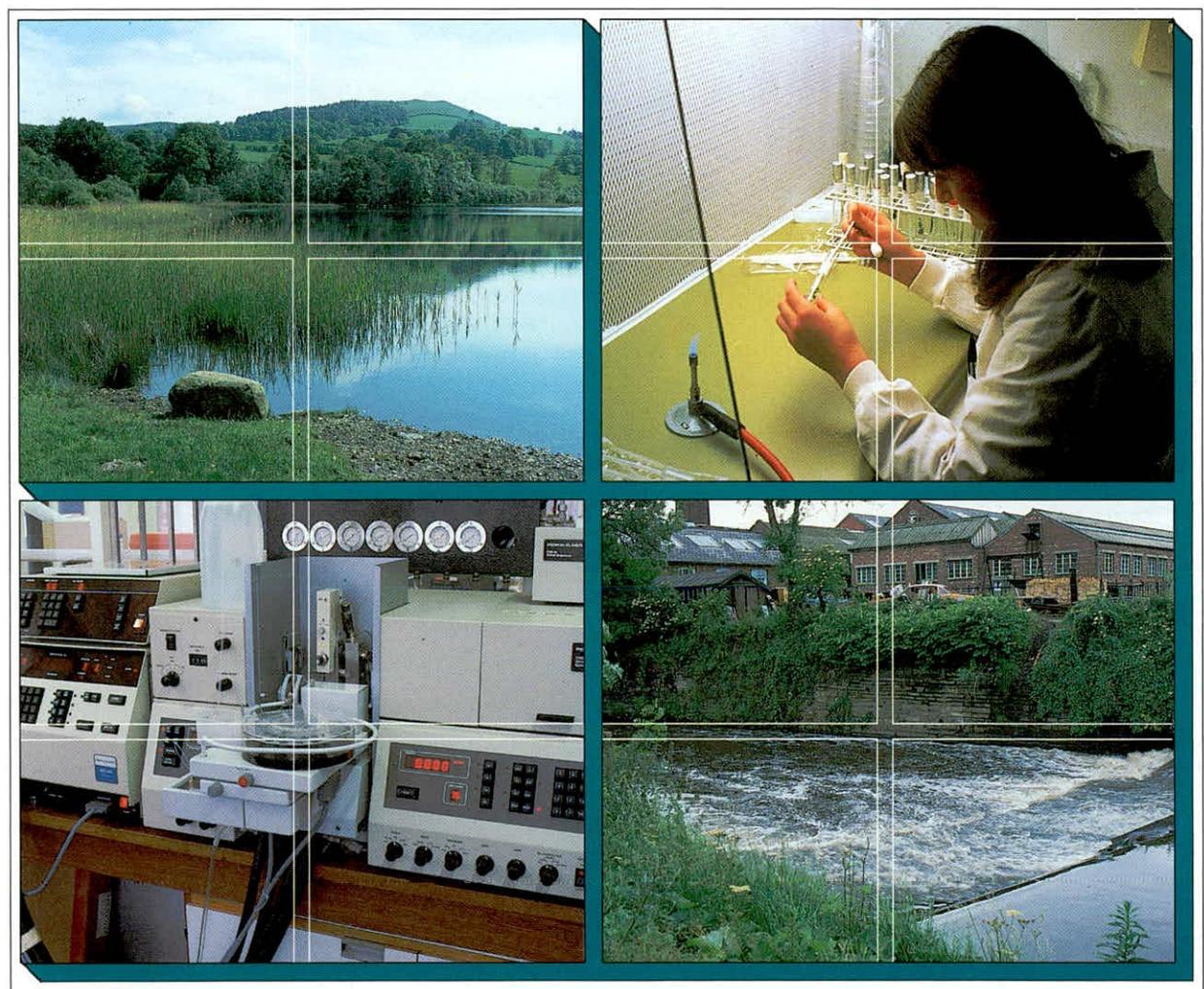
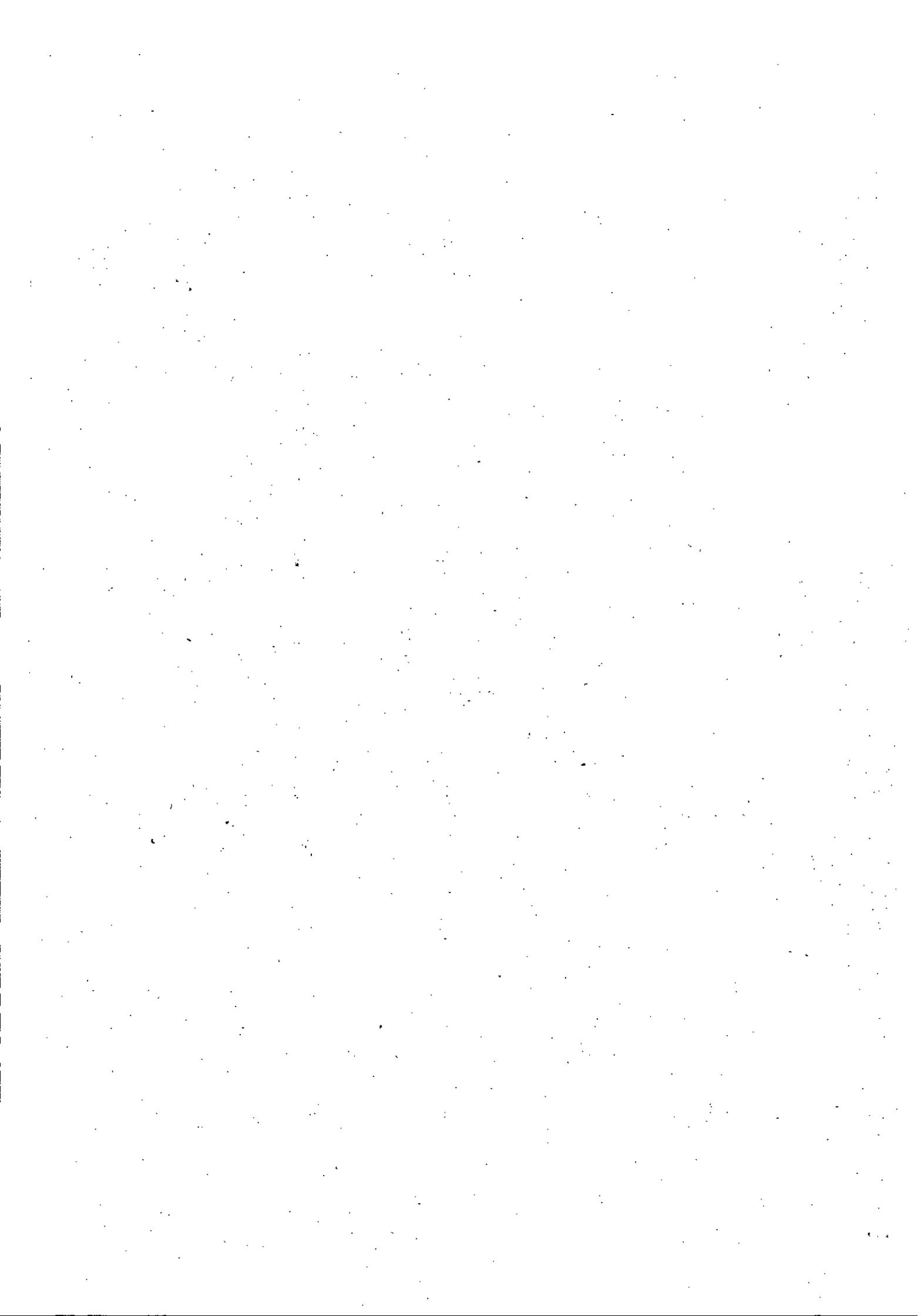


