slight reduction in their frequency of visiting with fewer daily visits and more never visiting in both summer and winter. It may be that the river works disrupted the recreation of those already frequent users of the riverside but it is also possible that changes were due to circumstances unrelated to the river restoration such as changes in weather, work and leisure time.

Residents interviewed in the post scheme survey reported making slightly longer visits after the restoration compared to those interviewed in the first survey, perhaps because the added interest of the scheme made them linger. In 1995 those subsequently re-interviewed were significantly more likely than the rest of the sample to visit for as much as half an hour to an hour but there were no such differences in the 1997 survey. Those interviewed both before and after scheme implementation reported making slightly longer visits (of 31 - 60 minutes) after the scheme was in place. The response categories offered to the respondents in the two surveys were slightly different and this may have affected the distribution of responses (Table 3.4).

3.2 Sections of river visited

There was no clear evidence from the survey responses that the sections which were most affected by the restoration scheme (sections 4, 5 and to a lesser extent 6) attracted significantly more visitors in the 1997 survey after scheme implementation. However, it did appear that there was less reported visiting of section 1 in 1997. Reasons for this change are not clear but may lie in a smaller proportion of the 1997 only sample drawn from the area near this river section (Table 3.5).

Generally, the pattern of visiting different parts of the river was similar for the re-interviewed and those interviewed once only so that the re-interviewed were not atypical in terms of where they visited the river. When the reported visiting pattern of those interviewed in both 1995 and 1997 was compared, it was again apparent that these respondents were not making significantly greater use of the sections affected by the scheme in 1997 compared with 1995. This is further evidence that the restoration had not affected which sections of the river people chose to visit.

3.3 Purpose of river visits

The pattern of activities undertaken when visiting the Skerne were very similar in the two surveys with one significant exception: twice as many people in the post scheme survey (35%) compared with the earlier survey (17%) gave 'wildlife' as the reason for visiting the river (Table 3.6). This was true both of those re-interviewed and of those only interviewed in one of the surveys. The restoration project may have heightened residents' awareness of the potential of the Skerne as a habitat for wildlife as well as improving the habitat itself. Visiting for purposes associated with school work emerged in the 1997 survey as a reason for visiting for a small minority whereas this reason was not reported in 1995 which suggests greater educational use of the river.

The re-interviewed were significantly more likely to visit the river for walking in 1995 compared with the others interviewed in that survey. This again suggests that the re-interviewed were particularly keen visitors in this respect but their other purposes for visiting the river were no different from those of other respondents.

In summary, comparison of the surveys overall and of those interviewed both before and after the implementation of the restoration scheme indicates that the works had little impact on the pattern and frequency of use that respondents made of the river and riverside. There was one major exception: the increase in the proportion reporting 'wildlife' as a reason for visiting the river.

4. APPRECIATION OF THE RIVER AND SCHEME IN THE 1995 AND 1997 SURVEYS

4.1 Rating of features of the river in the 1995 survey

In 1995, respondents were asked in detail about their perception of the river and surrounding parkland prior to the implementation of the restoration scheme. They were asked to rate 19 specific aspects on a scale from -5 (very bad) to +5 (very good). Full details of the results summarised here are provided in RRP 1995. Features which attracted the most positive ratings were access to the river (mean rating 3.2), the mown and unmown grass areas (2.3), the river as a wildlife habitat (1.7), the amount and type of trees on or near the river (1.2), and the shape of the river channel along sections 4-6, which were the sections most affected by the restoration proposals (1.1).

Mixed, uncertain, or less favourable responses were evoked by the following: wetland and pond areas about which many lacked knowledge (mean rating 0.9), the shape of the channel along sections 1-3 (0.8), maintenance of the river bed and banks (0.8), concrete river banks and retaining walls (0.1), and the recreational areas and opportunities (0.1) and the amount and type of plants in the river and on the riverbank (0.1) on which opinions were very divided (0.1).

The general quality of the water in the river, including rubbish there and smells, was the feature that attracted the most criticism (mean rating -1.6); other negative points were the safety aspects of the river area (-1.43), the cleanliness of the open space and river banks - litter, dumping and dog dirt (-1.2) and the amount of flooding in the area which was of particular concern to respondents in certain areas where house flooding had occurred in the past (0.15). Some of these concerns particularly the issues of rubbish, dumping and dog faeces are not central for river restoration but would nonetheless need to be given attention if restoration initiatives were to be fully appreciated by the public.

4.2 The attractiveness of the river and the scheme in the 1995 and 1997 surveys

The detailed evaluation questions on river features were time consuming to administer and were, therefore, were not repeated in the 1997 survey. However, questions to evaluate the perceived attractiveness of different sections of the river and of the river overall were included in both surveys for comparison. Non-response to these rating questions was high in both the 1995 and 1997 surveys. However, analysis of the 1995 survey responses shows that those unable to answer these questions were concentrated among those not visiting particular sections of the river and the river as a whole. Very few of those who reported visiting were unable to provide answers so that the level of non-response does not indicate that respondents found these questions particularly hard to answer where they were familiar with the river. In 1997 the level of non-response was higher than in 1995. Respondents in the post scheme survey may have felt that recent experience of the river was particularly important to such a response since the river had been changed, and may have felt reluctant to rate it where they had not recently visited.

The surveys suggest that the river Skerne was seen as more attractive after restoration than

before (Table 4.1 and 4.2). Ratings given in the 1997 survey out were higher for each section and overall than those given before the scheme in the 1995 survey. The ranking of the attractiveness of the different sections remained broadly the same with sections 5, where the river was markedly changed through the provision of meanders and wetland areas and 6, which was less altered, seen as the most attractive in both surveys. However, the ratings indicate that section 4, which was one of those affected by the restoration, was seen as relatively more attractive in 1997 compared with 1995.

The ratings of the re-interviewed did not differ significantly from those who participated in the surveys only once. A comparison of the ratings given by the re-interviewed in the 1995 and 1997 surveys confirms that they rated most sections (with the exception of section 2, one of the least changed sections) and the river overall as more attractive after the scheme was in place compared with before. Respondents were not reminded of the rating that they had given two years before when responding to the same scale in 1997 and the comparison assumes that individuals were able to use and interpret the scale consistently in the two surveys.

When the rating given to the river and the different sections of the river in the two surveys were compared individual with individual, there were higher ratings for the post scheme river and significant differences in the paired ratings for sections 4, 5 and 6, the sections most affected by the river restoration, but not for the other sections of the river and for the river overall. The statistical analysis thus accords with the predominantly favourable comments made by respondents on the appearance of the river after scheme implementation mentioned above in the first part of this report.

4.3 Survey descriptions of the restoration scheme in the 1995 and 1997 surveys

One of the aims of the study was to examine whether the impact of the scheme was as members of the public had expected it to be, on the basis of the hypothetical plans presented to them in the consultation and in the surveys prior to scheme implementation. In both the 1995 and 1997 surveys, respondents were shown a plan of the changes to the river and read some introductory text. However, in 1995 respondents had first been shown a map delimiting the scheme section of the river and showing the river in its then current condition (Figure 4.1). They were then shown a map presenting the changes (Figure 4.2). In 1997, respondents were not reminded of how the river had been before the scheme but were only shown a plan presenting the scheme sections post scheme implementation (Figure 4.3). In 1995, the following paragraph was read out outlining the proposal:

‘This is the proposed scheme. It would involve creating bends in the river course in sections 5 and 6 which may involve loss of some of the open space available for recreational activities such as football etc. Some of the concrete retaining walls will be given a softer appearance with extra planting including trailing plants. New bends in the river in section 5 would make the river less uniform, with variations in width and depth and river bed materials. The scheme would create wetland areas and pond areas joined to the river to attract new wildlife and would involve new landscaping with trees, plants and flowers. It is planned that the scheme will lead to an improvement in the water quality in the river. Moreover, Darlington Borough

Council are considering the possibility of an additional new footbridge and foot paths, which I will come on to later. Although the scheme would provide the same or an improved level of flood protection to nearby properties as at present, some of the open land by the river (the original floodplains) would be liable to natural flooding as at present'.

In the 1997 survey, the changes in the river were no longer hypothetical but actual changes that respondents could observe. After respondents had been asked whether and what changes they had noticed, when they had occurred who had been responsible for the changes and their objectives in making the changes, respondents were briefly told about the work done as follows:

'I'll just tell you that the changes to the river here have included constructing meanders in the river channel and backwaters for wildlife, rebuilding all of the sewer outfalls, strengthening the banks, improving the river bed and some new planting. The works started in 1995.'

The organisations involved in the restoration work were then described and respondents were told in addition:

'There are also plans for a new footpath and additional footbridge as well as tree planting on the hillside. The Heritage Lottery Fund will help to pay for this. The site is a demonstration project and other people will be able to learn and benefit from what is being done here.'

There were, too, certain differences in the scheme as described in the first survey and as described and achieved in the second. Some of these reflected substantive alterations as the scheme had evolved over the period of the two surveys (See figures 4.2 and 4.3). First, there were changes in the footpaths proposed in the two surveys. In 1995, formal footpaths on the north bank and extending south to St William's Pond were proposed. In 1997, plans had changed to a formal footpath for the disabled with resting places on the south bank of the river and no formal footpath to St William's Pond. Second, the meanders shown in the 1997 plan were less exaggerated than those indicated in 1995 and one change to the river shown in 1997 but not planned in 1995 was a pond or wetland area adjacent to the river on the south bank in section 5. Third, in 1995 the location of a proposed new bridge was under review and four possible locations were indicated to survey respondents so that their views could be taken into account. In 1997, a decision had been taken on the siting and future of the footbridges and therefore the site of a proposed competition winning bridge and the proposed refurbished footbridge (the bridge in place in 1995) were shown.

