



Eastern River Basin District

River Basin Management Plan

2009 – 2015



eastern
river basin district

Incorporating amendments of the Minister of the
Environment, Heritage and Local Government
Issued on 6 July 2010

Foreword by Cllr. J. J. Power Chairman of the Eastern River Basin District Advisory Council

As Chairman of the Advisory Council I am particularly encouraged by the progress that has been made in implementing the Water Framework Directive in the Eastern River Basin District. The Directive has far reaching environmental benefits for the future of the quality of the environment in our rivers, lakes estuaries, groundwaters and coastal waters. It is important to recognise the contribution made by the Local Authorities within the District, who acting jointly are the competent authority for making the River Basin Management Plan. I also wish to thank all the members of the Advisory and Technical Councils. Previously we have collated information on all of our waters in a way which has never been attempted before and gained a detailed understanding of the pressures currently facing them. In this document we set out our strategy and plan of actions to achieve Good Status for all our waters.

Introduction by the Chairman of the Technical Council

I would like to thank all of the Agencies and members of both the Technical Council and the Advisory Council for their continued participation and wholehearted support of this process, since the councils were formed in 2005.

Public involvement in the Eastern River Basin District began in 2003. Publication of the "Water Matters" report for each of the eight river basin districts provided all interested parties with an overview of the water management issues affecting each District in Ireland. Comments were invited from all interested parties and the submissions received assisted greatly in the development of this River Basin Management Plan.

Water is a very precious resource and we must do everything in our power to protect and conserve it. A significant technical effort has gone into preparing this Plan, which highlights the threats to our water quality and quantity and the actions that may need to be taken to provide better protection and enhancement for waters and aquatic ecosystems. It is important that the problems are addressed and that interested parties have a say in what needs to be done.

Water quality is a matter of concern to a very wide range of people and working together we can realise the ambitious aims of the Water Framework Directive to restore all our waters to Good Status.

*Tom Leahy, Dublin City, Executive Manager
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Dublin City Council

Comhairle Cathrach Bhaile Átha Cliath



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meath county council



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Comhairle Contae Fhine Gall



Comhairle Contae County Council



Comhairle Contae
Átha Cliath Theas
South Dublin County Council



Consultants to the
Eastern River Basin District

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List of Acronyms

| | |
|--------|--|
| AWB | Artificial Water Body |
| CAP | Common Agricultural Programme |
| CIS | Common Implementation Strategy |
| CSO | Combined Sewer Overflow |
| cSAC | Candidate Special Area of Conservation |
| DAFF | Department of Agriculture, Fisheries & Food |
| DEHLG | Department of the Environment, Heritage & Local Government |
| EDEN | Environmental Data Exchange Network |
| EPA | Environmental Protection Agency |
| EPRTTR | European Pollutant Release and Transfer Register |
| ESB | Electricity Supply Board |
| EU | European Union |
| FRMP | Flood Risk Management Plan |
| GDSDS | Greater Dublin Strategic Drainage Study |
| GSI | Geological Survey of Ireland |
| GWTDE | Groundwater Dependent Terrestrial Ecosystem |
| HMWB | Heavily Modified Water Body |
| HSE | Health & Safety Executive |
| IBEC | Irish Business and Employers Confederation |
| ICZM | Integrated Coastal Zone Management |
| IDEA | Irish Doctor's Environmental Association |
| IPPC | Integrated Pollution Prevention Control |
| LA | Local Authority |
| MMU | Mobile Monitoring Unit |
| NHA | National Heritage Area |
| NPWS | National Parks and Wildlife Service |
| NSS | National Spatial Strategy |
| OPW | Office of Public Works |
| OSWTS | On-site wastewater treatment systems |
| PE | Population Equivalent |
| PMS | Project Management System |
| pNHA | Proposed Natural Heritage Area |
| PoM | Programme of Measures |
| PPP | Plant Protection Products |
| REPS | Rural Environmental Protection Scheme |
| RBD | River Basin District |
| RBMP | River Basin Management Plan |
| RBMS | River Basin Management System |
| REACH | Registration, Evaluation and Authorisation of Chemicals |
| S.I. | Statutory Instrument |
| SAC | Special Areas of Conservation |
| SEA | Strategic Environmental Assessment |
| SPA | Special Protection Area |
| SUDS | Sustainable Urban Drainage Systems |
| UWWTD | Urban Waste Water Treatment Directive |
| WFD | Water Framework Directive |
| WMU | Water Management Unit |
| WSIP | Water Services Investment Plan |
| WWTW | Wastewater Treatment Works |

