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River Ribble Juvenile Fish Stock Assessment 2003
With Particular Reference to Salmonids

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May 2004

EA/NW/C/FTR/04/01

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Summary

During 2002, the Environment Agency implemented a new National Fisheries Monitoring Programme. This provided a framework for fisheries monitoring that is now, a more consistent, efficient and cost-effective programme & also, for the first time, provides a robust basis for the analysis and reporting of fish stocks on a National scale. The Fisheries Monitoring Programme is built around a combination of: a small number of Temporal sites that are monitored annually to allow year-to-year comparisons; and a larger number of Spatial sites that are monitored on a five-year rolling programme to allow comparisons within and between catchments. Temporal sites are sampled quantitatively (>1 run) and all other sites are sampled semi-quantitatively (1 run). A total of 61 sites was electric-fished throughout the Ribble catchment between 23rd July 2003 and 1st October 2003. These sites included 34 that had been previously sampled in the last survey of the catchment, in 1998. No sites were surveyed on the lower reaches of the main River Ribble, Paythorne Bridge (NGR SD 831 512) is the most downstream main river site. During the 2003, 13 sites were surveyed on main river, this is an increase of 10 sites since the 1998 survey. In addition to the electric fishing sites, 2 deep water sites were monitored using hydroacoustic equipment. This was undertaken at Sales Wheel (between NGR SD 665 359 and SD 674 361) and Church Deepes (between SD 559 282 and SD 566 287). These are not included in this report due to the complexity of the results.

The electric fishing procedure consisted of a single upstream fishing at 50 spatial sites. The other 11 sites were surveyed quantitatively (greater than a single fishing). The fish densities (expressed as numbers per 100m²) calculated from the 50 spatial sites in this report are therefore semi-quantitative, or minimum estimates and do not represent the complete juvenile salmonid production for these sites. The densities presented from the 11 temporal sites show a more accurate representation of the juvenile salmonid population.

A total of eight species were recorded with salmon and trout the most abundant in the survey.

Salmon fry production in the 2003 survey was higher when compared to 1998 which showed very low production. Long Preston Beck, Swanside Beck and the Skirden Beck system were the most productive areas for salmon fry. Salmon fry were also found in very low numbers scattered throughout the catchment. This suggests that the 2003-year class is relatively strong, and the returns of grilse in 2006 and two sea-winter salmon in 2007 should reflect this with improved numbers of returning salmon.

Salmon parr production was higher in 2003 compared to 1998, which showed very low production. The most productive areas were in the upper half of the catchment. Long Preston Beck, Rathmell Beck and Stainforth Beck were the most productive areas for salmon parr. In contrast the lower half of the catchment is not very productive for salmon parr with only very low densities being found. All of the main river sites that were surveyed held relatively low densities of salmon parr.

Trout fry were found throughout the catchment, the 2003 densities appeared to be on average similar with the 1998 densities, with relatively high densities being found. The most productive areas were Bashall Brook, Waddington, West Bradford and West Clough Becks, the Skirden Beck system, Long Preston Beck, Rathmell Beck and Stainforth Beck. The main river sites that were surveyed showed low production with very low densities being found.





Trout parr were similarly widely distributed, with similar densities being found in both 2003 and 1998. Productivity was on average spread evenly throughout the catchment with similar densities of trout parr being found in all spawning becks. The main river sites showed low production with low densities being found.

Contents

	Page no.
Summary	i
Contents	iv
1. Introduction	2
2. Methods	4
3. Results	6
3.1 Overview	6
3.2 Juvenile Salmon densities 2003	6
3.3 Juvenile Trout Densities 2003	7
3.4 Quantitative Electricfishing Results	8
3.4 Comparison with 1998 Survey Results	10
3.5 National Fisheries Classification Scheme	12
4. Discussion	14
4.1 Species Composition	14
4.2 Adult Abundance	14
4.3 Water Quality	14
4.4 Sub-Catchment Descriptions	16
5. Conclusions	20
6. Appendices	
Appendix I Annual Survey Sites	21
Appendix II The relationship between semi-quantitative and quantitative electric fishing results	22
Appendix III Site Summaries	23

1. INTRODUCTION

This report presents data from the juvenile salmonid stock assessment carried out on the River Ribble catchment in the summer of 2003. This survey forms part of the routine 5-year rolling programme of riverine stock assessments carried out by the Environment Agency's Ecological Appraisal Team for North West Region, Central Area. The survey is also used to assess annual variation (Temporal monitoring) at a small numbers of sites. The aim of this survey was to assess the distribution and abundance of juvenile salmon and trout in the River Ribble catchment in 2003 and to compare results with those from previous surveys. The new monitoring programme is divided into components clearly aimed at providing data of different types. The sites are split between the temporal and spatial components. Temporal elements of the programme will provide long term time-series data for specific sites and are to be sampled annually. The new national monitoring programme has therefore identified 11 sites on the Ribble which will be sampled on a yearly basis (Appendix 1). The sites are located primarily in spawning becks/areas so this will primarily assist in identifying different year class strengths and weaknesses from year to year. The spatial element of the monitoring is aimed at comparing groups of sites with similar habitat types or sub-catchments for example. These 50 spatial sites are to be surveyed at five-yearly intervals.

The Ribble catchment is the largest and most diverse river system in the Environment Agency, North West Region, Central Area, draining an area of 2128 km². The River Ribble rises at Newby Head Moss (NGR SD 793 845) in the Pennines, at an altitude of 422 metres. The river then passes through the Yorkshire Dales National Park and the Forest of Bowland, before entering the Irish Sea to the west of the town of Preston, a total of 110km from source to sea. The middle stretch of the Ribble is joined, to the south of Clitheroe, by two major tributaries, the Hodder and Calder. The River Darwen drains the conurbations of Darwen and Blackburn and meets the Ribble at Preston. Surveys of the Rivers Hodder, Calder and Darwen are reported independently.

The underlying geology of the Ribble catchment is dominated by Carboniferous Limestone and Millstone Grit with a small, isolated area of Pre-Cambrian/Silurian bedrock in the north of the catchment and an aquifer of Sherwood Sandstone in the lower catchment. Land use in the Ribble catchment is predominantly agricultural with rough grazing pasture for sheep in the higher altitudes and steeper gradients and improved pasture for cattle and sheep in the lower altitudes and lower gradient land.

The river water quality in the Ribble catchment is generally of good to fair standard (River Ecosystem Classification 1 or 2). However, the water quality for the middle reaches of Stock Beck is of a fair quality which is suitable for high class coarse fish populations and therefore unlikely to sustain salmonids (RE class 3). However this is an improvement on the previous report in 1998 when the quality was of poor standard (RE class 4). The water quality of Whit Beck is of poor quality which is likely to limit any fish populations (RE class 5), one of the main reasons behind this is due to the pH being relatively alkaline (pH 9). Two other becks have problems with Biological Oxygen Demand (BOD) levels, these being Monument Beck and Skirden Beck. Although these becks have water quality which is of good quality (RE class 2), their productivity may be affected by the high BOD levels which is causing the becks to have a significant (WQ) failure status.

Surface water is abstracted from a number of sites within the Ribble catchment, mostly by United Utilities for public water supply. In addition, groundwater is abstracted from aquifers

in the lower catchment by means of wells and boreholes or by making use of naturally occurring springs.

Long Preston Deep and the Ribble Estuary are designated Sites of Special Scientific Interest (SSSI). The Ribble Estuary is also a RAMSAR site and a Special Protected Area (SPA). There are also 31 non-riverine SSSI's within the catchment.

The Ribble supports major recreational fisheries for both coarse and game fish. Within the Ribble Estuary there are also commercial net fisheries for salmon (*Salmo salar*), sea trout (*Salmo trutta*) as well as sea bass (*Dicentrarchus labrax*) and mullet (*Chelon labrosus*). The survey area for this report is predominantly used as a game fishery for salmon, sea trout and brown trout.

2. METHODS

A total of 61 survey sites was electrofished on the main River Ribble and its tributaries, including 34 sites that had been sampled in the last survey of the catchment, in 1998. Sites were selected in shallow, wadeable areas to be representative of the available habitat, except on the main river where shallow riffle habitat was selected.

The survey commenced on 23rd July 2003 and was completed on 1st October 2003. All sites were sampled using pulsed DC electric fishing, powered by a 2.5 KVA Honda generator. Fifty of the sites were electric fished once in an upstream direction using 1 anode for sites less than 4m wide, or 2 anodes for sites greater than 4m wide. Sites ranged in length from 22m to 81.5m and the total area surveyed at each site ranged from 65.52m² to 1155m². The remaining 11 sites were surveyed quantitatively with upstream and downstream stop nets, where each subsequent 'run' (one electric fishing sample) should catch fewer fish than the previous run in that particular stretch of river. This depletion sampling method allows us to calculate an accurate population density for a particular section. This form of sampling is a more detailed survey, producing more accurate population estimates. Population estimates for fish populations were calculated by the method of Carle and Strub (1978) and expressed as numbers of fish of each species per 100m².

All salmonids, eels and minor coarse fish species were collected for measurement. The fork length of salmonids was measured to the nearest 0.5cm below. In addition, the total wet weight of eels was measured. Salmonid age classes were identified as 0+ (fry) or greater than 0+ (parr) based on the length frequency method. Minor species were recorded in a log abundance scale.

For the sites with 1 'run' the population estimate is recorded as a minimum density per 100m² rather than a population estimate. These minimum estimates were calculated for each age class of each species caught (the number of fish caught divided by the area fished and multiplied by 100). The minor coarse species such as bullheads, minnows and stone loach were not collected but their approximate numbers were estimated as tens, hundreds or thousands per 100m².

The fish data and physical habitat data were used to classify each site according to the National Fisheries Classification Scheme (NFCS). The NFCS compares the species/age class abundance data for each site with a national database of fish abundance, allocating each site to one of five abundance categories that each represents one fifth of the national data set for that species/age class. For example, if the density of salmon fry for a particular site falls within the top fifth of salmon fry densities for national sites, then it will be classified as category A for salmon fry; a density in the bottom fifth will classify the site as category E. Where the species/age class is absent, the site is classified as category F (absent).

The actual densities of each species and age class that correspond to the NFCS grades are defined in Table 1.

Table 1 The densities (number per 100m²) of juvenile salmon and trout and corresponding NFCS grades.

NFCS Grade (Level 1 classification)	Salmon Densities (no./100m ²)		Trout Densities (no./100m ²)	
	Fry (0+)	Parr (>0+)	Fry (0+)	Parr (>0+)
A	>86	>19	>38	>21
B	45-86	10-19	17-38	12-21
C	23-45	5-10	8-17	5-12
D	9-23	3-5	3-8	2-5
E	0-9	0-3	0-3	0-2
F	0	0	0	0

In addition to the electric fishing survey method, hydroacoustic survey methods were used at 2 deep water sites: Sales Wheel (between NGR SD 665 359 and SD 674 361) and Church Deeps (between SD 559 282 and SD 566 287). These are not included in this report due to the complexity of the results and are reported separately.

3. RESULTS

3.1 Overview

A total of eight species of fish were recorded during the 2003 survey, namely;

salmon (*Salmo salar*),
trout (*Salmo trutta*),
chub (*Leuciscus cephalus*),
eels (*Anguilla anguilla*),
lamprey (*Lampetra* spp.),
bullheads (*Cottus gobio*),
stoneloach (*Barbatula barbatula*),
and minnows (*Phoxinus phoxinus*).

Native white-clawed crayfish (*Austropotamobius pallipes*) were also found in the upper Ribble.

Several additional species are known to be present in the lower Ribble but none were caught in the present survey, probably due to the selective sampling of shallow, juvenile salmonid nursery areas. These include: barbel (*Barbus barbus*), roach (*Rutilus rutilus*), dace (*Leuciscus leuciscus*), rudd (*Scardinius erythrophthalmus*), pike (*Esox lucius*), perch (*Perca fluviatilis*), gudgeon (*Gobio gobio*), bream (*Abramis brama*), carp (*Cyprinus carpio*) and occasional migratory sea lamprey (*Petromyzon marinus*). Grayling (*Thymallus thymallus*) are also present in the middle reaches of the river but none were encountered in this survey. Rainbow trout (*Oncorhynchus mykiss*) may also be present in the Ribble as a consequence of escape from put-and-take fisheries. However these are unlikely to form a self-sustaining population and none were found in the 2003 survey.

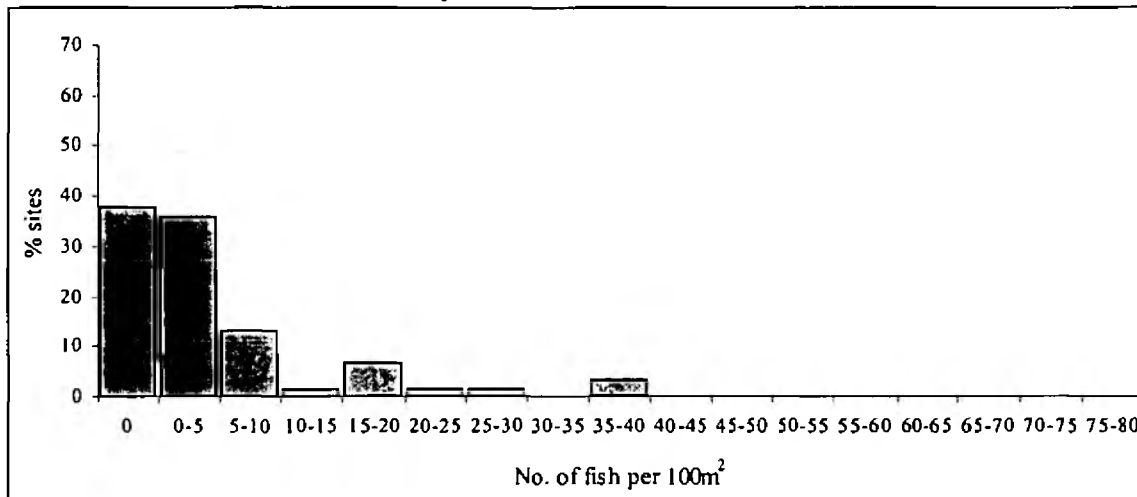
Juvenile trout were the most abundant species caught in the survey, being found at 57 (93%) of the 61 survey sites. Juvenile salmon were found at 48 of the 61 survey sites (79%).

3.2 Juvenile Salmon Densities 2003

Both semi-quantitative and quantitative sites (see Appendix II for the relationship between semi-quantitative and quantitative electric fishing results) are compared together for the purposes of this section in semi-quantitative format. This comparison shows the full range of abundances found within the catchment. The quantitative data is discussed later in the results.

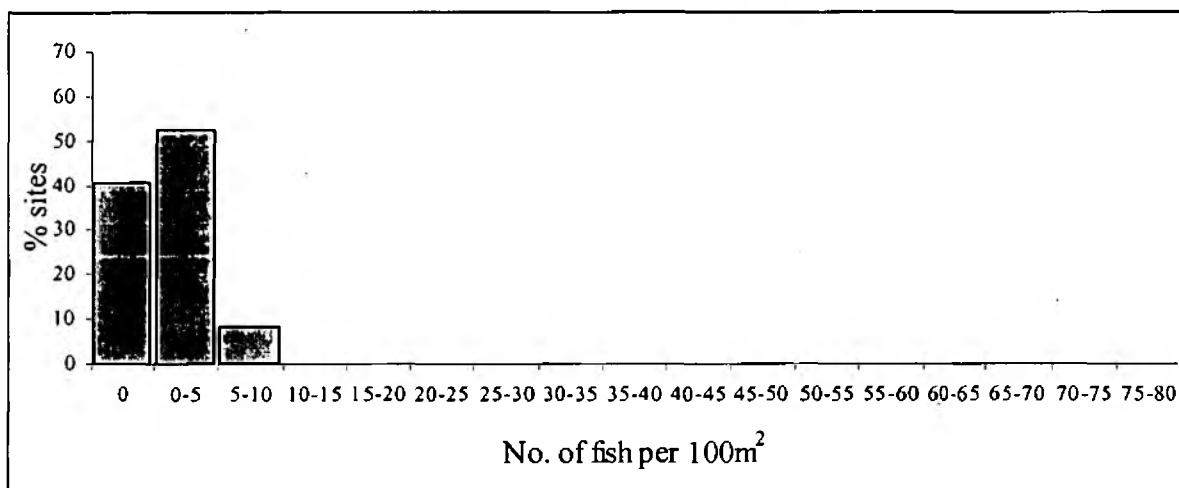
The distribution of salmon fry densities in the 2003 Ribble survey were mainly found in the lower density ranges, with fry being absent from 38% of survey sites. There were however more sites with higher densities than in the 1998 survey (i.e. above 15 fry per 100m²). No salmon fry were stocked into the Ribble catchment in 2003. Results presented here therefore represent only the natural production of salmon fry.

Figure 1 - The distribution of salmon fry densities (minimum estimates) for 61 accessible sites surveyed in the Ribble catchment in 2003.



Salmon parr densities were skewed towards the lower densities, with parr being absent from 41% of the sites. No salmon parr densities in excess of 10 parr per 100m² were recorded in the 2003 survey. No salmon parr were stocked into the Ribble catchment in 2003 (or as fry in 2002). Results presented here therefore represent only the natural production of salmon parr.