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# An audit of performance in the processing of macro-invertebrate samples in 1992. NRA North West Region

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**An audit of performance in the processing  
of macro-invertebrate samples in 1992.**  
**NRA North West Region**

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Project leader:	R.J.M. Gunn
Report date:	April 1993
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## **1. INTRODUCTION**

In 1992 the sampling of aquatic macro-invertebrates for the biological assessment of river quality continued throughout the United Kingdom. This task was undertaken by the National Rivers Authority (NRA) in England and Wales, the River Purification Boards (RPBs) in Scotland and the Industrial Research & Technology Unit (IRTU) in Northern Ireland.

In view of the number of staff involved and the variability of sample processing techniques, it was recognised that an independent quality control exercise was necessary to promote a consistently high level of reliability. The IFE was contracted to undertake an audit of the sample sorting and identification performance of each NRA region, several RPBs and the IRTU. This report presents the results of 60 samples audited for North West Region of the NRA. The IFE was not required to perform any statistical analyses nor interpretation of the results of the audit.

Each organisation employed standard collection procedures, as used in the 1990 River Quality Survey, and the sampling strategy was therefore compatible with RIVPACS (River InVertebrate Prediction And Classification System), which has been developed by the Institute of Freshwater Ecology (IFE).

Samples were sorted by NRA, RPB and IRTU personnel for the families of macro-invertebrates included in the Biological Monitoring Working Party (BMWP) system. Taxa present were recorded on site data sheets. Sample processing and recording techniques varied from region to region.

## **2. SAMPLE SELECTION**

Samples for audit were selected internally by each of the agencies being monitored. The biologists processing these samples had no prior knowledge of the samples to be audited.

The manner of sample selection, which biologists would be monitored and the number of audit samples from each season, were left to the discretion of the agency, within the limits of the total number of samples that IFE was contracted to audit.

## **3. SAMPLE PROCESSING**

The normal protocol for NRA, RPB and IRTU biologists was to sort their samples within the laboratory and to select examples of each scoring taxon within the BMWP system. In most cases, the invertebrates were placed in a vial of preservative (4% formaldehyde solution or 70% industrial alcohol) and the BMWP taxa were listed on a data sheet. The vial of animals and the sorted material were then returned to the sample container and preservative added. Thus, each sample available to IFE for audit should have included:

- i) a list of the BMWP families found in the sample
- ii) a vial containing representatives from each family
- iii) the preserved sample

When these three elements were present, the sequence of operations at IFE was as follows:

- a) The remainder of the sample was sorted and the BMWP families listed
- b) The families contained within the vial were identified and listed
- c) A comparison was made between the NRA listing of families and those identified from the vial by IFE
- d) A comparison was made between the NRA listing of families and those found in the sample by IFE
- e) "Losses" or "gains" from the NRA listing of families were noted. In the case of "gains", each additional family was identified, where possible, to species level, in order to clarify any specific repetitive errors.

For a number of different reasons, some samples did not include a vial containing representative examples of the families listed on the data sheet. Others arrived with the vial damaged in transit such that the representative examples were no longer separated. For these samples, only operations a), d) and e) above were appropriate.

Several directives were issued to IFE relating to the treatment of BMWP taxa. Terrestrial representatives of BMWP scoring families, animals deemed to have been dead at the time of sampling, cast insect skins, pupal exuviae, empty mollusc shells and posterior ends of "living" specimens were to be excluded from the listing of families present. Chrysomelidae and Curculionidae, which appear in the BMWP list, were also to be excluded for the purposes of the audit. Trichopteran pupae, although not routinely identified by many biologists, were to be included in the listing of families.