Fourth, the 1997 plan marks a proposed new car park which was under consideration but which had not been part of the plans in 1995. Fifth, the 1997 plan offered a more simplified and less detailed presentation of the proposed vegetation and other features. In 1995, proposed and existing trees, mown and amenity grass, wild flowers and informal grass were indicated whereas in 1997 only broadleaf and conifer trees, both existing and planned, were shown as plans for the vegetation were less defined in 1997 compared with 1995. The 1997 plan also shows a special 'Keepsafe' planting area on the south bank of the river not named in 1995 as well as riverside trees and floodplain.

There were differences in the presentation of the proposals in the surveys, chiefly, the use of a smaller and therefore slightly less detailed plan in 1997 compared with 1995 although the outlines and the area covered remained exactly the same. The size of the plan was reduced to make it easier for the interviewers to handle. Certain locations, the Rockwell and Dropwell, were not shown on the simpler 1997 plan and the label 'Rockwell Nature Reserve' used in 1995 for an area on the north side of the river was replaced by the alternative name for the area 'The Square Mile Project' in 1997. Three view points were indicated in 1997 and there were a few other minor changes in the labelling and presentation of the scheme area in the two surveys.

Differences in the responses in the two surveys on the effects that the scheme was perceived to have could be due to the differences in the presentation in the plans, real changes in the plans or real differences observed between the original plan and the scheme on the ground.

4.4 Perceived effect of the restoration in the 1995 and 1997 surveys

In the 1995 survey, expectations of changes in visiting once the scheme was completed did not match beliefs about visiting in 1997. In 1995, after respondents had been shown the restoration proposals, only 35% thought that the scheme would make no difference to their visiting and nearly two thirds (64%) believed that they would visit more often after the scheme was implemented. This was seen rather differently in 1997, with the scheme in place: two thirds believed that their visiting frequency was the same as before the scheme changes, 15% that they visited more frequently and 12%, that they visited less often, for reasons that were often unconnected with the scheme. This was one respect in which the results of the 1995 survey did not match the 1997 results since visiting behaviour appears to have changed very little with the scheme in place.

In 1995, respondents were asked whether they thought the scheme would lead to the river being more or less safe for children, to increased or reduced recreation opportunities and to a loss, increase or no change in wildlife habitats. In 1997, respondents were asked similar questions as to what they thought the effects of changing the river had been. There were some differences in the perceptions in the 1995 and 1997 surveys (Tables 4.3, 4.4 and 4.5).

The most marked change between the surveys was in the proportion regarding the river changes as offering increased recreational opportunities: nearly two thirds (64%) in 1995 compared with only 40% in 1997. The muddy conditions along the riverside after scheme implementation which made walking difficult in some areas may explain this response (Table 4.4). Many people thought that it was rather too early to judge the impact of the scheme because it was incomplete and immature. The re-interviewed had more positive views than those interviewed in one survey only. Like other respondents, they had a slightly less positive view of the recreational benefits of the scheme after compared with before implementation. However, those interviewed in 1997 only were the most uncertain of the recreational opportunities the scheme had brought.

When surveyed in 1995, respondents had very positive expectations of the effects of the scheme for the river as described to them and as they imagined it for wildlife. The 1997 results put this scheme effect in a slightly less favourable light and slightly more people

regarded the effects as uncertain. In other words, the effects imagined in 1995 were slightly more positive than the perceived effects in the 1997 survey. However, the scheme still has to mature and these perceptions may continue to change over the coming years (Table 4.3). The re-interviewed tended to have a more positive view of the effects of the scheme on wildlife and wildlife habitats, compared with those interviewed in one of the surveys only. However, the re-interviewed like the other survey respondents also tended to be more uncertain of the benefits to wildlife in the second survey.

Once the scheme was in place, fewer thought that it had made the riverside safer for children and more were uncertain about its effect than was the case in 1995. The re-interviewed were similar in this respect (Table 4.5).

Paradoxically, therefore, respondents appeared more uncertain of the impact of the scheme once it was in place and observable than when it was only described to them in plans and proposals. However, the comparative immaturity of the scheme at the time of the second survey may explain this uncertainty: there was some tendency to reserve judgement until the scheme had become fully established. This highlights the difficulty of selecting an appropriate time at which to conduct a post-scheme appraisal of a change in a natural resource. It is difficult to predict the rate at which the scheme will develop and achieve its full potential. Also research would ideally take place when works were sufficiently well settled for evaluation to be appropriate but not so long established that people have forgotten what the pre-scheme condition was like.

In 1997 (but not in 1995), respondents were asked whether the changes had resulted in the river landscape becoming more or less attractive or whether it had remained the same. Here, a very positive response was given, with 63% regarding the scheme section of the river as more attractive after the changes (Table 4.6). The re-interviewed were significantly more positive and less uncertain in their views than the 1997 survey only respondents. This confirms the enhanced rating scores given in 1997 compared with 1995 for the attractiveness of the sections of the river and overall. Furthermore, when asked whether the changes had resulted in increased, decreased or no change in flood risk, the most common response was a decreased risk (39%) with very few perceiving the risk as increased but also a substantial proportion (35%) uncertain (Table 4.7).

Overall, therefore, although the realised scheme evoked a slightly less favourable and more uncertain response than the proposals, very few respondents took a negative view of the effects of the scheme once it had been implemented. Apart from the effects on recreational opportunities, which may be a temporary matter, broadly the scheme appeared almost to have lived up to the high expectations Darlington residents had of it in 1995.

4.5 Approval for the scheme in the 1995 and 1997 surveys

In 1995, after the proposed scheme had been described and details of it shown on the plan, respondents were asked, on the basis of what they had been told, how strongly they were in favour of its being carried out. They were required to rate their preference for this on a scale of -3 (strongly against), to +3, (strongly in favour). Overwhelmingly, respondents supported the proposal (92%); a large number of them (70%) were strongly in favour. More

of those who visited the river than those who did not were strongly in favour. There were no statistically significant differences in the views of those who were later re-interviewed and those who only took part in the 1995 survey (Table 4.8a,b,c).

Did this enthusiasm survive the implementation of the scheme and the slight changes between the 1995 proposals and the 1997 construction? Approval of the scheme was slightly more qualified in 1997 after the scheme had been carried out than before, with 82% approving of the scheme overall, but only 30% strongly approving and the majority (52%) mostly approving (Table 4.9). Nonetheless, in both 1995 and 1997, those against the scheme or disapproving of it were very small minorities (4% in 1995, and 7% in 1997).

A verbal rather than a numerical rating scale and different response categories were considered appropriate and used in 1997. Thus the responses are not directly comparable. There were more respondents in 1997 (10%) who did not know whether they approved or disapproved compared with 1995 when 4% gave a no opinion (0) rating. This may have been because they had no personal experience of the scheme and therefore felt that they could not express an opinion although they, like the 1995 survey respondents were shown a plan detailing the river changes to help them make a judgement. The greater uncertainty of response may reflect a feeling that it was too early to make a judgement on the scheme too.

In 1997, the re-interviewed were significantly more approving of the scheme than those interviewed then for the first time, more of whom did not know what to think of the river works or did not choose to give an opinion. Although this difference was not significantly present in the 1995 survey, there may be a selection effect involved with those who agreed to be interviewed again being among those more interested in the river and its restoration. However, there may be an experimental effect at work with those interviewed twice becoming more knowledgeable and interested in the river works because the first survey served to alert them to the changes proposed.

When the responses of those who participated in both the 1995 and 1997 surveys are compared, it appears that the re-interviewed had modified their view slightly since the scheme was completed with 30% 'strongly approving' of the scheme in 1997 compared with 75% 'strongly in favour' of the proposals in 1995. Nevertheless, those among the re-interviewed who took a negative view after scheme implementation remained a very small minority.

An examination of the responses made by individuals to the questions in 1995 and 1997 eliciting opinions of the scheme shows a solid core of 81% which supported to some degree both the proposals and the implemented scheme but there were some shifts (Table 4.10). Chief among these was a shift amongst those 'strongly in favour' in 1995 to a more qualified position of 'mostly approve'. Very small numbers of individuals changed their views radically. Nine individuals in favour of the scheme in 1995, did not really approve or strongly disapproved in 1997. Similarly nine of those who had no opinions of the scheme or were against it in 1995, approved of the works in 1997.

Thus, the responses of those interviewed both before and after the scheme was implemented indicate that, in this particular case, the views expressed on the basis of the proposals as presented in drawings and text in the initial interview proved to be broadly a fair guide to how the same people felt about the scheme once the works had been completed although

support for the works was more qualified in 1997 than in 1995. This finding is encouraging for environmental management and consultation, and for Contingent Valuation studies, because it suggests that proposed changes can be effectively communicated to members of the public so that views on proposals will reflect their views after implementation. This should , therefore, enhance confidence in environmental communication and its correlation with public satisfaction after environmental changes are made.

5. MONETARY VALUATION OF RIVER RESTORATION

Contingent Valuation Method (CVM) (Mitchell and Carson, 1989) was used in the 1995 and 1997 surveys to elicit a monetary valuation of the benefits of changing the river. However, the sizes of the samples used in the surveys (252 in 1995 and 260 in 1997) were too small to meet FHRC or National Oceanic and Atmospheric Administration (NOAA) Guidelines (NOAA 1993) for the conduct of CVM surveys. The results must therefore be treated as *exploratory data* that would require confirmation by a large scale CVM study. This survey will therefore point to key results merely as an indication of public valuations of river restoration works.