Eastern River Basin District Boundary



1 Introduction

1.1 Background

The EU Water Framework Directive 2000/60/EC is being implemented across Europe, signalling a change of thinking in the way that water issues are addressed. The Directive commits member states to preventing deterioration and achieving at least good status in our rivers, lakes, estuaries, coastal and ground waters by the year 2015. It offers a degree of flexibility to each member state in the way it is implemented. The Directive takes a unified approach around the concept of water as a precious natural commodity that must be preserved and regulated to a higher standard.

The Directive is a very ambitious piece of legislation which will gradually encompass all water related laws. It has a long timeframe necessary to achieve all of its goals. So far, Ireland has successfully kept to the programme defined by the EU and detailed in Table 1.1. As with all our European neighbours, if we do not meet the challenges set out by the Directive, we will have failed ourselves and future generations.

Table 1.1: Timetable of Directive Implementation

| Deadline (December) | Action Required | |
|------------------------|--|---|
| 2000 | Directive enters into force. | ✓ |
| 2003 | Directive to be transposed into national law. International River Basin Districts and River Basin Districts to be identified. Competent authorities to be identified. | ✓ |
| 2004 | Characterisation of surface and groundwaters to be completed. Impacts of human activity (industry, farming etc) to be identified. Economic analysis of water use to be completed. Location and boundaries of water bodies to be identified. Reference conditions for water status to be defined. Register of protected areas to be established. | ✓ |
| 2006 | Environmental monitoring to be established and operational to ensure comprehensive view of water quality in each River Basin District. Work programme for production of River Basin Management Plans for each River Basin District to be published. | ✓ |
| 2007 | Interim overview of the significant water management issues for each River Basin District to be published. | ✓ |
| 2008 | Draft River Basin Management Plans to be published for consultation. Draft programmes of measures to be established in each RBD. | ✓ |
| 2009 | River Basin Management Plans to be finalised and published. Programmes of measures to be established in each RBD to meet environmental objectives. | ✓ |
| 2010 | Water pricing policies to be in place. | |
| 2012 | Programmes of measures to be fully operational. Interim progress reports to be prepared on implementation of planned programmes of measures. | |
| 2015 | Main environmental objectives to be met. River Basin Management Plans to be reviewed and updated every six years thereafter. | |

Notwithstanding this, our activities must also be sustainable so that we protect our waters. The changes that are necessary will not only affect the government, public authorities, agriculture and industry; they will also apply to every individual. Everything that we do, from washing our dishes to fertilising our gardens, has a consequence for our waters.

The area of land that a river drains is called its catchment or basin. The basin contains all surface waters (rivers, lakes, reservoirs, estuaries and coastal waters) and underground waters, together with the lands that drain into them. The activities that take place anywhere in the basin, even remote upland areas, can affect the waters downstream. River basins are natural hydrological units and provide a sensible framework to manage our waters.

The island of Ireland (classified under the Directive as Ecoregion 17) has been divided into eight river basin districts to help manage implementation of the Directive and a River Basin Management Plan (the “Plan”) has been developed for each river basin district. This Plan is the latest in a series of documents implementing the Directive in Ireland meeting deadlines identified in the Directive.