#### 4. REPORTING

The results of each sample audit were recorded on a standard report form (Table 1). For audit samples where a vial of animals was included, the comparison between the NRA listing and the taxa found in the vial by IFE was shown in box A of the report form. Discrepancies could be due to carelessness, misidentifications or errors in completing the NRA data sheet. Families not on the NRA listing but found by IFE in the remainder of the sample were entered in box B of the report form under "additional families". When the families listed as "losses" in section A of the report form were compared with the full list of families recorded in the sample by IFE, some apparent losses from the vial were offset by the presence of those families in the remainder of the sample. These taxa were therefore listed in the "losses" box of section A and the "gains" box of section B and were neither a net loss nor a net gain. In these cases, the families were marked with an asterisk in both boxes. Such errors are noted as "omissions" in the tables which summarise the results for each season (Tables 2, 3 and 4).

Species identifications, state of development (eg adult or larval coleopterans) and the presence of a single representative of a family within the remainder of the sample were recorded in the notes section of the report form. Where the NRA data sheet indicated that a family was noted and released at the site, this was recorded in the notes section but not included as a "loss", even though the family was not found in the vial.

For those samples in which the vial of animals was damaged or missing, box A of the report form was not applicable (N/a). Families not on the NRA list but present in the sample were listed in box B under "additional families" as before. Families recorded on the NRA list but not found by IFE were indicated on the left hand side of box B. If the vial of animals was retained by the NRA, entries in this box could include the sole representative of a family which was removed by the NRA, a family seen at the site which escaped or was released (without mention being made on the NRA data sheet), inaccurate identification, the wrong family box being ticked on the NRA data sheet or the family being present in the sample but missed by IFE.

Results of the audits of individual samples are presented in the Appendix.

## **ACKNOWLEDGEMENTS**

Thanks to Kay Symes for help with production of results and to Valerie Palmer for typing the manuscript.

TABLE 1. The IFE Report form

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION  RIVER

DATE  SITE

SORTER  SAMPLE CODE

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE		

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	

NET LOSSES  NET GAINS

NOTES:

TABLE 2. The 20 spring samples audited for North West Region.

River	Site	Sorter	Losses	Gains	Omissions
Grizedale Beck	Grizedale Bridge	BJI	0	5	0
St Johns Beck	Sosgill Bridge	AJ	0	2	0
Esk	Forge Bridge	AJ	0	0	0
Eea	Cartmel	BJI	0	3	0
Kent	Hawes Bridge	KJS	0	2	0
Hall Beck	NY 513 465	DS	1	6	0
Eamont	Udford	RFP	0	3	0
Sandwath Sike	ptc R. Leith	DS	1	1	0
Elton Brook	u/s Newbold Street	DGH	0	5	0
Weaver	Hankelow Mill	SJM	0	0	2
Hurst Brook	ptc Shelf Brook	DGH	0	3	0
Dibbinsdale Brook	u/s Brookhurst Avenue	KL	0	7	0
Agden Brook	Agden Brook Farm	KL	0	4	0
Bretherdale Beck	ptc Birk Beck	KJS	1	5	0
Woodnock Water	u/s Bath Street Mills	LHW	1	3	0
Calder	ptc Everage Clough	LHW	0	5	0
Lostock	Earnshaw Bridge	EMP	0	2	0
Skirden Beck	ptc Holden Beck	ERM	0	4	0
Phipps Brook	ptc Sankey Brook	EMP	0	2	0
Liggard Brook	u/s Liggard Brook Road Bridge	SLP	0	1	0

TABLE 3. The 20 summer samples audited for North West Region

River	Site	Sorter	Losses	Gains	Omissions
* Chor	A581 Bridge	ED/LHW	2	1	0
* Alt	ptc Hill House Drain	LIZ/JW	1	0	0
* Long Preston Beck	ptc R. Ribble	ED/JW	3	4	0
* Douglas	d/s M61 ptc Pearl Brook	LIZ/ED	0	2	0
Hurst Brook	ptc Shelf Brook	DGH	0	2	0
Day Green Stream	u/s Alsager ETW	SJM	0	0	0
* Hyndburn Brook	Hyndburn Bridge	LHW/SLP	0	2	0
* Croasdale Beck	ptc R. Hodder	ED/LIZ	2	4	0
Bollin	Warburton Mill	KL	1	0	0
Valley Brook	ptc R. Weaver	SJM	2	1	1
Carr Brook	ptc R. Glaze	KL	0	3	0
Tong Eng Brook	ptc R. Spodden	DGH	0	0	0
* Crooks Beck	ptc Lowgill B.	D182	1	9	0
* Trout Beck	Troutbeck	A202	1	1	0
* Langrigg Beck	NY 173 464	A243	0	3	0
* Westnewton Beck	Newton-out-field	A311	1	2	0
* Langley Burn	NY 511 807	D213	2	7	0
* Yewdale Beck	u/s Yewdale Bridge	K50	1	3	0
* Flodder Beck	ptc Grayrigg Beck	B50	0	7	0
* Briggle Beck	Little Salkeld	R109	0	1	0