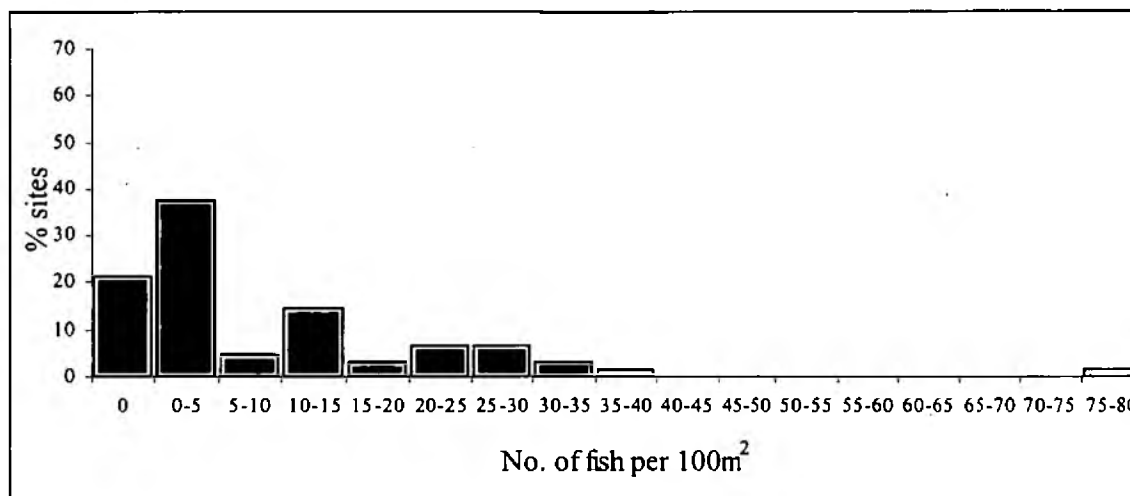
Figure 2 - The distribution of salmon parr densities (minimum estimates) for 61 accessible sites surveyed in the Ribble catchment in 2003.



3.3 Juvenile Trout Densities 2003

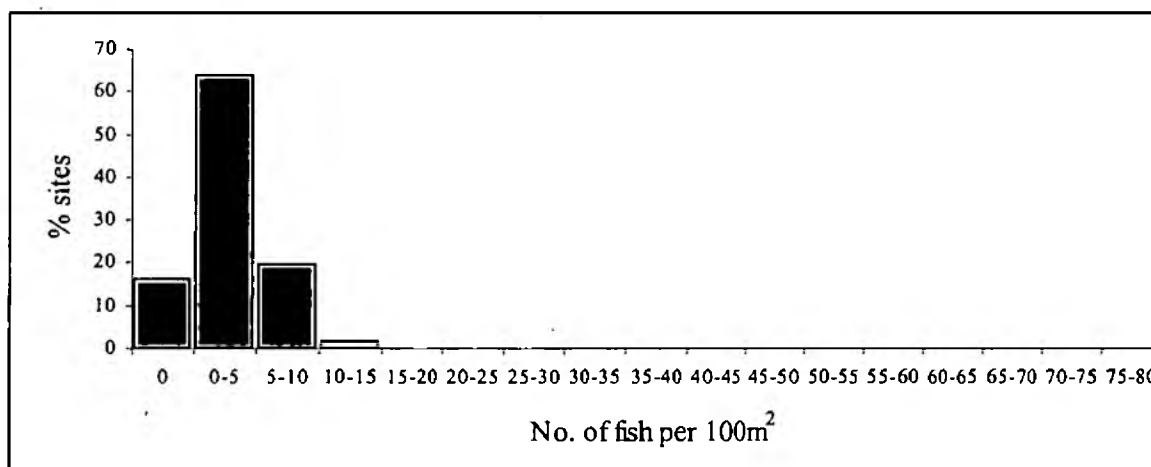
Densities of trout fry were generally low in the 2003 survey. Trout fry were absent from 21% of the survey sites while densities up to 10 fry per 100m² were recorded at 43% of survey sites. Higher trout fry densities, in excess of 20 fry per 100m², were recorded at 20% of sites. The most productive site was Bashall Brook at Clough Bottom where 77.69 fry per 100m² were recorded. No stocking of trout fry took place in the Ribble catchment in 2003. Results presented here therefore represent only the natural production of trout fry.

Figure 3 - The distribution of trout fry densities (minimum estimates) for 61 accessible sites surveyed in the Ribble catchment in 2003.



Trout parr densities tended to be relatively low, with parr being absent from 16% of survey sites. Trout parr densities were lower in 2003 than in 1998. Densities of less than 10 parr per 100m² were recorded at 84% of sites while densities greater than 10 parr per 100m² were recorded at 2% of sites. Trout parr densities reported here are the results of only natural production as no stocking of juvenile trout took place in previous years.

Figure 4 - The distribution of trout parr densities (minimum estimates) for 61 accessible sites surveyed in the Ribble catchment in 2003.



3.4 Quantitative Electricfishing Results

This is the second year that annual sites were monitored, so a comparison can be made between 2002 and 2003. This annual monitoring will show temporal variations and identify year class strengths.

3.4.1 Juvenile salmon densities 2003

The densities of salmon fry are concentrated towards the 20-35 fry per 100m² indicating suitable fry habitat, and relatively good natural production. The most productive site is on main river at Halton Bridge (SD 852 551) producing 33 fry per 100m². Another productive

salmon fry site was Long Preston Beck at Holmbridge (SD 842 582), with a density of 21 fry per 100m² in 2003. These densities have improved since 2002 were the majority of sites held densities in the region of 0 to 10 fry per 100m². Overall the 2003 salmon fry results show a strong year class.

Salmon parr densities are more concentrated towards the lower end of the scale with the majority of sites producing around 5 parr per 100m² indicating relatively poor natural production. Long Preston Beck at Holmbridge was the only quantitative site that held densities above average, producing a density of 16 parr per 100m² (Figure 5b). Early indications from the data suggest that there may be a problem with parr survival/habitat.

Figure 5a The distribution of salmon juveniles population densities for 11 quantitative sites surveyed in the Ribble catchment

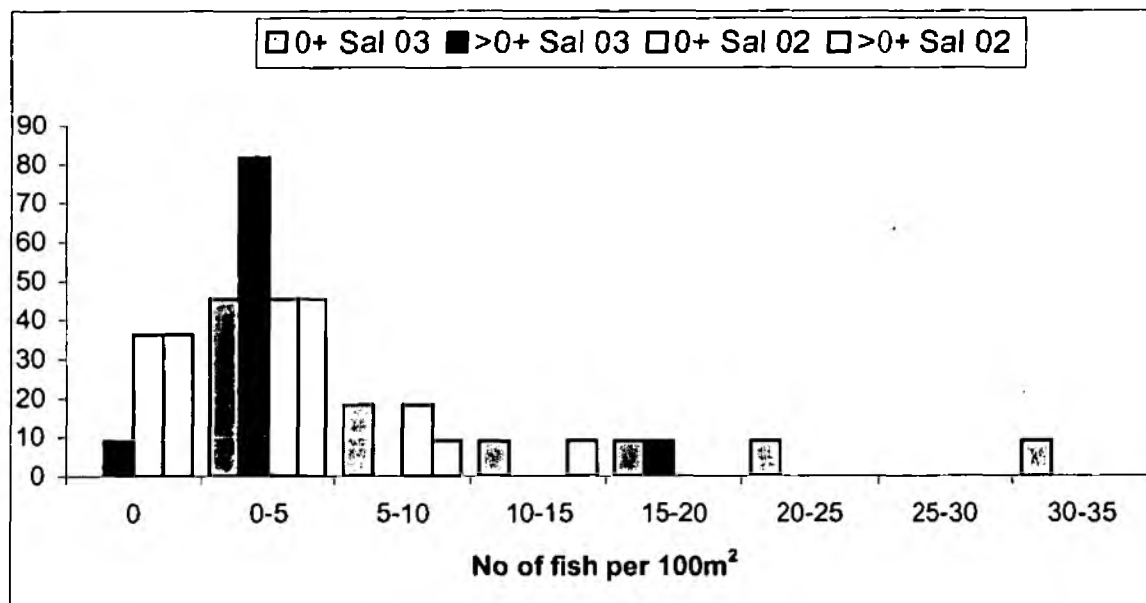
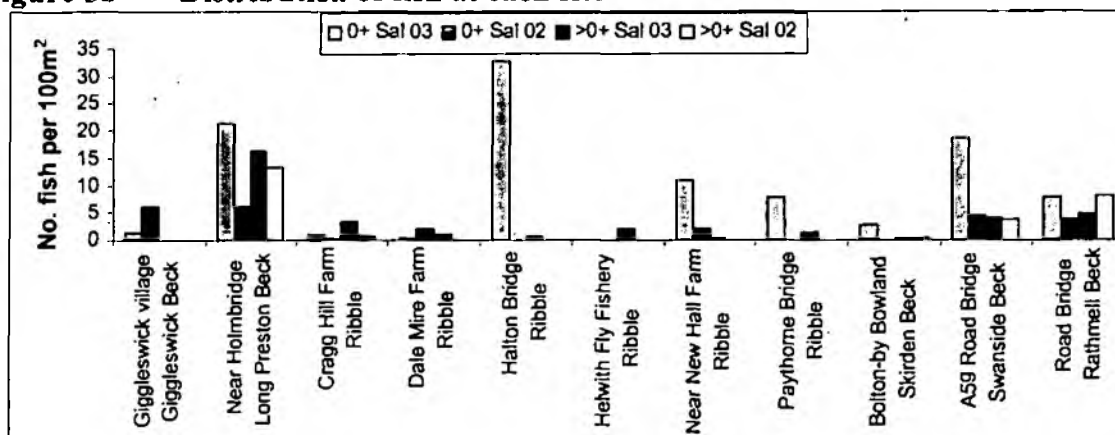


Figure 5b Distribution of fish at each site



3.4.2 Juvenile Trout Densities 2003

During 2003 no stocking was carried out, therefore the juvenile trout densities are from natural production only. The densities of trout fry are very much skewed towards the low densities with 36% of sites having between 0.1 and 5 fry per 100m², and 4 sites being devoid

of trout fry. The most productive site was Giggleswick Beck (SD 811 635) with a density of 21.8 fry per 100m². The distribution of trout parr densities are more concentrated towards the 0.1 to 5 parr per 100m² with a higher percentage (63.6%) than trout fry. Long Preston Beck (SD 842 582) was the most productive site for trout parr with 19.3 parr per 100m².

Figure 6a The distribution of trout juveniles population densities for 11 quantitative sites surveyed in the Ribble catchment

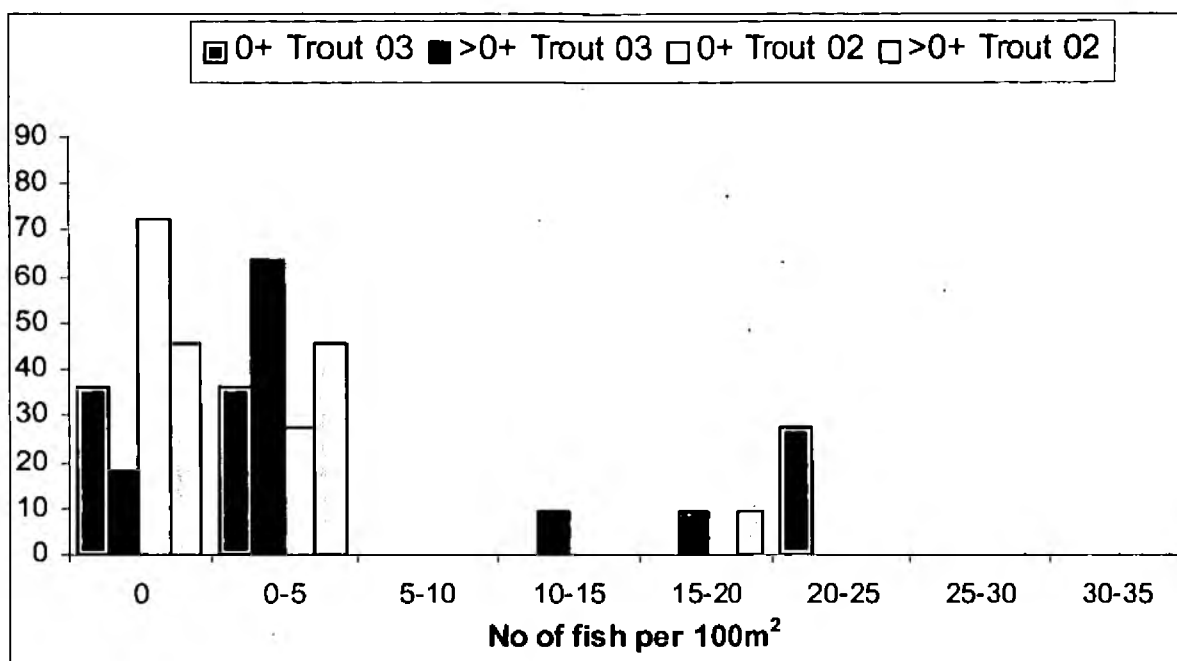
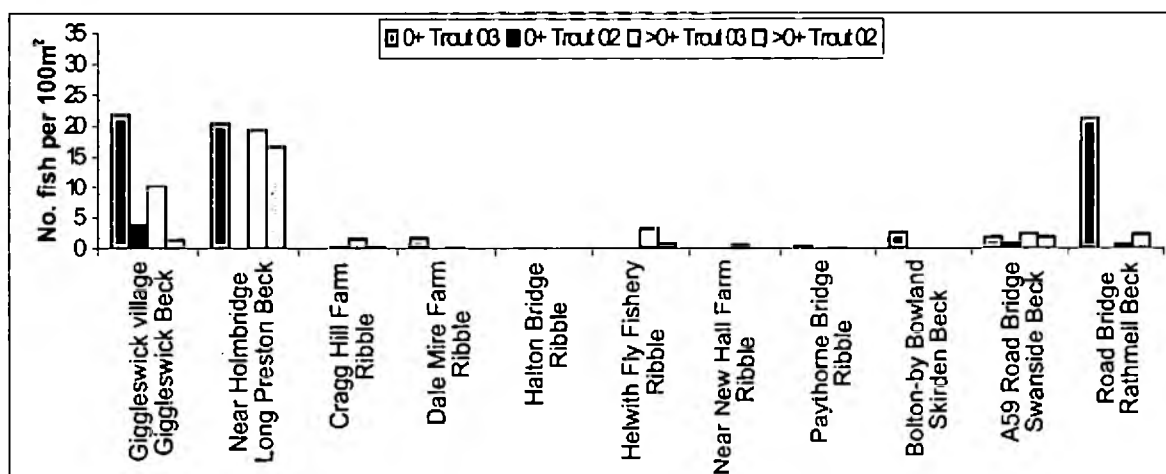


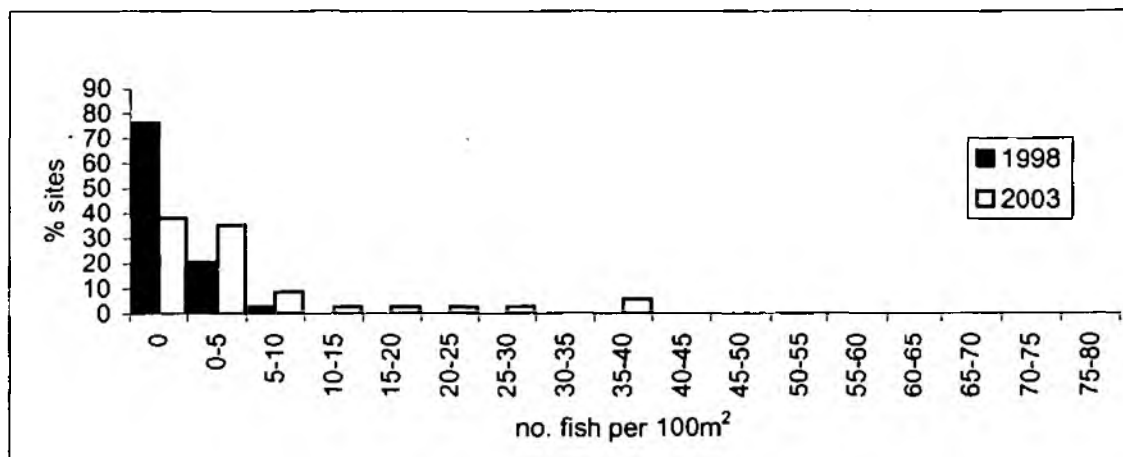
Figure 6b Distribution of fish at each site



3.4 Comparisons with 1998 Survey Results

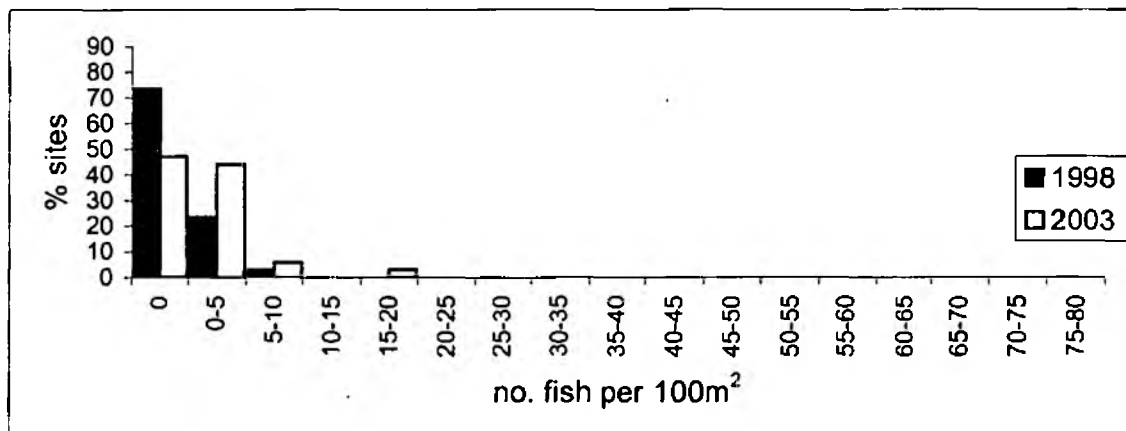
Salmon fry densities at the 34 repeated sites were markedly higher in 2003 than they had been in 1998. The percentage of those repeated sites from which salmon fry were absent decreased markedly from 76% in 1998, to 38% in 2003. From the repeated sites, there was an increase in fry densities greater than 10 fry per 100m² from 0% in 1998 to 17% of sites in 2003 (Figure 5). The maximum recorded density of salmon fry among the 34 repeated sites was higher in 2003 (36 fry per 100m²) than in 1998 (6 fry per 100m²).

Figure 5 - The distribution of salmon fry densities (minimum estimates) for 34 accessible sites in the Ribble catchment surveyed in both 1998 and 2003.



