Sampling Fish for the Water Framework Directive

A summary of Inland Fisheries Ireland's Water Framework Directive Monitoring Programme for Fish in Lakes, Rivers and Transitional Waters, 2007 - 2009

WFD Summary Report 2007 - 2009



Inland Fisheries Ireland CEO's Statement

The Water Framework Directive (WFD) was introduced in December 2000 with the broad aims of providing a standardised approach to water resource management throughout Europe and promoting the protection and enhancement of healthy aquatic ecosystems. The Directive, transposed into Irish Law in December 2003, requires Member States to protect those water bodies that are already of Good or High ecological status and to restore all water bodies that are degraded in order that they achieve at least Good ecological status by 2015.

Since 2007 a WFD team based in the Research and Development Division have worked closely with colleagues within Inland Fisheries Ireland (previously the Central and Regional Fisheries Boards) and with staff from other national agencies, academic institutions and our parent Department, the Department of Communication, Energy and Natural Resources to complete the key objectives of the fish monitoring programme.

I am delighted to have such an experienced, dedicated and talented team of scientists working within the WFD team in IFI, Swords. However, without the support and commitment of the management and staff in the Regional Fisheries Boards between 2007 and 2009 (now River Basin Districts), it would not have been possible to complete the key objectives reported in this document. The regional based staff were integral to the successful delivery of this programme. With the amalgamation of the Central and Regional Fisheries Boards in July 2010 into the newly formed entity, IFI, we are pleased to be able to further the WFD work programme at a national inland fisheries level.

I would like to congratulate all who have contributed to the significant level of work which was undertaken over the three year period (2007 - 2009) under the Water Framework Directive fish surveillance monitoring programme, the key elements of which are reported in this document, and wish them continued success in 2010.

Circles 3 Jane

Dr Ciaran Byrne CEO, Inland Fisheries Ireland

August 2010



Foreword

Welcome to Inland Fisheries Ireland's summary report on the first three years (2007 – 2009) of fish sampling for the Water Framework Directive Summary (WFD).

Inland Fisheries Ireland (IFI) has been assigned the responsibility by the Environmental Protection Agency (EPA) for delivering the fish monitoring element of the WFD in Ireland. Monitoring takes place over a three year rolling period, with the first three year monitoring cycle completed in 2009. Monitoring sites are set out in the WFD Monitoring Programme published by the EPA in 2006 and the fish monitoring requirements include over 300 water bodies. Although the surveillance monitoring programme for rivers and transitional waters was delayed by one year, the two subsequent years have seen a huge effort by the team of IFI scientists to achieve the three year goals, and I'm delighted to report a total of 70 lakes, 72 transitional waters and 134 river sites have been surveyed in the first surveillance monitoring cycle.

The 2007 - 2009 fish surveillance monitoring programme has been extensive, with over 70 fish species (plus hybrids and four brown trout varieties) being recorded and over 150,000 fish captured and examined. All fish have been identified, counted and a representative sub-sample has been measured, weighed and aged. A further sub-sample of fish was retained for laboratory analysis of stomach contents, sex and parasitism. This large volume of data has been processed and entered into a new GIS database, with interactive species distribution maps available on the WFD fish website (www.wfdfish.ie).

All water bodies surveyed have been assigned an interim ecological status class (High, Good, Moderate, Poor or Bad) and these results have been submitted to the EPA for inclusion in River Basin Management Plans (RBMPs). Future information from ongoing monitoring programmes will evaluate the effectiveness of programmes of measures set out in these RBMPs.

The data collected to date in this first cycle of surveillance monitoring for the WFD not only fulfils legislative requirements, but provides an invaluable source of information on fish species distribution and abundance for decision makers, angling clubs, fishery owners and other interested parties. Preliminary reports for each water body are available on the WFD fish website (www.wfdfish.ie) and these will be replaced by more detailed reports on each water body in 2010 and 2011.

It is important that I acknowledge the support and expertise received from our colleagues in the former Regional Fisheries Boards (RFBs) during the 2007 - 2009 monitoring seasons. It is only with a coordinated effort between the R&D and regional based staff that delivery of such a comprehensive monitoring programme is possible.

2010 has seen the merger of the Central and Regional Fisheries Boards into a national fishery research and management organisation called Inland Fisheries Ireland. This organisational change, within a



challenging economic climate, will necessitate a strong business focus on project management to ensure that Inland Fisheries Ireland continues to deliver against the requirements of the WFD fish monitoring programme. We also continue to see rapid changes in our aquatic environment; conservation and protection of this resource is of the highest priority.

Lastly I would like to thank all those that contributed to this report and I wish the IFI WFD team every success for the year ahead.

Cather folgh

Dr Cathal Gallagher, Head of Function, Research & Development

Inland Fisheries Ireland, August 2010



Executive Summary

The Water Framework Directive (WFD) (2000/60/EC) was introduced in 2000 and subsequently transposed into Irish law in 2003 (S.I. No. 722 of 2003), establishing a new framework for the protection and management of water resources from "source to sea" throughout the EU. The principal aim of the WFD is to preserve those water bodies that are currently of 'High' or 'Good' ecological status, and to restore those water bodies that are currently impaired in order that they achieve at least 'Good' ecological status by 2015.

One of the key steps in this process is for Member States to assess the current ecological status of surface waters (rivers, lakes and transitional waters) by monitoring a range of biotic and abiotic elements, including phytoplankton, macrophytes, phytobenthos, benthic invertebrates, fish, water chemistry and hydromorphology. Ongoing monitoring of these elements can then be used to assess the effectiveness or otherwise of programmes of measures designed to restore those water bodies that fail to meet the minimum WFD requirement of 'Good' ecological status.

Over 300 surveillance monitoring water bodies, encompassing rivers, lakes and transitional waters, have been set out by the Environmental Protection Agency in the WFD Water Monitoring Programme (EPA, 2006) and are completed on a three year rolling cycle for all biological quality elements. Inland Fisheries Ireland (IFI) has been assigned the task of monitoring fish for the WFD.

The first three year WFD fish monitoring cycle (2007 - 2009) has been extensive, with a total of 275 water bodies being surveyed (133 river water bodies (134 sites), 70 lakes and 72 transitional water bodies). Delays in the start-up of the fish surveillance monitoring programme in 2007 resulted in only 15 lakes and eight transitional water bodies being surveyed during this year; however, concerted efforts by the dedicated WFD team in IFI during 2008 and 2009 has seen the successful completion of surveys in the majority of surveillance monitoring sites, with a resulting vast amount of new information on fish species distribution and abundance being collected.

This report highlights the current draft ecological status, based on the fish populations present, of each water body surveyed during the first three year WFD fish monitoring cycle from 2007 - 2009.

Out of a total of 134 river sites surveyed, 10 (7.5%) were classified as 'High', 66 (49.3%) as 'Good', 54 (40.3%) as 'Moderate', 3 (2.2%) as 'Poor' and 1 (0.7%) as 'Bad' ecological status, based on the fish populations present.

Out of a total of 70 lakes surveyed, 10 (14%) were classified as 'High', 21 (30%) as 'Good', 34 (49%) as 'moderate', 4 (6%) as 'Poor' and 1 (1%) as 'Bad' ecological status, based on the fish populations present.



Out of a total of 72 transitional waters surveyed, 1 (1.4%) were classified as 'High', 37 (51.4%) as 'Good', 23 (31.9%) as 'Moderate', 9 (12.5%) as 'Poor' and 2 (2.8%) as 'Bad' ecological status, based on the fish populations present.

In addition to the new data collected from 2007 - 2009, archival data from 66 lakes (2005 - 2006, ROI and NI), 416 river sites (1998 - 2003, ROI and NI) and 12 transitional water bodies (2000 - 2006, ROI and NI) have been used to develop the ecological classification tools and these water bodies have also been assigned an ecological status class.

The fundamental WFD requirement of reporting the ecological status of each water body has been addressed; however, a considerable amount of new information on fish species distribution and abundance has also been collected, a selection of which is presented. More comprehensive information on the distribution and abundance of each species can be found in the 2007, 2008 and 2009 WFD summary reports (Kelly and Champ, 2008b; Kelly *et al.*, 2009; Kelly *et al.*, 2010). Individual reports on each water body are also available to download on the dedicated WFD fish website (www.wfdfish.ie).



Project Personnel

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Acknowledgements

In July 2010, the Central and Regional Fisheries Boards amalgamated to form the new entity – Inland Fisheries Ireland (IFI). However, throughout the 2007 – 2009 surveillance monitoring cycle, the authors received a significant amount of help and co-operation from the CEOs, ACEOs and their staff from the seven Regional Fisheries Boards, and from their colleagues within the Central Fisheries Board. This help and co-operation is gratefully acknowledged.

The many angling clubs, fishery owners and land owners who granted permission and access for fish surveys are also gratefully acknowledged.

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TABLE OF CONTENTS

| 1. INTRODUCTION | |
|--|---|
| 2. DETAILS OF WFD FISH MONITORING SITES | 9 |
| 3. SURVEY METHODOLOGY | |
| 4. KEY FINDINGS | |
| 4.1 Native versus non-native fish species richness | |
| 4.2 Species distribution and abundance | |
| 5. ECOLOGICAL CLASSIFICATION TOOL DEVELOPMENT | |
| 5.1 Lakes | |
| 5.2 Rivers | |
| 5.3 Transitional Waters | |
| 6. SUMMARY | |
| 7. REFERENCES | |



1. INTRODUCTION

In December 2000 the European Union introduced the Water Framework Directive (WFD) (2000/60/EC), the most significant piece of water quality legislation to come from the EU in recent years, with the aim of establishing a new framework for the management of water resources and the protection of aquatic ecosystems. The WFD is different from other water quality legislation in that it moves the focus away from the concept of 'water quality' based mainly on chemical analysis to a more holistic approach to water management, introducing the concept of 'ecological status'.

In Ireland, water quality has been assessed for many years by the Environmental Protection Agency (EPA), principally on the basis of benthic invertebrates and water chemistry in rivers. In contrast, the WFD now requires monitoring of phytoplankton, macrophytes, phytobenthos, benthic invertebrates, fish, water chemistry and hydromorphology.

EU Member States are required to conduct monitoring programmes to initially assess the health of their surface waters (rivers, lakes and transitional waters), and subsequently to assess the effectiveness of measures put in place to restore ecologically impaired waters. Each water body (section of a river or other surface water) is assigned an 'ecological status' class (High, Good, Moderate, Poor or Bad), with the fundamental objective of the WFD being to achieve at least 'Good' ecological status in all surface waters by 2015.

The WFD is administered at a local level through River Basin Districts (RBDs), with the EPA responsible for co-ordinating the activities of the RBDs, Local Authorities and State Agencies. The EPA also has the responsibility of reporting to the European Commission, developing classification systems, setting standards and devising the monitoring programme. The result of this co-ordinated work within each River Basin District is the development of River Basin Management Plans, which outline programmes of measures designed to restore water bodies that are currently falling below the WFD requirement of 'Good' ecological status. Ongoing monitoring of surface waters will help to track the effectiveness or otherwise of these measures in achieving the objectives of the WFD.

The responsibility of monitoring fish for the WFD has been assigned to Inland Fisheries Ireland (previously the Central and Regional Fisheries Boards), with over 300 water bodies encompassing rivers, lakes and transitional waters included in a three year rolling monitoring programme.

The first three year fish monitoring cycle from 2007 - 2009 has seen the completion of surveys on 70 lakes, 133 river water bodies (134 river sites) and 72 transitional water bodies. This report highlights some of the key findings from these surveys and the draft fish ecological status class of each water body are presented.

Detailed reports on all water bodies surveyed are available to download on the dedicated WFD fish website (www.wfdfish.ie).



2. DETAILS OF WFD FISH MONITORING SITES

A total of 70 lake water bodies, 133 river water bodies (134 river sites) and 72 transitional water bodies were surveyed from 2007 to 2009. Details of all sites surveyed are shown in Tables 2.1 to 2.3 and Figures 2.1 to 2.4.

 Table 2.1. Details of lakes surveyed for WFD fish monitoring, 2007 - 2009

| Lake name | Water body code | Year | Easting | Northing | Area (ha) | Mean depth (m) | Max depth (m) | Ecological status (fish) |
|----------------|--------------------|------|---------|----------|--------------|----------------------|---------------------|-----------------------------|
| ERBD | | | | | | ~ / | ~ / | |
| Annagh (White) | EA_07_258 | 2007 | 251154 | 273108 | 25.1 | >4.0 | 18.0 | Moderate |
| Bane | EA_07_270 | 2007 | 254766 | 271293 | 75.4 | >4.0 | 16.0 | Moderate |
| Dan | EA_10_29 | 2009 | 315394 | 203430 | 102.9 | 13.5 | 40.0 | Good |
| Lene | EA-07_274 | 2007 | 251073 | 268421 | 416.2 | >4.0 | 20.0 | Good |
| Skeagh, Upper | EA_07_267 | 2008 | 265083 | 301342 | 61.0 | 2.2 | 4.9 | Moderate |
| Tay | EA_10_25 | 2009 | 316085 | 207508 | 50.0 | 10.1 | 35.0 | Good |
| ShIRBD | | | | | | | | |
| Alewnaghta | SH_25_189 | 2009 | 176089 | 191267 | 54.6 | <4.0 | 4.5 | Moderate |
| Annaghmore | SH_26_669 | 2008 | 189942 | 283670 | 52.9 | <4.0 | 16.0 | Moderate |
| Ateduan | SH_27_108 | 2007 | 129670 | 188457 | 38.0 | 2.3 | 7.0 | Moderate |
| Cam | SH_23_74 | 2009 | 59744 | 107907 | 8.0 | 2.7 | 15.0 | Good |
| Cavetown | SH_26_705 | 2008 | 183228 | 297430 | 64.0 | <4.0 | 20.0 | Poor |
| Cullaun | SH_27_115 | 2009 | 131594 | 190644 | 49.7 | 6.7 | 21.0 | Moderate |
| Derg | SH_25_191a | 2009 | 177812 | 185798 | 11650.5 | 6.0 | 36.0 | Poor |
| Dromore | SH_27_82 | 2009 | 134517 | 185851 | 49.1 | 5.9 | 20.0 | Poor |
| Gur | SH_24_99 | 2009 | 163885 | 140815 | 78.9 | 2.4 | 5.0 | Moderate |
| Inchicronan | SH_27_126 | 2009 | 139500 | 185948 | 116.7 | <4.0 | 18.8 | Moderate |
| Lickeen | SH_28_85 | 2007 | 117575 | 190916 | 84.2 | >4.0 | 20.0 | Good |
| Meelagh | SH_26_711 | 2008 | 189093 | 312025 | 115.7 | <4.0 | 14.0 | Moderate |
| Nanoge | SH_26_580 | 2008 | 150461 | 290247 | 45.9 | 4.5 | 11.0 | Moderate |
| O' Flynn | SH_26_693 | 2008 | 158361 | 279690 | 136.9 | 4.5 | 14.5 | Moderate |
| Owel | SH_26_703 | 2008 | 240155 | 258633 | 1017.6 | >4.0 | 22.0 | Moderate |
| Sheelin | SH_26_709 | 2008 | 244291 | 283941 | 1808.2 | 4.4 | 15.0 | Moderate |
| NBIRBD | | | | | | | | |
| Muckno | NB_06_56 | 2009 | 285627 | 318883 | 316.0 | 5.9 | 20.0 | Poor |
| NWIRBD | | | | | | | | |
| Anure | NW_38_83 | 2009 | 181476 | 414670 | 156.0 | 2.0 | 11.9 | High |
| Barra | NW_38_84 | 2008 | 193447 | 411876 | 62.3 | 4.4 | 12.0 | High |
| Beagh | NW_38_80 | 2008 | 202074 | 421485 | 259.0 | 9.2 | 46.5 | High |
| Corglass | NW_36_655 | 2008 | 234842 | 308823 | 34.3 | 1.6 | 6.0 | Moderate |
| Derrybrick | NW_36_400 | 2008 | 234514 | 312044 | 36.2 | 2.1 | 5.0 | Moderate |
| Dungloe | NW_38_692 | 2009 | 177887 | 411252 | 61.0 | 1.3 | 7.5 | Good |
| Egish | NW_36_671 | 2008 | 277884 | 312744 | 117.0 | 3.3 | 10.0 | Bad |
| Fern | NW_39_13 | 2008 | 218292 | 424349 | 181.0 | 2.0 | 3.0 | Good |
| Kiltooris | NW_38_47 | 2008 | 167183 | 396339 | 43.3 | <4.0 | 14.0 | Good |
| Kindrum | NW_38_670 | 2009 | 217786 | 442631 | 61.0 | 6.6 | 15.0 | Good |
| Melvin | NW_35_160 | 2008 | 189530 | 353752 | 2197.0 | 7.8 | 40.0 | Good |
| Muckanagh | SH_27_100 | 2009 | 137228 | 192888 | 96.1 | 3.0 | 19.0 | Moderate |
| Nasnahida | NW_38_67 | 2009 | 185231 | 407764 | 15.2 | <4.0 | 11.0 | Good |
| Sessiagh | NW_38_61 | 2009 | 203933 | 435931 | 24.0 | 4.0 | 20.9 | Good |
| White | NW_36_647 | 2009 | 267964 | 319078 | 54.0 | <4.0 | 6.0 | Moderate |