\* indicates no vial of animals present in sample

TABLE 4. The 20 autumn samples audited for North West Region

River	Site	Sorter	Losses	Gains	Omissions
* Crossdale Beck	ptc R. Hindburn	K110	0	3	0
* Halewood Brook	ptc Ditton Brook	LIZ	1	2	0
Mersey	Bollin Point	DGH	0	0	0
Roch	u/s R. Irwell	TDP	0	0	0
Todd Brook	ptc R. Goyt	KL	0	2	0
* Dean Brook	ptc R. Douglas	JAW	1	1	0
Marbury Brook	ptc R. Weaver	DGH	0	0	1
Dane	u/s Swettenham Brook	SJM	0	2	0
\ Folly Brook	ptc Worsley Brook	KL	0	0	0
* Derwent	High Stock Bridge	A386	1	5	0
* Duddon	u/s Duddon Bridge	A426	0	1	0
* Dee	ptc R. Rawthey	K90	1	1	0
* Crowdundle Beck	Millrigg	R154	1	10	0
* Wymott Brook	ptc R. Lostock	LHW	0	3	0
* Williekeld Sike	NY 593 328	D279	0	3	0
* Black Beck	Pool Bridge, Hawkshead	B100	1	4	0
* Dow Brook	Dow Bridge	SLP	0	2	0
* Conder	Old Galgate Bridge	ERM	0	7	0
* Patten Beck	d/s Hayton STW	K110	0	1	0
* Rathmell Beck	Rathmell Bridge	JAW/ERM	2	5	0

\* indicates no vial of animals present in sample



## **APPENDIX**

### **Results of individual sample audits**

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Grizedale Beck
DATE	28.4.92	SITE	Grizedale Bridge
SORTER	BJI	SAMPLE CODE	NRA03 1658

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	1 Planariidae 2 Hydrophilidae 3 Lepidostomatidae 4 Sericostomatidae 5 Tipulidae

NET LOSSES  NET GAINS

NOTES:

- 1 Polycelis felina
- 2 Hydraena gracilis, Cercyon sp. (adults)
- 3 Crunoecia irrorata 1 only
- 4 Sericostoma personatum 1 only
- 5 Dicranota sp.

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	St Johns Beck
DATE	20.2.92	SITE	d/s Sosgill Bridge
SORTER	AJ	SAMPLE CODE	NRA03 07n0

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	1 Taeniopterygidae 2 Chloroperlidae

NET LOSSES  NET GAINS

NOTES:

1 Brachyptera risi 1 only  
2 Chloroperla torrentium 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Esk
DATE	28.1.92	SITE	d/s Forge Bridge
SORTER	AJ	SAMPLE CODE	NRA03 00jg

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	None

NET LOSSES 0 NET GAINS 0

NOTES:

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Eea
DATE	5.3.92	SITE	Cartmel
SORTER	BJI	SAMPLE CODE	NRA03 16d0

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	1 Planariidae 2 Valvatidae 3 Hydrophilidae

NET LOSSES 0 NET GAINS 3

NOTES:

1 Polycelis nigra/tenuis 1 only  
2 Valvata piscinalis 1 only  
3 Hydraena gracilis (adult) 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Kent
DATE	9.4.92	SITE	u/s Hawes Bridge, Natland
SORTER	KJS	SAMPLE CODE	NRA03 14qo

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	1 Planariidae 2 Elmidae

NET LOSSES 0 NET GAINS 2

NOTES:

1 Polycelis nigra/tenuis 1 only  
2 Elmis aenea (larva) 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Hall Beck
DATE	6.2.92	SITE	NY 513 465
SORTER	DS	SAMPLE CODE	NRA03 0ir0

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	1 Leptoceridae	2 Planariidae 3 Beraeidae

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	4 Sphaeriidae 5 Glossiphoniidae 6 Gammaridae 7 Polycentropodidae

NET LOSSES 1 NET GAINS 6

NOTES:

- 2 Polycelis felina
- 3 Beraea maurus
- 4 Pisidium sp. 1 only
- 5 Glossiphonia complanata 1 only
- 6 Gammarus pulex 1 only
- 7 Plectrocnemia conspersa

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Eamont
DATE	6.3.92	SITE	Udford
SORTER	RFP	SAMPLE CODE	NRA03 0oro

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	1 Hydrobiidae 2 Ancylidae 3 Hydrophilidae

NET LOSSES 0 NET GAINS 3

NOTES:

1 Potamopyrgus jenkinsi 1 only  
2 Ancylus fluviatilis  
3 Hydraena gracilis (adult) 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Sandwath Sike
DATE	3.3.92	SITE	ptc R.Leith
SORTER	DS	SAMPLE CODE	NRA03 Orp8

AQC OF BMWP FAMILIES A. IN VIAL  + B. IN SAMPLE  +

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	1 Hydrobiidae	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	2 Erpobdellidae

NET LOSSES  1 NET GAINS  1

NOTES:

1 Empty shell in vial  
2 Erpobdella octoculata 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Elton Brook
DATE	9.4.92	SITE	u/s Newbold Street, Bury
SORTER	DGH	SAMPLE CODE	NRA03 pp8c

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	1 Baetidae 2 Planariidae

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	3 Hydrobiidae 4 Ancyliidae 5 Sphaeriidae

NET LOSSES 0 NET GAINS 5

NOTES:

- 1 Baetis rhodani, B. vernus
- 2 Polycelis nigra/tenuis, Dugesia polychroa/lugubris, Planaria torva
- 3 Potamopyrgus jenkinsi
- 4 Ancyclus fluviatilis 1 only
- 5 Pisidium sp.

