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ENVIRONMENT
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NORTH WEST REGION

CENTRAL AREA REDD PROJECT

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G:\FER\Fisheries\Redd Counts\GIS Data

Central Area Fisheries Science and Management Team

Redd Distribution Project

SUMMARY

Redd counting is an integral part of most Fishery Officers duties. The number and distribution of salmonid redds throughout salmonid catchments provides invaluable information on the range and extent of spawning by both salmon and sea trout.

A project was initiated by the Fisheries Science and Management Team of Central Area, NW Region in liason with the Flood Defence function. The main objective of this project was to assess redd count data for Central Area and attempt to quantify these data in order to produce a grading system that would highlight key salmonid spawning areas. By showing which were the main areas for salmon and sea trout spawning, better informed decisions could be made on whether or not in-stream Flood Defence works should be given the go-ahead.

The main salmonid catchments in Central Area were broken into individual reaches, approximately 1 km in length. The number of redds in these individual reaches were then calculated and a density per km value was obtained for each reach. A grading system was devised which involved looking at the range of density per km values and dividing this by five to produce 5 classes, A – E. A sixth class (F) was used where the density per km value was 0.00. This grading system was calculated at two levels of detail. Grades for salmon and sea trout were produced for each individual catchment and also on an Area-wide level.

Maps were produced using a range of colours to represent the grade for each reach. These maps provide a highly useful overview of the status of salmonid spawning for each catchment over individual years and highlight the key salmon and sea trout spawning areas in each catchment.

These maps and the associated summary data should now provide Flood Defence and Fisheries staff with a fairly detailed overview of the status of spawning in any location within the main salmonid catchments in Central Area. Although these maps are very useful they should only be used as a guide. The current practice of consulting with the local Fishery Officer should be continued to ensure that expert local knowledge is taken into account.

Central Area Fisheries Science and Management Team

Redd Distribution Project

1 INTRODUCTION

A project was initiated by the Fisheries Science and Management Team (FSMR) of Central Area, NW Region in collaboration with Flood Defence. The aim of the project was to collate and analyse salmonid redd count data collected by Fishery Officers for the major salmonid catchments in Central Area. The main objective of this work was to produce maps that would highlight the key areas of salmonid spawning in these river catchments. The identification of these critical areas will enable Fishery Managers and Flood Defence staff to make better informed decisions on where to carry out or where to avoid in-stream works. The main driver behind this however is the Salmon and Freshwater Fisheries Act 1975. Part I, Section 2, subsection 4 of this Act states that,

"...any person who, except in the exercise of a legal right to take materials from any waters, wilfully disturbs any spawn or spawning fish, or any bed, bank or shallow on which any spawn or spawning fish may be, shall be guilty of an offence".

This legislation clearly states that it would be an offence to carry out any in-stream works in an area where salmonid spawning is known to occur. The work done as part of this project is therefore essential in order to prevent Environment Agency staff contravening these regulations by carrying out works in such areas.

2 METHODOLOGY

2.1 Data Analysis

Redd counting is an integral part of most Fishery Officers duties. Where possible, as much as the major salmonid spawning areas are surveyed each spawning season in order to assess the amount and distribution of spawning. The number and location of salmon and sea trout redds are recorded on field survey sheets that are then collated at the end of the spawning season.

For this project these field survey sheets were collected for the Ribble, Hodder and Lune catchments for the period 1992/93 to 1998/99. There were some gaps in the data and also varying amounts of coverage depending on weather and flow conditions for that season. The Wyre catchment was not included in this project due to a very small amount of relevant data.

The main problem with the data available was that it was not in a quantitative format. In order to introduce a quantitative element into the analysis, each of the rivers surveyed was broken down into distinct reaches, on average about 1km in length. The exact lengths of these reaches were recorded and entered into relevant spreadsheets. All these reaches were also assigned a reach code to facilitate easier use of the eventual maps.

Once these reaches were finalised, the field sheets were analysed in order to calculate the number of redds recorded each year in each individual reach. These figures were entered into the spreadsheets containing the reach lengths in order to calculate the redds per km value for each reach. This process was done individually for salmon and sea trout and also total salmonids.

2.2 Grading System

With the major salmonid catchments now broken down into reaches and each reach containing a value for salmon, sea trout and total salmonid redds per km, a grading system needed to be set up in order to recognise the best, and worst reaches.

In order to do this, two levels of detail were created, one creating grades unique to the individual catchment and the other creating grades comparable on an Area level.

The approach taken for these two levels of detail was the same. The range of redds per km densities was looked at for the entire data set available and this was divided equally into 5 classes. This produced 5 'classes' of redds per km, ranging from A to E. A sixth class, grade F was assigned when the value for that reach was 0.00.

Example

Range of salmon redds per km for River Hodder (1992-1999)

0.0 – 65.0 per km

Therefore, 65.0 divided by 5 in order to produce 5 equal classes. Sixth class (F) for 0.00

Grade	Density (Redds per km)
A	>53.20
B	40.11 – 53.20
C	27.01 – 40.10
D	13.01 – 27.00
E	0.01 – 13.00
F	0.00

This approach was taken to produce grading systems for sea trout, salmon and total salmonids for each individual catchment and also on an area level. The catchment based grades allowed the main spawning areas in relation to that particular catchment to be flagged up whilst the area-wide grades enabled the best reaches on an area-wide level to be identified.

Once these grading systems were established the spreadsheets containing redds per km data were analysed and grades for each species / reach were assigned.

2.3 Map Production

The end product of this project was the production of maps that would enable a quick and easy overview of the status of spawning throughout the major catchments. These maps could

then be used by Flood Defence and Fisheries staff in order to gain better insight into whether in-stream works should proceed or not in certain areas.

The maps created used a variety of colours to signify each grade. Individual maps were produced for each year and for each species. Two sets of maps were also required in order to display the catchment-based grades and also the area-wide grades.

3 RECOMMENDATIONS ON USE

The maps produced as a result of this project should provide an invaluable tool in the decision making process regarding in-stream works. However, these maps should only be used as a guide and where works are proposed, the existing procedure of consulting the relevant Fishery Officer for that area should be continued. These maps will also be available to these Fishery Officers and will also provide a good summary to that individual. It must be realised however that expert local knowledge of the actual area involved will still be the best advice available in many cases.

Another feature of these maps and the accompanying data is that trends in spawning distribution can be noted over time. This type of data will be useful for both Flood Defence staff and Fishery Officers for recognising certain areas that have exhibited distinct deterioration's or improvements. If such areas are noted, further work can be done to see why these changes have occurred and if they are related in any way to changes in channel form, substrate type or flow conditions.

4 GUIDELINES

The maps and associated spreadsheets produced as a result of this project should enable Flood Defence staff to have a good idea of the status of salmonid spawning in any area of river containing these species in Central Area. These data should be consulted before any proposed in-stream works go ahead. It is clear from the grades for each reach recorded in the Appendices that certain reaches are more prolific in terms of spawning than others. However, the section quoted in the Introduction of this report from the Salmon and Freshwater Fisheries Act (1975) states that is an offence to wilfully disturb *any* spawn or spawning fish, or *any* bed, bank or shallow on which any spawn or spawning fish may be. Therefore, some form of guidance has to be given on whether or not any area is free of spawn or contains bed, bank or shallow on which spawn or spawning fish may be.

In order to set this guidance the following guideline is proposed;

"If the reach in which works are proposed plus the two reaches immediately downstream of this have all produced F grades over the last three years of redd counting, then the presumption shall be that the works shall go ahead. However, consultation with Fishery staff should still be carried out".

The last sentence of this guideline is required because a situation might occur whereby although the key reaches affected by proposed works have not had any spawning in the last three years, the year in which the works are to go ahead may in fact have contained some spawning. This most recent spawning will not be recorded in map form as the field data for

each spawning season will only be analysed and written up several months after the actual field surveys.

This guideline is primarily related to any in-stream works that fall within the critical period for migratory salmonid spawning. This critical period is classed as the time between which the first and last fish spawn plus a further 90 days. This extra 90 day period is added onto the spawning season in order to protect the eggs in the redd. After 90 days, the majority of these eggs should have emerged as alevins. After consultation with Area Fishery Officers, the following time periods have been decided upon for salmon and sea trout.

Salmon (*Salmo salar*): 1st November to May 15th

Sea Trout (*Salmo trutta*): 15th October to 1st April

At any other time of the year consultation with the Fisheries Function must be continued in order to assess the impact of proposed in-stream works on recreational fisheries.

5 IMPROVEMENTS / DETERIORATIONS

The nature of the data used in this project has allowed individual reaches to be assessed over time to see whether they have improved or deteriorated. This is highly useful for Fishery Managers as they can now potentially recognise reaches that have shown definite deterioration's and start to question why these changes have occurred.

However, it is quite difficult to create a guideline that clearly defines whether or not a particular reach has shown a deterioration, or indeed an improvement, due to the inconsistent nature of the data. Although a quantitative element has been introduced by calculating redd densities per km for individual reaches, the grades obtained in this project are still very dependant on the amount of time spent by Fishery Officers actually out surveying. This variable is determined by weather conditions for that particular spawning season and therefore varies from year to year. For example, the catchment coverage and redd grades for the 1995/96 spawning season were noticeably better than other years for the three catchments covered in this report. This is more than likely related to the low flows experienced in this spawning season, part of the 1995/96 'drought' event in the North West. These low flows may have enabled a better redd counting season to have taken place, resulting in elevated grades.

Another important factor to consider when trying to identify significant changes in certain reaches is that the redd count data must be tied in with electric-fishing data and adult movements from counter and trap data in order to allow a holistic overview of why certain changes, if any, have occurred. Only by utilising these other data sources will Fishery Managers be able to make informed decisions on whether individual reaches have exhibited definite changes.

If, after detailed, holistic analysis, key reaches are identified where redd densities, juvenile densities and adult migrations are seen to have fallen, then these reaches can be flagged up as important areas. However, before habitat enhancement work is planned for these reaches further work must then be done in order to find out whether these changes are in fact due to habitat degradation and not some other factor.

An identical approach must be adopted when attempting to identify reaches with definite improvements. If, after all the variables are accounted for and the reach is shown to have improved as a whole, then work should be again carried out to see why this improvement has taken place. If a reason, or reasons are identified then this could possibly be used as a benchmark for improving other areas.