| Lake name | Water body code | Year | Easting | Northing | Area (ha) | Mean depth (m) Max depth (m) | | Ecological status (fish) |
|----------------|--------------------|------|---------|----------|--------------|--|------|--------------------------------|
| SWRBD | | | | | | | | |
| Acoose | SW_22_208 | 2008 | 75602 | 85287 | 66.3 | >4.0 | 19.0 | Good |
| Allua | SW_19_4 | 2008 | 118989 | 65591 | 135.9 | 4.0 | 28.4 | Moderate |
| Brin | SW_21_402 | 2008 | 78334 | 77451 | 24.5 | 5.9 | 13.0 | High |
| Caragh | SW_22_207 | 2008 | 71986 | 90432 | 488.7 | 11.0 | 39.0 | Good |
| Glenbeg | SW_21_444 | 2008 | 70632 | 53003 | 66.2 | | 32.0 | Good |
| Inniscarra | SW_19_138 | 2008 | 147703 | 279690 | 489.0 | 7.4 | 35.4 | Moderate |
| Leane | SW_22_185 | 2008 | 93171 | 88660 | 1944.3 | 13.0 | 60.0 | Good |
| Upper Lake | SW_22_186 | 2008 | 90931 | 82113 | 166.7 | 14.5 | 36.0 | Good |
| WRBD | | | | | | | | |
| Ardderry | WE_31_76 | 2007 | 98397 | 245804 | 81.1 | >4.0 | 12.0 | Moderate |
| Arrow | WE_35_159 | 2009 | 179161 | 312139 | 1247.0 | 9.0 | 33.0 | Moderate |
| Aughrusbeg | WE_32_436 | 2007 | 55792 | 258173 | 50.2 | <4.0 | 14.0 | Moderate |
| Bunny | WE_27_114 | 2009 | 137409 | 196784 | 102.9 | 2.7 | 14.0 | Moderate |
| Carra | WE_30_347 | 2009 | 118998 | 272737 | 1564.5 | 1.8 | 19.0 | Good |
| Carrowmore | WE_33_1914 | 2008 | 83597 | 327913 | 911.2 | <4.0 | 2.5 | Good |
| Corrib, Lower | WE_30_666a | 2008 | 113819 | 248676 | 11519.0 | <4.0 | 6.8 | Moderate |
| Corrib, Upper | WE_30_666b | 2008 | 127105 | 236016 | 5042.0 | >4.0 | 42.0 | Moderate |
| Cullin | WE_34_406a | 2009 | 122875 | 302769 | 1023.6 | <4.0 | 3.0 | Moderate |
| Doo | WE_32_463 | 2009 | 83461 | 268222 | 16.2 | >4.0 | 46.0 | High |
| Easky | WE_35_136 | 2008 | 144396 | 323036 | 118.7 | 3.0 | 10.5 | Good |
| Gill | WE_35_158 | 2008 | 175363 | 333545 | 1375.3 | >4.0 | 31.0 | Moderate |
| Glenade | WE_35_156 | 2007 | 182429 | 346230 | 73.6 | <4.0 | 11.5 | Moderate |
| Glencar | WE_35_139 | 2007 | 174919 | 343333 | 114.6 | >4.0 | 19.0 | High |
| Glencullin | WE_32_487 | 2008 | 81952 | 269647 | 34.1 | <4.0 | 13.0 | High |
| Kylemore | WE_32_509b | 2007 | 77268 | 258266 | 134.1 | >4.0 | 30.0 | High |
| Lettercraffroe | WE_30_344 | 2007 | 105625 | 237701 | 82.4 | 2.8 | 17.8 | Moderate |
| Mask | WE_30_665 | 2009 | 110027 | 264594 | 8217.8 | 5.0 | 57.0 | Moderate |
| Maumwee | WE_30_343 | 2007 | 97708 | 248533 | 27.6 | 2.1 | 8.8 | High |
| Nambrackmore | WE_32_500 | 2007 | 71689 | 245439 | 10.4 | 2.1 | 10.0 | Moderate |
| Ross (Corrib) | WE_30_345 | 2007 | 119229 | 236521 | 139.2 | >4.0 | 14.0 | Moderate |
| Shindilla | WE_31_171 | 2007 | 95812 | 246068 | 65.6 | >4.0 | 22.0 | High |
| Talt | WE_34_405 | 2008 | 139683 | 315172 | 96.9 | >4.0 | 40.0 | Good |
| Templehouse | WE 35 157 | 2008 | 161565 | 317148 | 118.6 | 2.6 | 5.3 | Moderate |