5.1 Value of enjoyment of an adult visit to the River Skerne in the 1995 survey

In 1995, a particular form of the Contingent Valuation Method questioning technique was used to assess the benefits of restoring the river: the valuation of the enjoyment (VOE) of an adult visit under varying conditions and options for restoration in addition to a variant of the more common 'willingness to pay' questions (preparedness to pay questions). This VOE approach was partly developed as a method of valuing the recreational benefits of coastal protection schemes (Penning-Rowsell et al, 1992) and as part of an earlier study to evaluate the social costs of sewerage and the benefits of improving river water quality. This procedure has been widely used in other FHRC CVM studies. It focuses on use value alone and is intended to exclude non-use or passive use (NOAA, 1993) values - the range of motivations that people may have for wishing to protect or enhance environmental resources other than for their recreational enjoyment. Full details of the 1995 VOE results are presented in RRP 1995. Because of the detailed and time consuming questions required, the VOE questions were asked only in the 1995 survey.

After detailed questioning on their use of the riverside and views on aspects of the river and surrounding parkland, respondents who visited the river were asked as individuals to consider the value they would put on their enjoyment of a visit to the river in its current condition. As it is recognised that this is a difficult question for respondents to answer, respondents were asked to think of visits or activities they had done in the past which gave them comparable enjoyment to the river visit. A list of possibilities was presented to them, for example buying a newspaper or chocolate bar, visiting a nature reserve or country park, visiting a restaurant, pub or swimming pool. They were then asked to use the cost of these visits as a guide to the value of their enjoyment of a visit to the river. Activities given and noted by interviewers included: visiting the cinema or theatre, going to a football match, bingo, a visit to the River Tees, visiting a cafe. However the most popular visit mentioned as giving the same level of enjoyment as a visit to the river was that to a country park or nature reserve.

In the 1995 survey, 56% of those who visited the river were able to give a value for a visit to the unrestored river. The most common amounts offered (£10 by 20 respondents and £5 by 18) and the mean value was £6 per adult visit (without outliers excluded) (Table 5.1). Values offered ranged from 20 pence to £50 per visit. With two extreme values excluded (£50 and £30) which were however not considered to be true outliers, the mean value of a current visit would still be high at £5.43.

A comparison of those who were able to give a value and those who were unable (excluding don't knows) revealed some differences. Those who were able to offer a value were more likely to be women, to be younger, to be in higher income groups, to visit the river for walking, to be members of the National Trust, and to be more critical of (as indicated by lower ratings given) certain river features including, the cleanliness of the open space, access to the river and the mown and unmown grass areas. But the comparison does not suggest that those who were able to value a river visit differed markedly from those who were not able to offer a value in their appreciation of the river in that their scores for the attractiveness of the different sections of the river (and overall?) were similar. Those who agreed to be, and subsequently were, re-interviewed were no more likely than those who only participated in the 1995 survey to be able to offer a value. Inability to offer a value would appear to reflect the difficulty of the task more than a lack of appreciation of, and interest in, the river.

After giving a value for the enjoyment of a visit to the river in its current condition, respondents, both river visitors and those who did not visit, were shown a plan indicating the proposed changes to the river in Darlington and explanatory text describing the details of the changes was read out as indicated above. Respondents were then asked what they liked and disliked about the changes, whether they would visit more often and whether they would get more enjoyment or less enjoyment from a visit to the river in the drawing compared to the river in its then current condition. Respondents were then asked to say what value they would place upon their individual enjoyment of a single visit to the river in the restoration map.

Nearly all the respondents (91%) in the 1995 survey anticipated that they would get more enjoyment and a majority (52%) much more enjoyment from their Skerne visits after the scheme represented in the drawing was implemented. This was as true of those subsequently re-interviewed as of those only interviewed in 1995. Two thirds of respondents believed that they would visit more often with the scheme in place. Again there were no differences between the re-interviewed and those included in the 1995 survey only.

Fifty two percent of respondents were able to offer a monetary value for a visit to the River Skerne as depicted in the restoration map. The mean value was £7.65 for visitors to the river (again with no outliers excluded (Table 5.1). With two possible outliers (£50, £30) excluded, the mean value was £7.08. Values ranged from 40 pence to £50. There were no significant differences between the re-interviewed and those who participated only in 1995.

The average monetary gain with the restoration in place was calculated as the average of the difference for each respondent between the value of the enjoyment of a visit to the unrestored river and to the river after scheme completion. Thus calculated, the average gain per visit (with no outliers excluded) with the scheme in place on the Skerne was £1.90 (Table 5.2).

These results must be treated with caution because they are based upon a small sample but they suggest that substantial economic benefits might be shown to arise from river restoration if a large scale study were carried out. On the basis of this small exploratory study, it appears that, even if high values were to be excluded as outliers and conservative assumptions were made about the number of visits to the river in the park and in the treatment of those unwilling or unable to offer a value in the 1995 survey, the recreation benefits that would be generated by the scheme would be considerable. These findings are

consistent with a study of a hypothetical restoration of the River Ravensbourne, Bromley although the values attached to the restored River Ravensbourne were lower than those found for the Skerne, nonetheless the potential benefits indicated were substantial (Tapsell et al 1992).

5.2 Preparedness to pay for river restoration in the 1995 and 1997 surveys

Respondents in both the 1995 and 1997 surveys were asked in some form whether they would be prepared to pay for the scheme to restore the river Skerne. This form of questioning is a variant of the more familiar 'willingness to pay' questions. Previous FHRC research has suggested that the form of words 'prepared to pay' (PTP) better captures those willing *and able* to pay than the conventional 'willingness to pay' wording (Green et al, 1993). Therefore, this question wording mainly has been used in the surveys. In neither survey did the sample sizes and the way in which the valuation questions were asked fully meet the standards and guidelines laid down for CV studies by FHRC (Green and Tunstall 1991) and others (Mitchell and Carson, 1989; NOAA 1992). The number of responses to the preparedness to pay questions were insufficient to provide estimates at the desired level of accuracy and to permit detailed validation studies. Therefore, preparedness to pay data also have to be regarded as from an extended exploratory study, the results of which would require confirmation through a large scale CV research. A particular interest of the experiment however is the extent to which the results from 1995 are replicated in the 1997 survey, differences in methods used notwithstanding.

Preparedness to pay (PTP) questions are intended to elicit total economic value which is conventionally defined as:

use value + non-use or passive use value

but the validity of this assumption is debateable since the range of motivations that people bring to willingness to pay questions still need to be elucidated: it is important to find out how people approach total valuation questions before the results can be regarded as valid. This is a further reason for treating the results on preparedness to pay as exploratory. The 1995 survey results on preparedness to pay and discussed more fully in Tapsell et al 1995.

5.2.1 Preparedness to pay in the 1995 survey

One issue that the 1995 survey sought to address was whether people preferred a local programme of river restoration to a national one. After respondents in the 1995 survey, had been asked about the value they attached to their visits to the River Skerne in Darlington before and after restoration, the following text, explaining the national situation, was read out to them:

'There are many miles of river in England and Wales which like the River Skerne in Darlington have been changed, through being straightened or put in concrete channels as part of flood defence schemes, or which have been altered in other ways. Although money is being spent to tackle particular problems on rivers, such as pollution and low flows, currently very little money is spent by national and local

authorities on schemes generally to return rivers to a more natural condition'.

Respondents were then asked to think about whether they would be prepared to pay additional national and local taxes to pay for a scheme to fund river restoration nationally and locally. This approach partly addressed the problem of 'embedding' or 'whole part bias' - a tendency to assign equal monetary value to a single example of a class of environmental good (a restored river) and the whole class of the good (restored rivers nationally). This has been a major concern of CV researchers in the 1990s (Cambridge Economics, 1992; Kahneman and Knetsch, 1992). But it is recognised that the procedure of asking questions about a national problem and then a specific local case provides only a very limited check upon this potentially significant source of bias. The unresolved issue of 'embedding' provides another reason for regarding the results of the preparedness to pay questions from these surveys as exploratory only.

The following guidance was offered to respondents in the 1995 survey:

'In current circumstances, you may not be able to afford to pay any more in national and local taxes to fund river restoration. Also there may be other environmental problems such as air pollution or other areas of public expenditure (such as education, law and order or health care) upon which you would prefer any extra money spent. Or you may prefer all public expenditure to be reduced so that national and local taxes can be reduced'.

This statement was intended to remind respondents of other calls upon their financial resources and to legitimate negative responses to the PTP questions. Respondents were then asked whether they would be prepared to pay, on behalf of their household, a small increase in national and local taxes each year to return rivers to a more natural condition: first, through a national programme which would include the River Skerne and then, through a local scheme for the Skerne only as presented in the drawing.

Previous qualitative research into the public's attitudes towards water quality improvements indicated that a national programme to reduce pollution in rivers in England and Wales was favoured over regional or local programmes (Tunstall, 1995). However, in the case of river restoration, slightly more were definitely prepared to pay for a local scheme than for a national programme but common responses were to be definitely prepared to pay for both (33%) or neither (27%) (Table 5.3). The responses may have been affected by the essentially local context and order in which the questions were asked: the local River Skerne scheme has been introduced in detail and at some length earlier in the questionnaire whereas a national scheme was introduced later and in brief. Furthermore, river restoration may have appeared from the example of the Skerne to be a site specific form of local environmental enhancement rather than a general environmental issue and respondents may have found the generic idea of river restoration much less familiar than a concept such as river water quality improvement.