6 PROJECT RECOMMENDATIONS

- The current format of redd counting sheets used on the Ribble and Hodder should be continued and new redd counting sheets for the Lune should be introduced in order to facilitate easier analysis of the field data
- The field redd survey sheets should be collated from the various catchments by the end of February in order to allow data analysis and map production to begin
- The maps produced from this project should be used by Flood Defence staff to gain an initial overview of the status of salmonid spawning in reaches that have proposed in-stream works
- A critical period for redd protection should be recognised. This period covers the time from the first spawning event to the last plus an additional 90 days for when the eggs are within the gravel
- For Salmon this critical period is 1st November to 15th May
- For Sea Trout this critical period is 15th October to 1st April
- A guideline is proposed which states that,

“If the reach in which works are proposed plus the two reaches immediately downstream of this have all produced F grades over the last three years of redd counting, then the presumption shall be that the works shall go ahead. However, consultation with Fishery staff should still be carried out”.
- This guideline should only apply to proposed works that fall within the critical period for the two salmonid species
- Further consultation with Data Resources staff at RFH should take place to further explore the possibility of transferring these data onto a GIS system

APPENDIX

Lune Grade Summary Sheet

Ribble Grade Summary Sheet

Hodder Grade Summary Sheet

APPENDIX I

Lune Grade Summary Sheets

Salmon

Sea Trout

Beck	Reach	Reach Code	Start NGR (SD) / (NY)	Finish NGR (SD) / (NY)	Salmon Grades (per km)				
					93/94	94/95	95/96	96/97	98/99
River Lune	Forge weir to road bridge SD523647	1	514648	523647			E		
	Road bridge SD523647 to Weir SD529654	2	523647	529654	E				
	Weir SD529654 to Bridge SD535658	3	529654	535658			E		
	Bridge SD535658 to SD539653	4	535658	539653	E		E	E	
	SD539653 to beck foot SD547659	5	539653	547659	E		D	D	
	Beckfoot SD547659 to SD552667	6	547659	552667	D		E	D	
	SD552667 to the Snab SD561677	7	552667	561677	E		E	D	
	The Snab SD561677 to Wenning Foot	8	561677	572684	E		E	C	
	Wenning Foot to Gressingham beckfoot	9	572684	574691	D		D	C	
	Gressingham beckfoot to Loyn Bridge	10	574691	582697	E		E	D	
	Loyn Bridge to SD581706	11	582697	581706	E		E	D	
	SD581706 to opp Arkholme Church	12	581706	589718	E		D	B	
	opp Arkholme Church to Greta Foot	13	589718	598728	E		D	D	
	Greta Foot to SD600741	14	598728	600741	E			A	
	SD600741 to Leck Beckfoot	15	600741	610754	E		D	E	
	Leck Beckfoot to SD610762	16	610754	610762			C	C	
	SD610762 to footbridge SD614774	17	610762	614774			B	B	
	Footbridge SD614774 to Kirkby Lonsdale road bridge	18	614774	615782	E		E	E	
	Kirby Lonsdale road bridge to beckfoot SD612791	19	615782	612791			F	F	
	Beckfoot SD612791 to Casterton beckfoot	20	612791	618797	E		D	D	
	Casterton beckfoot to footbridge SD608808	21	618797	608808	E		D	E	
	Footbridge SD608808 to Barbon Beckfoot	22	608808	608817			E	D	
	Barbon Beckfoot to beckfoot SD613828	23	608817	613828			E	D	
	Beckfoot SD613828 to Holme House	24	613828	614838		E	D	D	
	Holme House to beckfoot SD612842	25	614838	612842	D		E	E	
	Beckfoot SD612842 to Millhouses beck foot	26	612842	617852		E	E	D	

	Millhouses beck foot to Middleton Beckfoot	27	617852	621860	D	E	C	D	
	Middleton Beckfoot to Hatchery beckfoot	28	621860	620874	E		D	D	
	Beckfoot SD620874 to Hallbeck foot	29	620874	624884			E	E	
	Hallbeck foot to Rawthey Foot	30	624884	628897		E	E	E	
	Rawthey Foot to Broadraime Weir	31	628897	621901	E			E	
	Broadraime Weir to B6256 roadbridge	32	621901	623908					
	B6256 roadbridge to A684 roadbridge	33	623908	632923			E	E	
	A684 roadbridge to beckfoot SD630939	34	632923	630939			E		
	Beckfoot SD630939 to Chapel Beckfoot	35	630939	628949			E		
	Chapel Beckfoot to beckfoot SD623955	36	628949	623955			E	E	D
	Beckfoot SD623955 to Davy Bank roadbridge	37	623955	620964			B		
	Davy Bank road bridge to Lowgill	38	620964	624970			D		
	Lowgill to Fairmile Beckfoot	39	624970	623977					
	Fairmile Beckfoot to Gibbet Hill beckfoot	40	623977	623994					
	Gibbet Hill beckfoot to High Garlingill	41	623994	613005					
	High Garlingill to Borrow Beckfoot	42	613005	610015			E	D	
	Borrow Beckfoot to A685 road bridge	43	610015	613028					
	A685 road bridge to railway bridge	44	613028	613039		D	D	D	
	Railway bridge to Birk Beck foot	45	613039	612052		D	C	B	E
	Birk Beck foot to Chapel Beck (Orton) foot	46	612052	620057		E	C	A	E
	Chapel Beckfoot (Orton) to Rais Beck foot	47	620057	635057	E	D	D	D	C
	Rais Beck foot to Road bridge NY645055	48	635057	645055	D	E	B	D	E
	Road bridge NY645055 to NY657053	49	645055	657053	E	D	D	C	E
	NY657053 to Bowderdale Beck foot	50	657053	677052	E	E	E	E	E
	Bowderdale Beck foot to Dubbs road bridge	51	677052	692054	E	F	D	E	D
	Dubbs road bridge to top redds	52	692054	703054	E		F	F	
Denny Beck	Beck foot to Davies's farm	53	504647	504632					
	Davies's Farm to top redd	54	504632	499625					

Artle Beck	Beckfoot to Road bridge SD534645	55	532655	534645		E	E		
	Road bridge SD534645 to Road bridge SD532636	56	534645	532636	E	E		F	
	Road bridge SD532636 to Hawkshead	57	532636	542631					
	Hawkshead to Road bridge SD554624	58	542631	554624					
	Road bridge SD554624 to Foxdale Beck foot	59	554624	565621					
	Foxdale Beck foot to top redd	60	565621	578621					
Foxdale Beck	Beckfoot to Whitespout foot	61	565621	579608					
	Whitespout foot to top redd	62	579608	582600					
Udale Beck	Beck foot to top redd	63	554624	568604					
Tarn Brook	Beckfoot to SD544638	64	542652	544638					
	SD544638 to top redd	65	544638	564635					
River Wenning	Wenning Foot to A683 road bridge	66	572684	585684			E		
	A683 road bridge to Hindburn foot	67	585684	592689			E	E	
	Hindburn foot to SD600691	68	592689	600691			E	E	
	SD600691 to Tatham Bridge	69	600691	610694			E	E	
	Tatham Bridge to Wennington Bridge	70	610694	616700			E	E	
	Wennington Bridge to railway bridge SD634698	71	616700	634698			E	E	
	Railway bridge SD634698 to Low Bentham railway bridge	72	634698	645695			E		
	Low Bentham railway bridge to beckfoot SD656691	73	645695	656691			E		
	Beckfoot SD656691 to roadbridge SD667687	74	656691	667687			E		
	Road bridge SD667687 to footbridge SD679685	75	667687	679685					E
	Footbridge SD679685 to roadbridge SD693683	76	679685	693683			E	E	
	Roadbridge SD693683 to railway bridge SD703681	77	693683	703681			E	E	
	Railway Bridge SD703681 to Keasden Beckfoot	78	703681	712678			E	E	
	Keasden beckfoot to Clapham railway bridge	79	712678	734678			E	E	E
Clapham railway bridge to Austwick /Clapham Beck foot	80	734678	745674	E		E	E	E	
Nutta Beck	beckfoot to beckfoot SD735683	81	737677	735683	E	F	F	F	F
	beckfoot SD735683 to top redd	82	735683	721696	E	F	F	F	F

Clapham Beck	Beckfoot to Bowsber footbridge	83	745674	745684	B	D	C	D	E
	Bowsber footbridge to top redd	84	745684	745695		E	E	E	E
Austwick Beck	Austwick Beckfoot to SD753677	85	745674	753677	B	E	D	E	E
	SD753677 to Harden Bridge	86	753677	762678	D	D	C	E	E
	Harden Bridge to Road bridge SD769683	87	762678	769683	E	D	E	E	E
	Road bridge SD769683 to Town Head	88	769683	777689	E	E	E	D	F
	Town Head to SD788694	89	777689	788694	F	F	E	F	
	Town Head to SD768698	90	777689	768698		F			
	Town Head to SD779696	91	777689	779696		F			F
	SD779696 to top redd	92	779696	775705		E			
Fen Beck	Beckfoot to Waters bridge	93	745673	750669					
	Waters Bridge to top redd	94	750669	775659	E				
Keasden Beck	Keasden beckfoot to roadbridge SD716668	95	712678	716668			F		
	Roadbridge SD716668 to Turnerford Bridge	96	716668	723661					
	Turnerford Bridge to Rantree Gill foot	97	723661	719648					
	Rantree Gill foot to top redd	98	719648	721629					
River Hindburn	Hindburn foot to B6480 road bridge	99	592689	604680	E		D	E	
	B6480 Road bridge to Roeburn foot	100	604680	605675	E				
	Roeburn foot to Waterfall	101	605675	619676	E		D	E	
	Waterfall to Road bridge SD635670	102	619676	635670			E	F	
	Road bridge SD635670 to beckfoot SD641663	103	635670	641663			E	F	
	Beckfoot SD641663 to beckfoot SD645657	104	641663	645657	E		F	F	
	Beckfoot SD645657 to beckfoot SD648646	105	645657	648646	E		F	E	
	Beckfoot SD648646 to Road bridge SD650640	106	648646	650640	E			E	
	Road bridge SD650640 to SD654634	107	650640	654634			F	E	F
	SD654634 to beckfoot SD656627	108	654634	656627	F		F	F	F
	SD656627 to top redd	109	656627	654616	F		E	E	F
River Roeburn	Roeburn Foot to beckfoot SD604665	110	605675	604665					