Table 2.1 contd. Details of lakes surveyed for WFD fish monitoring, 2007 - 2009





Fig. 2.1. Location of WFD fish monitoring lake water bodies, 2007 - 2009



| ERED Datad-set sites Bridge at Clonlensan House 2009 E077A010100 EA, 07, 971 Good Plackwarer Just vis of Daugh Ramor 2009 E077A010100 EA, 07, 971 Good Dodder Footbridge (Beaver Row) 2009 E10070010250 EA, 10, 275 Good Cencree Bridge us of Daugh Rc confl. 2009 E10070010200 EA, 10, 275 Good Cencree Bridge us of Daugh Rc confl. 2009 E1007030200 EA, 07, 903 Good Namy Bridge at Julianstwn 2009 E070800200 EA, 07, 903 Good Liffery diatar Br 2009 E070800200 EA, 07, 903 Good Liffery diatar Br 2009 E107800200 EA, 07, 903 Good NWIRBD Band-set sites Ballygoly Br. 2009 E1065010100 NB, 06, 542 Good NWIRBD Batites Ballygoly Br. 2009 E1065010100 NB, 06, 55 Moderate Big Ballygoly Br. 2009 E1065010100 NB, 06, 55 Moderate | River | Site name | Year | Site Code | Water body code | Ecological status (fish) |
|--|-----------------------|----------------------------------|------|----------------------------|--------------------------|-----------------------------|
| | ERBD Hand-set sites | | | | | |
| Blackwater Just w's of Dangh Br. 2009 EIS/78010800 EA_07_1035 Good Dardge Hum w's of Bang Br. 2008 EIS/07010250 EA_10_273 Good Celencree Bridge u's of Dangh Br. 2009 EIS/07010200 EA_10_377 Good Generice Bridge u's of Dangh Br. 2009 EIS/07010200 EA_10_373 Good Rye Water Kildare Br. 2009 EIS/08010700 EA_00_1870_2 Good Liffey Kildare Br. 2009 EIS/08010700 EA_00_1870_2 Good Liffey Kildare Br. 2009 EIS/08010700 EA_00_1870_2 Good Liffey Kildare Br. 2009 EIS/0801000 NB_0.6421 Good Varrty Newrah Br. 2009 EIS/0801000 NB_0.650 Moderate NBIRBD Boat sites Bridge and Br. 2009 EIS/0801000 NB_0.650 Moderate NWIRBD Innd-set sites Bridge and Standard Reg w's Gamaly River 2009 EIS/0801000 NB_0.650 Moderate | Athboy | Bridge at Clonleasan House | 2009 | IE07A010100 | EA_07_971 | Good |
| | Blackwater | Just u/s of Lough Ramor | 2009 | IE07B010800 | EA_07_1035 | Moderate |
| Dodder Footbridge (Baaver Row) 2008 E699D010900 EA_0P_577 Good Glencree Bridge (as of Upper Lake 2009 E110G03200 EA_10_367 Good Rye Water Kildare Br 2009 E100601200 EA_10_367 Good Rye Water Kildare Br 2009 E1608010700 FA_00_3170 Good ERBD Boat sites ERBD Boat sites ERBD Boat sites EA_00_11870_2 Good Liftey Lacam Br. 2009 E1694D10200 EA_00_11870_2 Good Liftey Lacam Br. 2009 E1694D10200 EA_10_1601 Good NileBD Hand-set sites Balynshin Balynshin Conceyburrow Br. 2009 E1696010100 NR_0.6, 52 Moderate NIRBD Bant sites Bardy Br. 2009 E1696010200 NN_3.0, 5. Moderate NIRBD Bant sites Bardy Br. 2009 E16380010800 NN_3.0, 10.3, 5. Moderate Ocad Bardy Br. 2009 E1638001000 NN_3.0, 3.0, 3.0 Moderate | Dargle | 1km u/s of Bray Br. | 2009 | IE10D010250 | EA_10_1275 | Good |
| | Dodder | Footbridge (Beaver Row) | 2008 | IE09D010900 | EA_09_587 | Good |
| | Glencree | Bridge u/s of Dargle R. confl. | 2009 | IE10G010200 | EA_10_367 | Good |
| Namy Bridge at Julianstown 2009 IE 088010700 EA.08_214 Moderate ERD Boat sites Boyne B. 2008 IE 098010400 EA.09_246 Moderate ERD Boat sites Boyne Br. 2009 IE 09801010700 EA.09_1775 Moderate Liffey dx of Ballyward Br. 2009 IE 094101200 EA.09_1175 Moderate Vartry Lacan Br. 2009 IE 0941012100 EA.09_1175 Moderate Vartry Lacan Br. 2009 IE 004011000 NB_06_520 Moderate NWIRBD Bat sites Baltysoly Br. 2009 IE 0060010600 NB_06_50 Moderate NWIRBD Bat sites Barley Br. 2009 IE 0060010600 NW_20_11082 Good NWIRBD Bat sites Bridge u's Clonmany River 2008 IE 408010200 NW_29_1105 Moderate Burloot Bridge u's Dunley Lough 2008 IE 30801000 NW_29_1105 Moderate Chady Bridge u's Dunley Lough 2008 IE 308001000 NW_29_1105 Mode | Glenealo | Bridge d/s of Upper Lake | 2009 | IE10G050200 | EA_10_793 | Good |
| kye Water Kildare Br 2008 E09/R010400 E Δ_{20} Moderate Boyne Boyne Br. 2009 E07/B040200 E Δ_{20} Good Liffey d's of Ballyward Br. 2009 E09/L01700 E Δ_{20} Good Liffey Lacan Br. 2009 E09/L01200 E Δ_{20} E Δ_{20} Good Varty Newrath Br 2009 E09/L012100 NB_6.6-642 Good White Concepturrow Br. 2009 E06/B01000 NB_6.6-642 Good NBLRAbB Hand-set sites Barley Br. 2009 E06/B01000 NB_6.6-642 Good NURRD Hand-set sites Barley Br. 2008 E03/B010600 NB_4.6.50 Moderate Dece Barley Br. 2008 E3/B024000 NW_4.9.1082 Good Cronaniv Bridge in Marmfood Bridge in Ardara 2008 E3/B024000 NW_3.8.1124 Good Graakeelan Gartan) 2008 E3/B024000 NW_3.8.103 High Graakeelan Gartan) | Nanny | Bridge at Julianstown | 2009 | IE08N010700 | EA_08_814 | Moderate |
| ERBD Boat sites Boyne Br. 2009 IE/07B040200 EA_07_{-990} Good Liffey Kicullen Br. 2009 IE/07D101020 $EA_09_{-1175}_{-2}$ Good Liffey Jas of Ballyward Br. 2009 IE/01D1020 $EA_09_{-1175}_{-5}$ Good Vartry Newrath Br 2009 IE/06B010100 NB_06_642 Good NBRED Boat sites Ballygolly Br. 2009 IE/06B010100 NB_06_652 Good NURRD Boat sites Ballykallan Newrath Br 2009 IE/06B010100 NB_06_550 Moderate NURRD Hand-set sites Ballykallan Bridge u's Clommary River 2008 IE/03B010600 NW_38_412 Good NURRD Hand-set sites Bridge u's Clommary River 2008 IE30C04000 NW_38_412 Good Clady Bridge u's Danlewy Lough 2008 IE30C04000 NW_38_4124 Good Conanir Burn Bridge u's Danlewy Lough 2008 IE33C060100 NW_38_400 High Swallinbar 0.60m d's Swallinbar Br 2008 | Rye Water | Kildare Br | 2008 | IE09R010400 | EA_09_246 | Moderate |
| Boyne Boyne Br. 2009 E07DB/04200 EA_09_1870_2 Good Liffey d's of Ballyward Br. 2009 E00JL01700 EA_09_1187_3 Moderate Liffey Lacan Br. 2009 E00JL01200 EA_09_1187_3 Moderate Narty Newraft Br 2009 E00JL012100 EA_00_1870_25 Good White Conceyburrow Br. 2009 E003010500 NB_0.6.542 Good NBIRBD Hand-set sites Burley Br. 2009 E003010600 NB_0.6.50 Moderate Dace marky Br. 2008 E03B010800 NB_0.6.50 Moderate Data Sites Burley Br. 2008 E03B010800 NW_3.8.4124 Good Conaniv Burn Bridge u's Ommod 2008 E380C06100 NW_3.8.800 High Glaskeelan Gorann 2008 E38002000 NW_3.8.800 High Swaninbar 0.0kn d's Swaninbar Br 2008 E38020000 NW_3.8.800 High Glaskeelan Gorann 2008 | ERBD Boat sites | | | | | |
| Liffey Kikullen Br 2008 EØVL01020 EA_09_1175 Good Liffey Jas of Ballyward Br. 2009 EØVL01020 EA_09_1175 Good Vartry Newrath Br 2009 EØVL01020 EA_010_1100 EA_00_1175 Good NBRRBD Fland-set sites Ballygoly Br. 2009 EØ05010100 NB_06_642 Good NBRRD Fland-set sites Balkwaler (Monaghan) Newraills Br 2009 EØ050101000 NB_06_550 Moderate NURRD Hand-set sites Ballyhallan Bridge Vr. 2008 E404001020 NW.38_12 Good Surfoot Bridge vo Clonmary River 2008 E39020600 NW.38_142 Good Cohary Bridge vo Clonmary River 2008 E33060300 NW.38_4124 Good Glaskcelan Bridge vo Danlewy Lough 2008 E33060100 NW.38_4124 Good Cohary Bridge in Ardara 2008 E33060300 NW.38_181 Good Swalinbar 0.66m d's Swalinbar Br 2008 E336000300 NW.36_318 </td <td>Boyne</td> <td>Boyne Br.</td> <td>2009</td> <td>IE07B040200</td> <td>EA_07_990</td> <td>Good</td> | Boyne | Boyne Br. | 2009 | IE07B040200 | EA_07_990 | Good |
| | Liffey | Kilcullen Br | 2008 | IE09L010700 | EA_09_1870_2 | Good |
| | Liffey | d/s of Ballyward Br. | 2009 | IE09L010250 | EA_09_1175 | Moderate |
| Varity Newrith Br 2008 [E10V010300] EA_10_1601 Good Big Big white Ballygoly Br. 2009 [E06B010100] NB_06_642 Good NBIRED Ioat sites Biackwater (Monaghan) Newmills Br 2009 [E06B010100] NB_06_50 Moderate NWIRBD Hand-set sites Burley Br. 2009 [E06D010600] NW_40_1082 Good Burlindan Bridge u's Chornany River 2008 [E340B010200] NW_40_1082 Good Burliot Bridge u's Banbeg 2009 [E36C0300] NW_38_1124 Good Chady Bridge u's Banbeg 2008 [E3800300] NW_38_28.00 High Glaskeelan Bridge W's Onshin (Lough 2008 [E38000300] NW_38_3037 High Swailibar 0.6km d's Swanlinbar Br 2008 [E38000300] NW_36_163 Good Swailibar 0.6km d's Cavan R confl 2008 [E3600300] NW_36_164 Moderate Domore D rin Ballybay 2008 [E36001100] NW_36_1746 <td>Liffey</td> <td>Lucan Br.</td> <td>2009</td> <td>IE09L012100</td> <td>EA_09_1870_5</td> <td>Good</td> | Liffey | Lucan Br. | 2009 | IE09L012100 | EA_09_1870_5 | Good |
| NBLRDD Hand-set sites Ballygoly Br. 2009 E06B010100 NB_06_642 Good White Concyburrow Br. 2009 E06W010500 NB_06_550 Moderate Blackwater (Monaghan) Newmills Br 2009 E06B010600 NB_06_50 Moderate Dee Burley Br. 2009 E40B10200 NV.40, 1082 Good MIRRD Hand-set sites Ballyhalina Bridge u/s Channary River 2008 E43B10200 NV.41, 1082 Good Conariy Burn Bridge u/s Danlewy Lough 2008 E38C060100 NW_38, 200 High Glaskeelan Garatan 2008 E38C060100 NW_38, 3037 High Owentocker S00m d/s Bridge in Ardara 2008 E380060300 NW_38, 3037 High Swalihbar 0.6km d/s Swalinbar Br 2008 E380060300 NW_38, 3037 High Swalily Swaliy | Vartry | Newrath Br | 2008 | IE10V010300 | EA_10_1601 | Good |
| Big Ballygoly Br. 2009 ElectB010100 NB_06_642 Good White Coneyburrow Br. 2009 EE068010500 NB_06_550 Moderate Dec Burbkater (Monaghan) Newmills Br 2008 EE03B010800 NB_06_550 Moderate Dec MWRBD Hand-set sites Burblyahlan Bridge u's Clommany River 2008 EE302002060 NW_40_1082 Good Burnfoot Bridge u's of Bambeg 2009 EE38C040300 NW_38_14124 Good Calaskeelan Bridge u's of Bambeg 2008 EE38C060100 NW_38_1136 Good Glaskeelan Gartan 2008 EE38C060100 NW_38_1307 High Swailibar 0.6km d's Swailinbar Br 2008 EE36S010300 NW_38_13_037 High Swailibar 0.5km d's Swailibar Br 2008 EE36X01300 NW_36_18 Good Swailibar 0.5km d's Cavan R confl 2008 EE36A021400 NW_36_2417 Moderate Dromore Br in Baljbyav 2008 EE36A021400 | NBIRBD Hand-set sites | | | | | |
| WhiteConcepturrow Br.2009E065W010500NB_06_550ModerateBlackwater (Monaghan)Newmills Br2008E03B010800XB_05_50ModerateDeeBurley Br.2009EE03B010800NW_010500NW_01052GoodNURRD Hand-set sitesBridge in Burnfoot2008EE39B020600NW_32_1105ModerateBallyhallanBridge u's Clommany River2008EE39B020600NW_32_1105ModerateCronaniv BurnBridge u's of Bunbeg2009EE38C060100NW_38_4124GoodCronaniv BurnBridge U's Ounlewy Lough2008EE39G050100NW_38_1037HighGlaskeelanGartani2008EE36C06100NW_38_1037HighGuskeelanOckm d's Swanlinbar2008EE36C00100NW_38_1037HighSwanlinbar0.0km d's Swanlinbar2008EE36C00100NW_36_118GoodSwanlinbar0.0km d's Swanlinbar2008EE36C021400NW_36_2417ModerateDromoreBr in Ballybay2008EE36D020150NW_36_2417ModerateDromoreBr in Ballybay2008EE36D020150NW_36_2417ModerateErneKilconny Berurber (RHS)2008EE36D010500NW_36_2417ModerateErneBellahlina Br.2009EE36D010500NW_36_2417ModerateErneBurley Br u's Curenavoraph R confl2008EE37E03030NW_36_2417ModerateBurrenUllard Br.2009EE36D010500SE_ | Big | Ballygoly Br. | 2009 | IE06B010100 | NB_06_642 | Good |
| NBRBD Boat sites Newmills Br 2008 E03B010800 XB_03_5 Moderate Dee Burkyer (Monaghan) Burley Br. 2009 EE06D010600 NB_06_50 Moderate NWRBD Hand-set sites Ballyhallan Bridge u's Clonmany River 2008 EE39B020600 NW_39_1105 Moderate Clady Bridge u's Of Bunbeg 2009 EI38C060300 NW_38_1224 Good Conaniv Burn Bridge u's Of Roshin (Lough Gartan) 2008 EE38C060300 NW_38_124 Good Owentocker 500m d's Bridge in Ardara 2008 EE38C060300 NW_39_1136 Good Swailinbar 0 & Km d's Swailinbar Br 2008 EE36X002050 NW_36_18 Good Swilly Br (near Breenagh) 2008 EE36X021400 NW_36_2417 Moderate Dromore Br in Ballybay 2008 EE36X021400 NW_36_2417 Moderate Dromore Br in Ballybay 2008 EE36X021400 NW_36_2417 Moderate Finn Cumber Br. 2008 EE36X021400 NW_36_2 | White | Coneyburrow Br. | 2009 | IE06W010500 | NB_06_550 | Moderate |
| Blackwater (Monaghan) Newmils Br 2008 El:03B010800 NR_06_50 Moderate NWIRDD Hand-set sites Bridge u's Clonmany River 2008 IE:04B010200 NW_39_1105 Moderate Ballyhallan Bridge u's Clonmany River 2008 IE:39B020600 NW_39_1105 Moderate Cronaniv Burn Bridge u's Of Bunbeg 2008 IE:39B020600 NW_38_1124 Good Cronaniv Burn Bridge u's Of Bunbeg 2008 IE:38C060100 NW_38_1124 Good Cronaniv Burn Bridge u's Ohndy's Bridge in Ardara 2008 IE:38C060100 NW_38_102 Good Swaniinbar Oskm d's Swaniinbar 2008 IE:38C003000 NW_36_18 Good Swalithbar Swalithbar 2008 IE:38C0020150 NW_36_2417 Moderate Domore Brin Ballybay 2008 IE:36D02150 NW_36_2417 Moderate Dromore Brin Ballybay 2008 IE:36D02150 NW_36_2417 Moderate Erne Kilconny Belturbet (RHS) 2008 IE:36D01200 SE_1 | NBIRBD Boat sites | | | | | |
| Dec Burley Br. 2009 E00D010000 NH_66_50 Moderate Ballyhallan Bridge in Sumfoot 2008 Ei398020600 NW.40_1082 Good Clady Bridge in Sumfoot 2008 Ei398020600 NW.39_1105 Moderate Clady Bridge u's of Bunlewy Lough 2008 Ei38006300 NW.38_4124 Good Glaskeelan Bridge u's Of Roshin (Lough Gartan) 2008 Ei380060300 NW.38_3037 High Swalinbar 0.6km d's Bridge in Ardara 2008 Ei380060300 NW.38_3037 High Swalinbar 0.6km d's Swalinbar Br 2008 Ei380020050 NW.39_31508 Good NWIRBD Boat sites 0.4km d's Cavan R confl 2008 Ei38002100 NW.36_2417 Moderate Dromore Br in Ballybay 2008 Ei38020300 NW.35_304 Moderate Eany Water Just u's Eany Beg/More confl 2008 Ei37E03030 NW.35_304 Moderate Enne Kiloonny Belurbet (RHS) 2009 Ei36E011100 NW.35_36_east_4 <t< td=""><td>Blackwater (Monaghan)</td><td>Newmills Br</td><td>2008</td><td>IE03B010800</td><td>XB_03_5</td><td>Moderate</td></t<> | Blackwater (Monaghan) | Newmills Br | 2008 | IE03B010800 | XB_03_5 | Moderate |
| NVIRBD Hand-set sites Bridge u/s Clonmany River 2008 IE40B010200 NW_40_1082 Good Clady Bridge in /s of Buncheg 2008 IE30B020600 NW_39_1105 Moderate Cronaniv Burn Bridge u/s of Buncheg 2009 IE38C060100 NW_38_4124 Good Glaskeelan Bridge u/s of Buncheg 2008 IE38C060100 NW_38_3037 High Swanlinbar 0.6km d/s Swanlinbar Br 2008 IE38C060100 NW_38_3037 High Swanlinbar 0.6km d/s Swanlinbar Br 2008 IE36S010300 NW_36_108 Good Swanlinbar 0.6km d/s Swanlinbar Br 2008 IE36A021400 NW_36_2417 Moderate Annale 0.2km d/s Cavan R confl 2008 IE36A021400 NW_36_2417 Moderate Dromore Br in Ballybay 2008 IE36D020150 NW_36_2446 Good Murer Just /s Eany Beg/More confl 2008 IE36D01000 NB_36_east_4 Moderate Erne Kilconny Belturbet (RHS) 2008 IE36F011400 NB_36_east_ | Dee | Burley Br. | 2009 | IE06D010600 | NB_06_50 | Moderate |