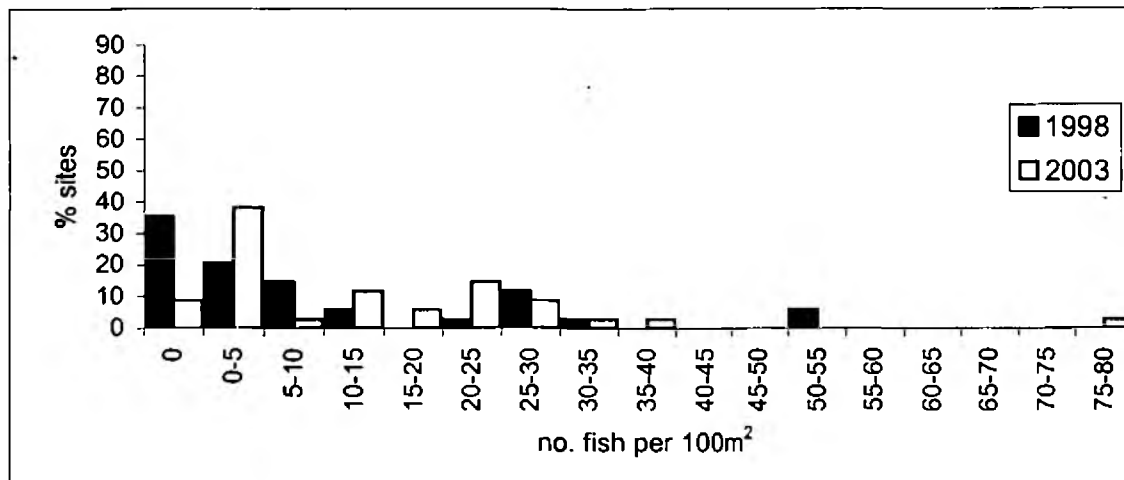
Salmon parr densities at the 34 repeated sites were also generally higher in 2003 than they had been in 1998. Salmon parr were absent from 47% of repeated sites in the 2003 survey, compared to 74% in the 1998 survey. Parr densities in excess of 10 parr per 100m² were recorded at 3% of the repeated sites in 2003 but no densities in this range were recorded in the 1998 survey. The maximum recorded density of salmon parr among the 34 repeated sites was higher in 2003 (16 fry per 100m²) than in 1998 (5 fry per 100m²).

Figure 6 - The distribution of salmon parr densities (minimum estimates) for 34 accessible sites in the Ribble catchment surveyed in both 1998 and 2003.



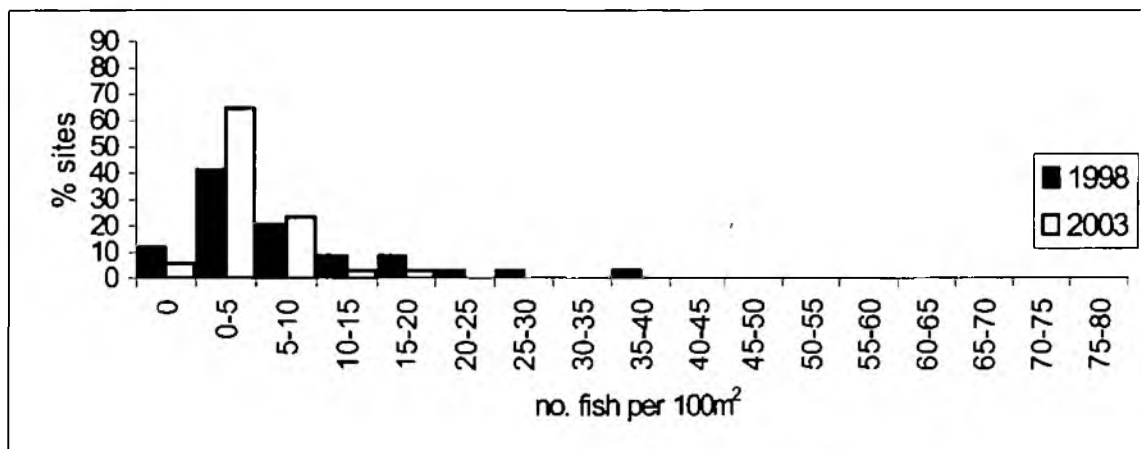
The distribution of trout fry densities from the 34 repeated sites were generally higher in 2003 than in 1998. The percentages of repeated sites from which trout fry were absent was lower in 2003 (9%) when compared to 1998 (35%). Trout fry densities in excess of 10 fry per 100m² were recorded at 50% of survey sites in 2003 compared with 29% in 1998. The maximum recorded density of trout fry among the 34 repeated sites was higher in 2003 (77 fry per 100m²) than in 1998 (53 fry per 100m²).

Figure 7 - The distribution of trout fry densities (minimum estimates) for 34 accessible sites in the Ribble catchment surveyed in both 1998 and 2003.



Trout parr densities were lower in 2003 and 1998 although the percentage of repeated sites from which trout parr were absent was 50% lower in 2003 (6%) than in 1998 (12%). Parr densities in excess of 10 parr per 100m² were less common in 2003 (6%) than in 1998 (26%). The maximum recorded density of trout parr among the 34 repeated sites was markedly lower in 2003 (19 fry per 100m²) than in 1998 (36 fry per 100m²).

Figure 8 - The distribution of trout parr densities (minimum estimates) for 34 accessible sites in the Ribble catchment surveyed in both 1998 and 2003.



3.5 National Fisheries Classification Scheme

The site-specific National Fisheries Classification Absolute Grades (Level 1) from the 2003 survey are given for each species/age class in figures 9 to 13.

Salmon fry densities were relatively higher in 2003 than in 1998 and were recorded at 38 of the 61 survey sites. Long Preston Beck, Swanside Beck and the Skirden Beck system were the most productive areas for salmon fry, albeit at relatively low densities. Fry were also present in Bashall Brook, West Bradford and West Clough Becks, Hellifield Beck, Rathmell Beck, Giggleswick Beck, Stainforth Beck and Gayle Beck. Fry were also present at 85% of the main river sites. There are no records of salmon fry stocking in the Ribble in 2003, so these results therefore reflect natural production. Main river spawning areas are likely to

Figure 9 - River Ribble Survey 2003
Survey Sites

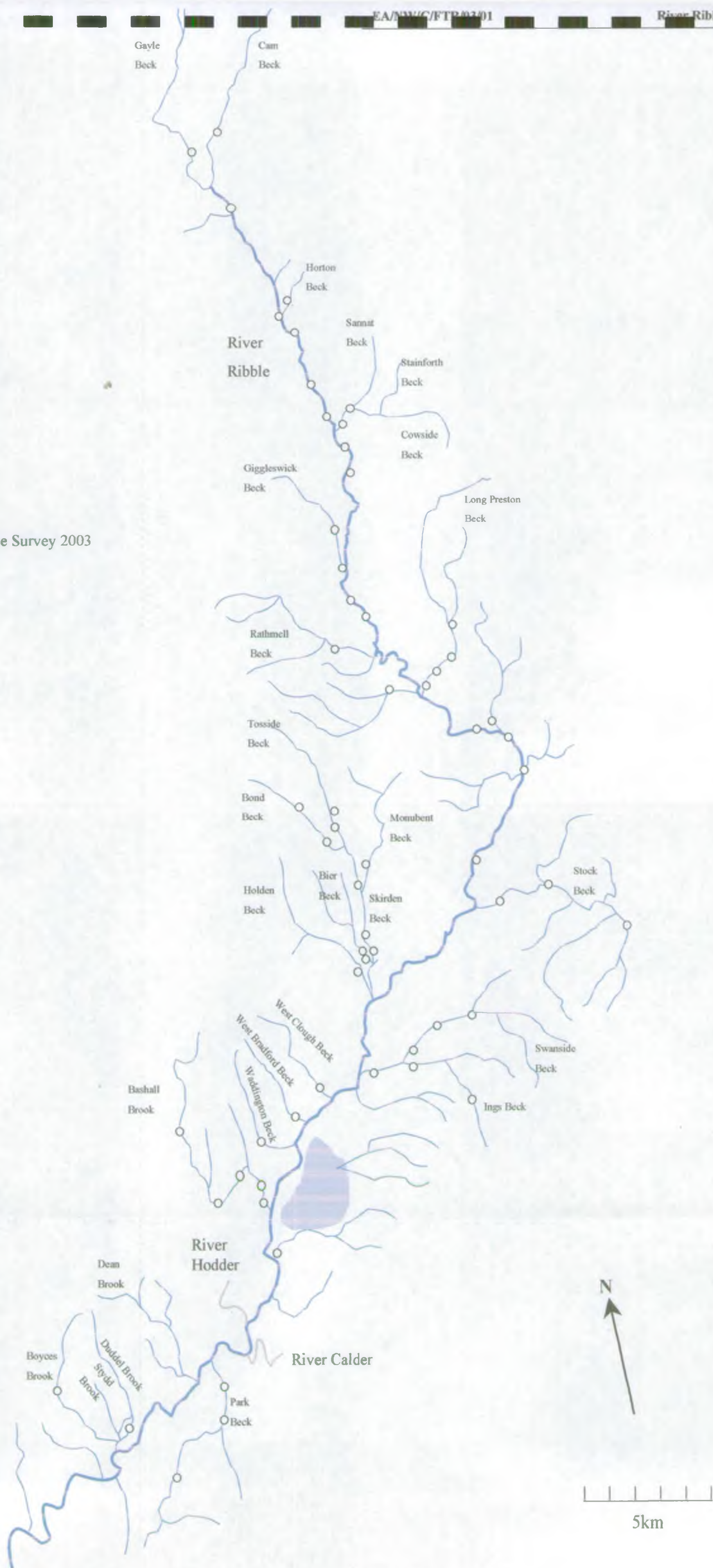


Figure 10 - River Ribble Survey 2003
Distribution and Abundance of
Salmon Fry (0+)
(minimum density estimates)

National Fisheries Classification

Absolute Grades (Level 1)

- A
- B
- C
- D
- E
- F

| Obstruction

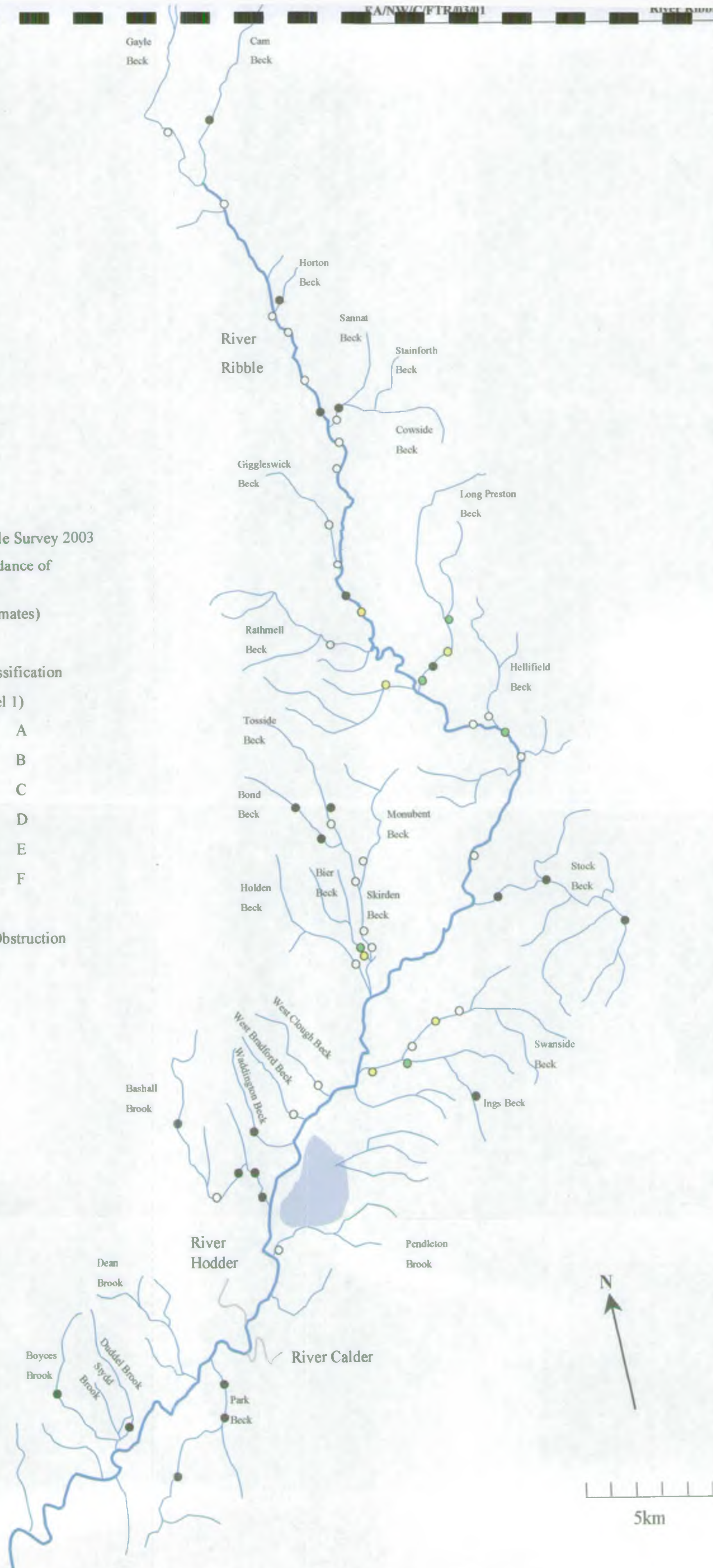




Figure 11 - River Ribble Survey 2003
Distribution and Abundance of
Salmon Parr (>0+)
(minimum density estimates)

National Fisheries Classification
Absolute Grades (Level 1)

- A
- B
- C
- D
- E
- F

| Obstruction

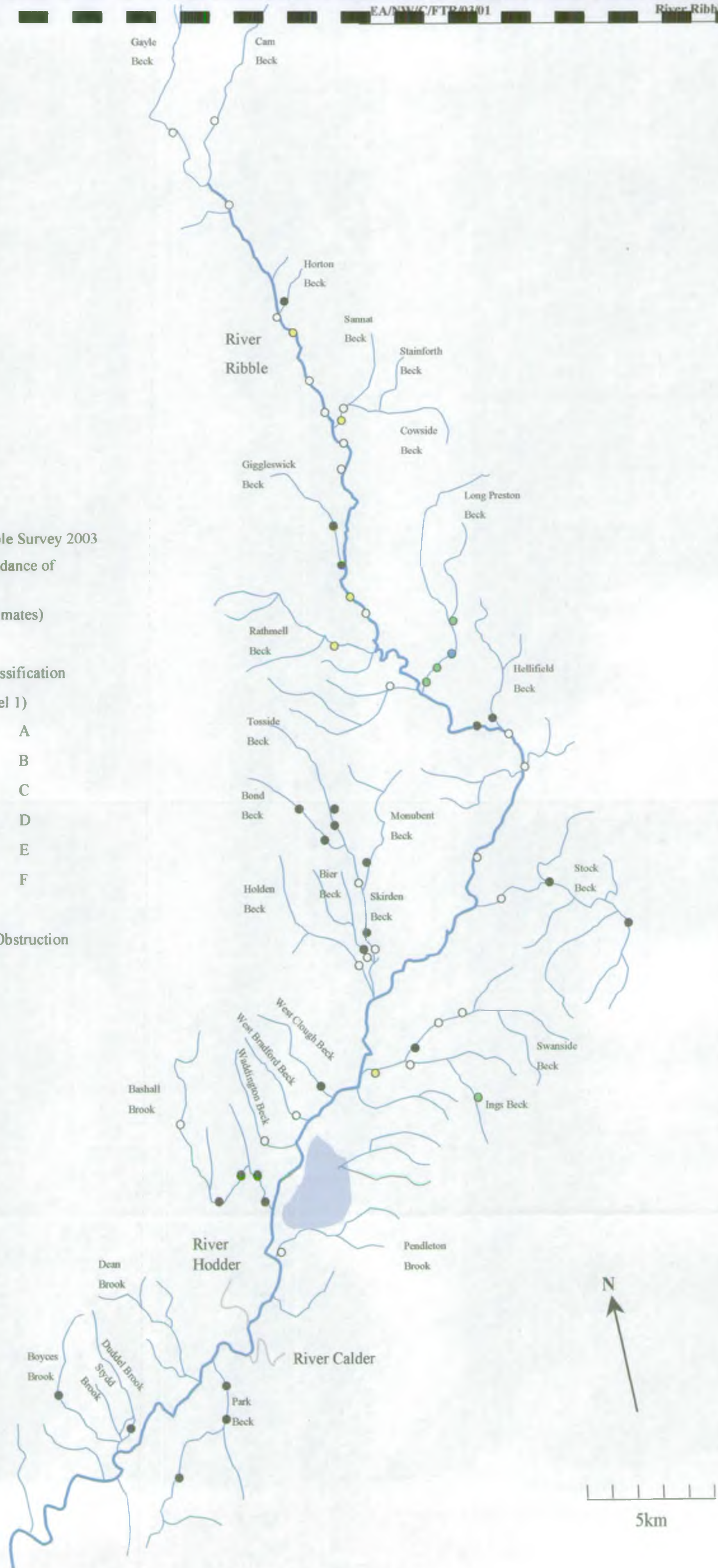


Figure 12 - River Ribble Survey 2003
Distribution and Abundance of Trout Fry (0+)
(minimum density estimates)

National Fisheries Classification
Absolute Grades (Level 1)