	Beckfoot SD604665 to Back Farm Beckfoot	111	604665	608653					
	Back Farm Beckfoot to beckfoot SD606646	112	608653	606646					
	Beckfoot SD606646 to roadbridge SD600638	113	606646	600638					
	Roadbridge SD600638 to Ford	114	600638	600631					
	Ford to Mallowdale	115	600631	605620					
	Mallowdale to Mallowdale Pike	116	605620	618609					
	Mallowdale Pike to top redd	117	618609	626600					
Gressingham Beck	Beckfoot to village SD570700	118	574691	570700	F			F	
	Village SD570700 to top redd	119	570700	550700	F			F	
River Greta	Greta foot to A683 road bridge	120	598728	611727		E			E
	A683 roadbridge to SD623721	121	611727	623721	E	E			E
	SD623721 to beckfoot SD633719	122	623721	633719					E
	Beckfoot SD633719 to Weir SD645720	123	633719	645720					E
	Weir SD645720 to Roadbridge SD653720	124	645720	653720			F		E
	Roadbridge SD653720 to beckfoot SD666716	125	653720	666716	E	E	E		
	Beckfoot SD666716 to Lund Farm	126	666716	675725	E	E	E	E	
	Lund Farm to A65 roadbridge	127	675725	689728		E	E	E	E
	A65 roadbridge to Doe foot	128	689728	694733		E		E	E
Burton Beck	beckfoot to top redd	129	654721	658729			F		
River Doe	Doe foot to Snow falls	130	694733	702743					E
	Snow falls to top redd	131	702743	733764					F
River Twiss	Twiss foot to Pecca Falls	132	694733	695748					
Cant Beck	beckfoot to A683 roadbridge	133	602728	607732	E		F		
	A683 roadbridge to beckfoot SD617736	134	607732	617736	E		F		
	beckfoot SD617736 to SD624739	135	617736	624739			F		
	SD624739 to Collingholme	136	624739	636747			F		F
	Collingholme to Anems House	137	636747	650745					F
	Collingholme to Low House Farm	138	636747	638754					F

Leck Beck	Beckfoot to A683 roadbridge	139	610754	614756			E		
	A683 roadbridge to beckfoot SD625763	140	614756	625763			E		
	beckfoot SD625763 to Cowan Bridge	141	625763	635767			F		
	Cowan Bridge to beckfoot SD646775	142	635767	646775			E		F
	Beckfoot SD646775 to SD649784	143	646775	649784			E		
	SD649784 to SD657797	144	649784	657797					
	SD657797 to top redd	145	657797	660800					
Barbon Beck	beckfoot to B6256 roadbridge	146	608817	623826		E	E	E	E
	B6256 roadbridge to footbridge SD632825	147	623826	632825		E	F	E	
	Footbridge SD632825 to footbridge SD644827	148	632825	644827					
	Footbridge SD644827 to SD656828	149	644827	656828	E				
	SD656828 to top redd	150	656828	665840					
Mansergh Beck	beckfoot to top redd	151	608821	606834					
Underley Beck	beckfoot SD612791 to top redd	152	612791	604808					
Millhouse beck	beckfoot SD617852 to roadbridge SD627854	153	617852	627854				F	
	roadbridge SD627854 to top redd	154	627854	644856				F	
Middleton Beck	beckfoot to top redd	155	621860	629865			F		
Hatchery Beck	beckfoot to top redd	156	622871	634876			F	F	F
Springs Gill	Beckfoot SD624884 to Killington roadbridge	157	624884	614889			F		
	Killington roadbridge to top redd	158	614889	613895			F		
River Rawthey	Rawthey foot to SD629907	159	628897	629907		E		F	
	SD629907 to bridge SD643909	160	629907	643909			E	E	
	SD643909 to bridge SD662913	161	643909	662913	E		E	E	
	bridge SD662913 to River Clough foot	162	662913	676922		E	D	D	E
	River Clough foot to Thursgill SD682933	163	676922	682933			E		F
	Thursgill SD682933 to Crook Holme	164	682933	690948		E	E	E	E
	Crook Holme to Wardses footbridge	165	690948	695960		E			E
	Wardses footbridge to Cautley beckfoot	166	695960	694968	D	E	E	E	

	Cautley beckfoot to Handley's bridge	167	694968	705976	E		F		
	Handley's Bridge to Rawthey Bridge	168	705976	712979					
	Rawthey Bridge to top redd	169	712979	734960			F	E	
River Clough	Clough foot to Hallbank Bridge	170	676922	683917			D		E
	Hallbank Bridge to Garsdale Foot bridge	171	683917	698913			E		
	Garsdale Foot bridge to road bridge SD714907	172	698913	714907	F		E		F
	Roadbridge SD714907 to footbridge SD727901	173	714907	727901			E		E
	Footbridge SD727901 to Low House bridge	174	727901	737895			E		
	Low house bridge to bridge SD SD752897	175	737895	752897					
	bridge SD752897 to cross thwaite bridge	176	752897	762900					
	Cross Thwaite bridge to A684 road bridge	177	762900	772903					
	A684 road bridge to top redd	178	772903	783921					
Bellows End Beck	Beckfoot SD716907 to SD714906	179	716907	714906			F	F	F
Cautley Beck	Cautley beckfoot to top redd	180	694968	683974	F	F	E	F	E
Backside Beck	beckfoot to top redd	181	700971	696987			E	F	
Wandale Beck	beckfoot to top redd	182	707978	712990			F	F	
Sally Beck	beckfoot SD714978 to top redd	183	714978	736992			F	F	E
River Dee	Dee foot to Rash Bridge	184	648910	659900			F		
	Rash Bridge to bridge SD666894	185	659900	666894			F		E
	bridge SD666894 to SD679887	186	666894	679887	D		C	E	B
	SD679887 to Barth Bridge	187	679887	694879	C	F	C	C	D
	Barth Bridge to Dent Church bridge	188	694879	708872	E	F	E	E	F
	Dent Church bridge to Deepdale beckfoot	189	708872	716866	F		E		
	Deepdale beckfoot to top redd	190	716866	743864					
Deepdale Beck	beckfoot to top redd	191	716886	725839					
Keld Beck	beckfoot to road bridge SD715864	192	708872	715864	F	F	E	D	B
	road bridge SD715864 to top redd	193	715864	714855	F		F		F
Blackhorse Beck	Beckfoot SD627919 to SD617917	194	627919	617917		F		F	

Crosdale Beck	beckfoot to roadbridge SD638937	195	630929	638937					
	roadbridge SD638937 to top redd	196	638937	652940					
Chapel Beck (Howgill)	beckfoot to roadbridge SD634950	197	629950	634950		F	F	E	F
	Roadbridge SD634950 to SD646963	198	634950	646963		F	E	E	
Long Rigg Beck	SD646963 to SD653976	199	646963	653976		F	F		
Bram Rigg Beck	SD648958 to SD660959	200	648958	660959		F			
Calf Beck	beckfoot to top redd	201	646963	658965			F		
Borrow Beck	Beckfoot to beckfoot NY599017	202	610015	599017					
	beckfoot NY599017 to footbridge NY587013	203	599017	587013					
	Footbridge NY587013 to Low Borrowdale	204	587013	580019			E		
	Low Borrowdale to beckfoot NY571028	205	580019	571028			D	D	
	beckfoot NY571028 to beckfoot NY560037	206	571028	560037			E	E	
	beckfoot NY560037 to Crookdale beckfoot	207	560037	552040			F	F	
	Crookdale beckfoot to High House	208	552040	537047			F		
	High House to top redd	209	537047	522060					
Crookdale Beck	Beckfoot to Hause Foot	210	552040	552054				F	
	Hause Foot to top redd	211	552054	517072					
Birk Beck	Beckfoot to Bretherdale Beckfoot	212	612052	600054			E	F	
	Bretherdale Beckfoot to Steps footbridge	213	600054	595067			E		
	Steps Footbridge to Rampshowe footbridge	214	595067	590077			E		
	Rampshowe footbridge to Salterwath	215	590077	583092					
	Salterwath to Wasdale Beckfoot	216	583092	578096					
	Wasdale Beckfoot to top redd	217	578096	557101					
Bretherdale Beck	Beckfoot to Midwath Stead	218	600054	585047		F	E	E	
	Midwath Stead to top redd	219	585047	577049			F	F	
Wasdale Beck	Beckfoot to A6 crossing	220	578096	561082					
	A6 crossing to top redd	221	561082	545073					

Chapel Beck (Orton)	beckfoot to roadbridge NY623065	222	620057	623065		C			
	roadbridge NY623065 to beckfoot NY629076	223	623065	629076		E			
	beckfoot NY629076 to top redd	224	629076	625090					
Tebay Gill	Beckfoot NY626056 to High woodend	225	626056	623039		E		E	
Rais Beck	beckfoot to Fawcett Mill bridge	226	635057	637067		E			
	Fawcett Mill Bridge to top redd	227	637067	650076		F			
Ellergill Beck	Beckfoot to top redd	228	639056	636028					
Langdale Beck	Beckfoot to Long Gills	229	643056	644041			F	E	
	Long Gills to beckfoot NY648027	230	644041	648027			F	F	
	beckfoot NY648027 to top redd	231	648027	658017			F		
Bowderdale Beck	beckfoot to NY674035	232	677052	674035		E	F	E	
	NY674035 to top redd	233	674035	678007			F		
Weasdale Beck	beckfoot to Weasdale roadbridge	234	685052	690038		E	F	E	
	Weasdale road bridge to top redd	235	690038	688018			F		

Beck	Reach	Reach Code	Start NGR (SD) / (NY)	Finish NGR (SD) / (NY)	Sea Trout Grade (per km)				
					93/94	94/95	95/96	96/97	98/99
River Lune	Forge weir to road bridge SD523647	1	514648	523647			F		
	Road bridge SD523647 to Weir SD529654	2	523647	529654	F				
	Weir SD529654 to Bridge SD535658	3	529654	535658			F		
	Bridge SD535658 to SD539653	4	535658	539653	F		F	F	
	SD539653 to beck foot SD547659	5	539653	547659	F		F	F	
	Beckfoot SD547659 to SD552667	6	547659	552667	F		F	F	
	SD552667 to the Snab SD561677	7	552667	561677	F		F	F	
	The Snab SD561677 to Wenning Foot	8	561677	572684	F		F	F	
	Wenning Foot to Gressingham beckfoot	9	572684	574691	F		F	F	
	Gressingham beckfoot to Loyn Bridge	10	574691	582697	F		F	F	
	Loyn Bridge to SD581706	11	582697	581706	E		F	F	
	SD581706 to opp Arkholme Church	12	581706	589718	E		F	F	
	opp Arkholme Church to Greta Foot	13	589718	598728	E		F	F	
	Greta Foot to SD600741	14	598728	600741	F			F	
	SD600741 to Leck Beckfoot	15	600741	610754	F		F	F	
	Leck Beckfoot to SD610762	16	610754	610762			F	F	
	SD610762 to footbridge SD614774	17	610762	614774			F	F	
	Footbridge SD614774 to Kirkby Lonsdale road bridge	18	614774	615782	F		F	F	
	Kirby Lonsdale road bridge to beckfoot SD612791	19	615782	612791			F	F	
	Beckfoot SD612791 to Casterton beckfoot	20	612791	618797	F		F	F	
	Casterton beckfoot to footbridge SD608808	21	618797	608808	F		F	F	
	Footbridge SD608808 to Barbon Beckfoot	22	608808	608817			F	F	
	Barbon Beckfoot to beckfoot SD613828	23	608817	613828			F	F	
	Beckfoot SD613828 to Holme House	24	613828	614838		F	F	F	
	Holme House to beckfoot SD612842	25	614838	612842	F		F	F	
	Beckfoot SD612842 to Millhouses beck foot	26	612842	617852		F	F	F	