| Bailtyhallain Bridge in Schorn operation Bridge in Sumfoot 2008 EE308020600 NN_40_1082 Good Chady Bridge u's of Bunbeg 2009 EE38C040300 NW_38_4124 Good Cananiv Burn Bridge u's of Bunbeg 2008 EE38C060100 NW_38_400 High Glaskeelan Gartan) 2008 EE38C060300 NW_38_3037 High Swanlinbar 0.6km d's Bridge in Ardara 2008 EE380060300 NW_38_3037 High Swailly Swilly Swilly Br (near Breenagh) 2008 EE380020150 NW_39_11508 Good Manalee 0.2km d's Cavan R confl 2008 EE360020150 NW_36_30 Moderate Dromore Br in Bailybay 2008 EE3601400 NW_36_30 Moderate Erne Kiconny Belurbet (RHS) 2008 EE3601100 NW_36_2417 Moderate Erne Kiconny Belurbet (RHS) 2008 EE3601100 NW_36_1746 Good Erne Kiconny Belurbet (RHS) 2009 EE36011100 NW_36_1746 | NWIRBD Hand-set sites | | •••• | WE 40 D 0 1 0 D 0 0 | | <u> </u> |
| Burntoot Bridge in Burntoot 2008 IE 398020000 NW 39_1105 Moderate Clady Bridge w's Onlowy Lough 2009 IE 38C040300 NW 38_4124 Good Glaskeelan Gartan) 2008 IE 39C040300 NW 38_4124 Good Owentocker 500m d's Bridge in Ardara 2008 IE 3960050100 NW 38_3037 High Swanlinbar 0.6km d's Swanlinbar Do 0km d's Swanlinbar 2008 IE 365010300 NW 36_118 Good Swilly Swilly Br (near Breenagh) 2008 IE 366003000 NW 36_2417 Moderate Annalee 0.2km d's Cavan R confl 2008 IE 366010300 NW 37_3646 Good Enne Bilabilan Br. 2009 IE 366011100 NW 36_2417 Moderate Finn Cumber Br. 2009 IE 366010300 NW 37_3646 Good SERBD Hand-set sites Balayitan Br. 2009 IE 367010000 SE_14_1781 Moderate Finn Cumber Br. 2009 IE 366011100 NW 36_36_ast_3 Mo | Ballyhallan | Bridge u/s Clonmany River | 2008 | IE40B010200 | NW_40_1082 | Good |
| | Burnfoot | Bridge in Burnfoot | 2008 | IE39B020600 | NW_39_1105 | Moderate |
| | Clady | Bridge u/s of Bunbeg | 2009 | IE38C040300 | NW_38_4124 | Good |
| GlaskeelanBridge W. of Koshin (L00gn Gartan)2008IE39G050100NW.39_1136GoodOwentocker500m d/s Bridge in Ardara2008IE39G06300NW.38_3037HighSwanlinbar0.6km d/s Swanlibar Br2008IE36S010300NW.36_118GoodSwillySwilly Br (near Breenagh)2008IE36S010300NW.36_2418GoodWaterfootLetter Br2008IE36A021400NW.36_2417ModerateAnnalee0.2km d/s Cavan R confl2008IE36D020150NW.36_230ModerateDromoreBr in Ballybay2008IE36E011100NW.36_2417ModerateEany WaterJust u's Eany Beg/More confl2008IE36E011140NW.36_241746ModerateFinnCumber Br.2009IE36E011100NW.36_1746ModerateFinnCumber Br.2009IE36E011000SE_15_1938ModerateBallyroanGloreen Br2008IE15B010200SE_15_1938ModerateBanogeBr u's Owenavorragh R confl.2008IE12D030200SE_11_277ModerateBanogeBr u's Ballyporeen2008IE12D030200SE_12_2798GoodDouglas (Ballon)Sragh Br2008IE12D030200SE_12_2798ModerateDuagBr u's Ballyporeen2008IE12D030200SE_12_798ModerateDuagBr u's Ballyporeen2008IE12D030200SE_14_946ModerateCidyFord (R) 3km u's Bunclody2008IE12D030200SE_14_946 </td <td>Cronaniv Burn</td> <td>Bridge u/s Dunlewy Lough</td> <td>2008</td> <td>IE38C060100</td> <td>NW_38_800</td> <td>High</td> | Cronaniv Burn | Bridge u/s Dunlewy Lough | 2008 | IE38C060100 | NW_38_800 | High |
| $\begin{array}{llllllllllllllllllllllllllllllllllll$ | Glaskeelan | Gartan) | 2008 | IE39G050100 | NW_39_1136 | Good |
| Swallinbar0.6km d/s Swallinbar Br2008EE36010300NW_36_18GoodSwillySwilly Br (near Breenagh)2008EE398020050NW_39_1508GoodWAtterfootLetter Br2008EE36A021400NW_36_2417ModerateDomoreBr in Ballybay2008EE36A020150NW_36_30ModerateEany WaterJust u/s Eany Beg/More confl2008EE36E010100NW_36_2417ModerateErneKiicony Belurbet (RHS)2009EE36E011100NW_36_1746ModerateFinnCumber Br.2009EE36E011100NW_36_1746ModerateSERBD Hand-set sitesBallyroanGloreen Br2008EE15B010200SE_15_1938ModerateBalnycanGloreen Br2009EE14B050100SE_14_1781ModerateBanogeBr u/s Owenavoragh R confl.2008EE12D030200SE_12_298GoodDouglas (Ballon)Sragh Br2008EE12D03000SE_12_789ModerateDuagBr u/s Baltyporeen2008EE16D030100SE_16_639GoodDuagaBr u/s Baltyporeen2008EE16D030100SE_14_781ModerateGloryBr E of Raheen2008EE15010200SE_15_1870GoodGuagBr u/s Baltyporeen2008EE16D030100SE_14_946ModerateGloryBr E of Raheen2008EE16N010100SE_16_1059HighNuennaBr d/s Clomantagh2008EE15N020100SE_14_946ModerateGl | Owentocker | 500m d/s Bridge in Ardara | 2008 | IE38O060300 | NW_38_3037 | High |
| SwillySwilly Br (near Breenagh)2008EE398020050NW_39_1508GoodWaterfootLetter Br2008IE36A0030700XB_36_west_5GoodAnnalee0.2km d/s Cavan R confl2008EE36A021400NW_36_2417ModerateDromoreBr in Ballybay2008IE36D020150NW_36_30ModerateEany WaterJust u/s Eany Beg/More confl2008IE37E030300NW_37_3646GoodErneBellahillan Br.2009IE36E011400XB_36_east_4ModerateFinnCumber Br.2009IE36E011000NW_36_1746ModerateBallyroanGloreen Br2008IE11B020300SE_11_257ModerateBanogeBr u/s Owenavorragh R confl.2008IE11B020300SE_11_277ModerateBurrenUllard Br.2009IE12C030200SE_12_2098GoodDuagFord (Br) 3km u/s Bunclody2008IE12D030200SE_12_2789ModerateDuagBr u/s Outporreen2008IE12D030200SE_12_789ModerateGloryBr E of Raheen2008IE12D030200SE_15_1870GoodDuncormick(W) Br nr Duncormick Rly St2008IE13D010350SE_14_946ModerateNierBr ENE of Ballymacarby2008IE16N010100SE_16_199HighNuennaBr d/s Clomantagh2009IE14B050100SE_15_1029ModerateNierBr ENE of Ballymacarby2008IE17010250SE_14_946ModerateNie | Swanlinbar | 0.6km d/s Swanlinbar Br | 2008 | IE36S010300 | NW_36_18 | Good |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | Swilly | Swilly Br (near Breenagh) | 2008 | IE39S020050 | NW_39_1508 | Good |
| NWIRED Boat sitesAnnalee0.2km d/s Cavan R confl2008IE36A021400NW_36_2417ModerateDromoreBr in Ballybay2008IE37E030300NW_37_3646GoodEany WaterJust u/s Eany Beg/More confl2008IE37E030300NW_37_3646GoodErneKilconny Belturbet (RHS)2008IE36E011400NB_36_east_4ModerateFinnCumber Br.2009IE36F010500XB_36_east_3ModerateBallyroanGloreen Br2008IE15B010200SE_15_1938ModerateBanogeBr u/s Owenavorragh R confl.2008IE11B020300SE_11_257ModerateBurrenUllard Br.2009IE144050100SE_12_2098GoodClodyFord (Br) 3km u/s Bunclody2008IE12C030200SE_12_2098GoodDouglas (Ballon)Sragh Br2008IE16D030100SE_16_639GoodDuncornick(W) Br nr Duncornick RIV St2008IE16D030100SE_15_1870GoodGloryBr Le of Raheen2008IE16D030100SE_15_1870GoodGreeseBridge NE of Belan House2009IE146040350SE_15_1029ModerateNierBr Le Sto Jallymacarby2008IE16N02100SE_16_1059HighNuennaBr d/s Clomantagh2008IE16N020100SE_16_1059HighNuennaBr d/s Clomantagh2008IE16A020600SE_11_2605GoodSterkeBring2009IE147020300SE_12_265 | Waterfoot | Letter Br | 2008 | IE36W030700 | XB_36_west_5 | Good |
| $\begin{array}{llllllllllllllllllllllllllllllllllll$ | NWIRBD Boat sites | | | | | |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | Annalee | 0.2km d/s Cavan R confl | 2008 | IE36A021400 | NW_36_2417 | Moderate |
| Eany WaterJust u's Eany Beg/More confl2008IE37E030300NW_37_3646GoodErneKilconny Belturbet (RHS)2009IE36E011400XB_36_east_4ModerateFinnCumber Br.2009IE36F010500XB_36_east_3ModerateSERBD Hand-set sites2009IE36F010500XB_36_east_3ModerateBallyroanGloreen Br2008IE11B020300SE_11_257ModerateBurrenUllard Br.2009IE14B050100SE_14_1781ModerateOuglas (Ballon)Sragh Br2008IE12D03200SE_12_2098GoodDouglas (Ballon)Sragh Br2008IE12D03200SE_12_89ModerateDuagBr u's Ballyporeen2008IE16D030100SE_16_639GoodDuncormick(W) Br nr Duncormick Rly St2008IE150010200SE_11_745ModerateGloryBr E of Raheen2008IE150010200SE_14_1781ModerateNierBr d's Clomantagh2008IE16N010100SE_16_01020SE_14_1781NuennaBr d's Clomantagh2008IE15N020100SE_16_1059HighNuennaBr d's Clomantagh2009IE14G040350SE_14_1781ModerateNierBuck's Br2009IE14B020100SE_16_2342GoodSerresBridge NE of Balmacarby2008IE15N020100SE_16_2342GoodNierBr ef Se Glomatagh2009IE14B011000SE_16_2342GoodSerresBridge NE <td< td=""><td>Dromore</td><td>Br in Ballybay</td><td>2008</td><td>IE36D020150</td><td>NW_36_30</td><td>Moderate</td></td<> | Dromore | Br in Ballybay | 2008 | IE36D020150 | NW_36_30 | Moderate |
| ErneKilconny Belturbet (RHS)2008 $E36E011400$ XB_36_east_4ModerateErneBellahillan Br.2009 $E36E011100$ NW_36_1746ModerateFinnCumber Br.2009 $E36E0110500$ XB_36_east_3ModerateSERBD Hand-set sitesBallyroanGloreen Br2008 $E11B020300$ SE_15_1938ModerateBanogeBr u's Owenavorragh R confl.2008 $E11B020300$ SE_11_257ModerateBurrenUllard Br.2009 $E14B050100$ SE_14_1781ModerateClodyFord (Br) 3km u's Bunclody2008 $E12C030200$ SE_12_2098GoodDouglas (Ballon)Sragh Br2008 $E161D030100$ SE_16_639GoodDuagBr u's Ballyporeen2008 $E161D030100$ SE_15_1870GoodGreeseBridge NE of Belan House2009 $E146040350$ SE_14_946ModerateNierBr ENE of Ballymacarby2008 $E16N010100$ SE_16_1059HighNuennaBr d's Clomantagh2009 $E146040350$ SE_15_1029ModerateUrrinBuck's Br2009 $E1416020300$ SE_16_2342GoodStressBrid's Clomantagh2008 $E16A020600$ SE_16_2342GoodStressBr2009 $E141000300$ SE_11_265GoodStressBr2009 $E14001000$ SE_16_2342GoodMierBr en Killadangan2008 $E15020800$ SE_15_155GoodStirf2009 <td< td=""><td>Eany Water</td><td>Just u/s Eany Beg/More confl</td><td>2008</td><td>IE37E030300</td><td>NW_37_3646</td><td>Good</td></td<> | Eany Water | Just u/s Eany Beg/More confl | 2008 | IE37E030300 | NW_37_3646 | Good |
| ErneBellahillan Br.2009IE36E011100NW_36_1746ModerateFinnCumber Br.2009IE36F010500XB_36_east_3ModerateSERBD Hand-set sitesBallyroanGloreen Br2008IE15B010200SE_15_1938ModerateBanogeBr u/s Owenavorragh R confl.2008IE11B020300SE_11_257ModerateBurrenUllard Br.2009IE14B050100SE_14_1781ModerateClodyFord (Br) 3km u/s Bunclody2008IE12C030200SE_12_2098GoodDouglas (Ballon)Sragh Br2008IE12D030200SE_16_639GoodDuncormick(W) Br nr Duncormick Rly St2008IE13D010350SE_15_1870GoodGreeseBridge NE of Belan House2009IE14G040350SE_14_946ModerateNierBr ENE of Ballymacarby2008IE15N020100SE_15_1029ModerateNuennaBr d/s Clomantagh2008IE12N020300SE_15_1029ModerateVirinBuck's Br2009IE14T020390SE_14_946ModerateUrrinBuck's Br2009IE14B020600SE_16_2342GoodSerBD Boat sitesAnnerDrummon Br2008IE15D020800SE_17_823GoodMuteenBallygriffin Br2009IE14B011000SE_16_1951ModerateObininDinin Br.2009IE14B020600SE_16_2342GoodManoENE of Seafield Ho2009IE14B020800SE_17_825Good | Erne | Kilconny Belturbet (RHS) | 2008 | IE36E011400 | XB_36_east_4 | Moderate |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | Erne | Bellahillan Br. | 2009 | IE36E011100 | NW_36_1746 | Moderate |
| SERBD Hand-set sitesBallyroanGloreen Br2008IE15B010200SE_15_1938ModerateBanogeBr u/s Owenavorragh R confl.2008IE11B020300SE_11_257ModerateBurrenUllard Br.2009IE14B050100SE_14_1781ModerateClodyFord (Br) 3km u/s Bunclody2008IE12C030200SE_12_2098GoodDouglas (Ballon)Sragh Br2008IE12D030200SE_16_639GoodDuagBr u/s Ballyporeen2008IE16D03100SE_16_639GoodDuncormick(W) Br nr Duncormick Rly St2008IE16D03100SE_15_1870GoodGloryBr E of Raheen2008IE16D03100SE_16_1059HighNuennaBr ENE of Balan House2009IE14G040350SE_14_946ModerateNierBr ENE of Balaymacarby2008IE15N020100SE_15_1029ModerateUrinBuck's Br2009IE14T020390SE_14_842ModerateUrrinBuck's Br2008IE12U010200SE_12_2605GoodSERBD Boat sites2008IE17C010250SE_17_832GoodJininDinin Br.2009IE14B011000SE_15_1955GoodKing'sKells Br.2009IE15N020800SE_15_1819GoodMulteenBallygriffin Br2008IE17N010350SE_17_832GoodMulteenBallygriffin Br2008IE17N010350SE_15_1819GoodMulteenBally | Finn | Cumber Br. | 2009 | IE36F010500 | XB_36_east_3 | Moderate |
| BallyroanGloreen Br2008IE15B010200SE_15_1938ModerateBanogeBr u/s Owenavorragh R confl.2008IE11B020300SE_11_257ModerateBurrenUllard Br.2009IE14B050100SE_14_1781ModerateClodyFord (Br) 3km u/s Bunclody2008IE12C030200SE_12_2098GoodDuagBr u/s Ballyporeen2008IE12D030200SE_15_1787ModerateDuagBr u/s Ballyporeen2008IE13D010350SE_13_745ModerateGloryBr E of Raheen2008IE13D010200SE_15_1870GoodGreeseBridge NE of Belan House2009IE14G040350SE_14_946ModerateNierBr ENE of Ballymacarby2008IE16N010100SE_16_1059HighNuennaBr d/s Clomantagh2008IE15N020100SE_14_842ModerateUrrinBuck's Br2008IE12U010200SE_14_842ModerateUrrinBuck's Br2008IE12U010200SE_14_245GoodSERBD Boat sites | SERBD Hand-set sites | | | | | |
| BanogeBr u/s Owenavorragh R confl.2008IE 11B020300SE_11_257ModerateBurrenUllard Br.2009IE 14B050100SE_14_1781ModerateClodyFord (Br) 3km u/s Bunclody2008IE 12C030200SE_12_2098GoodDouglas (Ballon)Sragh Br2008IE 12D030200SE_12_789ModerateDuagBr u/s Ballyporeen2008IE 13D010350SE_13_745ModerateGloryBr E of Raheen2008IE 15G010200SE_14_946ModerateGirceseBridge NE of Belan House2009IE 14G040350SE_14_946ModerateNierBr ENE of Ballymacarby2008IE 15N020100SE_15_1870GoodVuennaBr d/s Clomantagh2009IE 14T020390SE_14_946ModerateVuennaBr d/s Clomantagh2008IE 15N020100SE_12_2055GoodSERBD Boat sitesUrrinBuck's Br2008IE 16A020600SE_16_2342GoodBarrowPass Br.2009IE 148011000SE_17_832GoodColliganBr nr Killadangan2008IE 17N010350SE_17_832GoodDininDinin Br.2009IE 15K020800SE_17_825GoodMahonENE of Safield Ho2008IE 17N010350SE_17_825GoodMulteenBallygriffin Br2008IE 15N01300SE_16_3825GoodMahonENE of Safield Ho2008IE 15N010300SE_15_1018ModerateOwenavorragh <td< td=""><td>Ballyroan</td><td>Gloreen Br</td><td>2008</td><td>IE15B010200</td><td>SE_15_1938</td><td>Moderate</td></td<> | Ballyroan | Gloreen Br | 2008 | IE15B010200 | SE_15_1938 | Moderate |
| BurrenUllard Br.2009IE14B050100SE_14_1781ModerateClodyFord (Br) 3km u/s Bunclody2008IE12C030200SE_12_2098GoodDouglas (Ballon)Sragh Br2008IE12D030200SE_12_789ModerateDuagBr u/s Ballyporeen2008IE16D030100SE_16_639GoodDuncormick(W) Br nr Duncormick Rly St2008IE16D030100SE_15_1870GoodGloryBr E of Raheen2008IE16S010200SE_15_1870GoodGreeseBridge NE of Belan House2009IE146040350SE_14_946ModerateNierBr ENE of Balan House2008IE16N010100SE_16_1059HighNuennaBr d/s Clomantagh2008IE16N020100SE_15_1029ModerateTully StreamSoomeragh Br.2009IE144020390SE_14_842ModerateUrrinBuck's Br2008IE16A020600SE_16_2342GoodBarrowPass Br.2009IE148011000SE_15_1955GoodSenrowPass Br.2009IE15N020800SE_17_832GoodDininDinin Br.2009IE15N020800SE_15_1955GoodMahonENE of Seafield Ho2008IE17W010350SE_17_825GoodMulteenBallygriffin Br2008IE15N010300SE_16_3825GoodNoreQuaker's Bridge2008IE15N010300SE_15_1018ModerateOwenavorraghBr N of Ballinamona2008IE15N010300 </td <td>Banoge</td> <td>Br u/s Owenavorragh R confl.</td> <td>2008</td> <td>IE11B020300</td> <td>SE_11_257</td> <td>Moderate</td> | Banoge | Br u/s Owenavorragh R confl. | 2008 | IE11B020300 | SE_11_257 | Moderate |