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Weaver
DATE	14.5.92	SITE	Hankelow Mill
SORTER	SJM	SAMPLE CODE	NRA03 r07w

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	1 Hydrobiidae* 2 Sphaeriidae*	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	3 Hydrobiidae* 4 Sphaeriidae*

NET LOSSES 0 NET GAINS 0

NOTES:

1,3 Empty shell in vial, Potamopyrgus jenkinsi (1 only) in sample  
2,4 Empty shell in vial, Pisidium sp. (1 only) in sample

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Hurst Brook
DATE	11.5.92	SITE	ptc Shelf Brook
SORTER	DGH	SAMPLE CODE	NRA03 njas

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	1 Lymnaeidae 2 Oligochaeta 3 Simuliidae

NET LOSSES  NET GAINS

NOTES:

- 1 Lymnaea peregra
- 2 Indet Lumbricid 1 only
- 3 Simulium cryophilum group 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Dibbinsdale Brook
DATE	16.3.92	SITE	u/s Brookhurst Avenue
SORTER	KL	SAMPLE CODE	NRA03 t6uk

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	1 Lymnaeidae 2 Sphaeriidae 3 Oligochaeta 4 Dytiscidae 5 Simuliidae

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	6 Physidae 7 Gammaridae

NET LOSSES 0 NET GAINS 7

NOTES:

- 1 Lymnaea peregra
- 2 Pisidium sp.
- 3 Indet Tubificids
- 4 Rhantus sp. (larva)
- 5 Simulium ornatum group
- 6 Physa heterostropha
- 7 Crangonyx pseudogracilis 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Agden Brook
DATE	27.4.92	SITE	Agden Brook Farm
SORTER	KL	SAMPLE CODE	NRA03 lijc

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	1 Dytiscidae

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	2 Ancylidae 3 Sphaeriidae 4 Glossiphoniidae

NET LOSSES 0 NET GAINS 4

NOTES:

- 1 Potamonectes depressus (adult)
- 2 Ancylus fluviatilis 1 only
- 3 Pisidium sp.
- 4 Glossiphonia complanata 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Bretherdale Beck
DATE	20.2.92	SITE	ptc Birk Beck
SORTER	KJS	SAMPLE CODE	NRA03 Owbw

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	1 Perlidae	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	2 Ancyliidae 3 Caenidae 4 Hydrophilidae 5 Rhyacophilidae 6 Leptoceridae

NET LOSSES 1

NET GAINS 5

NOTES:

- 2 Ancylus fluviatilis
- 3 Caenis rivulorum 1 only
- 4 Hydraena gracilis (adults)
- 5 Glossosoma sp. 1 only
- 6 Athripsodes sp. (juveniles)

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Woodnock Water
DATE	18.3.92	SITE	u/s Bath Street Mills
SORTER	LHW	SAMPLE CODE	

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	1 Elmidae	2 Scirtidae

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	3 Planariidae 4 Hydrobiidae

NET LOSSES 1 NET GAINS 3

NOTES:

2 Elodes sp. (larva)  
3 Polycelis felina  
4 Potamopyrgus jenkinsi 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Calder
DATE	4.3.92	SITE	ptc Everage Clough
SORTER	LHW	SAMPLE CODE	NRA03 2hyw

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	1 Hydrobiidae 2 Lymnaeidae 3 Sphaeriidae 4 Elmidae 5 Sericostomatidae

NET LOSSES 0 NET GAINS 5

NOTES:

- 1 Potamopyrgus jenkinsi
- 2 Lymnaea peregra 1 only
- 3 Pisidium sp. 1 only
- 4 Elmis aenea, Esolus parallelepipedus (larvae), Limnius volckmari (adults)
- 5 Sericostoma personatum

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Lostock
DATE	6.5.92	SITE	Earnshaw Bridge
SORTER	EMP	SAMPLE CODE	NRA03 288w

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	1 Lymnaeidae

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	2 Hydrobiidae

NET LOSSES 0 NET GAINS 2

NOTES:

1 Lymnaea peregra  
2 Potamopyrgus jenkinsi

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Skirden Beck
DATE	11.5.92	SITE	ptc Holden Beck
SORTER	ERM	SAMPLE CODE	NRA03 2q84

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	1 Hydrobiidae 2 Sphaeriidae 3 Hydrophilidae 4 Tipulidae

NET LOSSES 0 NET GAINS 4

NOTES:

- 1 Potamopyrgus jenkinsi
- 2 Pisidium sp. 1 only
- 3 Hydraena gracilis (adults)
- 4 Antocha vitripennis, Phylidorea sp.

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Phipps Brook
DATE	30.4.92	SITE	ptc Sankey Brook
SORTER	EMP	SAMPLE CODE	NRA03 3xa4

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	1 Hydrobiidae 2 Sphaeriidae

NET LOSSES  NET GAINS

NOTES:

1 Potamopyrgus jenkinsi 1 only  
2 Pisidium sp.

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Liggard Brook
DATE	3.4.92	SITE	u/s Liggard Brook Road Bridge
SORTER	SLP	SAMPLE CODE	

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	1 Lymnaeidae

NET LOSSES 0 NET GAINS 1

NOTES:

1 Lymnaea truncatula 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Chor
DATE	13.8.92	SITE	A581 Bridge
SORTER	ED/LHW	SAMPLE CODE	

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  1 Planorbidae 2 Tipulidae	3 Limnephilidae

NET LOSSES  2 NET GAINS  1

NOTES:

3 Indet Limnephilid (juvenile) 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Alt
DATE	18.8.92	SITE	ptc Hill House Drain
SORTER	LIZ/JW	SAMPLE CODE	

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  1 Curculionidae	None

NET LOSSES  1  NET GAINS  0

NOTES:

1 IFE instructed to exclude Curculionidae from audit.

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Long Preston Beck
DATE	27.7.92	SITE	ptc R.Ribble
SORTER	ED/JW	SAMPLE CODE	NRA03 2pj4

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  1 Erpobdellidae 2 Sericostomatidae 3 Oligochaeta	4 Glossiphoniidae 5 Polycentropodidae 6 Psychomyiidae 7 Limnephilidae

NET LOSSES  3 NET GAINS  4

NOTES:

- 2 Empty cases found in sample
- 4 Helobdella stagnalis 1 only
- 5 Polycentropus flavomaculatus
- 6 Psychomyia pusilla 1 only
- 7 Drusus annulatus

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Douglas
DATE	16.7.92	SITE	d/s M61 ptc Pearl Brook
SORTER	LIZ/ED	SAMPLE CODE	

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  None	1 Planariidae 2 Planorbidae

NET LOSSES  0 NET GAINS  2

NOTES:

1 Polycelis nigra/tenuis 1 only  
2 Gyraulus albus 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Hurst Brook
DATE	14.8.92	SITE	ptc Shelf Brook
SORTER	DGH	SAMPLE CODE	NRA03 njas

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	1 Hydrobiidae 2 Hydrophilidae

NET LOSSES

NET GAINS

NOTES:

1 Potamopyrgus jenkinsi 1 only  
2 Hydraena gracilis (adult) 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Day Green Stream
DATE	14.7.92	SITE	B5078 Bridge, u/s Alsager ETW
SORTER	SJM	SAMPLE CODE	NRA03 mymc

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	None

NET LOSSES  NET GAINS

NOTES:

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Hyndburn Brook
DATE	16.6.92	SITE	Hyndburn Bridge
SORTER	LHW/SLP	SAMPLE CODE	NRA03 2klc

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  None	1 Dytiscidae 2 Hydrophilidae

NET LOSSES  0 NET GAINS  2

NOTES:

1 Agabus sp. (larvae)  
2 Indet Hydrophilid (larva) 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Croasdale Beck
DATE	15.7.92	SITE	ptc R.Hodder
SORTER	ED/LIZ	SAMPLE CODE	NRA03 2g48

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  1 Hydrobiidae 2 Leptoceridae	3 Sphaeriidae 4 Glossiphoniidae 5 Hydroptilidae 6 Odontoceridae

NET LOSSES  2 NET GAINS  4

NOTES:

3 Pisidium sp. 1 only  
4 Helobdella stagnalis 1 only  
5 Hydroptila sp. 1 only  
6 Odontocerum albicorne 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Bollin
DATE	20.8.92	SITE	Warburton Mill, Heatley
SORTER	KL	SAMPLE CODE	NRA03 1gx0

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	1 Planariidae	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	None

NET LOSSES 1 NET GAINS 0

NOTES:

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Valley Brook
DATE	25.8.92	SITE	ptc R.Weaver
SORTER	SJM	SAMPLE CODE	NRA03 sbwo

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	1 Lymnaeidae 2 Asellidae 3 Chironomidae*	4 Physidae

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	5 Chironomidae*

NET LOSSES  2

NET GAINS  1

NOTES:

4 Physa fontinalis  
5 Orthocladinae

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Carr Brook
DATE	10.7.92	SITE	ptc R.Glaze
SORTER	KL	SAMPLE CODE	NRA03 o09w

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	1 Physidae 2 Baetidae 3 Sialidae

NET LOSSES  NET GAINS

NOTES:

1 Physa fontinalis 1 only  
2 Baetis vernus 1 only  
3 Sialis lutaria

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Tong End Brook
DATE	18.6.92	SITE	ptc R.Spodden
SORTER	DGH	SAMPLE CODE	NRA03 qttg

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	None

NET LOSSES  NET GAINS

NOTES:

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Crooks Beck
DATE	27.7.92	SITE	ptc Lowgill B
SORTER	D182	SAMPLE CODE	NRA03 0g1s

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  1 Sericostomatidae	2 Sphaeriidae 3 Astacidae 4 Caenidae 5 Psychomyiidae 6 Hydropsychidae 7 Limnephilidae 8 Odontoceridae 9 Goeridae 10 Simuliidae

NET LOSSES  1 NET GAINS  9

NOTES:

- 2 Pisidium sp. 1 only
- 3 Indet Astacid (juvenile) 1 only
- 4 Caenis luctuosa/macrura 1 only
- 5 Psychomyia pusilla (pupa) 1 only
- 6 Hydropsyche sp. (pupae)
- 7 Ecclisopteryx guttulata 1 only
- 8 Odontocerum albicorne
- 9 Silo pallipes 1 only
- 10 Simulium ornatum group 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Trout Beck
DATE	18.6.92	SITE	Troutbeck
SORTER	A202	SAMPLE CODE	NRA03 086g

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  1 Limnephilidae	2 Hydrobiidae

NET LOSSES  1 NET GAINS  1

NOTES:

1 Empty Limnephilid cases found by IFE in sample.  
2 Potamopyrgus jenkinsi 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Langrigg Beck
DATE	8.7.92	SITE	NY 173 464
SORTER	A243	SAMPLE CODE	NRA03 Oavo

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  None	1 Planariidae 2 Sphaeriidae 3 Simuliidae

NET LOSSES  NET GAINS

NOTES:

1 Polycelis sp.  
2 Pisidium sp. 1 only  
3 Simulium ornatum group (pupae)

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Westnewton (Crookhurst) Beck
DATE	7.8.92	SITE	Newton-out-field
SORTER	A311	SAMPLE CODE	NRA03 0d48