Nearly half the 1995 respondents (45%) stated that they were definitely prepared to pay for the local scheme to restore the Skerne, a further 17% said 'maybe' indicating that altogether 62% might be prepared to pay. More of those subsequently re-interviewed were definitely prepared to pay (Table 5.4).

After respondents had been asked whether they were in principle prepared to pay for a national and local scheme, those who were or might be prepared to pay for a Skerne only scheme were asked:

'If a national programme could not be agreed upon, how much would you be willing to pay for the Skerne scheme?'

The amount that respondents were prepared to pay was determined using a ladder designed to give respondents the time and opportunity to consider the amount that they were willing to pay. Two starting points, 50p and £64, were alternated to provide a check on whether the starting point influenced the final PTP values offered. The full FHRC ladder procedure which requires that the two starting points, a high and a low one on the ladder, are used with each respondent was not used in this study because it was judged that it would take up too much interview time. It appears likely that a relativity effect operates - people judge the sums they are presented with on the ladder in relative and not absolute terms. It is therefore likely that this effect can be attenuated by repeating and reversing the ladder procedure (Green et al 1993). However, in this study this was not done in order to restrict the length of the questioning but beginning from one of the two starting points, respondents were asked whether or not they would be prepared to pay successive amounts. Depending on whether the respondent answered yes or no, the interviewer then proceeded to ask about the next (higher or lower) amount on the ladder until the respondent reached the maximum amount they were definitely prepared to pay.

Of the 152 valid cases, when asked whether they would be prepared to pay particular amounts for the Skerne scheme per annum in additional taxes, 100% were prepared to pay an extra 20 pence. The proportion of respondents prepared to pay decreased in relation to the additional sum proposed: for example, 98% were prepared to pay an extra 50 pence, 90% an extra £2, 42% an extra £16, 11% an extra £64 and only 1% of those asked were willing to pay an extra £256.

When asked to choose a figure that they would be prepared to pay in extra taxes, the sums indicated ranged from an extra 25 pence to £180. The median and modal figures offered were both £10, while the mean figure was £22.45 from the 149 cases with no outlying values excluded. Those subsequently re-interviewed offered similar amounts to those interviewed only in the 1997 survey.

There were significant differences in the mean value of the final sum offered depending on the different starting points. For the £64 starting point, mean sum offered was at £39.85 more than twice that offered with the 50 pence starting point, £18.64. Although interviewers were intended to alternate the starting points, in aggregate, the 50 pence starting point was used with more respondents (88 compared with 61) a factor which is reflected in the overall mean. Furthermore, although the alternating of the starting points should have had the effect of randomising their application, it is possible that the differences in the mean valuations offered with the two starting points reflect other differences in the respondents.

5.2.2 Factors influencing the decision on preparedness to pay in the 1995 survey

Respondents were asked to rate various factors influencing their decisions on whether to pay

for the programmes (whether a national programme including the Skerne or a local Skerne scheme only). A scale of 0 (least important) to 5 (most important) was used and t tests were carried out to reveal if there were any significant differences between the mean ratings of those who were and were not prepared to pay for the programmes. The results for those prepared to pay for a national or local programme were very similar, indicating that similar motivations apply to the two ways of funding restoration, probably in part because there was a core of respondents with a common response on preparedness to pay through both the national and local Skerne only scheme.

Overall, the factor rated most important in influencing the decision on preparedness to pay (both for a national scheme including the Skerne and a local Skerne only scheme) was 'the enjoyment I get from visiting the river', indicating the importance of use value to preparedness to pay for restoration. It should be noted that the questions on preparedness to pay were asked after valuation questions based on individual enjoyment of river visits had been put and which had therefore provided the context for the preparedness to pay questions for those who visited. The non-use factor of 'the environmental benefit of the change', however, was rated next most important. Factors such as what the respondents' household could afford to pay, what they thought was their household's fair share of the cost and what they felt it was fair for their household to pay were also rated as important. This suggests that both use and non-use value were motivations for preparedness to pay for restoration. These two components can be interpreted as broad measures of 'value' (ie. the value to the individual of the improvements in the river as a place to visit) and 'affordability' (ie. whether the individual can and should pay). These results reflect those found in previous studies (e.g. Garner et al 1994) and are consistent with our current understanding of how the individual decides whether and how much to pay for a good (Green and Tunstall, 1993; Green et al, 1993).

A factor which affected whether or not respondents were prepared to pay for both a national and a Skerne only scheme was whether or not respondents visited the river (ever in last twelve months) with a much higher percentage of visitors being definitely prepared to pay. A chi-squared test showed that there was a significant association between preparedness to pay for the Skerne scheme to pay and visiting the river. However, visitors were not found to be prepared to pay higher amounts compared with non visitors: the mean sums were £22.37 for visitors, £23.10 for non visitors and £22.45 overall. Income was also a significant factor in preparedness to pay, with those in higher income groups showing higher percentages prepared to pay for the Skerne programme than those with lower incomes.

Respondents were reassured after the preparedness to pay questions that the people of Darlington would not be required to pay anything extra for the restoration scheme on the Skerne over and above what they were already paying in Council Tax because a major part of the funding for the project had been raised by grants from the European Commission LIFE fund, with some additional funding from the River Restoration Project partners.

5.2.3 Preparedness to pay 1997 compared with 1995

In 1997, an opportunity presented itself to examine whether preparedness to pay had remained the same as in the 1995 survey and thus to test the consistency of preparedness to pay responses and the effectiveness of CVM scenarios as a way of presenting hypothetical

changes to the public. A divergence in the preparedness to pay between the two surveys might be due to:

- Differences in the scheme as presented in the 1995 CVM scenarios and as achieved on the ground in 1997.
- Differences in the presentation in the CVM scenarios between 1995 and 1997.
- Differences in the CVM methodology between 1995 and 1997.
- Differences in the characteristics, behaviour and attitudes in the 1995 and 1997 surveys. This could be controlled by looking at the preparedness to pay of those who participated in both surveys.
- Changes in the circumstances, for example income and employment, of the survey participants over the two year.

The comparison of the 1995 and 1997 survey results showed that, while visiting behaviour remained largely unaffected by the implementation of the scheme, the river was seen as more attractive in 1997 and that support for the scheme was only slightly reduced or modified in 1997 compared with the enthusiasm expressed for the hypothetical scheme presented in the proposals in 1995. In 1997, preparedness to pay for the implemented scheme could be compared with preparedness to pay for the hypothetical changes as presented in the CVM scenarios in the earlier survey.

The same reservations apply to the 1997 survey as to the 1995 survey, regarding the sample size and the preparedness to pay questions asked. Furthermore, the questioning methods employed in the 1995 and 1997 surveys were different in important respects that may have affected the responses. In 1997, because of restrictions on the interview length, the introductory text and questions asked were greatly reduced and simplified as compared with the 1995 survey. After respondents had been told briefly what changes had been made in the river, when the work commenced and the organisations involved in the restoration, they were asked about how much they thought had been spent on the changes to the river. The following statement was then read out to respondents:

‘Before the changes were made, the majority of people questioned in Darlington indicated that they might be prepared to pay, on behalf of their household a small increase in national and local taxes each year to pay for the scheme to restore the River Skerne. The average amount extra that people said they would be prepared to pay was £22.

The works have now been completed and paid for from other sources. But assuming this funding was not available, would you now be prepared to pay that amount of £22 extra per year extra in national and local taxes for the scheme?’

Respondents who replied negatively were asked:

‘Would you be prepared to pay something less than £22 extra each year and if so how much?’

Those who replied positively were asked:

'Would you be prepared to pay more than £22 extra per year and if so how much?

From this the following differences in the questioning procedure are apparent. First, preparedness to pay for the Skerne scheme was not set in the context of the national problem of river degradation and a possible national scheme to restore rivers: respondents were only asked about the Skerne. Second, no guidance was offered to respondents to legitimate their not being prepared to pay as in the 1995 survey. Third the form of the preparedness to pay question was different: in 1995, a questioning procedure with a ladder with two starting points was used, whereas in 1997, a single dichotomous choice question was administered to respondents in the first instance with follow up questions. Telling respondents that the sum they were asked about was the average amount that Darlington people had indicated they were prepared to pay may have made this appear to be the social norm and may have made people feel under an obligation to conform and respond positively. There is some evidence anyway that more respondents give positive responses to dichotomous choice questions than to open questions on willingness to pay.

It must be noted that an ambiguity in the wording of the preparedness to pay questions may have resulted in some confusion and it appears that some respondents prepared to pay more than £22 (3 in total) may have interpreted the follow up question as meaning how much extra over and above the £22 they were prepared to pay since they gave amounts less than £22 in response. A similar confusion may have occurred with those prepared to pay less. These responses have been included as given.

Despite the major differences in the way in which the preparedness to pay questions were asked in the 1995 and 1997 surveys, the results in aggregate were remarkably similar. In 1997, 161 respondents (62%) were prepared to pay something in extra national and local taxes for the restoration scheme; a majority (52%, or 134 respondents) were prepared to pay at least the £22 average amount extra including 10% of these who were prepared to pay more than that sum; in addition, 27 respondents, (10%) were prepared to pay something less than the £22. This was a slightly more positive response than that given in 1995 when 45% said they were 'definitely' and 17% 'maybe' prepared to pay: a total of 62% who might be prepared to pay (Table 5.4). The re-interviewed were significantly more prepared to pay the average amount of £22 but there were no significant differences in the proportions prepared to pay more or less than this sum. Although the questioning approach used in the 1997 survey may have pressurised some of those interviewed into responding positively to the £22 amount, the 1997 results broadly confirm those of 1995 in that there is no evidence of significantly greater unwillingness to pay extra for the scheme in the second survey.