| ClodyFord (Br) 3km u/s Bunclody2008IE12C030200SE_12_2098GoodDouglas (Ballon)Sragh Br2008IE12D030200SE_12_789ModerateDuagBr u/s Ballyporeen2008IE16D030100SE_16_639GoodDuncormick(W) Br nr Duncormick Rly St2008IE13D010350SE_13_745ModerateGloryBr E of Raheen2008IE15G010200SE_15_1870GoodGreeseBridge NE of Belan House2009IE14G040350SE_14_946ModerateNierBr ENE of Ballymacarby2008IE15N010100SE_16_1059HighNuennaBr d/s Clomantagh2008IE15N020100SE_15_1029ModerateTully StreamSoomeragh Br.2009IE14T020390SE_14_842ModerateUrrinBuck's Br2008IE16A020600SE_16_2342GoodSERBD Boat sites2009IE14B011000SE_14_196_1ModerateColliganBr nr Killadangan2008IE17C010250SE_17_832GoodDininDinin Br.2009IE15D020800SE_15_1955GoodMahonENE of Seafield Ho2008IE17M010350SE_17_825GoodMahonENE of Seafield Ho2008IE16M021100SE_16_3825GoodMahonENE of Seafield Ho2008IE15N010300SE_15_11018ModerateOwenavorraghBr N of Ballinamona2008IE11010500SE_11_251ModerateOwenavorraghBr N | Burren | Ullard Br. | 2009 | IE14B050100 | SE_14_1781 | Moderate |
| Douglas (Ballon)Sragh Br2008IE12D030200SE_12_789ModerateDuagBr u's Ballyporeen2008IE16D030100SE_16_639GoodDuncormick(W) Br n Duncormick Rly St2008IE13D010350SE_13_745ModerateGloryBr E of Raheen2008IE15G010200SE_15_1870GoodGreeseBridge NE of Belan House2009IE14G040350SE_14_946ModerateNierBr ENE of Ballymacarby2008IE15N020100SE_15_1029ModerateTully StreamSoomeragh Br.2009IE14T020390SE_14_842ModerateUrrinBuck's Br2008IE12U010200SE_12_2605GoodSERBD Boat sitesAnnerDrummon Br2008IE16A020600SE_16_2342GoodBarrowPass Br.2009IE14B011000SE_14_196_1ModerateColliganBr nr Killadangan2008IE17C010250SE_17_832GoodDininDinin Br.2009IE15K020800SE_15_1955GoodMahonENE of Seafield Ho2008IE17M010350SE_17_825GoodMulteenBallygriffin Br2008IE16M021100SE_17_181ModerateOwenavorraghBr N of Ballinamona2008IE15N010300SE_15_1018ModerateOwenavorraghBr N of Ballinamona2008IE15N010300SE_15_254GoodNoreQuaker's Bridge2009IE12S020400SE_11_2514GoodNoreQuak | Clody | Ford (Br) 3km u/s Bunclody | 2008 | IE12C030200 | SE_12_2098 | Good |
| DuagBr u/s Ballyporeen2008IE16D030100SE_16_639GoodDuncormick(W) Br nr Duncormick Rly St2008IE13D010350SE_13_745ModerateGloryBr E of Raheen2008IE15G010200SE_15_1870GoodGreeseBridge NE of Belan House2009IE14G040350SE_14_946ModerateNierBr ENE of Ballymacarby2008IE16N010100SE_16_1059HighNuennaBr d/s Clomantagh2008IE15N020100SE_11_2029ModerateTully StreamSoomeragh Br.2009IE14T020390SE_14_842ModerateUrrinBuck's Br2008IE16A020600SE_16_2342GoodBarrowPass Br.2009IE14B011000SE_14_196_1ModerateColliganBr nr Killadangan2008IE17C010250SE_17_832GoodDininDinin Br.2009IE15K020800SE_15_1955GoodKing'sKells Br.2009IE15K020800SE_15_1819GoodMahonENE of Seafield Ho2008IE17M010350SE_17_825GoodMulteenBallygriffin Br2008IE15N010300SE_15_1018ModerateOwenavorraghBr N of Ballinamona2008IE15N010300SE_15_1018ModerateOwenavorraghBr N of Ballinamona2008IE11010500SE_11_251GoodSuirKnocknageraeh Br2009IE12S020400SE_12_1524Good | Douglas (Ballon) | Sragh Br | 2008 | IE12D030200 | SE_12_789 | Moderate |
| Duncormick(W) Br nr Duncormick Rly St2008IE13D010350SE_13_745ModerateGloryBr E of Raheen2008IE15G010200SE_15_1870GoodGreeseBridge NE of Belan House2009IE14G040350SE_14_946ModerateNierBr ENE of Ballymacarby2008IE16N010100SE_16_1059HighNuennaBr d/s Clomantagh2008IE15N020100SE_15_1029ModerateTully StreamSoomeragh Br.2009IE14T020390SE_14_842ModerateUrrinBuck's Br2008IE16A020600SE_16_2342GoodSERBD Boat sitesAnnerDrummon Br2008IE16A020600SE_16_2342GoodBarrowPass Br.2009IE14B011000SE_15_1955GoodColliganBr nr Killadangan2008IE17C010250SE_17_832GoodDininDinin Br.2009IE15K020800SE_15_1955GoodKing'sKells Br.2009IE16M021100SE_15_1819GoodMahonENE of Seafield Ho2008IE16M021100SE_16_3825GoodNoreQuaker's Bridge2008IE15N010300SE_15_1018ModerateOwenavorraghBr N of Ballinamona2008IE11010500SE_11_251ModerateSlaneyWaterloo Br.2008IE11001050SE_16_3825GoodSlaneyWaterloo Br.2008IE11001050SE_16_2342Good | Duag | Br u/s Ballyporeen | 2008 | IE16D030100 | SE_16_639 | Good |
| GloryBr E of Raheen2008IE15G010200SE_15_1870GoodGreeseBridge NE of Belan House2009IE14G040350SE_14_946ModerateNierBr ENE of Ballymacarby2008IE16N010100SE_16_1059HighNuennaBr d/s Clomantagh2008IE15N020100SE_15_1029ModerateTully StreamSoomeragh Br.2009IE14T020390SE_14_842ModerateUrrinBuck's Br2008IE12U010200SE_12_2605GoodSERBD Boat sitesAnnerDrummon Br2008IE16A020600SE_14_196_1ModerateColliganBr nr Killadangan2008IE17C010250SE_17_832GoodDininDinin Br.2009IE15D020800SE_15_1955GoodKing'sKells Br.2009IE16M021100SE_17_825GoodMahonENE of Seafield Ho2008IE17M010350SE_17_825GoodMulteenBallygriffin Br2008IE16M021100SE_16_3825GoodNoreQuaker's Bridge2008IE15N010300SE_15_1018ModerateOwenavorraghBr N of Ballinamona2008IE1010500SE_11_251ModerateGoodSianeyWaterloo Br.2008IE160020200SE_12_1524Good | Duncormick | (W) Br nr Duncormick Rly St | 2008 | IE13D010350 | SE_13_745 | Moderate |
| GreeseBridge NE of Belan House 2009 IE14G040350 SE_14_946 ModerateNierBr ENE of Ballymacarby 2008 IE16N010100 SE_16_1059 HighNuennaBr d/s Clomantagh 2008 IE15N020100 SE_15_1029 ModerateTully StreamSoomeragh Br. 2009 IE14T020390 SE_14_842 ModerateUrrinBuck's Br 2008 IE12U010200 SE_12_2605 GoodSERBD Boat sites $Anner$ Drummon Br 2008 IE16A020600 SE_16_2342 GoodBarrowPass Br. 2009 IE14B011000 $SE_14_96_11$ ModerateColliganBr nr Killadangan 2008 IE17C010250 SE_17_832 GoodDininDinin Br. 2009 IE15D020800 SE_15_1955 GoodKing'sKells Br. 2009 IE16M021100 SE_17_825 GoodMahonENE of Seafield Ho 2008 IE16M021100 SE_16_3825 GoodMulteenBallygriffin Br 2008 IE15N010300 SE_15_1018 ModerateOwenavorraghBr N of Ballinamona 2008 IE1010500 SE_11_251 ModerateOwenavorraghBr N of Ballinamona 2008 IE16N02100 SE_11_251 ModerateSlaneyWaterloo Br. 2009 IE16S0202000 SE_11_254 Good | Glory | Br E of Raheen | 2008 | IE15G010200 | SE_15_1870 | Good |
| NierBr ENE of Ballymacarby 2008 IE16N010100 SE_16_1059 HighNuennaBr d/s Clomantagh 2008 IE15N020100 SE_15_1029 ModerateTully StreamSoomeragh Br. 2009 IE14T020390 SE_14_842 ModerateUrrinBuck's Br 2008 IE12U010200 SE_12_2605 GoodSERBD Boat sites $Anner$ Drummon Br 2008 IE16A020600 SE_16_2342 GoodBarrowPass Br. 2009 IE14B011000 $SE_14_196_11$ ModerateColliganBr nr Killadangan 2008 IE17C010250 SE_17_832 GoodDininDinin Br. 2009 IE15D020800 SE_15_1955 GoodKing'sKells Br. 2009 IE15N020800 SE_15_1819 GoodMahonENE of Seafield Ho 2008 IE17M010350 SE_17_825 GoodMulteenBallygriffin Br 2008 IE16M021100 SE_16_3825 GoodNoreQuaker's Bridge 2008 IE15N010300 SE_15_1018 ModerateOwenavorraghBr N of Ballinamona 2008 IE1010500 SE_11_251 ModerateSlaneyWaterloo Br. 2009 IE16S0202000 SE_12_1524 Good | Greese | Bridge NE of Belan House | 2009 | IE14G040350 | SE_14_946 | Moderate |
| NuennaBr d/s Clomantagh 2008 IE15N020100 SE_15_1029 ModerateTully StreamSoomeragh Br. 2009 IE14T020390 SE_14_842 ModerateUrrinBuck's Br 2008 IE12U010200 SE_12_2605 GoodSERBD Boat sites $SERBD$ Boat sites $SERBD$ SE_182_2605 GoodBarrowPass Br. 2009 IE14B011000 $SE_14_196_11$ ModerateColliganBr nr Killadangan 2008 IE17C010250 SE_17_832 GoodDininDinin Br. 2009 IE15D020800 SE_15_1955 GoodKing'sKells Br. 2009 IE15N020800 SE_15_1819 GoodMahonENE of Seafield Ho 2008 IE17M010350 SE_17_825 GoodMulteenBallygriffin Br 2008 IE16M021100 SE_16_3825 GoodNoreQuaker's Bridge 2008 IE15N010300 SE_15_1018 ModerateOwenavorraghBr N of Ballinamona 2008 IE1010500 SE_11_251 ModerateSlaneyWaterloo Br. 2009 IE16S020200 SE_11_254 Good | Nier | Br ENE of Ballymacarby | 2008 | IE16N010100 | SE_16_1059 | High |
| Tully Stream Soomeragh Br. 2009 IE141020390 SE_14_842 Moderate Urrin Buck's Br 2008 IE12U010200 SE_12_2605 Good SERBD Boat sites $IE120010200$ SE_16_2342 Good Anner Drummon Br 2008 IE16A020600 SE_16_2342 Good Barrow Pass Br. 2009 IE14B011000 SE_17_832 Good Dinin Dinin Br. 2009 IE15D020800 SE_15_1955 Good King's Kells Br. 2009 IE15M020800 SE_17_825 Good Mahon ENE of Seafield Ho 2008 IE17M010350 SE_17_825 Good Multeen Ballygriffin Br 2008 IE16M021100 SE_16_3825 Good Nore Quaker's Bridge 2008 IE15N010300 SE_15_1018 Moderate Owenavorragh Br N of Ballinamona 2008 IE1010500 SE_11_251 Moderate Slaney Waterloo Br. 2009 IE12S020400 SE_12_1524 Good Suir Knocknageragh Br | Nuenna | Br d/s Clomantagh | 2008 | IE15N020100 | SE_15_1029 | Moderate |
| Offin Buck's Br 2008 IE120010200 SE_12_2605 Good SERBD Boat sites | Tully Stream | Soomeragh Br. | 2009 | IE141020390 | SE_14_842 | Moderate |
| SERBD Boat sites Anner Drummon Br 2008 IE16A020600 SE_16_2342 Good Barrow Pass Br. 2009 IE14B011000 SE_14_196_1 Moderate Colligan Br nr Killadangan 2008 IE17C010250 SE_17_832 Good Dinin Dinin Br. 2009 IE15D020800 SE_15_1955 Good King's Kells Br. 2009 IE15N020800 SE_15_1819 Good Mahon ENE of Seafield Ho 2008 IE17M010350 SE_17_825 Good Multeen Ballygriffin Br 2008 IE16M021100 SE_16_3825 Good Nore Quaker's Bridge 2008 IE15N010300 SE_15_1018 Moderate Owenavorragh Br N of Ballinamona 2008 IE11010500 SE_11_251 Moderate Slaney Waterloo Br. 2009 IE16S0202000 SE_12_1524 Good Suir Knocknageragh Br 2008 IE16S0202000 SE_16_3997 Moderate <td>Urrin</td> <td>Buck's Br</td> <td>2008</td> <td>IE12U010200</td> <td>SE_12_2605</td> <td>Good</td> | Urrin | Buck's Br | 2008 | IE12U010200 | SE_12_2605 | Good |
| AnnerDrummon Br 2008 $IE16A020600$ SE_16_2342 $Good$ BarrowPass Br. 2009 $IE14B011000$ $SE_14_196_11$ ModerateColliganBr nr Killadangan 2008 $IE17C010250$ SE_17_832 $Good$ DininDinin Br. 2009 $IE15D020800$ SE_15_1955 $Good$ King'sKells Br. 2009 $IE15W020800$ SE_15_1819 $Good$ MahonENE of Seafield Ho 2008 $IE17M010350$ SE_17_825 $Good$ MulteenBallygriffin Br 2008 $IE16M021100$ SE_16_3825 $Good$ NoreQuaker's Bridge 2008 $IE15N010300$ SE_15_1018 ModerateOwenavorraghBr N of Ballinamona 2009 $IE12S020400$ SE_11_251 ModerateSlaneyWaterloo Br. 2008 $IE16S020200$ SE_16_3997 $Moderate$ | SERBD Boat sites | Darman Da | 2009 | IE164020600 | SE 16 0240 | Cool |
| BarrowPass Br.2009IE14B011000SE_14_196_1ModerateColliganBr nr Killadangan2008IE17C010250SE_17_832GoodDininDinin Br.2009IE15D020800SE_15_1955GoodKing'sKells Br.2009IE15K020800SE_15_1819GoodMahonENE of Seafield Ho2008IE17M010350SE_17_825GoodMulteenBallygriffin Br2008IE16M021100SE_16_3825GoodNoreQuaker's Bridge2008IE15N010300SE_15_1018ModerateOwenavorraghBr N of Ballinamona2008IE11010500SE_11_251ModerateSlaneyWaterloo Br.2009IE12S020400SE_12_1524GoodSuirKnocknageragh Br2008IE16S020200SE_16_3997Moderate | Anner | Drummon Br | 2008 | IE16A020600 | SE_10_2342 | Good |
| ComganBrin Kinadangan2006IE1/C010250SE_17_852GoodDininDinin Br.2009IE15D020800SE_15_1955GoodKing'sKells Br.2009IE15K020800SE_15_1819GoodMahonENE of Seafield Ho2008IE17M010350SE_17_825GoodMulteenBallygriffin Br2008IE16M021100SE_16_3825GoodNoreQuaker's Bridge2008IE15N010300SE_15_1018ModerateOwenavorraghBr N of Ballinamona2008IE11010500SE_11_251ModerateSlaneyWaterloo Br.2009IE12S020400SE_12_1524GoodSuirKnocknageragh Br2008IE16S020200SE_16_3997Moderate | Colligan | rass DI. Br.nr. Killadangan | 2009 | IE14D011000 IE17C010250 | SE_14_190_1 SE 17 922 | Good |
| Dinni Dinni BL 2009 IE13D02000 SE_15_1935 Good King's Kells Br. 2009 IE13D020800 SE_15_1819 Good Mahon ENE of Seafield Ho 2008 IE17M010350 SE_17_825 Good Multeen Ballygriffin Br 2008 IE16M021100 SE_16_3825 Good Nore Quaker's Bridge 2008 IE15N010300 SE_15_1018 Moderate Owenavorragh Br N of Ballinamona 2008 IE1010500 SE_11_251 Moderate Slaney Waterloo Br. 2009 IE12S020400 SE_12_1524 Good Suir Knocknageragh Br 2008 IE16S020200 SE_16_3997 Moderate | Dinin | Di lii Killadaligali Dinin Da | 2008 | IE1/C010230 | SE_17_032 | Good |
| King'sKens B1.2009IE15K020800SE_15_1819GoodMahonENE of Seafield Ho2008IE17M010350SE_17_825GoodMulteenBallygriffin Br2008IE16M021100SE_16_3825GoodNoreQuaker's Bridge2008IE15N010300SE_15_1018ModerateOwenavorraghBr N of Ballinamona2008IE11010500SE_11_251ModerateSlaneyWaterloo Br.2009IE12S020400SE_12_1524GoodSuirKnocknageragh Br2008IE16S020200SE_16_3997Moderate | Dillill King's | Dillii Dr. Kalla Pr | 2009 | IE15D020800 | SE_15_1955 SE_15_1910 | Good |
| MatterEINE of Scalled H02008IE1/M010500SE_17_625GoodMulteenBallygriffin Br2008IE16M021100SE_16_3825GoodNoreQuaker's Bridge2008IE15N010300SE_15_1018ModerateOwenavorraghBr N of Ballinamona2008IE11010500SE_11_251ModerateSlaneyWaterloo Br.2009IE12S020400SE_12_1524GoodSuirKnocknageragh Br2008IE16S020200SE_16_3997Moderate | Mahon | ENE of Saafield Up | 2009 | IE13K020000 IE17M010250 | SE_15_1019 SE 17 925 | Good |
| NoreQuaker's Bridge2008IE100021100SE_10_3225GoodOwenavorraghBr N of Ballinamona2008IE15N010300SE_15_1018ModerateSlaneyWaterloo Br.2009IE12S020400SE_12_1524GoodSuirKnocknageragh Br2008IE16S020200SE_16_3097Moderate | Multeen | Ballygriffin Br | 2008 | IE1/M010550 | SE_17_023 SE 16 3825 | Good |
| NoteGuade is Brage2006IE151010500SE_15_10166ModerateOwenavorraghBr N of Ballinamona2008IE11010500SE_11_251ModerateSlaneyWaterloo Br.2009IE12S020400SE_12_1524GoodSuirKnocknageragh Br2008IE16S020200SE_16_3097Moderate | Nore | Ouaker's Bridge | 2008 | IE15N010200 | SE_10_3023 SE 15 1019 | Moderate |
| StateDirectoreDirectoreDirectoreModerateSlaneyWaterloo Br.2009IE12S020400SE_12_1524GoodSuirKnocknageragh Br2008IE16S020200SE_163997Moderate | Owenavorragh | Br N of Ballinamona | 2008 | IF11010500 | SE_15_1016 SF 11 251 | Moderate |
| Suir Knocknageragh Br 2008 IE16S020200 SE 16 3997 Moderate | Slanev | Waterloo Br | 2008 | IE128020400 | SE_11_251 SE_12_1524 | Good |
| | Suir | Knocknageragh Br | 2009 | IE16S020200 | SE_12_1324 SE 16 3997 | Moderate |