- A
- B
- C
- D
- E
- F

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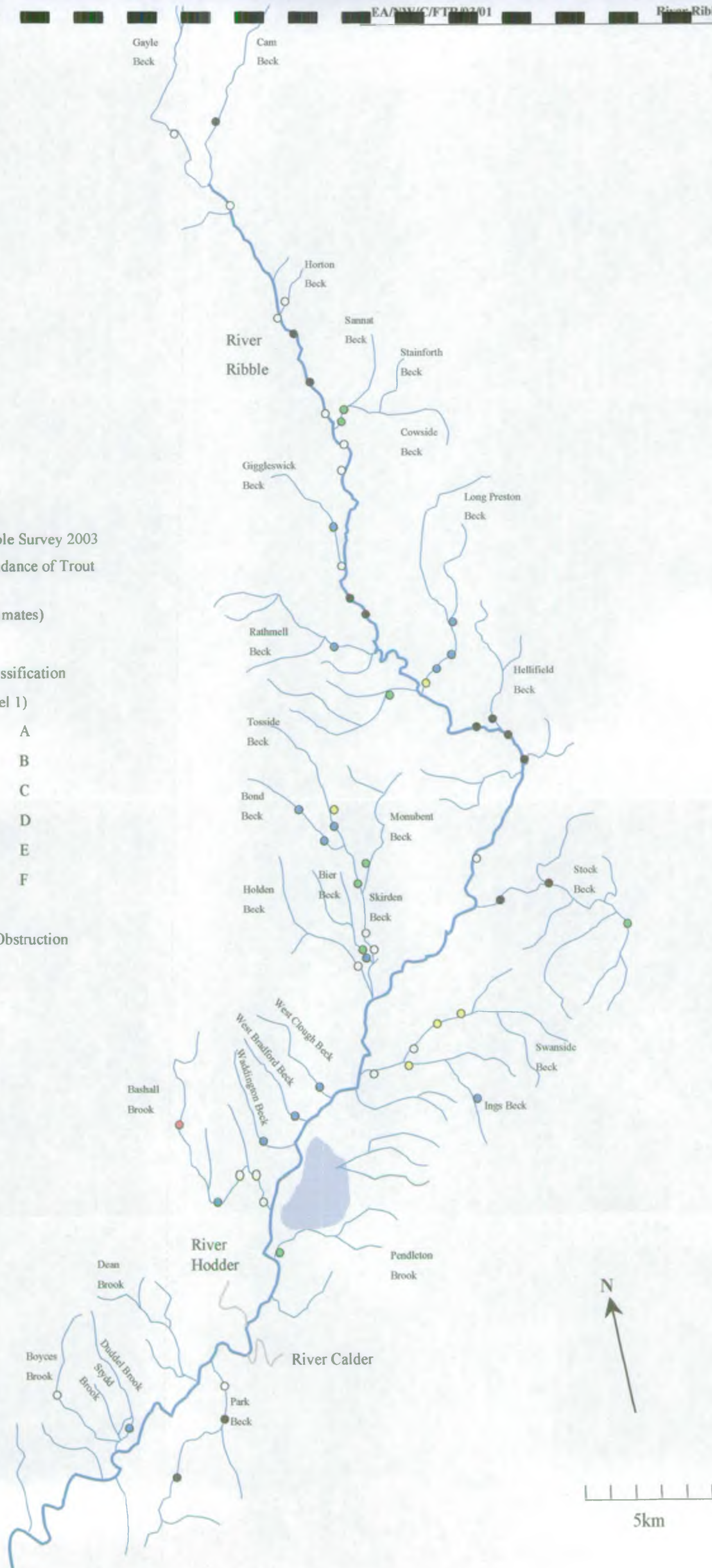
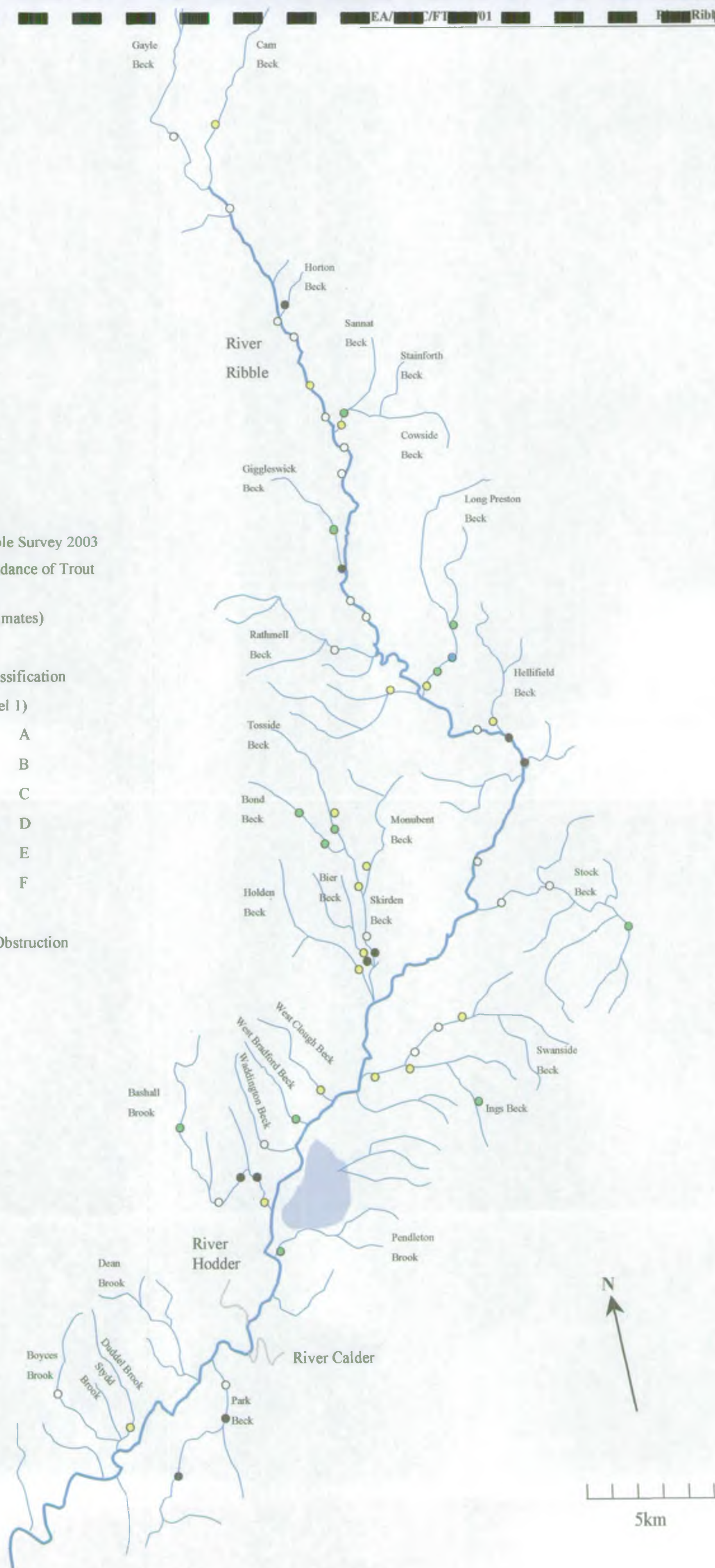


Figure 13 - River Ribble Survey 2003
Distribution and Abundance of Trout
Parr (>0+)
(minimum density estimates)

National Fisheries Classification
Absolute Grades (Level 1)

- A
- B
- C
- D
- E
- F

| Obstruction



sustain the majority of salmon production, particularly following relatively dry seasons when access to smaller spawning tributaries may be restricted. As a result from the Monitoring Review in 2002, more main river sites were added to the survey to improve the representation of salmon fry production in main river in the 2003 survey.

The distribution of salmon parr was widely spread throughout the Ribble catchment. Salmon parr densities were relatively higher in 2003 compared to 1998. The most productive areas were in the upper half of the catchment. Long Preston Beck, Ings Beck, Rathmell and Stainforth Becks were the most productive areas for salmon parr. Salmon parr were also found in Bashall Brook, Waddington, West Bradford and West Clough Becks, Swanside Beck, the Skirden Beck system, Gayle Beck and Cam Beck. There are no records of salmon parr stocking in the Ribble in 2002/3, so these results therefore reflect natural production. As with salmon fry production, the introduction of more main river sites has enabled a better representation of main river salmon parr production in the 2003 survey.

Trout fry were found throughout the catchment at relatively high densities. The most productive areas for trout fry included upper Bashall Brook, Waddington, West Bradford and West Clough Becks, the Skirden Beck system, Ings Beck, Long Preston Beck, Rathmell Beck and Stainforth Beck. Fry were found at relatively low densities in most other areas of the catchment. While the majority of salmon spawning is likely to occur in main river and large tributaries, trout spawning tends to be concentrated in smaller tributaries. The production of trout fry in the 2003 survey is therefore likely to be a representative reflection of production within the catchment.

Trout parr production in the 2003 survey was relatively high and similarly widely distributed like trout fry densities. Productivity was on average spread evenly throughout the catchment with similar densities of trout parr being found in all spawning becks. As with trout fry production, the coverage of sites in the 2003 survey is likely to provide a relatively accurate representation of trout parr production in the Ribble system.

Areas of Low Fish Production

A number of areas yielded particularly low densities of both trout and salmon. These include Boyces Brook, Park Brook, lower Stock Beck, lower Bashall Beck, Horton Beck, and Gayle Beck. Some of these streams may be too narrow for salmon to enter and spawn in, however they should still hold trout, assuming water quality and habitat are suitable. Investigations to address why these areas produce such low numbers of juvenile salmonids should be a priority.

4. DISCUSSION

4.1 Species Composition

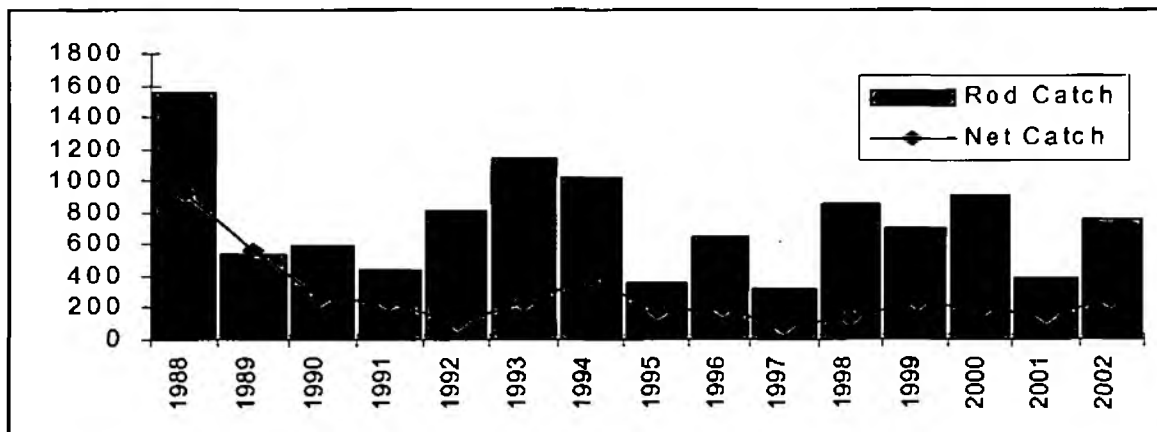
Limitations of the electric fishing technique restrict this survey to shallow riffle habitats that are typical of juvenile salmonid nursery areas. This type of survey will therefore focus on juvenile salmonid production and will not accurately reflect the status of deepwater fish populations such as major coarse species and adult salmonids. This is reflected in the range of species caught in the survey, compared with the range of species that are known to be present in the Ribble. Two deep water hydroacoustic surveys were undertaken at Sales Wheel (between NGR SD 665 359 and SD 674 361) and Church Deepes (between SD 559 282 and SD 566 287). These are not included in this report due to the complexity of the results.

4.2 Adult Abundance

Habitat and stocking issues aside, the distribution and abundance of juvenile salmon and trout are significantly affected by the abundance of spawning adults, particularly in the two previous years, and the ability of those adults to reach the spawning areas. For example in low flow years, the ability of the adult stock to penetrate into spawning streams is likely to be reduced, therefore resulting in a more restricted distribution of juveniles in the following years.

The corrected rod and net catches for 2001 were relatively low, (3rd lowest on record), which can mainly be put down to the access restrictions caused by the Foot and Mouth Disease outbreak (Figure 9), whereas 2002 rod and net catches were relatively high. While these two methods only sample the salmon run for part of the year they do (under normal conditions i.e. not 2001) provide a valuable index of salmon abundance. Counts of adult salmon at Waddow weir are only available from 1994, but also confirm the relatively high abundance of salmon in 2001 and 2002. These increases in catches could partly account for the higher densities of salmon juveniles found in the 2003 survey when compared to the 1998 survey.

Figure 9 - Corrected rod and net catches of salmon, River Ribble, 1988 – 2002.



4.3 Water Quality

The Environment Agency uses two principal schemes for the reporting and management of river water quality; the General Quality Assessment (GQA) scheme and the Water Quality Objectives (WQO) scheme. The GQA scheme is used to make periodic assessments of the quality of river water in terms of general chemistry and general biology, in order to monitor geographical and temporal trends. GQA chemistry and biology are defined by six grades ranging from A (Very good) to F (bad). In terms of GQA chemistry from 2000 to 2002, the

majority of the Ribble is described as good or fairly good (GQA classes B and C respectively), with only Stock Beck being described as fairly good or fair (classes C and D respectively). None of the catchment is described as classes E or F (poor and bad respectively).

The WQO scheme establishes clear quality targets to provide a commonly agreed planning framework for regulatory bodies and dischargers alike. This scheme is based upon the recognised uses to which a stretch of river may be put. Standards defining the five-tiered River Ecosystem (RE) use classes, which address the chemical quality requirements of different types of aquatic ecosystems, were introduced by "The Surface Waters (River Ecosystem) Classification Regulations 1994".

Table 2 – General descriptions of the five River Ecosystem classes.

River Ecosystem Class	Description
RE 1	Water of very good quality suitable for all fish species
RE 2	Water of good quality suitable for all fish species
RE 3	Water of fair quality suitable for high class coarse fish populations
RE 4	Water of fair quality suitable for coarse fish populations
RE 5	Water of poor quality which is likely to limit coarse fish populations
Waters that do not achieve RE 5 are of bad quality in which fish are unlikely to survive.	

River Ecosystem objectives are set for all of the specified reaches of the river system, on both a short to medium term basis and a long term basis. Short to medium term objectives are set where investment or campaigns are likely to result in a rapid improvement in water quality, and long term objectives are set where short term investment is not planned but an improvement in water quality is sought. The long term River Ecosystem objectives for the Ribble system are mostly set at RE1 or RE2 which are levels that are capable of sustaining salmonids. For 2001 and 2002, the reach between Rathmell Beck and Settle STW had a 'significant failure' status in reaching RE1, the main problem being Biological Oxygen Demand (BOD).

4.4 Sub-Catchment Descriptions

Lower Ribble Tributaries (downstream of Calder Foot) (Boyces Brook, Duddel Brook, Park Beck)

Recent Results Salmon fry and parr were absent from all 5 sites surveyed in these 3 tributaries (NFCS grade F) – these streams are likely to be too small for adult salmon to penetrate to spawn. Trout fry were present in low densities at these sites (NFCS grades E and F), with the exception of the Duddel Brook site, which held a high density of fry (NFCS grade B). Trout parr production was relatively low in these tributaries (NFCS grades D to F).

Long Term Results Duddel and Boyces Brooks were the only sites that were surveyed in both 1998 and 2003. Duddel Brook has seen a vast improvement in trout fry densities between the 2 surveys whereas the trout parr population in Boyces Brook has seen a decline.

Water Quality Long term RE objectives for these streams are set to RE2 and exceeded this standard in 2003 with RE1. No RE objectives have been set for Park Brook.

Lower Ribble Tributaries (upstream of Calder Foot) (Pendleton Brook, Bashall Beck, Waddington Beck, West Bradford Beck, West Clough Beck)

Recent Results Both salmon fry and parr were present in low densities (NFCS grades E and F) from all 9 sites surveyed on these 5 tributaries in 2003. However, relatively high densities of trout fry were recorded in these streams (NFCS grades A to C) with the exception of the 3 most downstream sites on Bashall Brook from which trout fry were in low densities (NFCS Grade E). Trout parr were found at relatively low densities (NFCS Grades C to F) throughout all of the 9 sites surveyed.

Long Term Results Only 3 sites were surveyed on Bashall Brook in 1998 compared to 5 in 2003. Of the 3 sites that were surveyed in both years salmon fry and parr densities had improved in 2003 with slightly higher densities. Trout fry densities were similar to those in 1998, whereas there has been a slight decline in trout parr densities. Waddington, West Bradford and West Clough Becks were all surveyed in both 1998 and 2003. Only the trout parr densities were lower in 2003 than in 1998, the rest of the results were similar in both years. Pendleton Brook was not surveyed in the previous survey 1998.

Water Quality Bashall Beck complied with its long term RE2 objective in 2003. Objectives have not been set for the other 4 streams.

Swanside Beck

Recent Results The Swanside Beck system has historically been considered to be an important spawning and nursery area for salmon within the Ribble catchment. The majority of salmon fry and parr were found at relatively low densities (NFCS grades C to F) in Swanside Beck in the 2003 survey. No salmon fry and a relatively low density of salmon parr were found at the single survey site on Ings Beck. Similarly low densities were obtained for both Swanside and Ings Becks in the previous survey in 1998 (NFCS Grades E and F). Production of both trout fry and parr was relatively low (NFCS grades D to E) in Swanside Beck. However relatively high grades of trout fry and parr were found in Ings Becks in the 2003 survey.

Long Term Results The salmon densities have improved since the last survey in 1998, but the densities of trout have declined slightly.

Water Quality Both Swanside and Ings Becks marginally failed to meet their RE1 long term water quality objective in 2003, because of pollution caused by agricultural activities.

Skirden Beck

Recent Results As with Swanside Beck, the Skirden Beck system has historically been considered to be one of the more important salmon spawning and nursery areas in the Ribble catchment. Both salmon fry and parr were present at low densities (NFCS Grades E and F) at the majority of sites on the Skirden Beck system in the 2003 survey. Salmon fry and parr were found at low densities on lower Holden Beck (NFCS grade E). Bier Beck however, had relatively high densities of salmon fry at the 2 sites surveyed in the 2003 survey. Trout fry and parr were found throughout the Skirden system, with Bond, Tosside and Bier Becks being particularly productive (NFCS grades B & C).

Long Term Results The previous survey of the Skirden system in 1998 produced similar results, however in the 2003 survey there was an increase in the salmon fry densities in Bier Beck.