	Millhouses beck foot to Middleton Beckfoot	27	617852	621860	F	F	F	F	
	Middleton Beckfoot to Hatchery beckfoot	28	621860	620874	E		F	F	
	Beckfoot SD620874 to Hallbeck foot	29	620874	624884			F	F	
	Hallbeck foot to Rawthey Foot	30	624884	628897		F	F	F	
	Rawthey Foot to Broadraime Weir	31	628897	621901	F			F	
	Broadraime Weir to B6256 roadbridge	32	621901	623908					
	B6256 roadbridge to A684 roadbridge	33	623908	632923			F	E	
	A684 roadbridge to beckfoot SD630939	34	632923	630939			F		
	Beckfoot SD630939 to Chapel Beckfoot	35	630939	628949			F		
	Chapel Beckfoot to beckfoot SD623955	36	628949	623955			F	F	E
	Beckfoot SD623955 to Davy Bank roadbridge	37	623955	620964			F		
	Davy Bank road bridge to Lowgill	38	620964	624970			F		
	Lowgill to Fairmile Beckfoot	39	624970	623977					
	Fairmile Beckfoot to Gibbet Hill beckfoot	40	623977	623994					
	Gibbet Hill beckfoot to High Garlingill	41	623994	613005					
	High Garlingill to Borrow Beckfoot	42	613005	610015			F	F	
	Borrow Beckfoot to A685 road bridge	43	610015	613028					
	A685 road bridge to railway bridge	44	613028	613039		F	F	F	
	Railway bridge to Birk Beck foot	45	613039	612052		F	F	E	F
	Birk Beck foot to Chapel Beck (Orton) foot	46	612052	620057		F	F	F	F
	Chapel Beckfoot (Orton) to Rais Beck foot	47	620057	635057	F	F	F	E	F
	Rais Beck foot to Road bridge NY645055	48	635057	645055	E	F	F	F	F
	Road bridge NY645055 to NY657053	49	645055	657053	F	F	F	F	F
	NY657053 to Bowderdale Beck foot	50	657053	677052	E	F	F	F	F
	Bowderdale Beck foot to Dubbs road bridge	51	677052	692054	E	E	E	F	F
	Dubbs road bridge to top redds	52	692054	703054	E		E	E	
Denny Beck	Beck foot to Davies's farm	53	504647	504632					
	Davies's Farm to top redd	54	504632	499625					

Artle Beck	Beckfoot to Road bridge SD534645	55	532655	534645		F	F		
	Road bridge SD534645 to Road bridge SD532636	56	534645	532636	F	F		E	
	Road bridge SD532636 to Hawkshead	57	532636	542631					
	Hawkshead to Road bridge SD554624	58	542631	554624					
	Road bridge SD554624 to Foxdale Beck foot	59	554624	565621					
	Foxdale Beck foot to top redd	60	565621	578621					
Foxdale Beck	Beckfoot to Whitespout foot	61	565621	579608					
	Whitespout foot to top redd	62	579608	582600					
Udale Beck	Beck foot to top redd	63	554624	568604					
Tarn Brook / Bull Beck	Beckfoot to SD544638	64	542652	544638					
	SD544638 to top redd	65	544638	564635					
River Wenning	Wenning Foot to A683 road bridge	66	572684	585684			E		
	A683 road bridge to Hindburn foot	67	585684	592689			F	E	
	Hindburn foot to SD600691	68	592689	600691			F	E	
	SD600691 to Tatham Bridge	69	600691	610694			F	E	
	Tatham Bridge to Wennington Bridge	70	610694	616700			F	E	
	Wennington Bridge to railway bridge SD634698	71	616700	634698			F	E	
	Railway bridge SD634698 to Low Bentham railway bridge	72	634698	645695			F		
	Low Bentham railway bridge to beckfoot SD656691	73	645695	656691			F		
	Beckfoot SD656691 to roadbridge SD667687	74	656691	667687			F		
	Road bridge SD667687 to footbridge SD679685	75	667687	679685				F	
	Footbridge SD679685 to roadbridge SD693683	76	679685	693683			F	F	
	Roadbridge SD693683 to railway bridge SD703681	77	693683	703681			F	F	
	Railway Bridge SD703681 to Keasden Beckfoot	78	703681	712678			F	F	
	Keasden beckfoot to Clapham railway bridge	79	712678	734678			F	F	F
Clapham railway bridge to Austwick /Clapham Beck foot	80	734678	745674	F		F	F	F	
Nutta Beck	beckfoot to beckfoot SD735683	81	737677	735683	E	E	E	F	E
	beckfoot SD735683 to top redd	82	735683	721696	E	E	E	E	E

Clapham Beck	Beckfoot to Bowsber footbridge	83	745674	745684	D	D	D	E	E
	Bowsber footbridge to top redd	84	745684	745695		E	E	E	E
Austwick Beck	Austwick Beckfoot to SD753677	85	745674	753677	D	E	E	E	E
	SD753677 to Harden Bridge	86	753677	762678	D	E	D	E	E
	Harden Bridge to Road bridge SD769683	87	762678	769683	E	E	D	D	D
	Road bridge SD769683 to Town Head	88	769683	777689	E	E	D	D	E
	Town Head to SD788694	89	777689	788694	E	E	E	E	
	Town Head to SD768698	90	777689	768698		E			
	Town Head to SD779696	91	777689	779696		E			C
	SD779696 to top redd	92	779696	775705		F			
Fen Beck	Beckfoot to Waters bridge	93	745673	750669					
	Waters Bridge to top redd	94	750669	775659	E				
Keasden Beck	Keasden beckfoot to roadbridge SD716668	95	712678	716668			E		
	Roadbridge SD716668 to Turnerford Bridge	96	716668	723661					
	Turnerford Bridge to Rantree Gill foot	97	723661	719648					
	Rantree Gill foot to top redd	98	719648	721629					
River Hindburn	Hindburn foot to B6480 road bridge	99	592689	604680	E		D	E	
	B6480 Road bridge to Roeburn foot	100	604680	605675	F				
	Roeburn foot to Waterfall	101	605675	619676	F		E	E	
	Waterfall to Road bridge SD635670	102	619676	635670			E	E	
	Road bridge SD635670 to beckfoot SD641663	103	635670	641663			E	E	
	Beckfoot SD641663 to beckfoot SD645657	104	641663	645657	E		E	E	
	Beckfoot SD645657 to beckfoot SD648646	105	645657	648646	E		E	E	
	Beckfoot SD648646 to Road bridge SD650640	106	648646	650640	E			E	
	Road bridge SD650640 to SD654634	107	650640	654634			E	E	E
	SD654634 to beckfoot SD656627	108	654634	656627	E		E	E	E
	SD656627 to top redd	109	656627	654616	E		D	E	E
River Roeburn	Roeburn Foot to beckfoot SD604665	110	605675	604665					

	Beckfoot SD604665 to Back Farm Beckfoot	111	604665	608653					
	Back Farm Beckfoot to beckfoot SD606646	112	608653	606646					
	Beckfoot SD606646 to roadbridge SD600638	113	606646	600638					
	Roadbridge SD600638 to Ford	114	600638	600631					
	Ford to Mallowdale	115	600631	605620					
	Mallowdale to Mallowdale Pike	116	605620	618609					
	Mallowdale Pike to top redd	117	618609	626600					
Gressingham Beck	Beckfoot to village SD570700	118	574691	570700	E			E	
	Village SD570700 to top redd	119	570700	550700	E			E	
River Greta	Greta foot to A683 road bridge	120	598728	611727		F			F
	A683 roadbridge to SD623721	121	611727	623721	F	F			F
	SD623721 to beckfoot SD633719	122	623721	633719					F
	Beckfoot SD633719 to Weir SD645720	123	633719	645720					F
	Weir SD645720 to Roadbridge SD653720	124	645720	653720			E		F
	Roadbridge SD653720 to beckfoot SD666716	125	653720	666716	E	F	E		
	Beckfoot SD666716 to Lund Farm	126	666716	675725	F	F	E	E	
	Lund Farm to A65 roadbridge	127	675725	689728		F	E	E	E
	A65 roadbridge to Doe foot	128	689728	694733		F		E	E
Burton Beck	beckfoot to top redd	129	654721	658729			E		
River Doe	Doe foot to Snow falls	130	694733	702743					E
	Snow falls to top redd	131	702743	733764					F
River Twiss	Twiss foot to Pecca Falls	132	694733	695748					
Cant Beck	beckfoot to A683 roadbridge	133	602728	607732	F		E		
	A683 roadbridge to beckfoot SD617736	134	607732	617736	E		E		
	beckfoot SD617736 to SD624739	135	617736	624739			E		
	SD624739 to Collingholme	136	624739	636747			E		E
	Collingholme to Anems House	137	636747	650745					E
	Collingholme to Low House Farm	138	636747	638754					E

Leck Beck	Beckfoot to A683 roadbridge	139	610754	614756			E		
	A683 roadbridge to beckfoot SD625763	140	614756	625763			E		
	beckfoot SD625763 to Cowan Bridge	141	625763	635767			E		
	Cowan Bridge to beckfoot SD646775	142	635767	646775			E		E
	Beckfoot SD646775 to SD649784	143	646775	649784			E		
	SD649784 to SD657797	144	649784	657797					
	SD657797 to top redd	145	657797	660800					
Barbon Beck	beckfoot to B6256 roadbridge	146	608817	623826		E	D	E	E
	B6256 roadbridge to footbridge SD632825	147	623826	632825		F	E	F	
	Footbridge SD632825 to footbridge SD644827	148	632825	644827					
	Footbridge SD644827 to SD656828	149	644827	656828	F				
	SD656828 to top redd	150	656828	665840					
Mansergh Beck	beckfoot to top redd	151	608821	606834					
Underley Beck	beckfoot SD612791 to top redd	152	612791	604808					
Millhouse beck	beckfoot SD617852 to roadbridge SD627854	153	617852	627854				F	
	roadbridge SD627854 to top redd	154	627854	644856				E	
Middleton Beck	beckfoot to top redd	155	621860	629865			E		
Hatchery Beck	beckfoot to top redd	156	622871	634876			E	E	E
Springs Gill	Beckfoot SD624884 to Killington roadbridge	157	624884	614889			E		
	Killington roadbridge to top redd	158	614889	613895			F		
River Rawthey	Rawthey foot to SD629907	159	628897	629907		F		E	
	SD629907 to bridge SD643909	160	629907	643909			F	F	
	SD643909 to bridge SD662913	161	643909	662913	E		F	F	
	bridge SD662913 to River Clough foot	162	662913	676922		E	E	F	F
	River Clough foot to Thursgill SD682933	163	676922	682933		E	F		F
	Thursgill SD682933 to Crook Holme	164	682933	690948		E	F	F	F
	Crook Holme to Wardses footbridge	165	690948	695960		F			F
Wardses footbridge to Cautley beckfoot	166	695960	694968	E	F	E	F		