The mean amounts offered in the two surveys were also remarkably similar. However, this similarity may be due to the questioning approach used in the 1997 survey which was focused on the 'average' £22 amount people were prepared to pay in 1995 and which appears to have generated a response anchored on this amount (Table 5.5). The mean values, however disguise the very different distributions of the amounts offered. The questioning technique employed in 1995 with two widely different starting points (50p and £64) resulted in a much wider range of amounts being offered (25 pence to £180) compared with the 1997 survey. The range of amounts offered in that survey was much narrower with a minimum of £1 and a maximum of £100. It can be argued therefore that the preparedness to pay amounts offered in the two surveys were strongly influenced by the methods used to elicit them.

An examination of those who were interviewed in both surveys clarifies and confirms some of these points. A comparison of the responses to preparedness to pay questions in 1995 and 1997 of the re-interviewed shows that about three-quarters of those prepared to pay (both the 'definitely' or 'maybe' categories) in 1995 remained ready to do so in 1997. Since most respondents fell into these categories, this indicates considerable consistency in responses on preparedness to pay over the two surveys. Of the re-interviewed, 71 (53%) were prepared to pay in both 1995 and 1997 (including both those 'definitely' and 'maybe' prepared to pay in 1995). However, there were some shifts in response. A majority of the few unwilling or in doubt about their preparedness to pay in 1995 (the 'No' and 'Don't know' categories grouped) were prepared to pay in 1997. Even among the few of those re-interviewed who were definitely not prepared to pay in 1995, almost half had changed their minds in 1997 (Table 5.6).

The mean amounts that the re-interviewed were prepared to pay in 1995 and 1997 were very similar but the standard deviations and the range of responses were very different (Table 5.5 and 5.7). The results again suggest that the actual amounts offered may be heavily influenced by the elicitation method. A comparison of the amounts offered by the 87 individuals participating and prepared to pay in both surveys shows the amounts to be only weakly correlated (Pearson's correlation coefficient 0.2586) but a t test of the paired difference in the amounts reveals a significant difference in the amounts offered ($t = 2.13$ (df 86) Significance 0.036).

Those who were prepared to pay for river restoration in 1997 differed from those not prepared to pay in several respects (Table 5.8 and 5.9). The former were less likely to be aged over 65, to be council tenants, to be in the lowest income group or to refuse to give their income than those not prepared to pay. They were more likely to have completed their education later and to have visited the scheme section of the River Skerne in the last twelve months than the other respondents. However, there were no differences in preparedness to pay according to household size and type, gender, length of residence in the area and proximity to the river (Table 5.8). Those prepared to pay for the scheme were more likely than other respondents to regard the scheme as very good value for money, to strongly approve of the scheme and to be interested in participating in decision making regarding the river. These attitudes appear to be consistent with preparedness to pay (Table 5.9).

In summary, a comparison of the results on preparedness to pay from the 1995 and 1997 surveys, indicates that there was a fair degree of consistency between the surveys on whether or not people were prepared to pay. The 1995 survey results therefore provided a reasonable indication of whether people were preparedness to pay. However, the amounts people were prepared to pay in 1995, given different methods of elicitation were only a weak guide to the amounts offered in 1997 and the responses suggest that the amounts offered were influenced by the elicitation method. A briefer questioning procedure was used in 1997 in order to reduce the time required to obtain the values. However, a majority of those interviewed in 1997 (52%) were prepared to pay the average amount offered by those willing to pay in the 1995 pre-implementation survey. This can be taken as an endorsement of the pre-scheme response on preparedness to pay. The results again suggest that substantial benefits could be generated by the river restoration scheme, even allowing for those unwilling to pay and any possible outlying values.

6. CONCLUSIONS

This second part of the report has presented a comparison of the results from the surveys of local residents in Darlington undertaken before the river Skerne restoration works were started (the 1995 survey) and after the restoration scheme was implemented (the 1997 survey). Generally, the results showed that public responses to the restoration were quite stable and consistent over time. Thus, the public reaction to the proposals in 1995 was broadly a fair guide to responses to the implemented scheme in 1997 although there were some variations in the way the scheme was regarded. This finding is encouraging for environmental management and consultation since it suggests that proposed changes can be effectively communicated to the public so that their views on proposals will reflect their views on implementation.

The river restoration appeared to have had very little impact on river visiting behaviour except that more people reported visiting the river for 'wildlife' after scheme completion. However, the research suggests that people found the river more attractive after the restoration work and appreciated the scheme's effects on the landscape. Respondents had a slightly less positive and more uncertain view of the effects of the scheme on wildlife and wildlife habitats and riverside safety for children after scheme implementation compared with before. Furthermore, significantly fewer thought that the river had increased the recreational opportunities in the 1997 survey compared with the 1995 survey. The immaturity of the scheme at the time of the second survey may account for the greater uncertainty about the effects found in 1997. However, substantial proportions still viewed the scheme effects as beneficial and very few thought that there had been adverse impacts.

The research indicates that project managers were generally successful in maintaining public support for the river restoration project from proposals through construction to completion of the main works. Approval for the implemented scheme in 1997 appeared to be slightly more qualified than it was for the proposals in 1995. However, very few people disapproved of the scheme in either survey. Among those who participated in both surveys, a solid core of 81% supported to some degree both the restoration proposals and the scheme. Thus the research indicates that respondents were consistent in their favourable view of the river restoration initiative.

The sample sizes of the 1995 and 1997 surveys were too small for a valid contingent valuation study to be carried out and the results on the economic benefits of restoring the river must be treated as exploratory requiring confirmation by a large scale CVM survey. However, the results from the surveys suggest that the local residents questioned attached considerable value to restoring the Skerne both in terms of the value of their enjoyment of their visits to the restored river and in terms of their preparedness to pay for the restoration. In 1995, 62% of respondents stated that they might be prepared to pay for river restoration and in 1997 the same proportion were prepared to pay extra through rates and taxes for the scheme. An average of £22 extra in national and local taxes per year was the amount that respondents were prepared to pay in 1995. In 1997, 52% confirmed that they would be prepared to pay at least that average amount per annum to fund the restoration and an additional 10% were prepared to pay something less towards the scheme. These results can be taken as an endorsement of the pre-scheme response on preparedness to pay although differences in elicitation methods in the 1995 and 1997 surveys appear to have had some

effect on the amounts offered. The surveys thus suggest that substantial economic benefits could be generated by the river restoration scheme.

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Figure 4.1
1995 Pre-restoration plan of River Skerne