Water Quality The Skirden Beck system significantly failed to meet its long term RE1 objective in 2003 through the Biological Oxygen Demand (BOD) determinand, due to pollution generated by agricultural activity.

Stock Beck

Recent Results Stock Beck has also historically been considered to be one of the more important salmon spawning and nursery streams in the catchment. In the 2003 survey, only the lower site on Stock Beck contained a low density of salmon parr, the other sites were devoid of fry and parr. Trout fry were absent from the downstream survey sites, with a relatively low density (NFCS Grade C) present at the uppermost site. Trout parr were present at low densities at all 3 sites (NFCS Grades C to E).

Long Term Results Only 2 sites were surveyed on Stock Beck in 1998. Salmon parr densities and trout densities have improved slightly since the 1998 survey.

Water Quality This improvement in fish densities may have resulted from the improvement in water quality since the 1998 survey. The upper reaches of Stock Beck upstream of Barnoldswick achieved their RE2 water quality objective in 2003. Downstream of Barnoldswick, the water quality objectives for the middle reaches of the beck are set to RE4. This standard was surpassed in 2003 with RE3 being achieved. The lower reaches of Stock Beck marginally failed to comply with their RE2 objectives in 2003. The water quality in Stock Beck downstream of Barnoldswick is still only of fair quality and therefore will only be able to hold small numbers of salmonids in 2003. Barnoldswick STW should have been improved recently under the last AMP scheme, so water quality should improve very soon.

Mid Ribble Tributaries (Hellifield Beck, Long Preston Beck, Rathmell Beck and Wigglesworth Beck)

Recent Results Salmon fry were found at low densities (NFCS grade E) in Hellifield Beck and at relatively low densities at all 4 survey sites on Long Preston Beck (NFCS Grades C to F). Salmon fry and parr were present in low densities in Rathmell Beck in the 2003 survey (NFCS Grades E and D respectively). Wigglesworth Beck also contained low densities of salmon fry and parr in the 2003 survey (NFCS Grades D and E respectively). Salmon parr were absent from Hellifield Beck and from the second upstream site on Long Preston Beck. The two upstream sites on Long Preston Beck held relatively high densities of

salmon parr (NFCS grades B & C). Trout fry and parr densities were relatively high (NFCS grades B to E) in these streams although fry were absent from Hellifield Beck.

Long Term Results Salmon fry and trout fry densities were generally higher in the 2003 survey of Long Preston Beck and Rathmell Beck. Hellifield Beck trout densities have declined slightly since the last survey in 1998. Wigglesworth Beck was not surveyed in the 1998 survey. Salmon and trout fry densities in Rathmell Beck had improved in the 2003 compared to the 1998 survey, with trout parr densities being of similar quality to the 1998 survey.

Water Quality Long Preston Beck achieved its long term water quality objective of RE1 in 2003 while Rathmell Beck complied with its RE2 objective. Wigglesworth Beck significantly failed to meet its RE1 objective through the BOD determinand, which has possibly been through pollution caused by agricultural activity.

Upper Ribble Tributaries (Giggleswick Beck, Stainforth Beck, Horton Beck, Cam Beck, Gayle Beck)

Recent Results Salmon fry were present in low densities (NFCS Grades E and F) at all of the survey sites on the upper Ribble tributaries in 2003. Salmon parr had a similar distribution to salmon fry with low densities (NFCS Grades D to F) being present at all of the survey sites. Trout fry were present at only low densities (NFCS grades C to F) in these survey sites in 2003, with the exception of the uppermost site on Giggleswick Beck (NFCS Grade B). Trout parr tended to be more widely distributed than fry through these sites, with Giggleswick and Stainforth Becks recording relatively low parr densities (NFCS grade C).

Long Term Results The densities of salmon fry in Giggleswick Beck and Gayle Beck had improved since the last survey in 1998. The densities of salmon parr in Stainforth, Gayle and Cam Becks had also improved slightly since the last survey. The densities of trout recorded in the previous survey were similar to the densities recorded in 2003.

Water Quality Long term water quality objectives for the upper Ribble tributaries were set to RE1 and all were compliant in 2003, with the exception of Cam Beck which marginally failed to meet its objective of RE1.

Main River Ribble

Recent Results Since the 1998 survey an extra 10 sites were included making a total of 13 main river sites surveyed in the 2003 survey. These were located upstream of the Stock Beck confluence. The majority of sites contained very low densities of salmon fry with the exception of Hollins Barn (NGR SD 807 613) and Halton Bridge (NGR SD 851 552) where relatively low densities were found (NFCS Grades D and C respectively). Salmon parr were also found at low densities (NFCS Grades D to F) at all of the sites. Trout fry were absent from most of the main Ribble sites but were found at low densities at 6 of the sites (NFCS Grade E). Trout parr were found at all but 2 of the main river sites in low densities (NFCS Grades D to E).

Long Term Results The densities of salmon fry has increased slightly since the last survey in 1998. From the sites that were surveyed in both years the densities of salmon parr and trout juveniles found in 2003 were similar to those found in 1998.

Water Quality Long term water quality standards for the upper main river marginally failed to reach its objective of RE1 between High Bridge (NGR SD 795 820) and Settle STW (NGR SD 807 619). The river also significantly failed to meet its RE1 objective between Settle STW and Rathmell Beck (NGR SD 813 517) through the BOD determinand. From here downstream, the river alternated between complying and marginally failing with the RE1/2 objectives.

Change to number of sites surveyed for future monitoring

During 2003 the salmonid monitoring programme on the Ribble was rationalised as it was not inline with the national guidance and too many sites were surveyed in 2003. There will therefore be a reduction in site numbers for the next survey in 2007. The number of annual sites has also changed as a result and only 6 sites will be surveyed from 2004 onwards. Some of the annual sites were removed due to poor access or very inefficient results, the rest were removed as they were over and above the national guideline requirements.

5. CONCLUSIONS

The inefficiency of the electric fishing technique in deep water has resulted in the under-representation of major coarse fish species in this survey.

Juvenile salmon densities were generally low throughout the Ribble catchment, although densities had improved since the last survey of the catchment in 1998. Salmon fry were found at relatively low densities (NFCS grades C and D) in Swanside Beck, Bier Beck, Long Preston Beck, Wigglesworth Beck and also at Halton Bridge and Hollins Barn survey sites on the main river.

Salmon parr were also found at low densities throughout the catchment with the exception of Rathmell Beck, lower Stainforth Beck and Anley House (NGR SD 808 626) and Cragg Hill Farm (NGR SD 807 707) on the main river (NFCS grade B to D). Parr were also present in Long Preston Beck in relatively high densities (NFCS grades B and C).

These results suggest that both the 2002 and 2003 year classes are relatively strong, therefore potentially affecting returns of grilse in 2005 and 2006 and returns of two sea-winter salmon in 2006 and 2007.

Whilst the 2003 survey provided a larger coverage of main river spawning areas, it still appears that the River Ribble is below its carrying capacity for juvenile salmon. The cause of this cannot be identified from this juvenile survey but possible factors include; a lack of spawning adults, a high mortality rate among the various juvenile life stages, stream habitat related problems, or a combination of all of these factors. It appears that in both survey years (1998 and 2003), the distribution of parr densities have been very similar, despite apparently different spawning populations. The 1996 and 1997 spawning populations were very low because these were exceptionally dry years – these produced low fry and particularly parr densities in 1998. The 2001 and 2002 spawning populations appeared to be much higher, giving rise to a better (but still low) range of fry densities, but still a low range of parr densities. The fact that similarly low parr populations have been produced from a relatively large and a relatively small spawning population indicates that there are stronger mechanisms at work, than simply adult abundance. Investigations and improvements should be carried out on Swanside, Skirden and Stock Becks as they have been historically good for salmon juveniles and they are currently under performing.

Juvenile trout were found throughout the catchment in 2003 at relatively high densities (NFCS grades A to C). The most productive areas for trout fry included, Bashall Brook, Waddington Beck, West Bradford Beck, West Clough Beck, the Skirden system, Long Preston Beck, Rathmell Beck and Ings Beck (NFCS grades A and B).

The most productive areas for trout parr included upper Bashall Beck, Pendleton Brook, West Bradford Beck, Ings Becks, Bond Beck, Tosside Beck, upper Stock Beck, Long Preston Beck, upper Giggleswick Beck and Stainforth Beck (NFCS grades B and C).

6. APPENDICES**Appendix I Annual sites surveyed**

Ribble	Dale Mire Barn	SD 795 758	Q
Ribble	Cragg Hill Farm	SD 807 707	Q
Ribble	Helwith Fly Fishery	SD 812 692	Q
Ribble	Hollins Barn	SD 807 613	Q
Ribble	Halton Bridge	SD 851 552	Q
Ribble	Paythorne	SD 831 512	Q
Giggleswick Beck	Giggleswick Village	SD 811 634	Q
Rathmell Beck	Rathmell Road Bridge	SD 806 594	Q
Long Preston Beck	Holmbridge	SD 842 582	Q
Skirden Beck	Bolton-by-Bowland	SD 784 494	Q
Swanside Beck	A59 Road Bridge	SD 774 455	Q

Q = Quantitative/Temporal Sites

Appendix II The relationship between semi-quantitative and quantitative electric fishing results

The Calibration of a Semi-Quantitative Approach to Fish Stock Assessment in the North West Region of the NRA. Farooqi, M.A. & Aprahamian, M.W. (1993). NRA/NW/FTR/93/4.

The aim of stock assessment is to acquire the information by which informed decisions can be made regarding the conservation, management and utilisation of the fish resource. However, the acquisition of accurate quantitative data (involving 2 or more fishings per site) for such purposes is both a time consuming and labour intensive procedure, particularly when contemplating a large number of sites. An alternative approach might be to employ a semi-quantitative sampling strategy, with a single fishing being carried out over a specified length of river without the use of stop nets. This would enable a larger number of sites to be sampled within the time constraints. For such information to be of value it is necessary to equate the results from this less accurate, semi-quantitative method with those that would have been obtained from a fully quantitative survey at the same site.

A total of 45 sites in North West Region was electric fished in 1992, firstly by semi-quantitative and then by quantitative techniques. At each site a section of river approximately 60m long was delimited by stop nets. For the purpose of the first fishing a 5m buffer zone was designated at the ends of the fishing zone leaving a central 50m section to be fished. This section was taken to represent what would normally be sampled in a single fishing without stop nets and the results from this were expressed as numbers of fish per 100m². Second and subsequent fishings were carried out over the full 60m, stop net to stop net, including the initial buffer zones. Data from these fishings, including the first, were used to calculate the population estimate by the Carle and Strub (1978) method. The relationship between the total population estimate (quantitative) and the density of fish recorded in the first catch (semi-quantitative) was examined by regression analysis. A highly significant relationship existed between the semi-quantitative and quantitative results for each age group of salmonids.

$$0+ \text{ salmon} \quad SQ = 0.463 (\pm 0.043) \times Q \quad (R^2 = 96.1\%, p < 0.0001)$$

$$>0+ \text{ salmon} \quad SQ = 0.424 (\pm 0.057) \times Q \quad (R^2 = 85.1\%, p < 0.0001)$$

$$0+ \text{ trout} \quad SQ = 0.515 (\pm 0.036) \times Q \quad (R^2 = 93.6\%, p < 0.0001)$$

$$>0+ \text{ trout} \quad SQ = 0.539 (\pm 0.055) \times Q \quad (R^2 = 83.4\%, p < 0.0001)$$

SQ semi-quantitative density estimate
Q quantitative density estimate

Appendix III Site Summaries, 2003 Survey Data



**ENVIRONMENT
AGENCY**



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S55S
Watercourse:-	Bashall Brook	Date Fished:-	08-Aug-03
Location:-	Backridge	NGR:-	SD 716 428

Habitat Features

Length (m):-	51.0	Mean width (m):-	6.05
Area (m ²):-	308.55	Mean depth (m):-	0.1
Gradient (m/km)		Max. depth (m):-	0.4
Water level:- Average	6		
(sec/m) Max	3		
Site description:-	0	% Pool	50
		% Glide	50
		% Riffle	
Adjacent land use:-	Improved Grassland		
Method:-	Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	F	F	E	F

Comments

Species Caught: Trout, Stoneloach, Bullhead, Minnow
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		0
>0+ Salmon		0
0+ Trout		1.94
>0+ Trout		0
Total	0	1.94

No photo

SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S53S
Watercourse:-	Bashall Brook	Date Fished:-	28-Aug-03
Location:-	Clough Bottom	NGR:-	SD 702 437

Habitat Features

Length (m):-	42.6	Mean width (m):-	3.28
Area (m ²):-	139.8	Mean depth (m):-	0.05
Gradient (m/km)	35	Max. depth (m):-	0.09
Water level:- Average	9		
(sec/m) Max	3		
Site description:-	0 % Pool 40 % Glide 60 % Riffle		
Adjacent land use:-	Rough Pasture		
Method:-	Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	F	F	A	A
2003 Classification	F	E	A	C

Comments

Species Caught: Salmon, Trout
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to sea trout

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0	0
>0+ Salmon	0	0.71
0+ Trout	50.6	77.69
>0+ Trout	22.2	7.86
Total	72.8	86.26



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S54S
Watercourse:-	Bashall Brook	Date Fished:-	23-Jul-03
Location:-	middle section	NGR:-	SD 705 421

Habitat Features

Length (m):-	50.0	Mean width (m):-	3.24
Area (m ²):-	162	Mean depth (m):-	0.1
Gradient (m/km)	38	Max. depth (m):-	0.31
Water level:- Average	6		
(sec/m) Max	3		
Site description:-	0 % Pool 60 % Glide 40 % Riffle		
Adjacent land use:-	Improved Grassland		
Method:-	Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	F	F	F	F
2003 Classification	E	F	B	E

Comments

Species Caught: Salmon, Trout
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to sea trout

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0	1.23
>0+ Salmon	0	0
0+ Trout	0	18.51
>0+ Trout	0	0.61
Total	0	20.35



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S57S
Watercourse:-	Bashall Brook	Date Fished:-	08-Aug-03
Location:-	Stephen Bridge	NGR:-	SD 728 419

Habitat Features

Length (m):-	41.9	Mean width (m):-	4.875
Area (m ²):-	204.2	Mean depth (m):-	0.09
Gradient (m/km)	16	Max. depth (m):-	0.6

Water level:- Average

(sec/m) Max

Site description:- 0 % Pool 80 % Glide 20 % Riffle

Adjacent land use:- Deciduous Woodland

Method:- Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	F	F	F	F
2003 Classification	F	F	E	D

Comments

Species Caught: Salmon, Trout, Eel, Stoneloach, Bullhead, Minnow

Stocking: No known stocking carried out prior to survey

Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0	0
>0+ Salmon	0	0
0+ Trout	0	2.44
>0+ Trout	4	1.95
Total	4	4.39



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S56S
Watercourse:-	Bashall Brook	Date Fished:-	08-Aug-03
Location:-	Wetters Bridge	NGR:-	SD 721 431

Habitat Features

Length (m):-	56.0	Mean width (m):-	4.125
Area (m ²):-	231	Mean depth (m):-	0.15
Gradient (m/km)		Max. depth (m):-	0.4
Water level:- Average	10		
(sec/m) Max	3		
Site description:-	10 % Pool 85 % Glide 5 % Riffle		
Adjacent land use:-	Improved Grassland		
Method:-	Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	F	F	E	F

Comments

Species Caught: Trout, Eel, Stoneloach, Bullhead, Minnow
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		0
>0+ Salmon		0
0+ Trout		2.6
>0+ Trout		0
Total	0	2.6



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S41S
Watercourse:-	Bier Beck	Date Fished:-	13-Aug-03
Location:-	Bolton Mill Farm	NGR:-	SD 782 492

Habitat Features

Length (m):-	33.3	Mean width (m):-	2.67
Area (m ²):-	88.81	Mean depth (m):-	0.15
Gradient (m/km)		Max. depth (m):-	0.37
Water level:- Average	6		
(sec/m) Max	3		
Site description:-	0 % Pool 50 % Glide 50 % Riffle		
Adjacent land use:-	Rough Pasture		
Method:-	Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	D	E	B	F

Comments

Species Caught: Salmon, Trout, Eel, Stoneloach, Bullhead
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		15.76
>0+ Salmon		2.25
0+ Trout		25.89
>0+ Trout		0
Total	0	43.9



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S40S
Watercourse:-	Bier Beck	Date Fished:-	12-Aug-03
Location:-	Holden	NGR:-	SD 779 494

Habitat Features

Length (m):-	67.5	Mean width (m):-	3
Area (m ²):-	202.41	Mean depth (m):-	0.15
Gradient (m/km)	5.6	Max. depth (m):-	0.25
Water level:- Average	10		
(sec/m) Max	3		
Site description:-	0 % Pool 40 % Glide 60 % Riffle		
Adjacent land use:-	Rough Pasture		
Method:-	Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	F	F	F	E
2003 Classification	C	F	C	D

Comments

Species Caught: Salmon, Trout, Stoneloach, Bullhead, Minnow
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0	26.17
>0+ Salmon	0	0
0+ Trout	0	12.35
>0+ Trout	1.1	3.95
Total	1.1	42.47

No photo

SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S36S
Watercourse:-	Bond Beck	Date Fished:-	13-Aug-03
Location:-	Beck Foot Farm	NGR:-	SD 775 537

Habitat Features

Length (m):-	38.9	Mean width (m):-	2.43
Area (m ²):-	94.58	Mean depth (m):-	0.1
Gradient (m/km)	10	Max. depth (m):-	0.27
Water level:- Average	10		
(sec/m) Max	3		
Site description:-	33 % Pool	33 % Glide	34 % Riffle
Adjacent land use:-	Rough Pasture		
Method:-	Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	F	F	B	D
2003 Classification	F	F	B	C

Comments

Species Caught: Trout, Eel, Stoneloach, Bullhead
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to sea trout

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0	0
>0+ Salmon	0	0
0+ Trout	23.9	34.89
>0+ Trout	3.13	7.4
Total	27.03	42.29



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S35S
Watercourse:-	Bond Beck	Date Fished:-	13-Aug-03
Location:-	Ghylls	NGR:-	SD 768 545