	Cautley beckfoot to Handley's bridge	167	694968	705976	F		E		
	Handley's Bridge to Rawthey Bridge	168	705976	712979					
	Rawthey Bridge to top redd	169	712979	734960			E	F	
River Clough	Clough foot to Hallbank Bridge	170	676922	683917			F		F
	Hallbank Bridge to Garsdale Foot bridge	171	683917	698913			F		
	Garsdale Foot bridge to road bridge SD714907	172	698913	714907	E		F		E
	Roadbridge SD714907 to footbridge SD727901	173	714907	727901			F		F
	Footbridge SD727901 to Low House bridge	174	727901	737895			E		
	Low house bridge to bridge SD SD752897	175	737895	752897					
	bridge SD752897 to cross thwaite bridge	176	752897	762900					
	Cross Thwaite bridge to A684 road bridge	177	762900	772903					
	A684 road bridge to top redd	178	772903	783921					
Bellows End Beck	Beckfoot SD716907 to SD714906	179	716907	714906			C	C	D
Cautley Beck	Cautley beckfoot to top redd	180	694968	683974	E	E	D	D	E
Backside Beck	beckfoot to top redd	181	700971	696987			E	E	
Wandale Beck	beckfoot to top redd	182	707978	712990			E	E	
Sally Beck	beckfoot SD714978 to top redd	183	714978	736992			E	E	E
River Dee	Dee foot to Rash Bridge	184	648910	659900			F		
	Rash Bridge to bridge SD666894	185	659900	666894			F		F
	bridge SD666894 to SD679887	186	666894	679887	F		E	E	F
	SD679887 to Barth Bridge	187	679887	694879	E	E	E	E	F
	Barth Bridge to Dent Church bridge	188	694879	708872	E	E	E	F	F
	Dent Church bridge to Deepdale beckfoot	189	708872	716866	F		E		
	Deepdale beckfoot to top redd	190	716866	743864					
Deepdale Beck	beckfoot to top redd	191	716886	725839					
Keld Beck	beckfoot to road bridge SD715864	192	708872	715864	B	D	B	C	C
	road bridge SD715864 to top redd	193	715864	714855	C		F		F
Blackhorse Beck	Beckfoot SD627919 to SD617917	194	627919	617917		E		E	

Crosdale Beck	beckfoot to roadbridge SD638937	195	630929	638937					
	roadbridge SD638937 to top redd	196	638937	652940					
Chapel Beck (Howgill)	beckfoot to roadbridge SD634950	197	629950	634950		E	D	F	B
	Roadbridge SD634950 to SD646963	198	634950	646963		D	E	E	
Long Rigg Beck	SD646963 to SD653976	199	646963	653976		D	D		
Bram Rigg Beck	SD648958 to SD660959	200	648958	660959		E			
Calf Beck	beckfoot to top redd	201	646963	658965			E		
Borrow Beck	Beckfoot to beckfoot NY599017	202	610015	599017					
	beckfoot NY599017 to footbridge NY587013	203	599017	587013					
	Footbridge NY587013 to Low Borrowdale	204	587013	580019			F		
	Low Borrowdale to beckfoot NY571028	205	580019	571028			F	F	
	beckfoot NY571028 to beckfoot NY560037	206	571028	560037			E	F	
	beckfoot NY560037 to Crookdale beckfoot	207	560037	552040			E	E	
	Crookdale beckfoot to High House	208	552040	537047			E		
	High House to top redd	209	537047	522060					
Crookdale Beck	Beckfoot to Hause Foot	210	552040	552054				E	
	Hause Foot to top redd	211	552054	517072					
Birk Beck	Beckfoot to Bretherdale Beckfoot	212	612052	600054			F	E	
	Bretherdale Beckfoot to Steps footbridge	213	600054	595067			F		
	Steps Footbridge to Rampshowe footbridge	214	595067	590077			F		
	Rampshowe footbridge to Salterwath	215	590077	583092					
	Salterwath to Wasdale Beckfoot	216	583092	578096					
	Wasdale Beckfoot to top redd	217	578096	557101					
Bretherdale Beck	Beckfoot to Midwath Stead	218	600054	585047		E	E	F	
	Midwath Stead to top redd	219	585047	577049			F	E	
Wasdale Beck	Beckfoot to A6 crossing	220	578096	561082					
	A6 crossing to top redd	221	561082	545073					

Chapel Beck (Orton)	beckfoot to roadbridge NY623065	222	620057	623065		E		
	roadbridge NY623065 to beckfoot NY629076	223	623065	629076		E		
	beckfoot NY629076 to top redd	224	629076	625090				
Tebay Gill	Beckfoot NY626056 to High woodend	225	626056	623039		F		E
Rais Beck	beckfoot to Fawcett Mill bridge	226	635057	637067		F		
	Fawcett Mill Bridge to top redd	227	637067	650076		E		
Ellergill Beck	Beckfoot to top redd	228	639056	636028				
Langdale Beck	Beckfoot to Long Gills	229	643056	644041			E	F
	Long Gills to beckfoot NY648027	230	644041	648027			D	E
	beckfoot NY648027 to top redd	231	648027	658017			A	
Bowderdale Beck	beckfoot to NY674035	232	677052	674035		F	D	F
	NY674035 to top redd	233	674035	678007			F	
Weasdale Beck	beckfoot to Weasdale roadbridge	234	685052	690038		F	E	E
	Weasdale road bridge to top redd	235	690038	688018			F	

APPENDIX II

Ribble Grade Summary Sheets

Salmon

Sea Trout

Beck	Reach	Reach No.	Start NGR (SD)	Finish NGR (SD)	Salmon Grade (per km)					
					92/93	93/94	94/95	95/96	96/97	98/99
River Ribble	Sunderland Hall to Hothersall Hall	1	SD620338	SD633348				E		
	Hothersall Hall to Osbaldeston Hall	2	SD633348	SD643345						
	Osbaldeston Hall to Boyces Brook Foot	3	SD643345	SD652352						
	Boyces Brook Foot to Ribchester Road Bridge	4	SD652352	SD662357				E		
	Ribchester Road Bridge to Beck Foot SD672365	5	SD662357	SD672365						
	Beck Foot SD672365 to Starling Brook Foot	6	SD682365	SD694373						
	Starling Brook Foot to Park Brook Foot	7	SD682365	SD694373						
	Park Brook Foot to Calder Foot	8	SD694373	SD709371						
	Calder Foot to Hodder Foot	9	SD709371	SD710382				E		
Boyces Brook	Boyces Brook to top redd	10	SD652352	SD664368	F	F	F	F	F	
Stydd Brook	Stydd Brook Foot to top redd	11	SD654358	SD651381						
Duddle Brook	Duddel Brook foot to top redd	12	SD654358	SD658365	F	F		F	F	E
Starling Brook	Starling Brook Foot to top redd	13	SD682365	SD652394						
Dean Brook	Dean Brook Foot to top redd	14	SD687368	SD687375	E			F	F	
Park Brook	Park Brook Foot to top redd	15	SD694373	SD695355				F		
River Ribble	Hodder Foot to Mitton Road Bridge	16	SD710382	SD716387						
	Mitton Road Bridge to Pipe Bridge	17	SD716387	SD723394						
	Pipe Bridge to Pendleton Brook Foot	18	SD723394	SD724403						
	Pendleton Brook Foot to Edisford Bridge	19	SD724403	SD726415						
	Edisford Bridge to Brungerley Bridge	20	SD726415	SD739429						
	Brungerley Bridge to West Bradford Bridge	21	SD739429	SD745439						
	West Bradford Bridge West Clough Brook Foot	22	SD745439	SD758448			E	D		
	West Clough Brook Foot to Swanside Brook Foot	23	SD758448	SD769454			E	D		
Pendleton Brook	Pendleton Brook Foot to top redd	24	SD724403	SD738407						
Bashall Brook	Bashall Brook Foot to Road Bridge SD723432	25	SD728417	SD723432			F	F	F	F
	Road Bridge SD723432 to top redd	26	SD723432	SD705441	E	E	F	E	F	F

West Clough Brook	West Clough Brook Foot to top redd	27	SD758448	SD750457			F			F
Chatburn Brook	Chatburn Brook Foot to top redd	28	SD767448	SD785442						
River Ribble	Swanside Beck Foot to Sawley Road Bridge	29	SD769454	SD775467			D	D	D	F
	Sawley Road Bridge to Skirden Beck Foot	30	SD775467	SD781477			E	D	E	F
	Skirden Beck Foot to SD794483	31	SD781477	SD794483			C	D	E	F
	SD794483 to Park House Beck Foot	32	SD794483	SD811488			E	E		F
	Park House Beck Foot to Stock Beck Foot	33	SD811488	SD825498				E	E	F
	Stock Beck Foot to Paythorne Road Bridge	34	SD825498	SD831512			C	C	D	F
Stock Beck	Stock Beck Foot to top redd	35	SD825498	SD879479					F	F
Skirden Beck	Skirden Beck foot to Bolton By Bowland	36	SD781477	SD784493		E	E	E	E	E
	Bolton By Bowland to Forest Becks	37	SD784493	SD786513		D	E	F	E	E
	Forest Becks to Tosside Beck Foot	38	SD786513	SD783530		D	E	E	E	F
Holden Beck	Holden Beck Foot to top redd	39	SD781479	SD774497			E	E	E	F
Bier Beck	Bier Beck Foot to top redd	40	SD783490	SD780515						
Bond Beck	Bond Beck Foot to top redd	41	SD781479	SD763556			F	E	F	F
Tosside Beck	Tosside Beck Foot to top redd	42	SD783530	SD778562			F	F	F	F
Monubent Beck	Monubent Beck Foot to top redd	43	SD786513	SD797529			F	F	F	F
Swanside Beck	Swanside Beck Foot to Ings Beck Foot	44	SD769454	SD785454					E	F
	Ings Beck Foot to Cowgill Beck Foot	45	SD785454	SD803465					E	C
	Cowgill Beck Foot to Howgill Beck Foot	46	SD803465	SD825462					E	F
Ings Beck	Ings Beck Foot to Twiston Beck Foot	47	SD785454	SD803450					E	D
	Twiston Beck Foot to top redd	48	SD803450	SD817447					F	C
Twiston Beck	Twiston Beck Foot to top redd	49	SD803450	SD811434					F	F
Cowgill Beck	Cowgill Beck Foot to top redd	50	SD803465	SD803476						F
Howgill Beck	Howgill Beck Foot to top redd	51	SD825462	SD833451					F	F
Cragg Clough	Cragg Clough Foot to top redd	52	SD827460	SD837457						
Eel Beck	Eel Beck Foot to top redd	53	SD816464	SD841476						
River Ribble	Paythorne Road Bridge to Weir SD843522	54	SD831512	SD843522				E		F