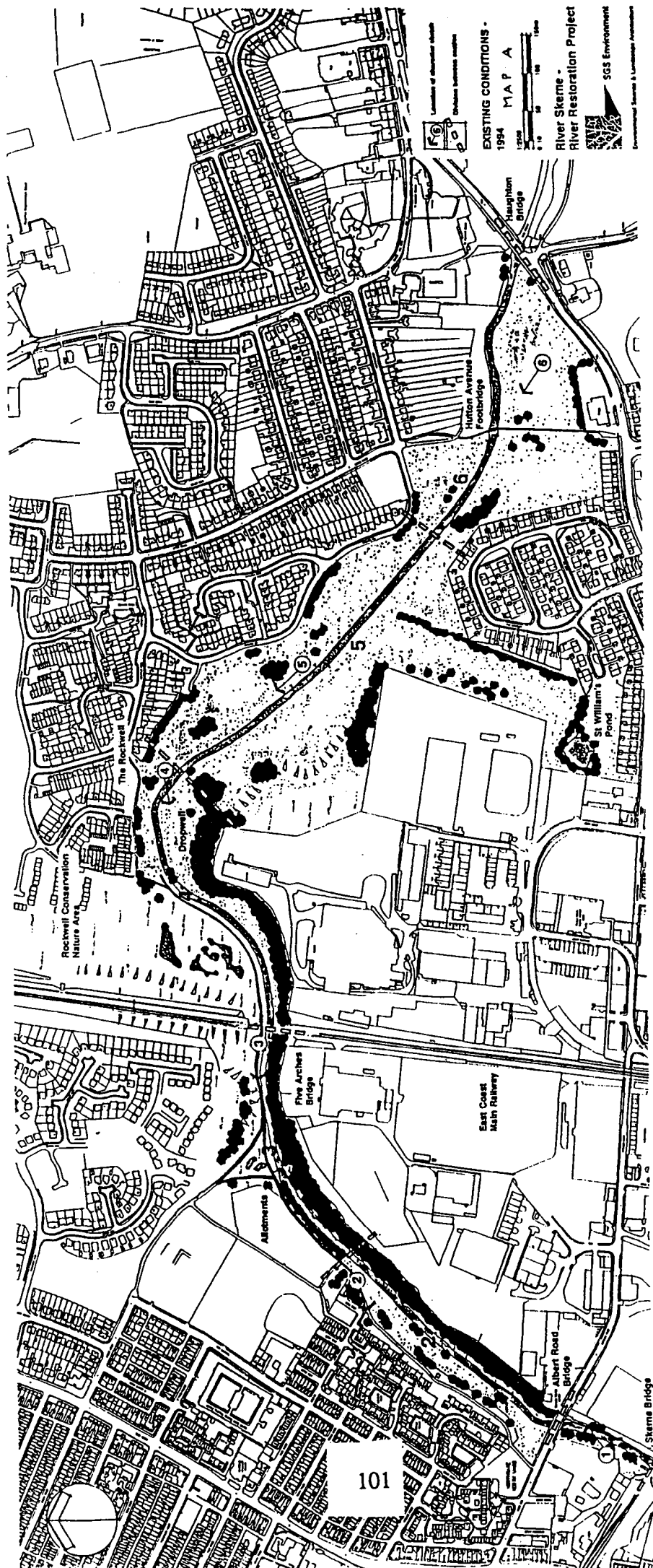
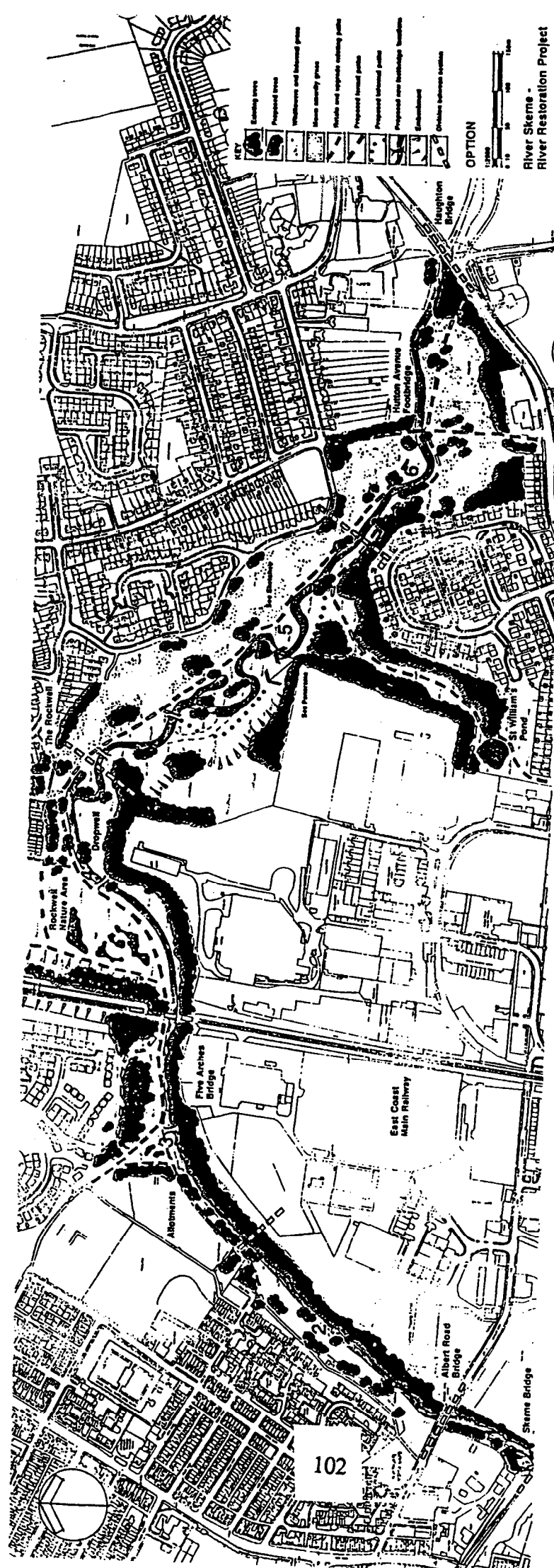


Figure 4.2
1995 Proposed restoration plan of River Skerne



1997 Post restoration plan of River Skerne

Figure 4.3

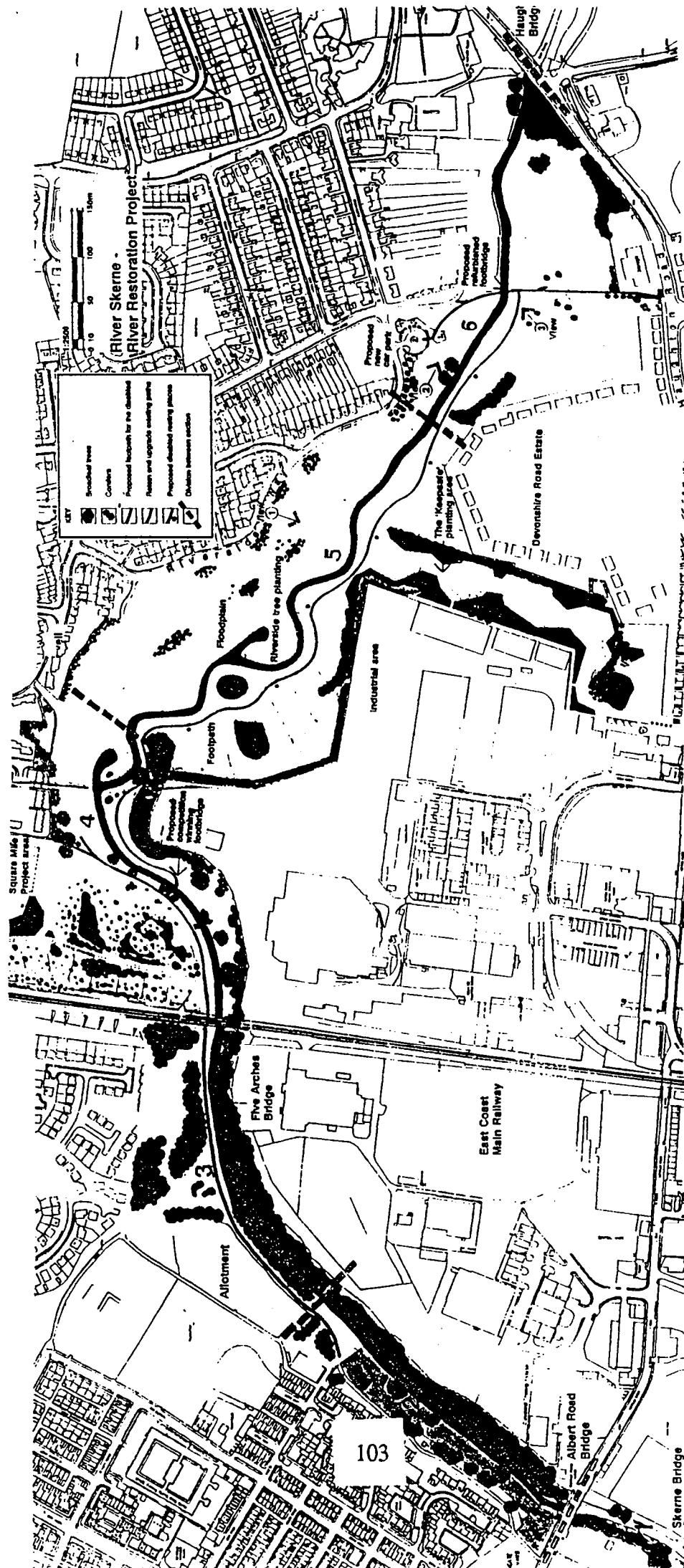


Table 2.1 **Characteristics of respondents: 1995 and 1997 surveys.**

CHARACTERISTICS OF RESPONDENTS						
CHARACTER- ISTICS	1995 Pre- only %	1995 Re-inter- viewed %	1995 All %	1997 Post only %	1997 Re-inter- viewed %	1997 All %
GENDER	61*	42*	51*	40	42	41
Male						
AGE	14	10	12	14	6	10
Under 30						
30-45	28	40	34	29	38	34
46-64	38	33	35	36	34	35
65+	21	18	19	22	22	22
MEAN AGE ON COMPLETING F/T EDUCATION	15.76	16.05	15.92	15.97	16.04	16.00
TENURE						
Own home	71*	82*	77*	70	75	73
Rent from council	17	13	15	21	11	16
Other	12	4	8	9	14	11
NUMBER IN H/H						
1	9	8	8	17*	10*	14*
2	41	29	34	42	32	37
3	22	24	23	13	25	19
4+	28	40	35	28	32	30

Table 2.1 (continued) Characteristics of respondents: 1995 and 1997 surveys

CHARACTERISTICS OF RESPONDENTS						
PERCENT WITH CHARACTERISTICS	1995 Pre-only %	1995 Re-inter-viewed %	1995 All %	1997 Post only %	1997 Re-inter-viewed %	1997 All %
INCOME						
Under £5,000	12	12	12	15*	7*	10*
£5,000 -£10,000	8	8	8	8	12	10
£10,001-£15,000	10	11	11	12	10	11
£15,001-£20,000	8	12	10	5	9	7
£20,001-£25,000	4	6	5	2	13	8
£25,001+	10	8	9	10	13	11
Refused	21	21	21	35	23	28
Don't know	27	22	24	14	15	15
MEAN LENGTH RESIDENCE IN AREA*	17.59	17.28	17.43	18.44	21.61	20.11
DISTANCE FROM RIVER						
Riverside	5	9	7	2*	13*	8*
Within 250m	26	27	27	42	36	39
250-500m	28	33	31	31	32	31
500m +	41	31	35	25	20	22

* Chi-sq Significant p 0.05

Table 2.2 Rating importance of consultation: 1995 and 1997 surveys

PERCENTAGE RATING CONSULTATION AS IMPORTANT						
Percent rating consultation as important	1995 Pre-only %	1995 Re-inter-viewed %	1995 All %	1997 Post only %	1997 Re-inter-viewed %	1997 All %
Not at all important 0	-	1	1	-	-	-
1	1	-	1	1	-	0
2	-	-	-	-	-	-
3	1	1	1	1	2	2
4	-	1	1	2	1	1
5	4	4	4	13	8	10
6	2	4	3	12	8	10
7	9	10	9	11	12	11
8	14	21	18	23	19	21
9	14	7	10	9	19	14
10 Very important	55	52	53	28	32	30
Number of cases	115	136	251	120	134	254
Mean rating	8.87	8.71	8.78	7.75	8.18	7.98