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  1 Oligochaeta	2 Sphaeriidae 3 Nemouridae

NET LOSSES  1 NET GAINS  2

NOTES:

2 Pisidium sp.  
3 Nemurella picteti

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Langley Burn
DATE	18.8.92	SITE	NY 511 807
SORTER	D213	SAMPLE CODE	NRA03 0tbk

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  1 Leptophlebiidae 2 Caenidae	3 Sphaeriidae 4 Ephemerellidae 5 Scirtidae 6 Hydroptilidae 7 Limnephilidae 8 Goeridae 9 Sericostomatidae

NET LOSSES  2  NET GAINS  7

NOTES:

- 3 Pisidium sp. 1 only
- 4 Ephemerella ignita
- 5 Elodes sp. (larva) 1 only
- 6 Hydroptila sp. 1 only
- 7 Ecclisopteryx guttulata
- 8 Silo pallipes
- 9 Sericostoma personatum

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Yewdale Beck
DATE	29.7.92	SITE	u/s Yewdale Bridge
SORTER	K50	SAMPLE CODE	NRA03 19r8

AQC OF BMWP FAMILIES A. IN VIAL

B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  1 Lepidostomatidae	2 Ancylidae 3 Gammaridae 4 Limnephilidae

NET LOSSES

 1

NET GAINS

 3

NOTES:

- 1 Empty Lepidostomatid cases found by IFE in sample.
- 2 Ancylus fluviatilis
- 3 Gammarus pulex 1 only
- 4 Drusus annulatus 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Flodder Beck
DATE	14.8.92	SITE	ptc Grayrigg Beck
SORTER	B50	SAMPLE CODE	NRA03 16a8

AQC OF BMWP FAMILIES A. IN VIAL

B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  None	1 Hydrobiidae 2 Lymnaeidae 3 Leptophlebiidae 4 Perlidae 5 Sialidae 6 Philopotamidae 7 Sericostomatidae

NET LOSSES  0

NET GAINS  7

NOTES:

- 1 Potamopyrgus jenkinsi
- 2 Lymnaea peregra 1 only
- 3 Paraleptophlebia sp.
- 4 Dinocras cephalotes
- 5 Sialis fuliginosa 1 only
- 6 Wormaldia sp. 1 only
- 7 Sericostoma personatum 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Briggle Beck
DATE	16.7.92	SITE	Little Salkeld
SORTER	R109	SAMPLE CODE	NRA03 Ohd0

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  None	1 Heptageniidae

NET LOSSES  0 NET GAINS  1

NOTES:

1 Ecdyonurus sp. 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Crossdale Beck
DATE	19.1.93	SITE	ptc R.Hindburn
SORTER	K110	SAMPLE CODE	NRA03 10t0

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  None	1 Hydrobiidae 2 Elmidae 3 Sericostomatidae

NET LOSSES  0 NET GAINS  3

NOTES:

1 Potamopyrgus jenkinsi 1 only  
2 Elmis aenea (larva) 1 only  
3 Sericostoma personatum 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Halewood Brook
DATE	16.12.92	SITE	ptc Ditton Brook
SORTER	LIZ	SAMPLE CODE	NRA03 3u1g

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  1 Planorbidae	2 Physidae 3 Asellidae

NET LOSSES  1 NET GAINS  2

NOTES:

2 Physa fontinalis 1 only  
3 Asellus aquaticus

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Mersey
DATE	22.9.92	SITE	Bollin Point
SORTER	DGH	SAMPLE CODE	NRA03 q19o

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	None

NET LOSSES  NET GAINS

NOTES:

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Roch
DATE	7.1.93	SITE	u/s R.Irwell
SORTER	TDP	SAMPLE CODE	NRA03 qj0k

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	None

NET LOSSES  NET GAINS

NOTES:

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Todd Brook
DATE	22.12.92	SITE	ptc R.Goyt
SORTER	KL	SAMPLE CODE	NRA03 olq4

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	1 Hydrobiidae 2 Glossiphoniidae

NET LOSSES  NET GAINS

NOTES:

1 Potamopyrgus jenkinsi  
 2 Glossiphonia complanata 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Dean Brook
DATE	29.12.92	SITE	ptc R.Douglas
SORTER	JAW	SAMPLE CODE	NRA03 3mb0

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  1 Planorbidae	2 Polycentropodidae

NET LOSSES  1 NET GAINS  1

NOTES:

1 Terrestrial snail found by IFE in sample.  
2 Plectrocnemia conspersa 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Marbury Brook
DATE	17.12.92	SITE	ptc R.Weaver
SORTER	DGH	SAMPLE CODE	NRA03 rv5w

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	1 Physidae*	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	2 Physidae*

NET LOSSES 0 NET GAINS 0

NOTES:

2 Physa fontinalis

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Dane
DATE	12.10.92	SITE	u/s Swettenham Brook
SORTER	SJM	SAMPLE CODE	NRA03 mbxo

AQC OF BMWP FAMILIES A. IN VIAL  + B. IN SAMPLE  +

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	1 Hydrobiidae 2 Hydrophilidae

NET LOSSES  0 NET GAINS  2

NOTES:

1 Potamopyrgus jenkinsi  
2 Hydraena gracilis (adult) 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Folly Brook
DATE	26.11.92	SITE	ptc Worsley Brook
SORTER	KL	SAMPLE CODE	NRA03 psxo

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	None

NET LOSSES  NET GAINS

NOTES:

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Derwent
DATE	2.10.92	SITE	High Stock Bridge
SORTER	A386	SAMPLE CODE	NRA03 03e8