	Weir SD843522 to Ged Beck Foot	55	SD843522	SD856536				E	E	F
	Ged Beck Foot to Halton Road Bridge	56	SD856536	SD852553			E	E	C	F
	Halton Road Bridge to Weir SD838556	57	SD852553	SD838556			E		C	F
	Weir SD838556 to Cow Bridge	58	SD838556	SD828569			E		F	F
	Cow Bridge to Rathmell Beck Foot	59	SD828569	SD814588	E	E	E	E	E	E
Rathmell Beck	Rathmell Beck Foot to top redd	60	SD814588	SD790598				C	F	F
Wigglesworth Beck	Wigglesworth Beck foot to top redd	61	SD824573	SD784584				E	F	F
Long Preston Beck	Long Preston Beck Foot to Holme Bridge	62	SD826572	SD842583	E	E	E	E	E	E
	Holme Bridge to top redd	63	SD842583	SD836604			E	E		D
Hellifield Beck	Hellifield Beck Foot to top redd	64	SD852553	SD857573					F	F
River Ribble	Rathmell Beck Foot to Beck Foot SD812605	65	SD814558	SD812605		C		E		E
	Beck Foot SD812605 to A65(T) Road Bridge	66	SD812605	SD809621	F	E	C	B	A	A
	A65(T) Road Bridge to Settle Road Bridge	67	SD809621	SD816641				E		E
	Settle Road Bridge to Weir SD817654	68	SD816641	SD817654	E	E		E		F
	Weir SD817654 to Stainforth Beck Foot	69	SD817654	SD818669			E	E	E	E
Giggleswick Beck	Giggleswick Beck Foot to Road Bridge SD812640	70	SD808626	SD812640	E	E	E	E	F	E
	Road Bridge SD812640 to top redd	71	SD812640	SD807645			E	F	E	E
River Ribble	Stainforth Beck Foot to Railway Bridge SD815683	72	SD818669	SD815683		D				
	Railway Bridge SD815683 to Helwyth Bridge	73	SD815683	SD812695	C	B	A	C	C	C
	Helwyth Bridge to Footbridge SD806709	74	SD812695	SD806709		D	D	D	C	C
	Footbridge SD806709 to Blind Beck Foot	75	SD806709	SD806730		E	D	E	E	E
	Blind Beck Foot to SD796750	76	SD806730	SD796750			E	E	E	F
Blind Beck	Blind Beck Foot to top redd	77	SD806730	SD806732						
Brants Gill	Brants Gill Foot to top redd	78	SD807727	SD813729						
Horton Beck	Horton Beck Foot to top redd	79	SD807716	SD813724				E		F
Stainforth Beck	Stainforth Beck foot to top redd	80	SD818669	SD832671	E					F
Fornah Beck	Fornah Beck Foot to top redd	81	SD825676	SD852698						
Catrigg Beck	Catrigg Beck Foot to top redd	82	SD837673	SD848648						

Cowside Beck	Cowside Beck Foot to top redd	83	SD836671	SD859669						
River Ribble	SD796750 to Cam Beck Foot	84	SD796750	SD791764		E	D	D	D	D
Gayle Beck	Cam Beck Foot to Farm Bridge SD784779	85	SD791764	SD784779		D	D	D	E	C
	Farm Bridge to Battywife Beck Foot	86	SD784779	SD775793		E	E	E	E	D
	Battywife Beck Foot to High Springs Foot	87	SD775793	SD790810					E	F
	High Springs Foot to Top of Long Gill	88	SD790810	SD813832						
Ouster Gill	Ouster Gill Foot to top redd	89	SD794820	SD792840						
Lat Gill	Lat Gill Foot to top redd	90	SD793817	SD813827						
High Springs	High Springs Foot to top redd	91	SD790810	SD806817						
Cam Beck	Cam Beck Foot to top redd	92	SD791764	SD813802		E	E			E
Low Birkwith Beck	Low Birkwith Beck Foot to top redd	93	SD791763	SD803774			E			F
Gillgarth Beck	Gillgarth Beck Foot to top redd	94	SD795754	SD775750						

Beck	Reach	Reach No.	Start NGR (SD)	Finish NGR (SD)	Sea Trout Grade (per km)						
					92/93	93/94	94/95	95/96	96/97	98/99	
River Ribble	Sunderland Hall to Hothersall Hall	1	SD620338	SD633348				F			
	Hothersall Hall to Osbaldeston Hall	2	SD633348	SD643345							
	Osbaldeston Hall to Boyces Brook Foot	3	SD643345	SD652352							
	Boyces Brook Foot to Ribchester Road Bridge	4	SD652352	SD662357				F			
	Ribchester Road Bridge to Beck Foot SD672365	5	SD662357	SD672365							
	Beck Foot SD672365 to Starling Brook Foot	6	SD682365	SD694373							
	Starling Brook Foot to Park Brook Foot	7	SD682365	SD694373							
	Park Brook Foot to Calder Foot	8	SD694373	SD709371							
	Calder Foot to Hodder Foot	9	SD709371	SD710382				F			
Boyces Brook	Boyces Brook to top redd	10	SD652352	SD664368	F	F	F	E	E		
Stydd Brook	Stydd Brook Foot to top redd	11	SD654358	SD651381							
Duddle Brook	Duddel Brook foot to top redd	12	SD654358	SD658365	D	D		C	E	E	
Starling Brook	Starling Brook Foot to top redd	13	SD682365	SD652394							
Dean Brook	Dean Brook Foot to top redd	14	SD687368	SD687375	C			D	E		
Park Brook	Park Brook Foot to top redd	15	SD694373	SD695355				F			
River Ribble	Hodder Foot to Mitton Road Bridge	16	SD710382	SD716387							
	Mitton Road Bridge to Pipe Bridge	17	SD716387	SD723394							
	Pipe Bridge to Pendleton Brook Foot	18	SD723394	SD724403							
	Pendleton Brook Foot to Edisford Bridge	19	SD724403	SD726415							
	Edisford Bridge to Brungerley Bridge	20	SD726415	SD739429							
	Brungerley Bridge to West Bradford Bridge	21	SD739429	SD745439							
	West Bradford Bridge West Clough Brook Foot	22	SD745439	SD758448				F	F		
	West Clough Brook Foot to Swanside Brook Foot	23	SD758448	SD769454				F	F		
	Pendleton Brook	Pendleton Brook Foot to top redd	24	SD724403	SD738407						
Bashall Brook	Bashall Brook Foot to Road Bridge SD723432	25	SD728417	SD723432				F	F	D	C
	Road Bridge SD723432 to top redd	26	SD723432	SD705441	F	E	F	E	E	F	

West Clough Brook	West Clough Brook Foot to top redd	27	SD758448	SD750457			E			F
Chatburn Brook	Chatburn Brook Foot to top redd	28	SD767448	SD785442						
River Ribble	Swanside Beck Foot to Sawley Road Bridge	29	SD769454	SD775467			F	F	F	F
	Sawley Road Bridge to Skirden Beck Foot	30	SD775467	SD781477			F	F	F	F
	Skirden Beck Foot to SD794483	31	SD781477	SD794483			F	F	F	F
	SD794483 to Park House Beck Foot	32	SD794483	SD811488			F	F		F
	Park House Beck Foot to Stock Beck Foot	33	SD811488	SD825498				F	F	F
	Stock Beck Foot to Paythorne Road Bridge	34	SD825498	SD831512			F	F	E	F
Stock Beck	Stock Beck Foot to top redd	35	SD825498	SD879479					E	F
Skirden Beck	Skirden Beck foot to Bolton By Bowland	36	SD781477	SD784493		B	F	B	E	F
	Bolton By Bowland to Forest Becks	37	SD784493	SD786513		E	E	C	E	F
	Forest Becks to Tosside Beck Foot	38	SD786513	SD783530		E	D	C	F	F
Holden Beck	Holden Beck Foot to top redd	39	SD781479	SD774497			E	B	D	D
Bier Beck	Bier Beck Foot to top redd	40	SD783490	SD780515						
Bond Beck	Bond Beck Foot to top redd	41	SD781479	SD763556			E	D	E	F
Tosside Beck	Tosside Beck Foot to top redd	42	SD783530	SD778562			E	E	E	C
Monubent Beck	Monubent Beck Foot to top redd	43	SD786513	SD797529			E	D	E	E
Swanside Beck	Swanside Beck Foot to Ings Beck Foot	44	SD769454	SD785454					E	B
	Ings Beck Foot to Cowgill Beck Foot	45	SD785454	SD803465					E	E
	Cowgill Beck Foot to Howgill Beck Foot	46	SD803465	SD825462					E	F
Ings Beck	Ings Beck Foot to Twiston Beck Foot	47	SD785454	SD803450					E	E
	Twiston Beck Foot to top redd	48	SD803450	SD817447					D	C
Twiston Beck	Twiston Beck Foot to top redd	49	SD803450	SD811434					D	A
Cowgill Beck	Cowgill Beck Foot to top redd	50	SD803465	SD803476						F
Howgill Beck	Howgill Beck Foot to top redd	51	SD825462	SD833451					E	F
Cragg Clough	Cragg Clough Foot to top redd	52	SD827460	SD837457						
Eel Beck	Eel Beck Foot to top redd	53	SD816464	SD841476						
River Ribble	Paythorne Road Bridge to Weir SD843522	54	SD831512	SD843522				F		F