Table 2.3 Interest in participation: 1995 and 1997 surveys

INTEREST IN PARTICIPATION						
Percent interested in participating in:	1995 Pre only %	1995 Re-inter-viewed %	1995 All %	1997 Post only %	1997 Re-inter-viewed %	1997 All %
Decision making	31	42	37	32	38	35
Further survey	85*	100*	93*	78**	90**	84**

* Chi-sq. - 21.37 (df1) Sig. .000

** Chi-sq. = 6.43 (df1) Sig. .011

Table 3.1 Percentage of respondents visiting the scheme section of the River Skerne. 1995 and 1997 surveys

PERCENT VISITING SCHEME SECTION OF RIVER						
Percent visiting	1995 Pre-only %	1995 Re-inter-viewed %	1995 All %	1997 Post only %	1997 Re-inter-viewed %	1997 All %
In the last 12 months	72*	96*	85*	77	84	81
Have visited, but not in last 12 months	12	2	7	11	14	13
Never visited	16	2	8	11	2	6
Number of cases	116	136	252	124	136	260

* Chi-sq = 26.26 (df 1) Sig .0000

Table 3.2 Frequency of visiting river in summer: 1995 and 1997 surveys

SUMMER						
Frequency	1995* Pre- only %	1995* Re-inter- viewed %	1995 All %	1997 Post only %	1997 Re-inter- viewed %	1997 All %
Daily	15	31	24	22	24	23
Several times a week	14	23	20	26	25	25
Weekly	16	21	19	13	17	15
Fortnightly	12	7	9	4	8	6
Monthly	10	7	8	11	5	8
2/3 times a year	14	8	11	14	12	13
Once a year	11	3	7	3	2	3
Never	6	-	3	8	7	7
Number of respondents	98	133	231	109	133	242

* Chi-sq. + 27.20 (df7). Sig. .0003

Table 3.3 Frequency of visiting river in winter: 1995 and 1997 surveys

WINTER						
Frequency	1995* Pre- only %	1995* Re-inter- viewed %	1995 All %	1997 Post only %	1997 Re-inter- viewed %	1997 All %
Daily	13	24	19	19	18	18
Several times a week	7	15	12	12	15	14
Weekly	11	14	13	12	8	9
Fortnightly	8	4	6	3	10	7
Monthly	16	15	15	8	11	9
2/3 times a year	18	16	17	22	14	17
Once a year	19	12	15	7	5	6
Never	8	1	4	17	20	19
Number of respondents	97	132	229	109	133	242

Bases for percentages on visiting frequency exclude those who never have visited the scheme section of the river and don't know but include those who have not visited there in the last 12 months.

* Chi-sq. = 17.77 (df 7) Sig + .0131

Table 3.4 Duration of visits to the river: 1995 and 1997 surveys

DURATION OF VISITS						
Percent Visiting for duration	1995 Pre-only *** %	1995 Re-inter-viewed *** %	1955 All %	1997 Post only %	1997 Re-inter-viewed %	1997 All %
0-15 mins*	35	18	25	18	11	14
16-30 mins	33	41	37	31	41	36
31-60 mins	17	30	25	36	38	37
1-2 hours**	15	10	12	16	10	12
3-4 hours**	-	-)	-	1	0
over 4 hours	-	2	1	-	-	-
Number of Respondents	94	133	227	101	124	225

Bases for percentages visiting for purposes exclude those who never have visited the scheme section of the river and don't know but include those who have not visited there in the last 12 months.

* Response categories were 0-5 minutes and 6-15 minutes in 1995

** Response category was 1-4 hours in 1995.

*** Chi-sq. 13.68 (df 5) Sig. .018

Table 3.5 **Percentage of respondents visiting sections of the river: 1995 and 1997 surveys**

SECTION OF RIVER VISITED						
Percent Visiting	1995 Pre-only %	1995 Re-inter-viewed %	1995 All %	1997 Post only %	1997 Re-inter-viewed %	1997 All %
Section 1	21	26	24	4**	13*	9*
Section 2	41	53	48	36	42	39
Section 3	62	69	66	72	66	69
Section 4	64	75	71	73	79	76
Section 5	67	71	70	72	73	72
Section 6	71	74	74	70	66	68

Bases for percentages visiting sections exclude those who never have visited the scheme section of the river and don't know but include those who have not visited there in the last 12 months.

* Chi-sq = 6.86 (df 1?) Sig .032
Percentage based on small numbers

Table 3.6 Purpose of visits to river and nearby open space

PURPOSE OF VISITS						
Percent Visiting for purpose	1995 Pre-only %	1995 Re-inter-viewed %	1995 All %	1997 Post only %	1997 Re-inter-viewed %	1997 All %
Walking	60**	73**	68**	59	68	64
Access elsewhere	51	50	50	39	49	45
Walking the dog	31	38	35	32	35	34
Wildlife	16	18	17	31	38	35
Cycling	6	9	8	10	6	8
Playing	4	8	7	5	5	5
Football/games	6	7	7	7***	2***	4***
Sitting	3	4	4	2	3	3
Jogging*	NA	NA	NA*	2	2	2
School visit	0	0	0	5	6	5
Fishing	-	1	0	-	2	1
Other*	7	10	9*	6	2	4

Bases for percentages visiting for purposes exclude those who never have visited the scheme section of the river and don't know but include those who have not visited there in the last 12 months.

* Jogging was not included as a separate activity in the 1995 survey but was included in the 'other' category.

() less than 0.5%

** Chi-sq. = 4.23 (df1) Sig.0400

*** Chi-sq. 5.16 (df1) Sig.023

Table 4.1 Mean rating of the attractiveness of sections of the River Skerne: 1995 and 1997 surveys

MEAN RATING OF RIVER SECTIONS						
River sections	1995 Pre- only	1995 Re-inter- viewed	1995 All	1997 Post only	1997 Re-inter- viewed	1997 All
Section 1	0.47	0.43	0.45	1.33*	0.65*	0.79*
Section 2	1.29	2.14	1.78	2.00	2.16	2.09
Section 3	0.97	0.64	0.78	1.51	1.39	1.45
Section 4	1.69	1.79	1.75	2.44	2.87	2.68
Section 5	2.35	2.31	2.33	2.79	3.14	2.98
Section 6	1.98	2.09	2.04	2.93	2.87	2.90
River overall	1.64	1.89	1.78	2.68	2.69	2.69
Number of respondents River overall	102	132	234	94	118	212

Rating scale: -5 = very unattractive to + 5 very attractive.

Missing data including those who did not visit a particular section of the river are excluded from the calculation of the means.

* Means based on very small number of cases.

Table 4.2 Rating of the river overall: 1995 and 1997 surveys

RATING OF RIVER OVERALL						
Percent rating river overall	1995 Pre-only %	1995 Re-inter-viewed %	1995 All %	1997 Post only %	1997 Re-inter-viewed %	1997 All %
-5 Very un-attractive	-	1	1	1	2	1
-4	3	1	2	1	-	1
-3	6	1	3	-	2	1
-2	4	4	4	-	2	1
-1	4	7	6	2	2	2
0	6	3	4	5	4	5
+1	11	12	11	5	8	7
+2	25	24	24	18	13	15
+3	29	31	30	35	27	31
+4	7	13	10	27	34	31
+5 Very attractive	6	3	4	5	8	7
Number of cases	102	132	234	94	118	212

Missing data including those who never visit the river are excluded.

Table 4.3 Perceived effects of scheme on wildlife and wildlife habitats. 1995 and 1997 surveys

EFFECT ON WILDLIFE/HABITATS						
Percent giving effect on wildlife/habitats as:	1995 Pre-only %	1995 Re-inter-viewed %	1995 All %	1997* Post only %	1997* Re-inter-viewed %	1997* All %
Loss	6	2	4	3	2	3
Increase	74	85	79	62	77	70
No change	13	10	12	13	11	12
Don't know	7	3	5	22	10	15
Number of cases	115	136	251	124	135	259

* Chi-sq. = 9.09 (df 3) Sig. .028

Table 4.4 Perceived effects on recreational opportunities. 1995 and 1997 surveys

EFFECT ON RECREATIONAL OPPORTUNITIES						
Percent giving effect on recreational opportunities	1995 Pre-only * %	1995 Re-inter-viewed * %	1995 All * %	1997 Post only ** %	1997 Re-inter-viewed ** %	1997 All ** %
Increased	60	67	64	27	52	40
Reduced	9	7	8	7	4	5
Remain the same	21	24	23	36	38	37
Don't know	10	2	6	31	7	19
Number of cases	15	136	251	124	136	260

* Chi-sq. = 9.90 (df 3) Sig. .0194

** Chi-sq. = 30.20 (df 3) Sig. .0000

Table 4.5 Perceived effects of scheme on riverside safety for children. 1995 and 1997 surveys

EFFECT ON RIVERSIDE SAFETY						
Percent giving effect as	1995 Pre-only %	1995 Re-inter-viewed %	1995 All %	1997 Post only %	1997 Re-inter-viewed %	1997 All %
More safe	41	38	39	30	30	30
Less safe	6	7	6	9	12	10
No difference	46	49	47	37	39	38
Don't know	7	7	7	24	19	22
Number of cases	115	136	251	124	135	259

Table 4.6 Perceived effects of riverside landscape. 1997 survey only

EFFECT ON RIVERSIDE LANDSCAPE			
Percent giving effect on recreational opportunities	1997 Post only * %	1997 Re-inter-viewed * %	1997 All * %
More attractive	57	69	63
Less attractive	5	3	4
Remain the same	13	15	14
Don't know	25	13	19
Number of cases	123	136	259

Chi-sq. + 8.03 (df. 3) Sig. .045

Table 4.7 Perceived effects of scheme on flood risk. 1997 survey only

EFFECT ON FLOOD RISK			
Percent giving effect on flood risk as:	1997 Post only %	1997 Re-inter-viewed %	1997 All %
Increased	4	4	4
Decreased	34	44	39
No change	22	22	22
Don't know	40	30	35
Number of cases	124	135	259

Table 4.8a Percentage approving of the restoration options: Skerne 1995 survey only

Ratings	Strongly Against						Strongly in favour	Don't know	No. of cases
	-3	-2	-1	0	+1	+2	+3		
SKERNE 1995									
Visitors	2	1	2	3	6	15	71	-	223
Non-visitors	7	-	-	14	10	10	59	-	29
All	3	0	1	4	7	15	70	-	252

Table 4.8b Percentage approving of the restoration. Visitors only. 1995 survey only.