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  1 Dytiscidae	2 Sphaeriidae 3 Caenidae 4 Leuctridae 5 Leptoceridae 6 Goeridae

NET LOSSES  1 NET GAINS  5

NOTES:

- 2 Pisidium sp. 1 only
- 3 Caenis luctuosa/macrura 1 only
- 4 Leuctra fusca 1 only
- 5 Athripsodes albifrons, Oecetis testacea
- 6 Goera pilosa

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Duddon
DATE	15.10.92	SITE	u/s Duddon Bridge
SORTER	A426	SAMPLE CODE	NRA03 1cj8

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  None	1 Erpobdellidae

NET LOSSES  0 NET GAINS  1

NOTES:

1 Indet Erpobdellid 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Dee
DATE	20.10.92	SITE	ptc R.Rawthey
SORTER	K90	SAMPLE CODE	NRA03 Oyn8

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  1 Polycentropodidae	2 Perlodidae

NET LOSSES  1 NET GAINS  1

NOTES:

2 Isoperla grammatica

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Crowdundle Beck
DATE	21.10.92	SITE	Millrigg
SORTER	R154	SAMPLE CODE	NRA03 0h4o

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE.	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  1 Leptoceridae	2 Sphaeriidae 3 Piscicolidae 4 Ephemerellidae 5 Caenidae 6 Capniidae 7 Dytiscidae 8 Gyrinidae 9 Hydroptilidae 10 Odontoceridae 11 Lepidostomatidae

NET LOSSES  1 NET GAINS  10

NOTES:

1 Empty cases in sample	10 Odontocerum albicorne 1 only
2 Pisidium sp. 1 only	11 Lepidostoma hirtum
3 Piscicola geometra 1 only	
4 Ephemerella ignita	
5 Caenis rivulorum	
6 Capnia sp. (juvenile) 1 only	
7 Platambus maculatus (larva) 1 only	
8 Orectochilus villosus (larva) 1 only	
9 Ithytrichia sp. 1 only	

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Wymott Brook
DATE	22.12.92	SITE	ptc R.Lostock
SORTER	LHW	SAMPLE CODE	

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  None	1 Baetidae 2 Coenagriidae 3 Tipulidae

NET LOSSES  0 NET GAINS  3

NOTES:

1 Baetis rhodani 1 only  
2 Ischnura elegans 1 only  
3 Dicranota sp. 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Williekeld Sike
DATE	6.11.92	SITE	NY 593 328
SORTER	D279	SAMPLE CODE	NRA03 0hlc

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  None	1 Baetidae 2 Sericostomatidae 3 Tipulidae

NET LOSSES  NET GAINS

NOTES:

1 Baetis rhodani  
2 Sericostoma personatum 1 only  
3 Palaria (Neolimnomyia) sp.

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Black Beck
DATE	19.1.93	SITE	u/s Pool Bridge, Hawkshead
SORTER	B100	SAMPLE CODE	NRA03 19g4

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  1 Oligochaeta	2 Hydrobiidae 3 Asellidae 4 Leptoceridae 5 Lepidostomatidae

NET LOSSES  1 NET GAINS  4

NOTES:

- 1 Elongate, soft Erpobdellids in sample
- 2 Potamopyrgus jenkinsi
- 3 Asellus aquaticus
- 4 Oecetis testacea 1 only
- 5 Lepidostoma hirtum 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Dow Brook
DATE	7.1.93	SITE	Dow Bridge
SORTER	SLP	SAMPLE CODE	NRA03 2ak8

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  None	1 Lymnaeidae 2 Gammaridae

NOTES: NET LOSSES  0 NET GAINS  2

1 Lymnaea peregra  
2 Gammarus pulex 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Conder
DATE	6.11.92	SITE	Old Galgate Bridge
SORTER	ERM	SAMPLE CODE	NRA03 2zk8

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  None	1 Planariidae 2 Planorbidae 3 Leptophlebiidae 4 Hydrophilidae 5 Leptoceridae 6 Lepidostomatidae 7 Simuliidae

NET LOSSES  NET GAINS

NOTES:

- 1 Polycelis nigra/tenuis 1 only
- 2 Gyraulus albus 1 only
- 3 Paraleptophlebia sp. 1 only
- 4 Hydraena gracilis (adults)
- 5 Athripsodes sp. (juvenile) 1 only
- 6 Lepidostoma hirtum
- 7 Simulium ornatum group, S.(Wilhelmia) sp.

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Patten Beck
DATE	16.12.92	SITE	d/s Hayton STW
SORTER	K110	SAMPLE CODE	NRA03 Odfc

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  None	1 Nemouridae

NET LOSSES  0 NET GAINS  1

NOTES:

1 Nemoura cambrica/erratica 1 only

1992 RIVER QUALITY SURVEY AQC - BIOLOGICAL SAMPLES

REGION	North West	RIVER	Rathmell Beck
DATE	11.12.92	SITE	Rathmell Bridge
SORTER	JAW/ERM	SAMPLE CODE	NRA03 2pdk

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	No vial of animals present in sample. Identification check not applicable.	N/a

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)  1 Planorbidae 2 Odontoceridae	3 Sphaeriidae 4 Caenidae 5 Taeniopterygidae 6 Gyrinidae 7 Lepidostomatidae

NET LOSSES  2 NET GAINS  5

NOTES:

- 1 Terrestrial snail found by IFE in sample
- 3 Pisidium sp. 1 only
- 4 Caenis rivulorum
- 5 Brachyptera risi
- 6 Orectochilus villosus (larva) 1 only
- 7 Lepidostoma hirtum 1 only