	Weir SD843522 to Ged Beck Foot	55	SD843522	SD856536				F	F	F
	Ged Beck Foot to Halton Road Bridge	56	SD856536	SD852553			F	F	F	F
	Halton Road Bridge to Weir SD838556	57	SD852553	SD838556			F		F	F
	Weir SD838556 to Cow Bridge	58	SD838556	SD828569			F		E	F
	Cow Bridge to Rathmell Beck Foot	59	SD828569	SD814588	E	F	F	F	F	F
Rathmell Beck	Rathmell Beck Foot to top redd	60	SD814588	SD790598				E	E	E
Wigglesworth Beck	Wigglesworth Beck foot to top redd	61	SD824573	SD784584				E	E	F
Long Preston Beck	Long Preston Beck Foot to Holme Bridge	62	SD826572	SD842583	E	E	F	E	E	F
	Holme Bridge to top redd	63	SD842583	SD836604			E	E		E
Hellifield Beck	Hellifield Beck Foot to top redd	64	SD852553	SD857573					E	F
River Ribble	Rathmell Beck Foot to Beck Foot SD812605	65	SD814558	SD812605		E		F		F
	Beck Foot SD812605 to A65(T) Road Bridge	66	SD812605	SD809621	E	E	F	E	F	F
	A65(T) Road Bridge to Settle Road Bridge	67	SD809621	SD816641				D		F
	Settle Road Bridge to Weir SD817654	68	SD816641	SD817654	F	F		F		F
	Weir SD817654 to Stainforth Beck Foot	69	SD817654	SD818669			F	F	F	F
Giggleswick Beck	Giggleswick Beck Foot to Road Bridge SD812640	70	SD808626	SD812640	E	F	E	E	E	E
	Road Bridge SD812640 to top redd	71	SD812640	SD807645			F	F	D	C
River Ribble	Stainforth Beck Foot to Railway Bridge SD815683	72	SD818669	SD815683		F				
	Railway Bridge SD815683 to Helwyth Bridge	73	SD815683	SD812695	E	F	F	F	F	F
	Helwyth Bridge to Footbridge SD806709	74	SD812695	SD806709		E	F	E	F	F
	Footbridge SD806709 to Blind Beck Foot	75	SD806709	SD806730		F	F	E	F	F
	Blind Beck Foot to SD796750	76	SD806730	SD796750			E	E	E	F
Blind Beck	Blind Beck Foot to top redd	77	SD806730	SD806732						
Brants Gill	Brants Gill Foot to top redd	78	SD807727	SD813729						
Horton Beck	Horton Beck Foot to top redd	79	SD807716	SD813724				E		F
Stainforth Beck	Stainforth Beck foot to top redd	80	SD818669	SD832671	F					F
Fornah Beck	Fornah Beck Foot to top redd	81	SD825676	SD852698						
Catrigg Beck	Catrigg Beck Foot to top redd	82	SD837673	SD848648						

Cowside Beck	Cowside Beck Foot to top redd	83	SD836671	SD859669						
River Ribble	SD796750 to Cam Beck Foot	84	SD796750	SD791764		E	F	E	E	E
Gayle Beck	Cam Beck Foot to Farm Bridge SD784779	85	SD791764	SD784779		F	F	E	E	F
	Farm Bridge to Battywife Beck Foot	86	SD784779	SD775793		D	F	E	F	F
	Battywife Beck Foot to High Springs Foot	87	SD775793	SD790810					F	F
	High Springs Foot to Top of Long Gill	88	SD790810	SD813832						
Ouster Gill	Ouster Gill Foot to top redd	89	SD794820	SD792840						
Lat Gill	Lat Gill Foot to top redd	90	SD793817	SD813827						
High Springs	High Springs Foot to top redd	91	SD790810	SD806817						
Cam Beck	Cam Beck Foot to top redd	92	SD791764	SD813802		E	F			E
Low Birkwith Beck	Low Birkwith Beck Foot to top redd	93	SD791763	SD803774			F			E
Gillgarth Beck	Gillgarth Beck Foot to top redd	94	SD795754	SD775750						

APPENDIX III

Hodder Grade Summary Sheets

Salmon

Sea Trout

Beck	Reach	Reach No.	Start NGR (SD)	Finish NGR (SD)	Salmon Grade (per km)						
					92/93	93/94	94/95	95/96	96/97	97/98	98/99
Hodder	Hodder foot to Lower Hodder Br.	1	710382	704392				E	E		F
	Lower Hodder Br. to Over Hacking Brook foot	2	704392	700401				E	E		F
	Over Hacking Brook foot to Higher Hodder Br.	3	700401	697412				E	E		F
	Higher Hodder Br. to brook foot (SD 692421)	4	697412	692421				E	E		F
	Brook foot (SD 692421) to brook foot (SD 680425)	5	692421	680425				E	E		F
	Brook foot (SD 680425) to brook foot (SD 679433)	6	680425	679433				E	E		F
	Brook foot (SD 679433) to Mill Beck foot	7	679433	674433				E	E		F
	Mill Beck foot to brook foot (SD 662434)	8	674433	662434				E	E		F
	Brook foot (SD 662434) to Doeford Br.	9	662434	651432				D	D		E
	Doeford Bridge to Greystoneley Brook foot	10	651432	645437				E	D		E
	Greystoneley Brook foot to Lees Beck foot	11	645437	652444	E	D	E	E	C		E
Cow Ark	Cow Ark brook foot to top redd	12	669443	673454		F		F	F	F	F
Mill Brook	Mill Brook foot to top redd	13	674433	683449	F	F		F	F	F	F
Lees Beck	Lees Beck foot to top redd	14	652444	668452					F		
Hodder	Lees Beck foot to Pipe Bridge (SD 654453)	15	652444	654453		E	E	A	D		E
	Pipe Bridge (SD 654453) to Fair Oak Brook foot	16	654453	654489				D	F		E
	Fair Oak Brook foot to Bridge Pool	17	654489	659471		E	D	C	D		E
	Bridge Pool to Burholme Br.	18	659471	657479		E		E	E		E
	Burholme Br. to brook foot (SD 656488)	19	657479	656488		E	E	E	E		E
	Brook foot (SD 656488) to foot Br. (SD 663494)	20	656488	663494	E	E	E	C	E		E
	Foot Br. (SD 663494) to Thorneyholme Br.	21	663494	664501			D	B	C		E
	Thorneyholme Br. to Rougher Syke foot	22	664501	673503	E		E	D	E		
	Rougher Syke foot to Knowlemere Br.	23	673503	680499			E	E	E		
	Knowlemere Br. to foot Br. (SD 691499)	24	680499	691499	E		E	E	E		
	Foot Br. (SD 691499) to Newton Br.	25	691499	698504			D	C	E		

	Newton Br. to Dunnnow Hall Br.	26	698504	760510			D	D	D		
	Dunnnow Hall Br. to Croasdale Brook foot	27	760510	714524	E	E	D	E	E		
Rougher Syke	Rougher Syke to top redd	28	673503	678520		F		F	F	F	F
Birkett Brook	Birkett Brook foot to top redd	29	683496	681485		F	F	F	F	F	F
Foulscales Brook	Foulscales Brook foot to top redd	30	693497	690479	F	F	F	F	F	F	F
Skelshaw Brook	Skelshaw Brook foot to top redd	31	723508	727497						F	
Easington Brook	Easington Brook foot to top redd	32	703505	727513	E	E			E	E	
Dunnnow Syke	Dunnnow Syke foot to top redd	33	709515	698520						F	
King Syke	King Syke foot to top redd	34	711515	724521			D	E		F	
Hodder	Croasdale Brook foot to Holmehead Br.	35	714524	716533				E	F	E	
	Holmehead Br. to Stocks reservoir	36	716533	719545				E	F	E	
	Stocks Reservoir to Hare Clough Beck foot	37	726573	715584					F	F	
	Hare Clough Beck foot to White Syke foot	38	715584	714586					F	F	
	White Syke foot to Cross of Greet Br.	39	714586	704591					F	F	F
Croasdale Brook	Croasdale Brook foot to Foot Br. (SD 706530)	40	714524	706530		F	F	E	F	E	F
	Foot Br. (SD 706530) to Foot Br. (SD 708537)	41	706530	708537	E	F	F	E	F	E	F
	Foot Br. (SD 708537) to Shay House Br.	42	708537	707545		F	F		E	E	E
	Shay House Br. to Moor Syke foot	43	707545	703550			F		F	F	F
	Moor Syke to top of Croasdale Beck	44	703550	683572					F		F
Lanshaw Brook	Lanshaw Brook foot to top redd	45	705534	698541						F	F
Moor Syke	Moor Syke foot to top redd	46	703550	705560							
Black Brook	Black Brook foot to top redd	47	693560	679555					F		
Barn Gill	Barn Gill foot to top redd	48	718537	739547		F			F	F	F
Phynis Brook	Phynis Brook foot to top redd	49	716543	715550				F	F	F	F
Bottoms	Bottoms Beck foot to top redd	50	740560	750595							
Hasgill Beck	Hasgill Beck foot to top redd	51	725574	734587							
Hare Clough Beck	Hare Clough Beck foot to top redd	52	715584	705575							
White Syke Beck	White Syke foot to top redd	53	714586	704584				E			E

Dunsop	Dunsop foot to Foot Br. (SD 657509)	54	663501	657509		E	F	E	F	F	E
	Foot Br. (SD 657509) to Duckpond (SD 653522)	55	657509	653522		E	F	E	E	F	E
	Duckpond (SD 653522) to Brennand River foot	56	653522	653533	F	E	F	F	E		E
Brennand River	Brennand River foot to Farm Br. (SD 646541)	57	653533	646541							
	Farm Br. (SD 646541) to top redd	58	646541	634545							
Whitendale River	Whitendale River foot to Whitendale Br.	59	646541	660549					F		F
	Whitendale Br. to top redd	60	660549	657571					F		F
Brown Syke	Brown Syke foot to top redd	61	631558	644574							
Langden Brook	Langden Brook foot to chapel (SD 653503)	62	662493	653503			F	E	F	F	F
	Chapel (SD 653503) to Haredon Brook foot	63	653503	643507				F	F	F	F
	Haredon Brook foot to Losterdale Brook foot	64	643507	633513	F			E	E	E	E
	Losterdale Brook foot to Bleasdale Water foot	65	633513	607504				F	F	F	F
Haredon Brook	Haredon Brook foot to top redd	66	643507	630503		F		F	F	F	
Losterdale Brook	Losterdale Brook foot to brook foot (SD 627523)	67	633513	627523	F	F	F	F	F	F	E
	Brook foot (SD 627523) to top redd	68	627523	627528	F	F	F	F	F	F	
Rams Brook	Brook foot to top redd	69	628522	635526					F	F	
Bleasdale Water	Bleasdale Water foot to top redd	70	607504	612492							
River Loud	Loud foot to Leagram Brook foot	71	651432	638426					F	E	E
	Leagram Brook foot to Chipping Brook foot	72	638426	628417					E	E	E
	Chipping Brook foot to Knott farm	73	628417	614402						F	F
	Knott Farm to top redd	74	614402	596429						F	
Leagram Brook	Leagram Brook foot to road Br. (SD 639441)	75	638426	639441					F	F	F
	Road Br. (SD 639441) to top redd	76	639441	630452	F					F	F
Chipping Brook	Chipping Brook foot to Startifants Br.	77	628417	624427	E				E	E	F
	Startifants Br. to top redd	78	624427	612442					E	F	F
Greystoneley Brook	Greystoneley Brook foot to Greystoneley Br.	79	645437	646441		F				F	F
	Greystoneley Br. to top redd	80	646441	642468	F	F	F			F	F
Hell Clough Brook	Hell Clough foot to top redd	81	637461	634470						F	