Habitat Features

Length (m):-	33.7	Mean width (m):-	3.58
Area (m ²):-	120.8	Mean depth (m):-	0.05
Gradient (m/km)	20	Max. depth (m):-	0.35
Water level:- Average	10		
(sec/m) Max	3		
Site description:-	0 % Pool 70 % Glide 30 % Riffle		
Adjacent land use:-	Deciduous Woodland		
Method:-	Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	F	F	B	B
2003 Classification	F	F	B	C

Comments

Species Caught: Trout, Bullhead
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to sea trout

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0	0
>0+ Salmon	0	0
0+ Trout	27	27.32
>0+ Trout	18	9.11
Total	45	36.43



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S115S
Watercourse:-	Boyce Brook	Date Fished:-	08-Aug-03
Location:-	Ribchester	NGR:-	SD 650 354

Habitat Features

Length (m):-	37.6	Mean width (m):-	4
Area (m ²):-	150.5	Mean depth (m):-	0.17
Gradient (m/km)	8.3	Max. depth (m):-	0.33
Water level:- Average	4		
(sec/m) Max	3		
Site description:-	10 % Pool	30 % Glide	60 % Riffle
Adjacent land use:-	Urban		
Method:-	Upstream electric-fishing, 1 anode, 2 runs, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	F	F	F	C
2003 Classification	F	F	E	E

Comments

Species Caught: Trout, Eel
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to sea trout

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0	0
>0+ Salmon	0	0
0+ Trout	0	1.33
>0+ Trout	8	0.66
Total	8	1.99

No photo

SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S17S
Watercourse:-	Gayle Beck	Date Fished:-	21-Aug-03
Location:-	Nether Lodge Farm	NGR:-	SD 785 779

Habitat Features

Length (m):-	56.2	Mean width (m):-	6.3
Area (m ²):-	354.06	Mean depth (m):-	0.08
Gradient (m/km)	13	Max. depth (m):-	0.42

Water level:- Average
(sec/m) Max

Site description:- 10 % Pool 70 % Glide 20 % Riffle

Adjacent land use:- Improved Grassland

Method:- Upstream electric-fishing, 2 anodes, 1 run, pulsed DC, wading, no stopnets used

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	F	F	F	D
2003 Classification	F	E	F	D

Comments

Species Caught: Salmon, Trout
Stocking: No known stocking carried out prior to survey
Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0	0
>0+ Salmon	0	0.28
0+ Trout	0	0
>0+ Trout	4.88	1.98
Total	4.88	2.26

No photo

SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S114S
Watercourse:-	Duddle Brook	Date Fished:-	08-Aug-03
Location:-	Stydd Brook	NGR:-	SD 653 357

Habitat Features

Length (m):-	46.2	Mean width (m):-	2.375
Area (m ²):-	109.7	Mean depth (m):-	0.5
Gradient (m/km)	20	Max. depth (m):-	1
Water level:- Average	8		
(sec/m) Max	3		
Site description:-	5	% Pool	80
		% Glide	15
		% Riffle	
Adjacent land use:-	Rough Pasture		
Method:-	Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	F	F	F	F
2003 Classification	F	F	B	D

Comments

Species Caught: Trout, Eel, Stoneloach, Bullhead, Minnow
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to sea trout

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0	0
>0+ Salmon	0	0
0+ Trout	0	29.16
>0+ Trout	0	2.73
Total	0	31.89

No photo

SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S22S
Watercourse:-	Giggleswick Beck	Date Fished:-	29-Aug-03
Location:-	Brigholme Barn nr Anley Hall	NGR:-	SD 808 626

Habitat Features

Length (m):-	35.0	Mean width (m):-	2.2
Area (m ²):-	77	Mean depth (m):-	0.19
Gradient (m/km)		Max. depth (m):-	0.3
Water level:- Average			
(sec/m) Max			
Site description:-	0 % Pool 60 % Glide 40 % Riffle		

Adjacent land use:- Pasture

Method:- Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	E	F	E	F

Comments

Species Caught: Salmon, Trout, Bullhead, Minnow
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		6.49
>0+ Salmon		0
0+ Trout		2.59
>0+ Trout		0
Total	0	9.08



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S21T
Watercourse:-	Giggleswick Beck	Date Fished:-	26-Aug-03
Location:-	Giggleswick village	NGR:-	SD 811 635

Habitat Features

Length (m):-	54.0	Mean width (m):-	1.275
Area (m ²):-	68.85	Mean depth (m):-	0.1
Gradient (m/km)	6	Max. depth (m):-	0.18
Water level:- Average	7		
(sec/m) Max	5		
Site description:-	0	% Pool	70
		% Glide	30
		% Riffle	
Adjacent land use:-	Urban		
Method:-	Upstream electric-fishing, 1 anode, 3 runs, pulsed DC, wading, no stopnets used		

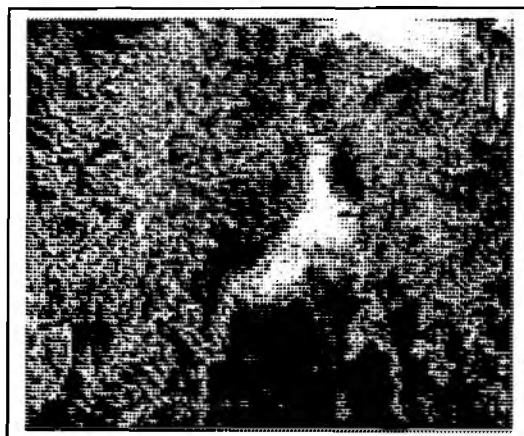
Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	F	F	C	B
2003 Classification	E	F	B	C

Comments

Species Caught: Salmon, Trout, Stoneloach, Bullhead
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0	1.45
>0+ Salmon	0	0
0+ Trout	9.5	21.78
>0+ Trout	15.4	10.16
Total	24.9	33.39



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S29S
Watercourse:-	Hellifield Beck	Date Fished:-	27-Aug-03
Location:-	Halton Bridge	NGR:-	SD 851 554

Habitat Features

Length (m):-	28.8	Mean width (m):-	2.275
Area (m ²):-	65.52	Mean depth (m):-	0.1
Gradient (m/km)	11.1	Max. depth (m):-	0.3
Water level:- Average	6		
(sec/m) Max	6		
Site description:-	0 % Pool 0 % Glide 100 % Riffle		
Adjacent land use:-	Improved Grassland		
Method:-	Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	E	F	D	B
2003 Classification	E	F	F	D

Comments

Species Caught: Salmon, Trout, Eel
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	1.25	4.57
>0+ Salmon	0	0
0+ Trout	3.77	0
>0+ Trout	13.8	3.05
Total	18.82	7.62



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S43S
Watercourse:-	Holden Beck	Date Fished:-	22-Aug-03
Location:-	Holden	NGR:-	SD 777 490

Habitat Features

Length (m):-	54.6	Mean width (m):-	6.87
Area (m ²):-	375.3	Mean depth (m):-	0.1
Gradient (m/km)		Max. depth (m):-	0.82
Water level:- Average	10		
(sec/m) Max	3		
Site description:-	30 % Pool	15 % Glide	55 % Riffle
Adjacent land use:-	Rough Pasture		
Method:-	Upstream electric-fishing, 2 anodes, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	E	E	D	D
2003 Classification	E	E	E	D

Comments

Species Caught: Salmon, Trout, Eel, Stoneloach, Bullhead, Minnow
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0.9	1.6
>0+ Salmon	0.45	0.8
0+ Trout	5.44	1.33
>0+ Trout	3.62	1.86
Total	10.41	5.59

No photo

SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S18S
Watercourse:-	Horton Beck	Date Fished:-	28-Aug-03
Location:-	Horton-in-Ribblesdale	NGR:-	SD 807 728

Habitat Features

Length (m):-	30.1	Mean width (m):-	2.82
Area (m ²):-	84.75	Mean depth (m):-	0.1
Gradient (m/km)	5	Max. depth (m):-	0.33
Water level:- Average	0		
(sec/m) Max	0		
Site description:-	0	% Pool	100
		% Glide	0
		% Riffle	
Adjacent land use:-	Urban		
Method:-	Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	F	E	F	D
2003 Classification	F	F	E	F

Comments

Species Caught: Trout
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to sea trout

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0	0
>0+ Salmon	1.39	0
0+ Trout	0	2.35
>0+ Trout	3.25	0
Total	4.64	2.35



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S49S
Watercourse:-	Ings Beck	Date Fished:-	23-Sep-03
Location:-	Downham Bridge	NGR:-	SD 788 452

Habitat Features

Length (m):-	68.0	Mean width (m):-	5.3
Area (m ²):-	360.4	Mean depth (m):-	0.2
Gradient (m/km)	22.2	Max. depth (m):-	0.34
Water level:- Average	4		
(sec/m) Max	1		
Site description:-	10 % Pool 10 % Glide 80 % Riffle		
Adjacent land use:-	Deciduous Woodland		
Method:-	Upstream electric-fishing, 2 anodes, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	F	F	B	C
2003 Classification	C	E	D	D

Comments

Species Caught: Salmon, Trout, Bullhead
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0	36.35
>0+ Salmon	0	2.22
0+ Trout	26.6	3.88
>0+ Trout	10.6	3.61
Total	37.2	46.06

No photo

SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S48S
Watercourse:-	Ings beck	Date Fished:-	23-Sep-03
Location:-	Nr Twiston	NGR:-	SD 805 445

Habitat Features

Length (m):-	37.3	Mean width (m):-	3.6
Area (m ²):-	134.28	Mean depth (m):-	0.15
Gradient (m/km)		Max. depth (m):-	0.59
Water level:- Average			
(sec/m) Max			
Site description:-	10 % Pool 0 % Glide 90 % Riffle		

Adjacent land use:- Rough Pasture

Method:- Upstream electric-fishing, 2 anodes, 1 run, pulsed DC, wading, no stopnets used

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	F	F	B	A
2003 Classification	F	C	B	C

Comments

Species Caught: Salmon, Trout, Bullhead
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0	0
>0+ Salmon	0	6.7
0+ Trout	25.3	24.5
>0+ Trout	35.9	8.19
Total	61.2	39.39



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S28S
Watercourse:-	Long Preston Beck	Date Fished:-	27-Aug-03
Location:-	Hospital Bridge	NGR:-	SD 832 575

Habitat Features

Length (m):-	37.4	Mean width (m):-	4.1
Area (m ²):-	153.34	Mean depth (m):-	
Gradient (m/km)	16	Max. depth (m):-	
Water level:- Average	5		
(sec/m) Max	2		
Site description:-	% Pool	% Glide	% Riffle
Adjacent land use:-	Rough Pasture		
Method:-	Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	E	F	F	E
2003 Classification	C	C	D	D

Comments

Species Caught: Salmon, Trout, Eel, Stoneloach, Bullhead
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0.4	36.52
>0+ Salmon	0	9.13
0+ Trout	0	3.91
>0+ Trout	2.22	4.56
Total	2.62	54.12



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S26T
Watercourse:-	Long Preston Beck	Date Fished:-	26-Aug-03
Location:-	Near Holmbridge	NGR:-	SD 842 582

Habitat Features

Length (m):-	49.1	Mean width (m):-	2
Area (m ²):-	98.2	Mean depth (m):-	0.2
Gradient (m/km)		Max. depth (m):-	0.39
Water level:- Average	2.5		
(sec/m) Max	2		
Site description:-	0 % Pool 80 % Glide 20 % Riffle		
Adjacent land use:-	Pasture		
Method:-	Upstream electric-fishing, 1 anode, 2 runs, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	E	D	D	C
2003 Classification	D	B	B	B

Comments

Species Caught: Salmon, Trout, Eel, Stoneloach, Bullhead
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	2.85	21.38
>0+ Salmon	5.14	16.29
0+ Trout	3.41	20.36
>0+ Trout	8	19.34
Total	19.4	77.37



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S25S
Watercourse:-	Long Preston Beck	Date Fished:-	26-Aug-03
Location:-	Nr Bookliber	NGR:-	SD 841 586

Habitat Features

Length (m):-	49.1	Mean width (m):-	2.97
Area (m ²):-	145.7	Mean depth (m):-	0.15
Gradient (m/km)		Max. depth (m):-	0.44
Water level:- Average	8		
(sec/m) Max	3		
Site description:-	5	% Pool	35
		% Glide	60
		% Riffle	
Adjacent land use:-	Rough Pasture		
Method:-	Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used		

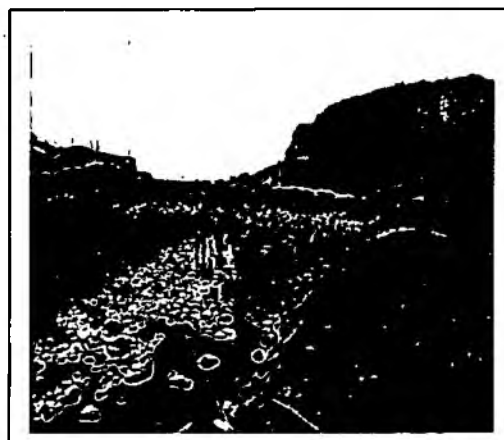
Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	F	C	B	C

Comments

Species Caught: Salmon, Trout, Eel, Stoneloach, Bullhead
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		0
>0+ Salmon		6.18
0+ Trout		23.33
>0+ Trout		8.24
Total	0	37.75



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S27S
Watercourse:-	Long Preston Beck	Date Fished:-	26-Aug-03
Location:-	Scaleber	NGR:-	SD 841 591

Habitat Features

Length (m):-	39.6	Mean width (m):-	2.75
Area (m ²):-	108.9	Mean depth (m):-	0.15
Gradient (m/km)	17	Max. depth (m):-	0.3
Water level:- Average	6		
(sec/m) Max	3		
Site description:-	0 % Pool 80 % Glide 20 % Riffle		
Adjacent land use:-	Rough Pasture		
Method:-	Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	C	C	B	C

Comments

Species Caught: Salmon, Trout, Bullhead
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		24.79
>0+ Salmon		7.34
0+ Trout		30.3
>0+ Trout		9.18
Total	0	71.61



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S39S
Watercourse:-	Monubent Beck	Date Fished:-	12-Aug-03
Location:-	Forest Becks	NGR:-	SD 788 514

Habitat Features

Length (m):-	81.5	Mean width (m):-	4.15
Area (m ²):-	338.2	Mean depth (m):-	0.12
Gradient (m/km)		Max. depth (m):-	0.5
Water level:- Average	5		
(sec/m) Max	2		
Site description:-	5	% Pool	25
		% Glide	70
		% Riffle	
Adjacent land use:-	Deciduous Woodland		
Method:-	Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	F	F	E	C
2003 Classification	E	F	C	D

Comments

Species Caught: Salmon, Trout, Stoneloach, Bullhead
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0	0.29
>0+ Salmon	0	0
0+ Trout	2.08	10.34
>0+ Trout	8.3	1.77
Total	10.38	12.4

No photo

SITE REPORT

Site Details

River System:- Ribble Site Code:- S113S
 Watercourse:- Park Brook Date Fished:- 01-Oct-03
 Location:- Brockhall nr B.R.F.C training centre NGR:- SD 697 368

Habitat Features

Length (m):- 49.0 Mean width (m):- 4.6
 Area (m²):- 225.4 Mean depth (m):- 0.15
 Gradient (m/km) Max. depth (m):- 0.32

Water level:- Average

(sec/m) Max

Site description:- 10 % Pool 30 % Glide 60 % Riffle

Adjacent land use:- Deciduous Woodland

Method:- Upstream electric-fishing, 2 anodes, 1 run, pulsed DC, wading, no stopnets used

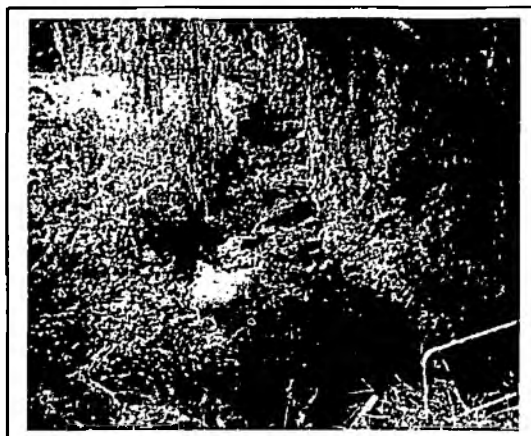
Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	F	F	E	E

Comments

Species Caught: Trout, Eel, Stoneloach, Bullhead, Minnow
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to sea trout

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		0
>0+ Salmon		0
0+ Trout		0.44
>0+ Trout		0.44
Total	0	0.88



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S111S
Watercourse:-	Park Brook	Date Fished:-	01-Oct-03
Location:-	Copster Green d/s Bridge	NGR:-	SD 674 342

Habitat Features

Length (m):-	59.1	Mean width (m):-	3.925
Area (m ²):-	231.86	Mean depth (m):-	
Gradient (m/km)		Max. depth (m):-	
Water level:- Average			
(sec/m)	Max		
Site description:-	% Pool	% Glide	% Riffle
Adjacent land use:-	Rough Pasture		
Method:-	Upstream electric-fishing, 2 anodes, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	F	F	F	F

Comments

Species Caught: Eel, Stoneloach, Bullhead, Minnow
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to sea trout

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		0
>0+ Salmon		0
0+ Trout		0
>0+ Trout		0
Total	0	0



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S112S
Watercourse:-	Park Brook	Date Fished:-	01-Oct-03
Location:-	Dinckley Bridge	NGR:-	SD 694 354

Habitat Features

Length (m):-	52.8	Mean width (m):-	4.4
Area (m ²):-	232.32	Mean depth (m):-	0.12
Gradient (m/km)		Max. depth (m):-	0.5
Water level:- Average	12		
(sec/m) Max	3		
Site description:-	40 % Pool 35 % Glide 25 % Riffle		
Adjacent land use:-	Improved Grassland		
Method:-	Upstream electric-fishing, 2 anodes, 1 run, pulsed DC, wading, u/s stopnets used		