Table 2.2. Details of river sites surveyed for WFD fish monitoring, 2008 - 2009



Table 2.2 contd. Details of river sites surveyed for WFD fish monitoring, 2008 - 2009

| River | Site name | Year | Site Code | Water body code | Ecological status (fish) |
|-----------------------|------------------------------------|------|---------------|-------------------------|-----------------------------|
| ShIRBD Hand-set sites | | | | | |
| Ballyfinboy | Bridge u/s Lough Derg | 2009 | IE25B020800 | SH_25_1853 | Moderate |
| Bilboa | Bilboa Br. | 2009 | IE25B030080 | SH_25_486 | High |
| Boor | Br NW of Kilbillaghan | 2008 | IE26B071100 | SH_26_3921 | Moderate |
| BOW Broadford | Bow River Br | 2008 | IE25B100100 | SH_25_2145 | Good |
| Broadford | Bridge u/s of Doon Lough | 2008 | IE27B020300 | SH_27_287 | Good |
| Caher | Bridge 2 km d/s of Formovle | 2009 | IE27B020800 | SH_27_287 | Good |
| Dead | Pope's Br. | 2009 | IE25D010100 | SH_25_1893 | Moderate |
| Glenafelly | Br 3km E of Longford | 2008 | IE25G210010 | SH 25 2084 | Good |
| Glendine | Knockloskeraun Br. | 2009 | IE28G020200 | SH_28_231 | Good |
| Gourna | Br u/s Owenogarney R confl. | 2008 | IE27G020600 | SH_27_885 | Good |
| Graney | Caher Br, S of L. Graney | 2008 | IE25G040025 | SH_25_2081 | Good |
| Inny | Br 1km S of Oldcastle | 2008 | IE26I010100 | SH_26_3091 | Good |
| Little | Br 2km SW of Cloghan | 2008 | IE25L010200 | SH_25_3014 | Moderate |
| Moyree | Bridge u/s Fergus River | 2009 | IE27M020700 | SH_27_1178 | Moderate |
| Newport | Rockvale Br. | 2009 | IE25N020200 | SH_25_320 | Good |
| Owvane | Bridge u/s of Loghill | 2009 | IE240020200 | SH_24_878 | Good |
| Twebo | Owveg Br. Pr pr Pappa House | 2009 | IE230050200 | SH_25_1/45 SH_22_427 | Bod |
| Tyshe | West of Ardfert Friery | 2008 | IE231020300 | SH_23_427 | Bau |
| Shirr Boat sites | West of Ardient Phary | 2009 | 11231020400 | 511_25_427 | 1 001 |
| Brosna | Clonony Br (NW of canal) | 2008 | IE25B091100 | SH 25 681 | Moderate |
| Brosna | 0.5km NW of Pollagh | 2008 | IE25B090760 | SH_25_681 | Moderate |
| Camlin | Bridge W of Lisnabo | 2008 | IE26C011000 | SH 26 3927 2 | Moderate |
| Clodiagh | Br at Rahan | 2008 | IE25C060500 | SH_25_2952 | Good |
| Creegh | Drumellihy Br. | 2009 | IE28C021400 | SH_28_709 | Good |
| Cross | Bridge u/s Shannon River | 2008 | IE26C100400 | SH_26_1448_2 | Moderate |
| Deel (Newcastlewest) | Bridge near Ballinaska | 2008 | IE24D020400 | SH_24_863 | Moderate |
| Feale | Br ENE of Duagh Ho | 2008 | IE23F010500 | SH_23_2941 | High |
| Feorish | Bridge 1.5km SW of Keadue | 2009 | IE26F020400 | SH_26_234 | Poor |
| Fergus | Bridge near Clonroad House | 2008 | IE27F010700 | SH_27_1245 | Moderate |
| Fergus | Poplar Br. | 2009 | IE2/F010100 | SH_2/_181 | Good* |
| Inny Kilonow | Shrule Br Bollyshmile Bridge | 2008 | IE201011550 | SH_20_883 | Moderate |
| Little Brosna | Riverstown Br | 2008 | IE25K010700 | SH_25_554 SH_25_633 | Good |
| Maigue | at Castleroberts Br | 2008 | IE23E020700 | SH_25_055 SH_24_1675 | Moderate |
| Mountnugent | Mountnugent Br | 2008 | IE26M020500 | SH_26_2742 | Good |
| Nenagh | Ballysoilshaun Br. | 2009 | IE25N010300 | SH 25 335 | Good |
| Scramoge | Bridge N.E. of Riverdale | 2008 | IE26S010300 | SH 26 3801 | Moderate |
| Shannon | Battle Br | 2008 | IE26S020500 | SH_26_3090 | Moderate |
| Shannon | Ballyleague Br. | 2009 | IE26S021600 | SH_26_4162 | Moderate* |
| Silver | Lumcloon Br | 2008 | IE25S020700 | SH_25_3701 | Good |
| Smearlagh | Ford u/s Feale R confl (LHS) | 2008 | IE23S020700 | SH_23_373 | Good |
| Suck | Ballyforan Bridge | 2008 | IE26S071100 | SH_26_1447_4 | Moderate |
| Suck | Cloondacarra Bridge | 2008 | IE26S070300 | SH_26_1447_1 | Moderate |
| Tullamore | Bridge SW of Ballycowen Br. | 2008 | IE25T030400 | SH_25_3798 | Moderate |
| SWRBD Hand-set sites | Eard C of Doors | 2000 | IE20 A 020200 | SW 20, 2251 | C - 1 |
| Argideen | Ford S of Keengarrigeen | 2009 | IE20A020200 | SW_20_2251 | Good |
| Funshion | Brackbaun Br. Ballyworishoon Pr | 2009 | IE18F050030 | SW_18_11 SW_10_755 | Good |
| Martin | Bawpafinny Br | 2008 | IE190010200 | SW_19_755 SW 10_101 | Good |
| Shanowen | Ford (Br) u/s Maine R confl | 2008 | IE19W010000 | SW_19_191 SW_22_3452 | High |
| SWRBD Boat sites | rord (Dr) we manie it conn. | 2000 | 11220010100 | 5 17 _22_3732 | 111511 |
| Awbeg | Kilcummer Br. | 2009 | IE18A051300 | SW 18 2677 | Good |
| Bandon | Bridge near Desert Station | 2009 | IE20B020600 | SW_20_2230 1 | Moderate* |
| Blackwater | Killavullen Br. | 2009 | IE18B021900 | SW_18_2292_5 | Moderate* |
| Blackwater | Nohaval Br. | 2009 | IE18B020200 | SW_18_450 | Good |
| Bride | Bridge N of Ballynella | 2009 | IE18B050500 | SW_18_2778 | Good |
| Flesk* | Flesk Br. S of Killamev I HS | 2008 | IE22E020300 | SW 22 3372 | Good |
| Gweestin | Gweestin Br | 2008 | IE22G061200 | SW 22 2207 | Moderate |
| Lee | Inchinossig Br | 2008 | IE19L030100 | SW 19 928 | Good |
| Maine | Maine Br (Lower) | 2008 | IE22M010700 | SW_22_3960 | Moderate |
| Owenreagh* | Br u/s Upper Lake | 2008 | IE22O030400 | SW_22_2703 | Good |
| Womanagh | S of Ballyhonock Lough | 2008 | IE19W011300 | SW_19_1909 | Moderate |



| River | Site name | Year | Site Code | Water body code | Ecological status (fish) |
|---------------------|--------------------------------|------|-------------|--------------------|-----------------------------|
| WRBD Hand-set sites | | | | | |
| Ballinglen | Ballinglen Bridge | 2008 | IE33B010100 | WE_33_2091 | High |
| Black | Bridge at Kilshanvy | 2009 | IE30B020100 | WE_30_2928 | Good |
| Clydagh | Br NW Ardvarney | 2008 | IE34C050030 | WE_34_314 | High |
| Dunneill | Donaghintraine Br. | 2009 | IE35D060200 | WE_35_1430 | Moderate |
| Glenamong | Bridge u/s Lough Feeagh | 2008 | IE32G030100 | WE_32_2441 | Good |
| Gowlan | Ford u/s of Easky River confl. | 2009 | IE35G030100 | WE_35_1187 | Good |
| Moy | Cloonbaniff Br | 2008 | IE34M020050 | WE_34_3035 | High |
| Owenbrin | Bridge u/s of Lough Mask | 2009 | IE300010200 | WE_30_1063 | Good |
| Owendalulleegh | Bridge SE of Killafeen | 2009 | IE29O011000 | WE_29_150 | Moderate |
| Tobercurry | Br just u/s Moy River | 2008 | IE34T020200 | WE_34_2633 | High |
| Unshin | d/s of Riverstown Br. | 2009 | IE35U010200 | WE_35_2178 | Good |
| WRBD Boat sites | | | | | |
| Behy | Behy Bridge | 2008 | IE34B080400 | WE_34_3999 | Good |
| Bunowen* | Tully Bridge | 2008 | IE32B030100 | WE_32_3740 | Good |
| Castlebar | Br 2.5km d/s Castlebar | 2008 | IE34C010200 | WE_34_3953 | Poor |
| Deel (Crossmolina) | Bridge at Castle Gore | 2008 | IE34D010400 | WE_34_3896_3 | Moderate |
| Glenamoy | Glenamoy Bridge | 2008 | IE33G010100 | WE_33_3238 | Good |
| Nanny | u/s of Weir Br. | 2009 | IE30N010300 | WE_30_1128 | Moderate |