Beck	Reach	Reach No.	Start NGR (SD)	Finish NGR (SD)	Sea Trout Grade (per km)							
					92/93	93/94	94/95	95/96	96/97	97/98	98/99	
Hodder	Hodder foot to Lower Hodder Br.	1	710382	704392				F	F		F	
	Lower Hodder Br. to Over Hacking Brook foot	2	704392	700401				F	F		F	
	Over Hacking Brook foot to Higher Hodder Br.	3	700401	697412				F	F		F	
	Higher Hodder Br. to brook foot (SD 692421)	4	697412	692421				F	F		F	
	Brook foot (SD 692421) to brook foot (SD 680425)	5	692421	680425				F	F		F	
	Brook foot (SD 680425) to brook foot (SD 679433)	6	680425	679433				F	F		F	
	Brook foot (SD 679433) to Mill Beck foot	7	679433	674433				F	F		F	
	Mill Beck foot to brook foot (SD 662434)	8	674433	662434				F	E		E	
	Brook foot (SD 662434) to Doeford Br.	9	662434	651432				E	E		E	
	Doeford Bridge to Greystoneley Brook foot	10	651432	645437				F	F		F	
	Greystoneley Brook foot to Lees Beck foot	11	645437	652444	F	E	E	E	E		F	
Cow Ark	Cow Ark brook foot to top redd	12	669443	673454		E		E	E	E	E	
Mill Brook	Mill Brook foot to top redd	13	674433	683449	E	E		D	D	D	D	
Lees Beck	Lees Beck foot to top redd	14	652444	668452					E			
Hodder	Lees Beck foot to Pipe Bridge (SD 654453)	15	652444	654453		E	F	D	E		E	
	Pipe Bridge (SD 654453) to Fair Oak Brook foot	16	654453	654489				E	F		F	
	Fair Oak Brook foot to Bridge Pool	17	654489	659471		F	F	E	F		F	
	Bridge Pool to Burholme Br.	18	659471	657479		F		F	F		F	
	Burholme Br. to brook foot (SD 656488)	19	657479	656488		F	F	E	E		F	
	Brook foot (SD 656488) to foot Br. (SD 663494)	20	656488	663494	F	E	F	E	F		F	
	Foot Br. (SD 663494) to Thorneyholme Br.	21	663494	664501			F	E	E		F	
	Thorneyholme Br. to Rougher Syke foot	22	664501	673503	F		F	E	F			
	Rougher Syke foot to Knowlemere Br.	23	673503	680499			F	E	F			
	Knowlemere Br. to foot Br. (SD 691499)	24	680499	691499	F		F	F	F			
	Foot Br. (SD 691499) to Newton Br.	25	691499	698504			E	E	F			
	Newton Br. to Dunnow Hall Br.	26	698504	760510			F	E	F			

	Dunnow Hall Br. to Croasdale Brook foot	27	760510	714524	E	E	F	F	E		
Rougher Syke	Rougher Syke to top redd	28	673503	678520		E		D	C	C	C
Birkett Brook	Birkett Brook foot to top redd	29	683496	681485		C	E	D	C	A	C
Foulscales Brook	Foulscales Brook foot to top redd	30	693497	690479	E	E	D	E	E	C	D
Skelshaw Brook	Skelshaw Brook foot to top redd	31	723508	727497						E	
Easington Brook	Easington Brook foot to top redd	32	703505	727513	F	E			E	D	
Dunnow Syke	Dunnow Syke foot to top redd	33	709515	698520						F	
King Syke	King Syke foot to top redd	34	711515	724521			E	E		F	
Hodder	Croasdale Brook foot to Holmehead Br.	35	714524	716533				E	F	E	
	Holmehead Br. to Stocks reservoir	36	716533	719545				F	F	E	
	Stocks Reservoir to Hare Clough Beck foot	37	726573	715584					F	F	
	Hare Clough Beck foot to White Syke foot	38	715584	714586					F	F	
	White Syke foot to Cross of Greet Br.	39	714586	704591					F	F	E
Croasdale Brook	Croasdale Brook foot to Foot Br. (SD 706530)	40	714524	706530		E	E	E	D	E	D
	Foot Br. (SD 706530) to Foot Br. (SD 708537)	41	706530	708537	D	D	D	C	F	E	E
	Foot Br. (SD 708537) to Shay House Br.	42	708537	707545		E	D		D	D	D
	Shay House Br. to Moor Syke foot	43	707545	703550			E		E	D	F
	Moor Syke to top of Croasdale Beck	44	703550	683572					F		E
Lanshaw Brook	Lanshaw Brook foot to top redd	45	705534	698541						D	D
Moor Syke	Moor Syke foot to top redd	46	703550	705560							
Black Brook	Black Brook foot to top redd	47	693560	679555					E		
Barn Gill	Barn Gill foot to top redd	48	718537	739547		E			E	E	E
Phynis Brook	Phynis Brook foot to top redd	49	716543	715550				C	D	D	D
Bottoms	Bottoms Beck foot to top redd	50	740560	750595							
Hasgill Beck	Hasgill Beck foot to top redd	51	725574	734587							
Hare Clough Beck	Hare Clough Beck foot to top redd	52	715584	705575							
White Syke Beck	White Syke foot to top redd	53	714586	704584					E		E
Dunsop	Dunsop foot to Foot Br. (SD 657509)	54	663501	657509		E	E	E	D	E	E

	Foot Br. (SD 657509) to Duckpond (SD 653522)	55	657509	653522		E	D	D	D	D	E
	Duckpond (SD 653522) to Brennand River foot	56	653522	653533	D	E	E	D	E		E
Brennand River	Brennand River foot to Farm Br. (SD 646541)	57	653533	646541							
	Farm Br. (SD 646541) to top redd	58	646541	634545							
Whitendale River	Whitendale River foot to Whitendale Br.	59	646541	660549					D		E
	Whitendale Br. to top redd	60	660549	657571					E		E
Brown Syke	Brown Syke foot to top redd	61	631558	644574							
Langden Brook	Langden Brook foot to chapel (SD 653503)	62	662493	653503			E	D	E	E	E
	Chapel (SD 653503) to Haredon Brook foot	63	653503	643507				D	D	E	E
	Haredon Brook foot to Losterdale Brook foot	64	643507	633513		E		C	B	C	B
	Losterdale Brook foot to Bleasdale Water foot	65	633513	607504				D	E	E	E
Haredon Brook	Haredon Brook foot to top redd	66	643507	630503		D		B	C	C	
Losterdale Brook	Losterdale Brook foot to brook foot (SD 627523)	67	633513	627523	D	E	C	B	C	E	D
	Brook foot (SD 627523) to top redd	68	627523	627528	D	F	D	A	F	C	
Rams Brook	Brook foot to top redd	69	628522	635526					E	E	
Bleasdale Water	Bleasdale Water foot to top redd	70	607504	612492							
River Loud	Loud foot to Leagram Brook foot	71	651432	638426				E	E	F	F
	Leagram Brook foot to Chipping Brook foot	72	638426	628417				E	F	F	F
	Chipping Brook foot to Knott farm	73	628417	614402					F	F	
	Knott Farm to top redd	74	614402	596429					E		
Leagram Brook	Leagram Brook foot to road Br. (SD 639441)	75	638426	639441				E	E	D	E
	Road Br. (SD 639441) to top redd	76	639441	630452	E				E	D	E
Chipping Brook	Chipping Brook foot to Startifants Br.	77	628417	624427	F			E	E	E	E
	Startifants Br. to top redd	78	624427	612442				E	E	E	
Greystoneley Brook	Greystoneley Brook foot to Greystoneley Br.	79	645437	646441		F			E	D	E
	Greystoneley Br. to top redd	80	646441	642468	E	E	E		E	C	D
Hell Clough Brook	Hell Clough foot to top redd	81	637461	634470					E		

APPENDIX IV**Ribble: Density classes for redds per km Grades**

Grade	Salmon (0.00 – 22.00)	Sea Trout (0.00 – 27.20)	Total Salmonids (0.00 – 27.20)
A	>17.70	>21.79	>21.79
B	13.31 – 17.70	16.35 – 21.79	16.35 – 21.79
C	8.81 – 13.30	10.90 – 16.34	10.90 – 16.34
D	4.41 – 8.80	5.45 – 10.89	5.45 – 10.89
E	0.01 – 4.40	0.01 – 5.44	0.01 – 5.44
F	0.00	0.00	0.00

Hodder: Density classes for redds per km Grades

Grade	Salmon (0.00 – 65.00)	Sea Trout (0.00 – 46.00)	Total Salmonids (0.00 – 75.00)
A	>53.20	>37.10	>60.00
B	40.11 – 53.20	27.81 – 37.10	45.01 – 60.00
C	27.01 – 40.10	18.51 – 27.80	30.01 – 45.00
D	13.01 – 27.00	9.21 – 18.50	15.01 – 30.00
E	0.01 – 13.00	0.01 – 9.20	0.10 – 15.00
F	0.00	0.00	0.00

Lune: Density classes for redds per km Grades

Grade	Salmon (0.00 – 65.00)	Sea Trout (0.00 – 98.33)	Total Salmonids (0.00 – 98.33)
A	>53.20	>78.45	>78.45
B	40.11 – 53.20	58.84 – 78.45	58.84 – 78.45
C	27.01 – 40.10	39.23 – 58.83	39.23 – 58.83
D	13.01 – 27.00	19.61 – 39.22	19.61 – 39.22
E	0.01 – 13.00	0.01 – 19.60	0.01 – 19.60
F	0.00	0.00	0.00

CENTRAL AREA: Density classes for redds per km Grades

Grade	Salmon (0.00 – 65.00)	Sea Trout (0.00 – 98.33)	Total Salmonids (0.00 – 98.33)
A	>53.20	>78.45	>78.45
B	40.11 – 53.20	58.84 – 78.45	58.84 – 78.45
C	27.01 – 40.10	39.23 – 58.83	39.23 – 58.83
D	13.01 – 27.00	19.61 – 39.22	19.61 – 39.22
E	0.01 – 13.00	0.01 – 19.60	0.01 – 19.60
F	0.00	0.00	0.00