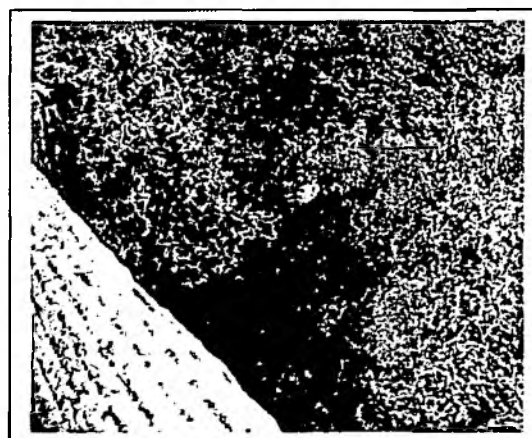
Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	F	F	F	F

Comments

Species Caught: No fish Caught
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to sea trout

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		0
>0+ Salmon		0
0+ Trout		0
>0+ Trout		0
Total	0	0



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S58S
Watercourse:-	Pendleton Brook	Date Fished:-	28-Aug-03
Location:-	Sewage Works	NGR:-	SD 726 403

Habitat Features

Length (m):-	37.9	Mean width (m):-	4.35
Area (m ²):-	164.8	Mean depth (m):-	0.2
Gradient (m/km)		Max. depth (m):-	0.46
Water level:- Average	4		
(sec/m) Max	2		
Site description:-	0 % Pool 70 % Glide 30 % Riffle		
Adjacent land use:-	Public access, grazing		
Method:-	Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	E	E	C	C

Comments

Species Caught: Salmon, Trout, Eel, Stoneloach, Bullhead, Minnow
Stocking: No known stocking carried out prior to survey
Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		1.82
>0+ Salmon		1.21
0+ Trout		10.31
>0+ Trout		7.28
Total	0	20.62

No photo

SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S23S
Watercourse:-	Rathmell Beck	Date Fished:-	26-Aug-03
Location:-	Road Bridge	NGR:-	SD 806 594

Habitat Features

Length (m):-	38.5	Mean width (m):-	4.9
Area (m ²):-	188.65	Mean depth (m):-	0.07
Gradient (m/km)	1	Max. depth (m):-	0.35
Water level:- Average	10		
(sec/m) Max	3		
Site description:-	% Pool	% Glide	% Riffle
Adjacent land use:-	Pasture		
Method:-	Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	F	F	D	F
2003 Classification	E	D	B	E

Comments

Species Caught: Salmon, Trout, Eel, Stoneloach, Bullhead, Minnow
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0	7.95
>0+ Salmon	0	4.77
0+ Trout	7.14	21.17
>0+ Trout	0	0.53
Total	7.14	34.42



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S9S
Watercourse:-	Ribble	Date Fished:-	20-Aug-03
Location:-	Above Stainforth Force	NGR:-	SD 818 673

Habitat Features

Length (m):-	51.3	Mean width (m):-	6.77
Area (m ²):-	347.3	Mean depth (m):-	0.25
Gradient (m/km)		Max. depth (m):-	0.45
Water level:- Average	5		
(sec/m) Max	1.5		
Site description:-	0 % Pool 80 % Glide 20 % Riffle		
Adjacent land use:-	Deciduous Woodland		
Method:-	Upstream electric-fishing, 2 anodes, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	F	E	E	E

Comments

Species Caught: Salmon, Trout
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		0
>0+ Salmon		0.86
0+ Trout		0.24
>0+ Trout		0.24
Total	0	1.34

No photo

SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	
Watercourse:-	Ribble	Date Fished:-	27-Aug-03
Location:-	Arnford D/S Weir	NGR:-	SD 839 555

Habitat Features

Length (m):-	22.8	Mean width (m):-	20.08
Area (m ²):-	457.6	Mean depth (m):-	0.25
Gradient (m/km)		Max. depth (m):-	0.4
Water level:- Average			
(sec/m) Max			
Site description:-	5	% Pool	95
		% Glide	0
		% Riffle	

Adjacent land use:- Rough Pasture

Method:- Upstream electric-fishing, 2 anodes, 1 run, pulsed DC, wading, u/s stopnet used

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	E	F	F	E

Comments

Species Caught: Salmon, Trout, Chub, Eel, Stoneloach, Bullhead, Minnow

Stocking: No known stocking carried out prior to survey

Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		0.21
>0+ Salmon		0
0+ Trout		0
>0+ Trout		0.21
Total	0	0.42



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S11S
Watercourse:-	Ribble	Date Fished:-	20-Aug-03
Location:-	Below Locks Weir	NGR:-	SD 817 654

Habitat Features

Length (m):-	30.0	Mean width (m):-	22.67
Area (m ²):-	680.25	Mean depth (m):-	0.1
Gradient (m/km)		Max. depth (m):-	0.19
Water level:- Average	5		
(sec/m) Max	3		
Site description:-	0 % Pool 5 % Glide 90 % Riffle		
Adjacent land use:-	Rough Pasture		
Method:-	Upstream electric-fishing, 1 anode, 10 min timed, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	E	E	E	E

Comments

Species Caught: Salmon, Trout
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		1.91
>0+ Salmon		0.29
0+ Trout		0.29
>0+ Trout		0.44
Total	0	2.93



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S7T
Watercourse:-	Ribble	Date Fished:-	21-Aug-03
Location:-	Cragg Hill Farm	NGR:-	SD 807 707

Habitat Features

Length (m):-	65.0	Mean width (m):-	13.37
Area (m ²):-	869.3	Mean depth (m):-	0.17
Gradient (m/km)	4.7	Max. depth (m):-	0.38
Water level:- Average	9		
(sec/m) Max	3		
Site description:-	0 % Pool 90 % Glide 10 % Riffle		
Adjacent land use:-	Rough Pasture		
Method:-	Upstream electric-fishing, 2 anodes, 3 runs, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	E	D	F	E

Comments

Species Caught: Salmon, Trout, Stoneloach, Bullhead, Minnow
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		0.92
>0+ Salmon		3.33
0+ Trout		0
>0+ Trout		1.49
Total	0	5.74



SITE REPORT

Site Details

River System:- Ribble Site Code:- S6S
 Watercourse:- Ribble Date Fished:- 25-Sep-03
 Location:- D/S of Horton-in-Ribblesdale NGR:- SD 806 716

Habitat Features

Length (m):- 54.6 Mean width (m):- 16.05
 Area (m²):- 876.33 Mean depth (m):- 0.25
 Gradient (m/km) 5 Max. depth (m):- 0.5
 Water level:- Average 5
 (sec/m) Max 2
 Site description:- 0 % Pool 65 % Glide 35 % Riffle
 Adjacent land use:- Rough Pasture
 Method:- Upstream electric-fishing, 2 anodes, 1 run, pulsed DC, wading, no stopnets used

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	E	E	E	E

Comments

Species Caught: Salmon, Trout
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		0.46
>0+ Salmon		0.91
0+ Trout		1.02
>0+ Trout		0.57
Total	0	2.96



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S5T
Watercourse:-	Ribble	Date Fished:-	21-Aug-03
Location:-	Dale Mire Farm	NGR:-	SD 795 758

Habitat Features

Length (m):-	64.5	Mean width (m):-	9.32
Area (m ²):-	601.5	Mean depth (m):-	0.11
Gradient (m/km)		Max. depth (m):-	0.55
Water level:- Average	10		
(sec/m) Max	3		
Site description:-	% Pool 70	% Glide 30	% Riffle
Adjacent land use:-	Rough Pasture		
Method:-	Upstream electric-fishing, 2 anodes, 2 runs, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	F	F	F	E
2003 Classification	E	E	E	E

Comments

Species Caught: Salmon, Trout, Stoneloach, Bullhead, Minnow
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0	0.49
>0+ Salmon	0	1.16
0+ Trout	0	1.66
>0+ Trout	0.4	0.16
Total	0.4	3.47



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	
Watercourse:-	Ribble	Date Fished:-	19-Aug-03
Location:-	Halton Bridge	NGR:-	SD 852 551

Habitat Features

Length (m):-	49.8	Mean width (m):-	10.42
Area (m ²):-	519.1	Mean depth (m):-	0.16
Gradient (m/km)		Max. depth (m):-	0.29
Water level:- Average	5		
(sec/m) Max	2		
Site description:-	5	% Pool	15
		% Glide	80
		% Riffle	
Adjacent land use:-	Rough Pasture		
Method:-	Upstream electric-fishing, 2 anodes, 3 runs, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	C	E	F	F

Comments

Species Caught: Salmon, Chub, Eel
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		32.74
>0+ Salmon		0.57
0+ Trout		0
>0+ Trout		0
Total	0	33.31



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	
Watercourse:-	Ribble	Date Fished:-	20-Aug-03
Location:-	Helwith Fly Fishery	NGR:-	SD 812 692

Habitat Features

Length (m):-	50.0	Mean width (m):-	12.65
Area (m ²):-	632.5	Mean depth (m):-	0.45
Gradient (m/km)		Max. depth (m):-	0.8
Water level:- Average	10		
(sec/m) Max	4		
Site description:-	10 % Pool 80 % Glide 10 % Riffle		
Adjacent land use:-	Rough Pasture		
Method:-	Upstream electric-fishing, 2 anodes, 2 runs, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	E	E	F	D

Comments

Species Caught: Salmon, Trout
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		0.31
>0+ Salmon		1.9
0+ Trout		0
>0+ Trout		3.16
Total	0	5.37



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S13S
Watercourse:-	Ribble	Date Fished:-	29-Aug-03
Location:-	Near Anley House	NGR:-	SD 809 623

Habitat Features

Length (m):-	41.0	Mean width (m):-	16
Area (m ²):-	656	Mean depth (m):-	0.11
Gradient (m/km)		Max. depth (m):-	0.34
Water level:- Average	3		
(sec/m) Max	3		
Site description:-	0 % Pool 30 % Glide 70 % Riffle		
Adjacent land use:-	Improved Grassland		
Method:-	Upstream electric-fishing, 2 anodes, 1 run, pulsed DC, wading, no stopnets used		

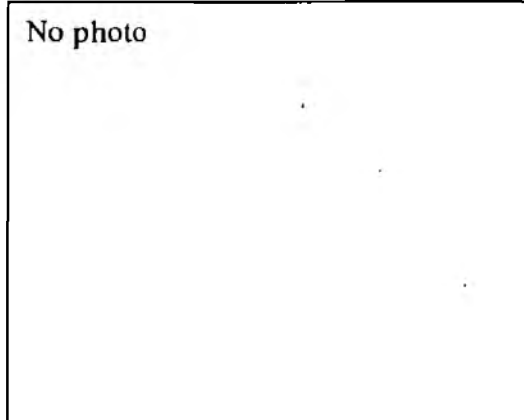
Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	F	D	F	E

Comments

Species Caught: Salmon, Trout, Stoneloach, Bullhead, Minnow
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		0
>0+ Salmon		3.2
0+ Trout		0
>0+ Trout		0.45
Total	0	3.65



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S14T
Watercourse:-	Ribble	Date Fished:-	29-Aug-03
Location:-	Near New Hall Farm	NGR:-	SD 807 613

Habitat Features

Length (m):-	34.5	Mean width (m):-	16.85
Area (m ²):-	581.3	Mean depth (m):-	0.1
Gradient (m/km)		Max. depth (m):-	0.19
Water level:- Average	5		
(sec/m) Max	3		

Site description:- % Pool % Glide % Riffle

Adjacent land use:- Rough Pasture

Method:- Upstream electric-fishing, 2 anodes, 3 runs, pulsed DC, wading, no stopnets used

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	D	E	F	E

Comments

Species Caught: Salmon, Trout, Eel
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		10.84
>0+ Salmon		0.17
0+ Trout		0
>0+ Trout		0.51
Total	0	11.52

No photo

SITE REPORT

Site Details

River System:- Ribble Site Code:- S10S
 Watercourse:- Ribble Date Fished:- 25-Sep-03
 Location:- Near Taitlands Farm, above NGR:- SD 819 665
 Langcliffe

Habitat Features

Length (m):- 57.0 Mean width (m):- 16.075
 Area (m²):- 916.2 Mean depth (m):- 0.3
 Gradient (m/km) Max. depth (m):- 0.62
 Water level:- Average 9
 (sec/m) Max 2
 Site description:- 5 % Pool 50 % Glide 45 % Riffle
 Adjacent land use:- Rough Pasture
 Method:- Upstream electric-fishing, 2 anodes, 1 run, pulsed DC, wading, no stopnets used

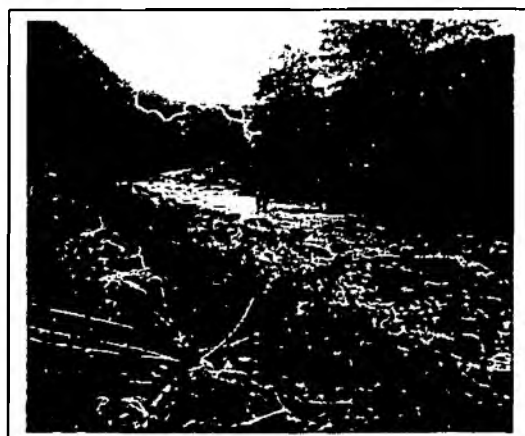
Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	F	E	E	E
2003 Classification	E	E	E	E

Comments

Species Caught: Salmon, Trout
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0	0.54
>0+ Salmon	0.16	0.87
0+ Trout	0.33	0.54
>0+ Trout	0.33	0.1
Total	0.82	2.05



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	
Watercourse:-	Ribble	Date Fished:-	25-Sep-03
Location:-	Nether Lodge	NGR:-	SD 784 779

Habitat Features

Length (m):-	50.0	Mean width (m):-	14.57
Area (m ²):-	728.5	Mean depth (m):-	0.09
Gradient (m/km)	4	Max. depth (m):-	0.13
Water level:- Average	5		
(sec/m) Max	2		
Site description:-	0 % Pool 40 % Glide 60 % Riffle		
Adjacent land use:-	Moorland		
Method:-	Upstream electric-fishing, 2 anodes, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	E	E	F	E
2003 Classification	E	E	E	E

Comments

Species Caught: Salmon, Trout, Stoneloach, Bullhead, Minnow
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	1.71	3.29
>0+ Salmon	0.57	0.54
0+ Trout	0	0.13
>0+ Trout	0.28	0.13
Total	2.56	4.09

No photo

SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S16T
Watercourse:-	Ribble	Date Fished:-	19-Aug-03
Location:-	Paythorne Bridge	NGR:-	SD 831 512

Habitat Features

Length (m):-	62.9	Mean width (m):-	18.37
Area (m ²):-	1155	Mean depth (m):-	0.2
Gradient (m/km)		Max. depth (m):-	0.4

Water level:- Average
(sec/m) Max

Site description:- 5 % Pool 5 % Glide 90 % Riffle

Adjacent land use:- Rough Pasture

Method:- Upstream electric-fishing, 2 anodes, 3 runs, pulsed DC, wading, no stopnets used

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	E	E	E	E

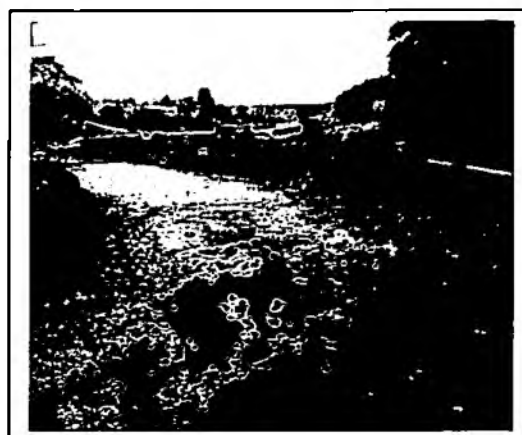
Comments

Species Caught: Salmon, Trout, Chub, Eel, Bullhead, Minnow

Stocking: No known stocking carried out prior to survey

Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		7.81
>0+ Salmon		1.29
0+ Trout		0.34
>0+ Trout		0.08
Total	0	9.52



SITE REPORT

Site Details

River System:- Ribble
Watercourse:- Ribble
Location:- Swinden

Site Code:-
Date Fished:- 27-Aug-03
NGR:- SD 856 544

Habitat Features

Length (m):- 32.5

Mean width (m):- 20.1

Area (m²):- 654

Mean depth (m):- 0.39

Gradient (m/km)

Max. depth (m):- 0.68

Water level:- Average 4
(sec/m) Max 3

Site description:- 10 % Pool 90 % Glide 0 % Riffle

Adjacent land use:- Improved Grassland

Method:- Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, u/s stopnets used

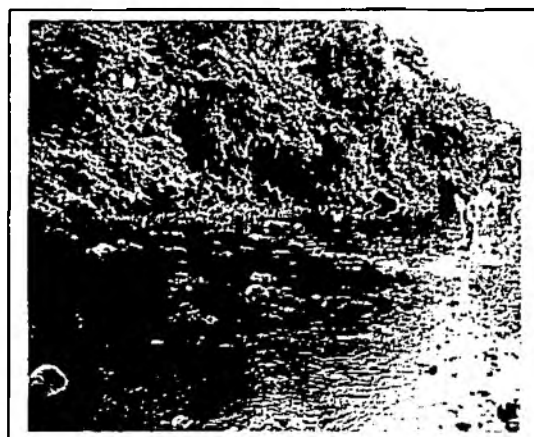
Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	E	E	F	F

Comments

Species Caught: Salmon, Eel, Bullhead, Minnow
Stocking: No known stocking carried out prior to survey
Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		0.91
>0+ Salmon		0.45
0+ Trout		0
>0+ Trout		0
Total	0	1.36



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S42S
Watercourse:-	Skirden Beck	Date Fished:-	22-Aug-03
Location:-	Bolton-by Bowland	NGR:-	SD 784 494

Habitat Features

Length (m):-	63.4	Mean width (m):-	6.05
Area (m ²):-	383.57	Mean depth (m):-	0.12
Gradient (m/km)	16.7	Max. depth (m):-	0.35
Water level:- Average	10		
(sec/m) Max	3		
Site description:-	0 % Pool 50 % Glide 50 % Riffle		
Adjacent land use:-	Public access, grazing		
Method:-	Upstream electric-fishing, 2 anodes, 3 runs, pulsed DC, wading, stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	F	E	F	D
2003 Classification	E	E	E	F