Table 2.2 cont. Details of river sites surveyed for WFD fish monitoring, 2008 - 2009

*surveys completed in unfavourable flood conditions and will be repeated in the second surveillance monitoring cycle (2010 – 2012)





Fig. 2.2. Location of WFD fish monitoring river sites (hand-set), 2008 - 2009





Fig. 2.3. Location of WFD fish monitoring river sites (boat), 2008 - 2009



Table 2.3. Details of transitional waters surveyed for WFD fish monitoring, 2007 – 2009. TW = Transitional Water, FT = Freshwater Tidal, L = Lagoon

| Transitional Water body | Water body Code | Year | Easting | Northing | Туре | Area (km ²) | Ecological status (fish) |
|---|----------------------------|------|---------|----------|-----------|----------------------------|-----------------------------|
| ERBD | | | | | | | |
| Avoca Estuary | EA_150_0100 | 2008 | 324953 | 173295 | TW | 0.17 | Moderate |
| Boyne Estuary | EA_010_0100 | 2009 | 313778 | 276399 | TW | 3.16 | Good |
| Broad Lough | EA_130_0100 | 2008 | 330594 | 195959 | TW | 0.80 | Good |
| Broadmeadow Water | EA_060_0100 | 2008 | 320835 | 247207 | L | 3.33 | Good |
| Liffey Estuary, Lower | EA 090 0300 | 2008 | 322144 | 234429 | TW | 4.80 | Good |
| Liffey Estuary, Upper | EA_090_0400 | 2008 | 314071 | 234314 | TW | 0.19 | Poor |
| Rogerstown Estuary | EA 050 0100 | 2008 | 322928 | 252252 | TW | 3.05 | Moderate |
| Tolka Estuary | EA_090_0200 | 2008 | 321433 | 234429 | TW | 3.58 | Moderate |
| NBIRBD | | | | | | | |
| Castletown Estuary | NB 040 0200 | 2009 | 307493 | 308320 | TW | 1.88 | Moderate |
| Dundalk Bay, Inner | NB 040 0100 | 2009 | 311060 | 304506 | TW | 33.35 | Moderate |
| WRBD | | | | | | | |
| Ballysadare Estuary | WE 460 0300 | 2008 | 163808 | 330609 | тw | 8.72 | Moderate |
| Bridge Lough, Knockakilleen | WE 160 0200 | 2009 | 133901 | 213038 | L | 0.08 | Poor |
| Camus Bay | WE 200 0200 | 2009 | 94485 | 233785 | TW | 10.75 | Good |
| Corrib Estuary | WE 170 0700 | 2008 | 130733 | 224168 | TW | 9.70 | Good |
| Erriff Estuary | WE 310 0100 | 2008 | 89005 | 263718 | TW | 0.41 | Good |
| Garayoge Estuary | WE 470 0100 | 2008 | 166769 | 337869 | TW | 8.83 | Good* |
| Kinvarra Bay | WE 160 0100 | 2009 | 136233 | 212338 | TW | 5 72 | Good |
| Loch an Aibhinn | WE 200 0700 | 2009 | 94702 | 231553 | I. | 0.54 | Moderate* |
| Loch an tSáile | WE 200_1100 | 2009 | 95117 | 238938 | ī | 0.90 | Moderate* |
| Loch Tanaí | WE_200_1100 WE_200_0600 | 2008 | 95017 | 230456 | I | 0.10 | Moderate* |
| Lough Athola | WE 260_0100 | 2009 | 62586 | 248410 | ī | 0.10 | Good |
| Mov Estuary | WE_200_0100 WE_420_0300 | 2009 | 125934 | 323839 | TW | 7 42 | Good |
| Murree Lough | WE 120_0100 | 2009 | 125455 | 211937 | I | 0.13 | Bad |
| Newport Bay | WE 350 0200 | 2008 | 95723 | 293895 | TW | 9 35 | Good |
| Sruwaddacon Bay | WE 400 0200 | 2008 | 82999 | 337409 | TW | 8 39 | Good |
| Tullaghan Bay | WE 390 0100 | 2008 | 77396 | 317351 | TW | 17.25 | Good |
| Westport Bay | WE 350 0100 | 2008 | 94402 | 284134 | TW | 5 32 | Good |
| NWPRD | WE_550_0100 | 2000 | 74402 | 204134 | 1 11 | 5.52 | 0000 |
| Donegal Bay Inner | NW 050 0100 | 2009 | 10130/ | 375542 | тW | 8 1 2 | Good |
| Durnesh Lough | NW 040 0100 | 2009 | 311060 | 304506 | I | 0.12 | Moderate |
| Erne Estuary | NW 030 0100 | 2009 | 187760 | 369317 | TW | 2.58 | Good |
| Gweebarra Estuary | NW 120 0100 | 2009 | 1853/3 | 361866 | TW | 2.30 8.26 | Good |
| Inch Lough | NW 220 0300 | 2009 | 183113 | 402412 | I | 1.62 | Good |
| Swilly Estuary | NW 220_0300 | 2009 | 297785 | 135653 | TW | 59.36 | Good |
| Shipp | 14W_220_0100 | 2007 | 271105 | 155055 | 1 11 | 57.50 | 0000 |
| Cashen Estuary | SH 060 0100 | 2008 | 89059 | 136019 | тW | 2 67 | Good |
| Deel Estuary | SH_060_0100 | 2008 | 131801 | 152431 | TW | 2.07 | Moderate |
| Eagle Estuary Upper | SH_060_0200 | 2008 | 0/087 | 132431 | ET 1 | 0.38 | Good |
| Ferrous Estuary | SH_060_1100 | 2008 | 132035 | 165677 | TW | 64.75 | Moderate |
| I engus Estuary Lee (Tralee) Estuary | SH_050_0100 | 2008 | 80583 | 113302 | TW | 3.06 | Rad* |
| Limerick Docks | SH 060 0000 | 2008 | 157382 | 157267 | I W | 2.00 | Good |
| Maigua Estuary | SH 060 0700 | 2008 | 1/2000 | 157207 | 1.1 TW | 2.49 | Moderate |
| Shannon Estuary Lower | SH_060_0700 | 2008 | 140070 | 152519 | TW | 123.08 | Good |
| Shannon Estuary, Lunor | SH_060_0300 | 2008 | 1/2529 | 152200 | | 20.51 | Good |
| Shannon Estuary, Opper | 3n_000_0800 | 2008 | 145558 | 139394 | 1 VV | 39.31 | 0000 |

*Indicates a low confidence of classification due to sampling problems. These sites will be repeated and re-classified



Table 2.3 contd. Details of transitional waters surveyed for WFD fish monitoring, 2007 – 2009. TW = Transitional Water, FT = Freshwater Tidal, L = Lagoon

| Transitional Water body | MS Code | Year | Easting | Northing | Туре | Area (km ²) | Ecological status (fish) |
|--------------------------------|-------------|------|---------|----------|------|----------------------------|-----------------------------|
| SERBD | | | | | | | (11311) |
| Barrow Estuary, Upper | SE 100 0300 | 2007 | 273066 | 137640 | TW | 1.15 | Moderate |
| Barrow Nore Estuary Upper | SE 100 0250 | 2007 | 272129 | 128644 | TW | 0.64 | Poor |
| Barrow Suir Nore Estuary | SE 100 0100 | 2007 | 271527 | 107512 | TW | 28.21 | Good |
| Bridgetown Estuary | SE 080 0100 | 2009 | 291841 | 107934 | TW | 2.03 | Good |
| Colligan Estuary | SE 140 0100 | 2008 | 226938 | 92488 | TW | 10.03 | Good |
| Lady's Island Lake | SE 060 0100 | 2009 | 309650 | 106515 | L | 2.96 | Moderate |
| New Ross Port | SE 100 0200 | 2007 | 267862 | 117105 | TW | 6.71 | Moderate |
| Nore Estuary | SE_100_0400 | 2007 | 265312 | 135294 | TW | 1.26 | Good |
| North Slob Channels | SE 040 0100 | 2009 | 307472 | 124835 | L | 0.37 | Moderate |
| Slaney Estuary, Lower | SE_040_0200 | 2009 | 303790 | 124978 | TW | 18.35 | Good |
| Slaney Estuary, Upper | SE_040_0300 | 2009 | 297785 | 135653 | FT | 0.80 | Good |
| Suir, Lower | SE_100_0500 | 2007 | 266073 | 112602 | TW | 3.52 | Moderate |
| Suir, Middle | SE_100_0550 | 2007 | 249824 | 114070 | TW | 7.03 | Good |
| Suir, Upper | SE_100_0600 | 2007 | 243887 | 121066 | TW | 1.09 | Moderate |
| Tacumshin Lake | SE_070_0100 | 2009 | 305135 | 106528 | L | 3.11 | Moderate |
| SWRBD | | | | | | | |
| Argideen Estuary | SW_090_0200 | 2008 | 151698 | 44138 | TW | 4.92 | Moderate |
| Bandon Estuary, Lower | SW_080_0100 | 2009 | 158029 | 51623 | TW | 6.79 | High |
| Bandon Estuary, Upper | SW_080_0300 | 2009 | 155716 | 55871 | FT | 0.35 | Moderate |
| Blackwater Estuary, Lower | SW_020_0100 | 2008 | 210190 | 86691 | TW | 12.07 | Good |
| Blackwater Estuary, Upper | SW_020_0500 | 2008 | 210068 | 98339 | FT | 0.70 | Good |
| Glashaboy Estuary | SW_060_0800 | 2008 | 172449 | 73470 | TW | 0.12 | Poor* |
| Ilen Estuary | SW_130_0100 | 2008 | 105212 | 29954 | TW | 9.66 | Good |
| Kilkeran Lake | SW_110_0100 | 2008 | 133844 | 34429 | L | 0.18 | Poor |
| Kilmakilloge Harbour | SW_190_0200 | 2008 | 73974 | 58927 | TW | 5.85 | Good |
| Lee (Cork) Estuary, Lower | SW_060_0900 | 2008 | 172082 | 72051 | TW | 0.88 | Poor* |
| Lee (Cork) Estuary, Upper | SW_060_0950 | 2008 | 165903 | 71693 | TW | 0.25 | Poor* |
| Mahon, Lough | SW_060_0750 | 2008 | 177107 | 69092 | TW | 12.23 | Moderate* |
| Mahon, Lough (Harper's Island) | SW_060_0700 | 2008 | 180271 | 72382 | TW | 2.06 | Poor* |
| North Channel Great Island | SW_060_0300 | 2008 | 183669 | 69611 | TW | 7.96 | Good* |
| Owenacurra Estuary | SW_060_0400 | 2008 | 188010 | 71718 | TW | 1.12 | Poor* |

*Indicates a low confidence of classification due to sampling problems. These sites will be repeated and re-classified





Fig. 2.4. Location of WFD fish monitoring transitional water bodies, 2007 - 2009



3. SURVEY METHODOLOGY

Sampling fish for the WFD requires the use of a broad range of survey techniques, developed in accordance with European standards (CEN, 2005a) to provide comprehensive information on the composition, abundance and age structure of all fish species present within each water body. Detailed information on the survey procedures and sample processing techniques for lakes, rivers and transitional waters can be found in the WFD summary reports for 2008 and 2009 (Kelly *et al.*, 2009; Kelly *et al.*, 2010).

Lakes are surveyed using a 'multi-method' approach, involving the use of monofilament multi-mesh survey gill nets (Fig. 3.1), large mesh braided, single panel survey gill nets and fyke nets. The netting procedure is carried out in accordance with the European standard for sampling of fish with multi-mesh gill nets (CEN, 2005b), which adopts a 'stratified random sampling' survey design, structured to effectively survey a representative sample of all habitat types and depth zones within the lake.



Fig. 3.1. Setting a benthic monofilament multi-mesh gillnet on Lough Allen

Rivers are surveyed using electric-fishing, in accordance with the European standard for sampling of fish with electricity (CEN, 2003). Small, wadeable streams are surveyed using 'hand-set' electric-fishing equipment with either backpacks or bank side generators using standard protocols developed by IFI (CFB, 2008a), whilst larger rivers are surveyed using 'boat-based' electric-fishing equipment (Fig. 3.2). Very large rivers (>2m deep, >30m wide) are surveyed using boat-based high-voltage electric-fishing equipment.





Fig. 3.2. Boat-based electric-fishing

Transitional waters (estuaries and lagoons) are surveyed using a 'multi-method' approach, developed by IFI for the purposes of the Water Framework Directive in accordance with methods used in the UK and other European countries (CFB, 2008b). This involves the use of fyke nets, beach seine nets (Fig. 3.3) and beam trawling using a small custom built beam trawl that can be deployed from a small boat.



Fig. 3.3. Setting a beach seine net



4. KEY FINDINGS

A large amount of new data has been collected during the first three year WFD fish monitoring cycle, with 79 species (plus hybrids and four brown trout 'varieties') and over 150,000 fish being recorded. This huge volume of data has been processed and entered into a new GIS database, with interactive species distribution maps available on the WFD fish website (www.wfdfish.ie).

4.1 Native versus non-native fish species richness

Figures 4.1 and 4.2 show fish species richness for lakes and river sites respectively. In general, sites in the ShIRBD and southern end of the NWIRBD and NBIRBD exhibited much higher fish species richness due to the presence of many non-native species such as roach, perch and pike. The northwestern end of the NWIRBD is one of the few remaining locations with only native fish species present.