Ratings	Strong- ly Against						Strong- ly in favour	No. of cases
	-3	-2	-1	0	+1	+2	+3	
SKERNE 1995 VISITORS ONLY								
1995 only %	4	1	2	1	10	17	65	93
Re-inter- viewed %	1	1	2	4	4	14	75	132
All %	2	1	2	3	6	15	71	225

Table 4.8c Percentage approving of the restoration. All respondents. 1995 survey only

Ratings	Strong- ly Against						Strong- ly in favour	No. of cases
	-3	-2	-1	0	+1	+2	+3	
SKERNE 1995 ALL RESPOND- ENTS								
1995 only %	5	1	2	3	10	16	64	116
Re-inter- viewed %	1	1	2	5	4	13	74	136
All %	3	1	2	4	7	15	69	252

Table 4.9 Percentage approving of the restoration. All respondents. 1997 survey only

SKERNE 1997	Strongly Dis-approve	Not really approve	Mostly approve	Strongly approve	Don't know	No of cases
1997 only % *	2	6	44	32	16	124
Re-inter-viewed % *	2	6	58	30	5	136
All %	2	6	52	30	10	260

* Chi-sq. = 10.30 (df 4) Sig. .035

Table 4.10 Percentage of respondents approving of the river restoration scheme in 1995 and 1997: the re-interviewed only

APPROVAL OF RESTORATION SCHEME: 1995 AND 1997: THE RE-INTERVIEWED ONLY							
1997	1995		In favour		No opinion/Against		All
	Strongly in favour (Rating 3)		(Rating 1-2)		(Rating 0- -3)		
	%	Number	%	Number	%	Number	
Strongly approve	33	33	22	5	10	1	30
Mostly approve	55	54	65	15	80	8	58
Do not really approve	5	5	9	2	10	1	6
Strongly Disapprove	1	1	4	1	-	-	
Don't know	6	6	-	-	-	-	5
Number of cases	99		23		10		132

Table 5.1 Monetary valuation of enjoyment £ per visit with restoration Options: Skerne 1995

SKERNE 1995	£ Mean value	Standard deviation	% valuing	No. of cases
SKERNE 1995				
Visitors only				
Current river *				
1995 only	5.52	4.95	54	48
Re-interviewed	6.31	7.60	58	73
All	6.00	6.67	56	121
With scheme				
1995 only	7.36	5.36	51	46
Re-interviewed	7.84	8.21	54	69
All	7.65	7.27	52	115
With scheme Visitors and non visitors				
1995 only	7.05	5.53	44	51
Re-interviewed	7.71	8.13	52	71
All	7.44	7.14	48	122

* Visitors only were asked about the value of their enjoyment of a visit to the river in current condition. Both visitors and non-visitors were asked about a visit to the river after restoration.

Table 5.2 Estimated difference or gain in £ value per adult visit with restoration options: Skerne 1995

SKERNE 1995	£ Value per adult visit Mean difference	Standard deviation	No. of cases
SKERNE 1995			
1995 only	2.08	3.96	44
Re-interviewed	1.78	2.67	68
With scheme	1.90	3.23	112

Zero valuations and those unable and unwilling to offer a valuation are excluded from the calculation of the mean differences.

Negative, positive and zero difference values are included in the calculations of the mean differences.

Table 5.3 Preparedness to pay for a national and local river restoration programme: Skerne 1995

Prepared to pay	Local Yes %	Maybe %	No %	Don't know %	All national %	No. of cases
National Yes %	32.5	3.2	2.8	0.8	39.5	99
Maybe %	6.0	10.7	-	0.8	17.5	44
No %	5.2	1.6	26.6	0.4	33.7	85
Don't know %	1.2	1.6	0.8	6.0	9.5	24
All local %	44.8	17.1	30.2	7.9	100.0	252
No. of cases	113	43	76	20	252	

Percentages based on all 252 cases

Table 5.4 **Percentage of respondents prepared to pay for restoration: 1995 and 1997 surveys**

PREPARED TO PAY FOR RESTORATION						
Percent prepared to pay	1995 Pre-only * %	1995 Re-inter-viewed * %	1995 All * %	1997 Post only ** %	1997 Re-inter-viewed ** %	1997 All ** %
More than £22 extra per year	NA	NA	NA	9	12	10
£22 extra per year and no more	NA	NA	NA	35	47	41
Less than £22 extra per year	NA	NA	NA	9	12	10
Definitely prepared to pay	37	52	45	NA	NA	NA
Maybe prepared to pay	17	17	17	NA	NA	NA
Total prepared to pay	54	69	62	53	70	62
Not prepared to pay	41	21	30	28	22	25
Don't know	5	10	8	19	7	13
Number of cases	116	136	252	124	135	259

*Chi-sq. = 12.62 (df 3) Sig. .006

** Chi-sq. = 9.65 (df2) Sig. .008 % willing to pay the average, £22.

Table 5.5 Mean amount respondents were prepared to pay. 1995 and 1997 surveys

MEAN AMOUNT PREPARED TO PAY						
Prepared to pay	1995 Pre-only	1995 Re-inter-viewed	1995 All	1997 Post only	1997 Re-inter-viewed	1997 All
Mean amount in £ p.a. extra	19.86	24.29	22.45	23.53	21.38	22.26
Standard Deviation	26.20	33.52	30.67	13.65	9.96	11.63
Number of cases	62	87	149	66	95	161
% prepared to pay and giving an amount	53	64	59	53	70	62

Table 5.6 Prepared to pay in 1995 and 1997: Re-interviewed only

PREPARED TO PAY: 1995 AND 1997. RE-INTERVIEWED ONLY					
1997	1995				
	Defin-ately %	Maybe %	No %	Don't know %	Number of cases
Yes	76	78	48	71	95
No/Don't know	24	22	52	29	41
Number of cases	70	23	29	14	136

Chi-sq. + 8.34 (df3) Sig. .039

Table 5.7 Amount respondents were prepared to pay in 1995 and 1997: the re-interviewed only

AMOUNT PREPARED TO PAY: 1995 AND 1997. RE-INTERVIEWED ONLY				
Amount: £ per annum extra	1995		1997	
	Number	%	Number	%
Less than £22	58	67	19	20
£22	-	-	63	66
More than £22	29	33	13	14
Number of cases	87	100	95	100
Lowest value	0.25		4.00	
Highest value	180.00		60.00	

Table 5.8 Characteristics of those prepared and not prepared to pay for river restoration: 1997 only

CHARACTERISTICS OF THOSE PREPARED/NOT PREPARED TO PAY: 1997 ONLY			
Characteristics	Prepared to pay	Not prepared to pay	All
AGE*			
Under 30	12	6	10
30-45	36	30	34
46-64	36	32	35
65+	16	31	22
TENURE*			
Home owner	75	69	73
Council tenant	11	23	16
Other	14	8	12
INCOME*			
Under £5,000	7	16	10
£5,001-£10,000	10	11	10
£10,001-£15,000	15	4	11
£15,001-£20,000	8	4	7
£20,001-£25,000	10	4	8
£25,000+	14	7	11
Refused	25	34	29
Don't know	11	20	15
MEAN AGE ON COMPLETING F/T EDUCATION *	16.25	15.61	16.00
VISITED IN LAST 12 MONTHS*	86	73	81

* Chi-sq. significant at 0.05 level

Table 5.9 Attitudes of those prepared and not prepared to pay: 1997 only

ATTITUDES OF THOSE PREPARED/NOT PREPARED TO PAY: 1997 ONLY			
Attitudes	Prepared to pay %	Not prepared to pay %	All %
SCHEME VALUE FOR MONEY*			
Very good	29	9	21
Quite good	49	31	42
Not very good	7	13	9
Not at all good	1	18	8
Too soon to tell	11	13	12
Don't know	4	15	8
Number of cases	161	99	260
APPROVAL OF SCHEME*			
Strongly approve	38	18	30
Mostly approve	56	44	52
Do not really approve	2	12	6
Strongly disapprove	1	4	2
Don't know	3	21	10
Number of cases	161	99	260
PARTICIPATION*			
Interested in participating in decision making	42	22	35
Not interested in participating	58	78	65
Number of cases	161	99	260

* Chi-sq. significant at 0.05 level