Comments

Species Caught: Salmon, Trout
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0	2.6
>0+ Salmon	0.44	0.26
0+ Trout	0	2.6
>0+ Trout	2.22	0
Total	2.66	5.46

No photo

SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S37S
Watercourse:-	Skirden Beck	Date Fished:-	01-Aug-03
Location:-	Forest Beck	NGR:-	SD 786 515

Habitat Features

Length (m):-	79.4	Mean width (m):-	5.48
Area (m ²):-	435	Mean depth (m):-	0.25
Gradient (m/km)	16.7	Max. depth (m):-	1.3
Water level:- Average	8		
(sec/m) Max	2		
Site description:-	30 % Pool 10 % Glide 60 % Riffle		
Adjacent land use:-	Improved Grassland		
Method:-	Upstream electric-fishing, 2 anodes, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	E	E	C	D

Comments

Species Caught: Salmon, Trout, Eel, Stoneloach, Bullhead, Minnow
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		6.44
>0+ Salmon		0.92
0+ Trout		9.42
>0+ Trout		2.52
Total	0	19.3

No photo

SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S38S
Watercourse:-	Skirden Beck	Date Fished:-	22-Aug-03
Location:-	Oak Trees Nurseries	NGR:-	SD 784 503

Habitat Features

Length (m):-	64.5	Mean width (m):-	6.3
Area (m ²):-	406.4	Mean depth (m):-	0.1
Gradient (m/km)		Max. depth (m):-	0.26
Water level:- Average	8		
(sec/m) Max	3		
Site description:-	0 % Pool	60 % Glide	40 % Riffle
Adjacent land use:-	Rough Pasture		
Method:-	Upstream electric-fishing, 2 anodes, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	E	F	E	E

Comments

Species Caught: Salmon, Trout, Eel, Stoneloach, Bullhead, Minnow
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		2.46
>0+ Salmon		0
0+ Trout		2.7
>0+ Trout		0.98
Total	0	6.14

No photo

SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S19S
Watercourse:-	Stainforth Beck	Date Fished:-	28-Aug-03
Location:-	Above stepping stones	NGR:-	SD 822 673

Habitat Features

Length (m):-	44.1	Mean width (m):-	3.825
Area (m ²):-	168.7	Mean depth (m):-	0.12
Gradient (m/km)	29	Max. depth (m):-	0.3
Water level:- Average	10		
(sec/m) Max	3		
Site description:-	0 % Pool 75 % Glide 25 % Riffle		
Adjacent land use:-	Urban		
Method:-	Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	F	E	D	D
2003 Classification	F	E	C	C

Comments

Species Caught: Salmon, Trout, Bullhead
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0	0
>0+ Salmon	1.77	2.37
0+ Trout	4.44	13.04
>0+ Trout	2.66	5.92
Total	8.87	21.33



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S20S
Watercourse:-	Stainforth Beck	Date Fished:-	28-Aug-03
Location:-	Stainforth car park	NGR:-	SD 821 672

Habitat Features

Length (m):-	37.0	Mean width (m):-	3.97
Area (m ²):-	147	Mean depth (m):-	0.13
Gradient (m/km)		Max. depth (m):-	0.21
Water level:- Average	6		
(sec/m) Max	3		
Site description:-	0	% Pool	75
		% Glide	25
		% Riffle	
Adjacent land use:-	Urban		
Method:-	Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used		

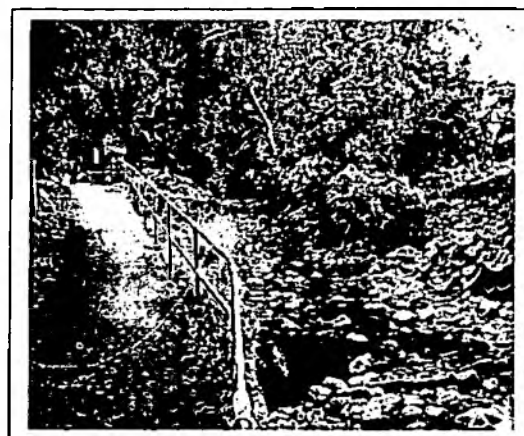
Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	E	D	C	D

Comments

Species Caught: Salmon, Trout
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		0.68
>0+ Salmon		4.76
0+ Trout		9.52
>0+ Trout		4.08
Total	0	19.04



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S30S
Watercourse:-	Stock Beck	Date Fished:-	28-Aug-03
Location:-	Barnoldswick	NGR:-	SD 879 479

Habitat Features

Length (m):-	36.8	Mean width (m):-	2.6
Area (m ²):-	95.68	Mean depth (m):-	0.14
Gradient (m/km)		Max. depth (m):-	0.24
Water level:- Average	5		
(sec/m) Max	3		
Site description:-	0	% Pool	50
		% Glide	50
		% Riffle	
Adjacent land use:-	Rough Pasture		
Method:-	Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	F	F	E	E
2003 Classification	F	F	C	C

Comments

Species Caught: Trout
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0	0
>0+ Salmon	0	0
0+ Trout	1.08	12.54
>0+ Trout	1.08	5.22
Total	2.16	17.76



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S32S
Watercourse:-	Stock Beck	Date Fished:-	27-Aug-03
Location:-	Crow Park	NGR:-	SD 838 497

Habitat Features

Length (m):-	59.2	Mean width (m):-	5.9
Area (m ²):-	349.28	Mean depth (m):-	0.28
Gradient (m/km)		Max. depth (m):-	0.37
Water level:- Average	5		
(sec/m) Max	3		
Site description:-	10 % Pool	70 % Glide	20 % Riffle
Adjacent land use:-	Improved Grassland		
Method:-	Upstream electric-fishing, 2 anodes, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	F	E	F	E

Comments

Species Caught: Salmon, Trout, Eel
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		0
>0+ Salmon		0.28
0+ Trout		0
>0+ Trout		0.28
Total	0	0.56



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S31S
Watercourse:-	Stock Beck	Date Fished:-	27-Aug-03
Location:-	Monk Bridge	NGR:-	SD 857 497

Habitat Features

Length (m):-	40.3	Mean width (m):-	7.5
Area (m ²):-	302.25	Mean depth (m):-	
Gradient (m/km)		Max. depth (m):-	0.66

Water level:- Average
(sec/m) Max

Site description:- % Pool % Glide % Riffle

Adjacent land use:- Improved Grassland

Method:- Upstream electric-fishing, 2 anodes, 1 run, pulsed DC, wading, no stopnets used

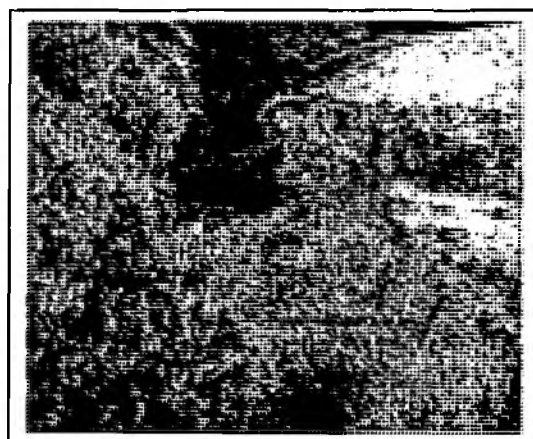
Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	F	F	F	F
2003 Classification	F	F	F	E

Comments

Species Caught: Trout, Eel, Stoneloach, Minnow
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0	0
>0+ Salmon	0	0
0+ Trout	0	0
>0+ Trout	0	0.33
Total	0	0.33



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S47T
Watercourse:-	Swanside Beck	Date Fished:-	12-Aug-03
Location:-	A59 Road Bridge	NGR:-	SD 774 455

Habitat Features

Length (m):-	60.0	Mean width (m):-	8.55
Area (m ²):-	513	Mean depth (m):-	0.24
Gradient (m/km)	10	Max. depth (m):-	0.43
Water level:- Average	11		
(sec/m) Max	2		
Site description:-	% Pool	% Glide	% Riffle

Adjacent land use:- Pasture

Method:- Upstream electric-fishing, 2 anodes, 3 runs, pulsed DC, wading, no stopnets used

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	E	F	E	C
2003 Classification	D	D	E	D

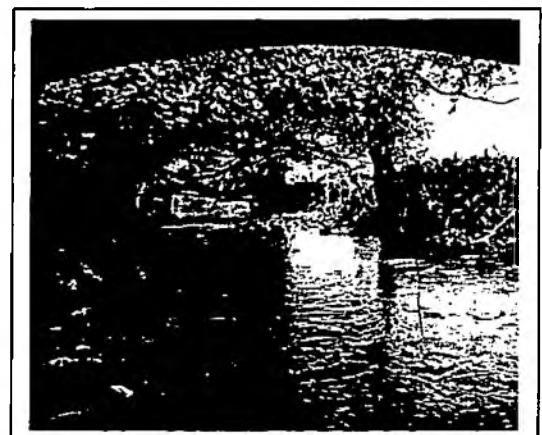
Comments

Species Caught: Salmon, Trout, Stoneloach, Bullhead, Minnow

Stocking: No known stocking carried out prior to survey

Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	1.5	18.52
>0+ Salmon	0	4.09
0+ Trout	0.5	1.75
>0+ Trout	7.5	2.34
Total	9.5	26.7



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S45S
Watercourse:-	Swanside Beck	Date Fished:-	23-Sep-03
Location:-	Cowgill Farm	NGR:-	SD 802 464

Habitat Features

Length (m):-	60.0	Mean width (m):-	6.2
Area (m ²):-	372	Mean depth (m):-	0.12
Gradient (m/km)	28.5	Max. depth (m):-	0.28
Water level:- Average	4		
(sec/m) Max	3		
Site description:-	0 % Pool + 60 % Glide 40 % Riffle		
Adjacent land use:-	Rough Pasture		
Method:-	Upstream electric-fishing, 2 anodes, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	F	F	B	B
2003 Classification	D	E	D	E

Comments

Species Caught: Salmon, Trout, Stoneloach, Bullhead, Minnow
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0	10.75
>0+ Salmon	0	2.15
0+ Trout	29.01	3.23
>0+ Trout	15.6	0.27
Total	44.61	16.4

No photo

SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S46S
Watercourse:-	Swanside Beck	Date Fished:-	23-Sep-03
Location:-	ptc Ings Beck	NGR:-	SD 793 459

Habitat Features

Length (m):-	53.0	Mean width (m):-	5.7
Area (m ²):-	302.1	Mean depth (m):-	0.15
Gradient (m/km)		Max. depth (m):-	1.03

Water level:- Average
(sec/m) Max

Site description:- 5 % Pool 50 % Glide 45 % Riffle

Adjacent land use:- Improved Grassland

Method:- Upstream electric-fishing, 2 anodes, 1 run, pulsed DC, wading, no stopnets used

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	E	E	C	D
2003 Classification	E	F	E	E

Comments

Species Caught: Salmon, Trout, Stoneloach, Bullhead

Stocking: No known stocking carried out prior to survey

Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	6.17	5.3
>0+ Salmon	1.15	0
0+ Trout	13.9	2.65
>0+ Trout	3.47	0.33
Total	24.69	8.28



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S44S
Watercourse:-	Swanside Beck	Date Fished:-	23-Sep-03
Location:-	Stopper Lane	NGR:-	SD 812 463

Habitat Features

Length (m):-	45.5	Mean width (m):-	5.025
Area (m ²):-	228.6	Mean depth (m):-	0.15
Gradient (m/km)	10	Max. depth (m):-	0.42
Water level:- Average	6		
(sec/m) Max	3		
Site description:-	0 % Pool 30 % Glide 70 % Riffle		
Adjacent land use:-	Improved Grassland		
Method:-	Upstream electric-fishing, 2 anodes, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	E	D	B	C
2003 Classification	E	E	D	D

Comments

Species Caught: Salmon, Trout
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	2.08	4.37
>0+ Salmon	1.25	2.19
0+ Trout	9.58	7.87
>0+ Trout	5.41	1.75
Total	18.32	16.18

No photo

SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S33S
Watercourse:-	Tosside Beck	Date Fished:-	13-Aug-03
Location:-	Grunsagill Bridge	NGR:-	SD 782 542

Habitat Features

Length (m):-	33.6	Mean width (m):-	4.7
Area (m ²):-	158	Mean depth (m):-	0.15
Gradient (m/km)		Max. depth (m):-	0.35
Water level:- Average	7		
(sec/m) Max	3		
Site description:-	0 % Pool 80 % Glide 20 % Riffle		
Adjacent land use:-	Deciduous Woodland		
Method:-	Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	F	F	C	C
2003 Classification	F	F	D	D

Comments

Species Caught: Trout, Stoneloach, Bullhead .
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0	0
>0+ Salmon	0	0
0+ Trout	10	4.43
>0+ Trout	5.23	1.9
Total	15.23	6.33



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S34S
Watercourse:-	Tosside Beck	Date Fished:-	13-Aug-03
Location:-	Tosside - Holiday Cottages	NGR:-	SD 781 541

Habitat Features

Length (m):-	30.4	Mean width (m):-	4
Area (m ²):-	121.6	Mean depth (m):-	0.1
Gradient (m/km)	20	Max. depth (m):-	0.45
Water level:- Average	10		
(sec/m) Max	4		
Site description:-	0 % Pool 40 % Glide 60 % Riffle		
Adjacent land use:-	Urban		
Method:-	Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used		

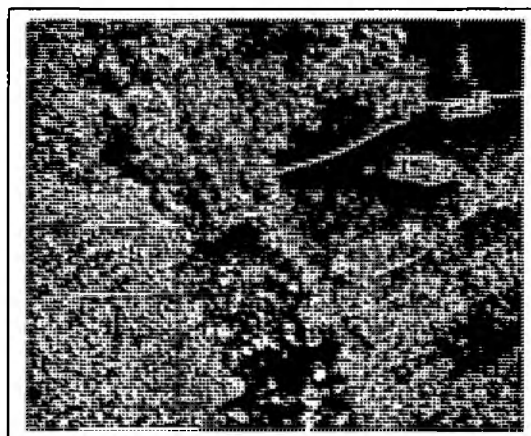
Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	E	F	B	C

Comments

Species Caught: Salmon, Trout, Stoneloach, Bullhead
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		0.82
>0+ Salmon		0
0+ Trout		17.27
>0+ Trout		6.58
Total	0	24.67



SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S52S
Watercourse:-	Waddington Beck	Date Fished:-	26-Aug-03
Location:-	d/s Waddington	NGR:-	SD 731 437

Habitat Features

Length (m):-	37.4	Mean width (m):-	2.5
Area (m ²):-	93.5	Mean depth (m):-	0.12
Gradient (m/km)	35	Max. depth (m):-	0.23
Water level:- Average	8		
(sec/m) Max	3		
Site description:-	0	% Pool	30
		% Glide	70
		% Riffle	
Adjacent land use:-	Urban		
Method:-	Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	F	F	B	C
2003 Classification	F	E	B	E

Comments

Species Caught: Salmon, Trout, Bullhead
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0	0
>0+ Salmon	0	1.06
0+ Trout	30.2	20.32
>0+ Trout	6.53	1.06
Total	36.73	22.44

No photo

SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S51S
Watercourse:-	West Bradford Beck	Date Fished:-	22-Aug-03
Location:-	West Bradford	NGR:-	SD 742 446

Habitat Features

Length (m):-	45.5	Mean width (m):-	3
Area (m ²):-	136.5	Mean depth (m):-	0.08
Gradient (m/km)	35	Max. depth (m):-	0.37
Water level:- Average	8		
(sec/m) Max	3		
Site description:-	10 % Pool 50 % Glide 40 % Riffle		
Adjacent land use:-	Urban		
Method:-	Upstream electric-fishing, 2 anodes, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	F	F	A	A
2003 Classification	E	E	B	C

Comments

Species Caught: Salmon, Trout, Stoneloach, Bullhead, Minnow
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0	5.12
>0+ Salmon	0	0.73
0+ Trout	53.3	36.63
>0+ Trout	25.18	8.05
Total	78.48	50.53

No photo

SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S50S
Watercourse:-	West Clough Brook	Date Fished:-	13-Aug-03
Location:-	West Clough	NGR:-	SD 755 449

Habitat Features

Length (m):-	34.0	Mean width (m):-	5.13
Area (m ²):-	174.42	Mean depth (m):-	0.1
Gradient (m/km)	35	Max. depth (m):-	0.6
Water level:- Average	8		
(sec/m) Max	2		
Site description:-	0 % Pool 40 % Glide 60 % Riffle		
Adjacent land use:-	Rough Pasture		
Method:-	Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification	F	F	C	C
2003 Classification	E	F	B	D

Comments

Species Caught: Salmon, Trout, Eel, Stoneloach, Bullhead
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon	0	3.44
>0+ Salmon	0	0
0+ Trout	14	26.4
>0+ Trout	13.59	2.87
Total	27.59	32.71

No photo

SITE REPORT

Site Details

River System:-	Ribble	Site Code:-	S24S
Watercourse:-	Wigglesworth Beck	Date Fished:-	29-Aug-03
Location:-	Wigglesworth Hall Farm	NGR:-	SD 813 576

Habitat Features

Length (m):-	29.6	Mean width (m):-	3.6
Area (m ²):-	106.5	Mean depth (m):-	0.07
Gradient (m/km)		Max. depth (m):-	0.24
Water level:- Average	5		
(sec/m) Max	3		
Site description:-	5	% Pool	90
		% Glide	5
		% Riffle	
Adjacent land use:-	Rough Pasture		
Method:-	Upstream electric-fishing, 1 anode, 1 run, pulsed DC, wading, no stopnets used		

Fishery Classification (level 1)

	0+ salmon	>0+ salmon	0+ trout	>0+ trout
1998 Classification				
2003 Classification	D	E	C	D

Comments

Species Caught: Salmon, Trout, Lamprey
 Stocking: No known stocking carried out prior to survey
 Accessibility: accessible to salmon

Species	Density (no. per 100m ²)	
	1998	2003
0+ Salmon		17.84
>0+ Salmon		1.87
0+ Trout		11.26
>0+ Trout		1.87
Total	0	32.84