Fig. 4.1 Native versus non-native fish species richness in lakes surveyed for the WFD, 2007 – 2009





Fig. 4.2 Native versus non-native fish species richness in rivers surveyed for the WFD, 2008 - 2009

4.2 Species distribution and abundance

Species distribution and abundance (Catch Per Unit Effort – CPUE) maps for each year and for all waterbodies have been collated for the dominant fish species and are available in the 2008 and 2009 summary reports (Kelly *et al.*, 2009; Kelly *et al.*, 2010). The distribution and abundance of selected key species recorded from 2007 - 2009 in lakes, rivers and transitional waters are shown in Figures 4.3 to 4.14.

Among the lakes surveyed from 2007 - 2009, brown trout and Arctic char were distributed mainly in the north and west of the country, while many of the non-native fish were recorded in the midlands (Figs. 4.3 and 4.4). The highest density of brown trout was recorded in Lough Barra, with 0.47 fish per metre of net being captured. The highest density of Arctic char was recorded in Lough Shindilla (0.11 fish per metre of net). The two most abundant non-native fish species recorded in lakes surveyed from 2007 - 2009 were roach and perch. These species were mainly distributed throughout



the ShIRBD and the southern ends of the NWIRBD and NBIRBD; however, high numbers of both roach and perch were also recorded in the eastern half of the WRBD (Figs. 4.5 and 4.6). The highest density of roach was recorded in Lough Cullin, with 0.60 fish per metre of net being captured. The highest density of perch was recorded in Lough Alewnaghta (1.06 fish per metre of net).

Both brown trout and salmon in rivers surveyed from 2007 - 2009 were well distributed throughout the country; however, there was a notable absence of salmon in the upper Shannon catchment (Figs. 4.7 to 4.10). The highest density of 0+ brown trout was recorded in the Glendine River, with 0.40 fish per m² being captured. The highest density of 0+ salmon was recorded in the Tobercurry Stream (0.57 fish per m²). The highest density of 1+ and older brown trout and salmon were recorded in two rivers in Co. Donegal (Burnfoot river - 0.44 fish per m² and Owentocker river - 0.43 fish per m² respectively). Similar to the distribution in lakes, roach were mainly recorded in the ShIRBD and the southern ends of the NWIRBD and NBIRBD. The highest density of roach was recorded in the River Blackwater (Kells), with 0.21 fish per m² being recorded. Dace, an invasive fish species in Ireland, was recorded in four river sites; the River Barrow (Pass Bridge), Awbeg River, Munster Blackwater at Killavullen Bridge, and Tully Stream, with the highest density being recorded in the Tully Stream (0.006 fish per m²).

A total of 71 fish species were recorded among the transitional waters surveyed from 2007 – 2009. Many of these species, such as European eel and pollack (Figs. 4.13 and 4.14) were widely distributed around the country, however many other species had much more restricted distributions. Sea bass were not recorded in the NWIRBD or WRBD. They were recorded in several water bodies within the Shannon and the Barrow/Suir/Nore Estuaries, as well as the Lower Munster Blackwater Estuary and four small estuaries on the east coast (Broad Lough, Tolka Estuary, Broadmeadow Water and Rogerstown Estuary) (Fig. 4.15). Smelt, a species considered an indicator of good water quality and listed in the Irish Red Data Book as threatened in Ireland (Whilde, 1993), were recorded in five water bodies within the Barrow/Suir/Nore Estuary, three water bodies within the Shannon Estuary, and the Lower Munster Blackwater Estuary (Fig. 4.16).





Fig. 4.3. Distribution and abundance of brown trout in lakes surveyed for WFD fish monitoring 2007-2009





Fig. 4.4. Distribution and abundance of Arctic char in lakes surveyed for WFD fish monitoring 2007-2009





Fig. 4.5. Distribution and abundance of roach in lakes surveyed for WFD fish monitoring 2007 $\,$ - $\,$ 2009 $\,$





Fig. 4.6. Distribution and abundance of perch in lakes surveyed for WFD fish monitoring 2007 - 2009

lascach Intíre Éireann Inland Fisheries Ireland



lascach Intíre Éireann Inland Fisheries Ireland



30





Fig. 4.11. Distribution and abundance of roach in rivers surveyed for WFD fish monitoring 2008 $-\,2009$





Fig. 4.12. Distribution and abundance of dace in rivers surveyed for WFD fish monitoring 2008 -2009





Fig. 4.13. Distribution of European eel in transitional waters surveyed for WFD fish monitoring 2007 - 2009





Fig. 4.14. Distribution of pollack in transitional waters surveyed for WFD fish monitoring 2007 - 2009





Fig. 4.15. Distribution of European sea bass in transitional waters surveyed for WFD fish monitoring 2007 – 2009





Fig. 4.16. Distribution of smelt in transitional waters surveyed for WFD fish monitoring 2007 - 2009



5. ECOLOGICAL CLASSIFICATION TOOL DEVELOPMENT

An essential step in the WFD process is the classification of water bodies into ecological status classes (High, Good, Moderate, Poor or Bad), based on the various biological and physico-chemical elements monitored. These status classes are used to identify the objectives that must be set in River Basin Management Plans, and in turn help to track the effectiveness of programmes of measures designed to restore those water bodies that fail to meet the current minimum WFD requirement of Good ecological status.

Ecological classification tools for the various biological quality elements (phytoplankton, macrophytes, phytobenthos, benthic invertebrates and fish) are being developed by various organisations. Inland Fisheries Ireland is responsible for the development of classification tools for fish in Irish lakes, rivers and transitional waters. Progress in the development of these three separate tools, along with the resultant ecological status classifications are highlighted below.

5.1 Lakes

A preliminary ecological classification tool for fish in lakes was developed for the island of Ireland (Ecoregion 17) using Central Fisheries Board (now IFI) and Agri-Food and Biosciences Institute Northern Ireland (AFBINI) data generated during the NSSHARE Fish in Lakes (FIL) project. This classification tool (FIL) is used to objectively assign lakes to ecological status classes based on fish species composition, abundance and age structure (Kelly *et al.*, 2008a). Expert opinion is also used on some occasions where known pressures, such as non-native species introductions, serve to downgrade the status of a lake. For example, a high status lake cannot contain any non-native fish species.

Data collected from the 70 lakes surveyed during the 2007 – 2009 surveillance monitoring period are being used to further refine the Fish in Lakes Classification tool (FIL2) in order to make it fully WFD compliant and compatible for use in the EU Intercalibration process, which is expected to be completed during 2011.

Four lake 'types', based on alkalinity and maximum depth, have been identified for use in the FIL2 classification tool (Low Alkalinity/Shallow, Low Alkalinity/Deep, High Alkalinity/Shallow and High Alkalinity/Deep). Each lake is assigned an ecological status or 'impact class' based on an anthropogenic pressure gradient using total phosphorous and chlorophyll as stressors. The FIL2 classification tool then uses discriminant analysis to develop classification rules for each lake typology based on selected key fish metrics, including the total BPUE (Biomass Per Unit Effort) of all fish species, BPUE of native fish species and the percentage biomass of perch. A separate statistical model is then used to generate Ecological Quality Ratios (EQRs) between 0 and 1 for each lake.

The FIL2 classification tool is due to be completed in December 2010; however, the original FIL classification tool has been used, along with expert opinion, to assign all lakes surveyed to date into



draft ecological status classes based on the fish populations present in each (Fig. 5.1). Final ecological classifications will be reported in March 2011 once the FIL2 classification tool has been completed.

A total of 136 lakes (RoI and NI), including the 70 lakes surveyed during the 2007 - 2009 surveillance monitoring period, have been used in classification tool development and assigned draft ecological status classes. The spatial distribution of ecological status classes in the 105 lakes situated within RoI is shown in Figure 5.1. The distribution of high and good status sites in the north-west and west of the country, situated in remote areas with low levels of anthropogenic pressures, reflects the absence of non-native fish species and the presence of sensitive species such as Arctic char in these water bodies. Details of the ecological status classes assigned to each of the 70 lakes surveyed during the 2007 - 2009 surveillance monitoring period in particular are given in Table 2.1.





Fig. 5.1. Draft fish ecological status in the 105 lakes used to develop the FIL ecological classification tool



5.2 Rivers

A new ecological classification tool for fish in rivers (Fish Classification System - FCS2) has recently been completed for the island of Ireland, along with a separate version for Scotland, under the management of the Scotland and Northern Ireland Forum for Environmental Research (SNIFFER). The tool was originally developed by the Environment Agency of England and Wales and has been adapted and extended for application to Irish and Scottish fish data. The tool was developed using Irish data (675 sampling occasions) collected during the 2007 – 2009 surveillance monitoring period (Republic of Ireland and Northern Ireland), along with CFB archival data (various projects, 1998 to 2001) and data generated during the EPA ERTDI 2000-MS-4-M1 Q-values and fish project from 2001 to 2003.

FCS2 works by comparing fish species metrics (abundance and prevalence) within a given site (observed) to those predicted (expected) for that site under reference (or unimpaired) conditions using a geo-statistical model based on Bayesian statistics. The tool predicts the expected catch of a species at reference conditions by using a range of environmental variables (e.g. altitude, river width) and pressure variables (e.g. molybdate reactive phosphate). FCS2 also takes into account the geographical location of a site because different fish species can predominate in different parts of the country. FCS2 generates an Ecological Quality Ratio (EQR) (more correctly, probability) estimate of abundance and prevalence for each of 16 fish species models. Species probabilities are then combined to produce an EQR for each site. Site EQRs are then combined to produce an EQR for each water body which is used to classify the water body. Class boundaries are defined along a range between 1 and 0 for High, Good, Moderate, Poor and Bad ecological status.

This recently completed classification tool for fish in rivers has been used to assign all river sites surveyed to date into draft ecological status classes based on the fish populations present in each. Final ecological classifications will be given once the classification tool has completed the EU Intercalibration process.

A total of 550 river sites (565 sampling occasions) from the Republic of Ireland, including the 134 river sites surveyed during the 2007 - 2009 surveillance monitoring period, have been assigned draft ecological status classes using this new river fish classification tool (FCS2). The spatial distribution of ecological status classes in these 550 river sites is shown in Figure 5.2. Details of the ecological status classes assigned to each of the 134 river sites surveyed during the 2007 - 2009 surveillance monitoring period in particular are also given in Table 2.2.





Fig. 5.2. Draft fish ecological status in all 550 river sites (RoI) used to develop the rivers fish ecological classification tool



5.3 Transitional Waters

A new preliminary ecological classification tool for fish in transitional waters, the Transitional Fish Classification Index (TFCI), has been developed for the island of Ireland (Ecoregion 1) using Northern Ireland Environment Agency (NIEA) and IFI data. It is a multi-metric index based on similar tools developed for transitional waters in South Africa and the UK (Harrison and Whitfield, 2004; Coates et al., 2007), using 10 different fish metrics based on species composition, abundance, functional guilds and indicator species to assign an ecological status class to each transitional water body.

The TFCI is still undergoing some development, particularly in relation to classifying small lagoons and freshwater tidal zones. Currently, the WFD classifies all transitional waters in Ireland into one 'typology'; however, this proves problematic for developing a robust classification tool for all estuaries. For example, lagoons do not have a strong, continuous connection to the sea and thus are expected to contain a different species composition and lower species richness than larger estuaries. Similarly, freshwater tidal zones and small estuaries also tend to have lower species richness than larger estuaries and hence it is difficult to compare all estuary types together.

Currently, the TFCI is run separately for two distinct categories; 'Transitional Waters' and 'Lagoons and Freshwater Tidal' water bodies. This helps in overcoming the problem of comparing different types of estuaries; however, we can see from the classifications that lagoons and freshwater tidal water bodies still tend to score lower than larger/complete estuary systems, mainly due to a lower species richness and abundance, particularly in relation to certain functional guilds and indicator species.

The TFCI is currently undergoing further development in an attempt to address these problems, particularly with regards setting different 'type specific' reference conditions for each of the water body types identified. This, in effect, will help to ensure that we are only comparing 'like with like' and are not downgrading smaller, naturally less species diverse water bodies by comparing them with larger, species rich systems.

All 72 transitional water bodies surveyed during the 2007 – 2009 surveillance monitoring cycle have been assigned draft ecological status classes using the current TFCI, with the aid of expert opinion. Final ecological classifications will be assigned to each water body once the TFCI has been revised and the EU Intercalibration process has been completed.

The spatial distribution of transitional water ecological status classes is shown in Figure 5.3. Similar to trends in lakes and rivers, there are a greater proportion of good status sites in the north and west of the country than in the south and east. Details of the ecological status classes assigned to each water body are also given in Table 2.3.





Fig. 5.3. Draft fish ecological status in all 72 transitional water bodies surveyed for WFD fish monitoring 2007 - 2009



6. SUMMARY

The first three year WFD fish monitoring cycle, from 2007 – 2009, has been extensive. A large amount of work has been completed, both in terms of a comprehensive fish monitoring programme and in the development of ecological classification tools for fish in lakes, rivers and transitional waters. Field sampling over the three year period was hampered by several factors, including project start-up (funding issues) delays, an embargo on staff recruitment and very high rainfall levels in 2008 and 2009; however, despite this, approximately 90% of all scheduled surveys were completed.

The paucity of WFD compliant fish population data, particularly in relation to lakes and transitional waters, has necessitated the concurrent development of the ecological classification tools that have been reliant on the input of this new data as it became available. These classification tools continue to be refined as more data is collected, and the process of intercalibration with other EU Member States will ensure that they are fully WFD compliant.

Although the EU intercalibration process has yet to be completed for the fish ecological classification tools (both the lakes tool and rivers tool are expected to complete the intercalibration process during 2011), all lake, river and transitional water bodies surveyed to date have been assigned draft ecological status classes using the classification tools along with expert opinion.

Whilst the main emphasis of WFD surveillance monitoring is to assign ecological status classes to all water bodies, the fish monitoring element of the WFD has also generated a vast amount of invaluable new data on fish distribution and abundance throughout Ireland. No such comprehensive lake or transitional water fish monitoring programmes have been attempted in the past, and most historical monitoring of fish in rivers has tended to focus on salmon and trout in particular catchments. In contrast, during the WFD surveillance monitoring programme from 2007 - 2009, more than 150,000 fish encompassing 79 different species have been recorded.

This large amount of data has been collated into a new GIS database from which fish species distribution and abundance maps for rivers, lakes and transitional waters throughout Ireland can be generated. Distribution patterns of native versus non-native fish can be studied, along with the distribution and abundance of individual species of interest such as Arctic char or salmon. Fish ecological status maps for all water bodies surveyed to date are also available. Interactive GIS maps can be accessed on the dedicated WFD fish website (www.wfdfish.ie), along with individual reports on each water body surveyed.



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