The Water Framework Directive was enacted in Ireland in 2003 through the European Communities (Water Policy) Regulations 2003 (S.I. 722 of 2003) which have since been amended in 2005 and 2008. This legislation is available at www.wfdireland.ie.

The Water Framework Directive legislation specifically identifies:

- the competent authority for coordination and reporting nationally as the EPA;
- the competent authorities for the Plan and Programme of Measures (POM) as the relevant Local Authorities, acting jointly; and
- the co-ordinating authority for each individual basin district. Dublin City Council is the coordinating and contracting authority for the Eastern River Basin District.



The first important milestone document, known as the “Characterisation Report” was prepared in December 2004 by the relevant local authorities covering each river basin district, in accordance with Section 7(2 & 3) of the European Communities (Water Policy) Regulations 2003. It includes (a) an analysis of the river basin district’s characteristics; (b) a review of the impact of human activity on the status of surface waters and of groundwater, and (c) an economic analysis of water use. A summary report, known as the Article V Characterisation Report was submitted by the Environmental Protection Agency (EPA) to the European Commission.

A network of monitoring sites for the Directive was established by the EPA in December 2006 covering rivers, lakes, coastal waters and estuaries as well as groundwater. The monitoring is undertaken by several organisations including the EPA, Local Authorities, the Marine Institute and the Inland Fisheries Ireland.

A second milestone report, known as “Water Matters” was prepared in December 2007 by the relevant local authorities covering each river basin district. It includes a preliminary overview of significant water management issues across each river basin district and actions suggested to solve these problems, in addition to inviting public comment.

The Draft River Basin Management Plan for the Eastern River Basin District was issued in December 2008 for a 6 month period of public consultation. The submissions received on the draft Plan have been reviewed and incorporated in this Final River Basin District Management Plan (The Plan) as appropriate. This Plan draws on the background milestone documents (listed in the bibliography) to describe the actions that are proposed to ensure the necessary protection of our waters over the coming years. It represents a major milestone in the implementation of the Directive and follows on from the previous major elements of work described above. It sets out how the aims and objectives of improving and protecting water quality and ecology in the waters of each river basin district could be achieved, by means of a Programme of Measures.

This Plan has been produced jointly by the local authorities and a project team for the Eastern River Basin District. There are twelve local authorities with lands in the Eastern River Basin District (shown on Map 1.1), and these will be the prime implementing agencies for the actions described in the Plan, although actions will also require the involvement of other state and private organisations. Coordination of these efforts is being developed through an Eastern River Basin District Technical Council which includes all of the local authorities along with agencies responsible for implementing relevant legislation.

The Eastern River Basin District Advisory Council has also provided valuable contributions to the development of the Water Matters Report and this Plan.

The Legend in Map 1.1 also shows the topography of the Eastern River Basin District, which can be referenced for all other maps within this Plan.

National advice regarding the preparation of River Basin Management Plans was provided by the Department of the Environment, Heritage & Local Government (DEHLG), which indicated that there will be four levels of reporting (as shown in Figure 1.1):

1. A high level report for the island of Ireland produced by the two governments (Ireland and Northern Ireland) entitled "Managing Our Shared Waters – Working Together";
2. A River Basin Management Plan for each district for public consultation (this Plan);
3. Electronic submissions of data and measures to the EU; and
4. Supporting documents and research.

The four levels provide information to an increasing level of detail. The Eastern River Basin District has also produced an additional level of information which is intended to provide detailed supporting information for this Plan. It presents a description of each water body and sub catchment, explains the pressures affecting the waters and the measures needed to deal with these pressures; this is in electronic form (PowerPoint slides) and can be downloaded from the website www.erbd.ie.

In addition, it should be emphasised that the River Basin Management System developed by the Eastern River Basin District contains all data sets describing the District, a detailed analysis of pressures, the recommended actions to address those pressures, and all of the reasoning for that selection, including the costs and effectiveness of each measure in each location.

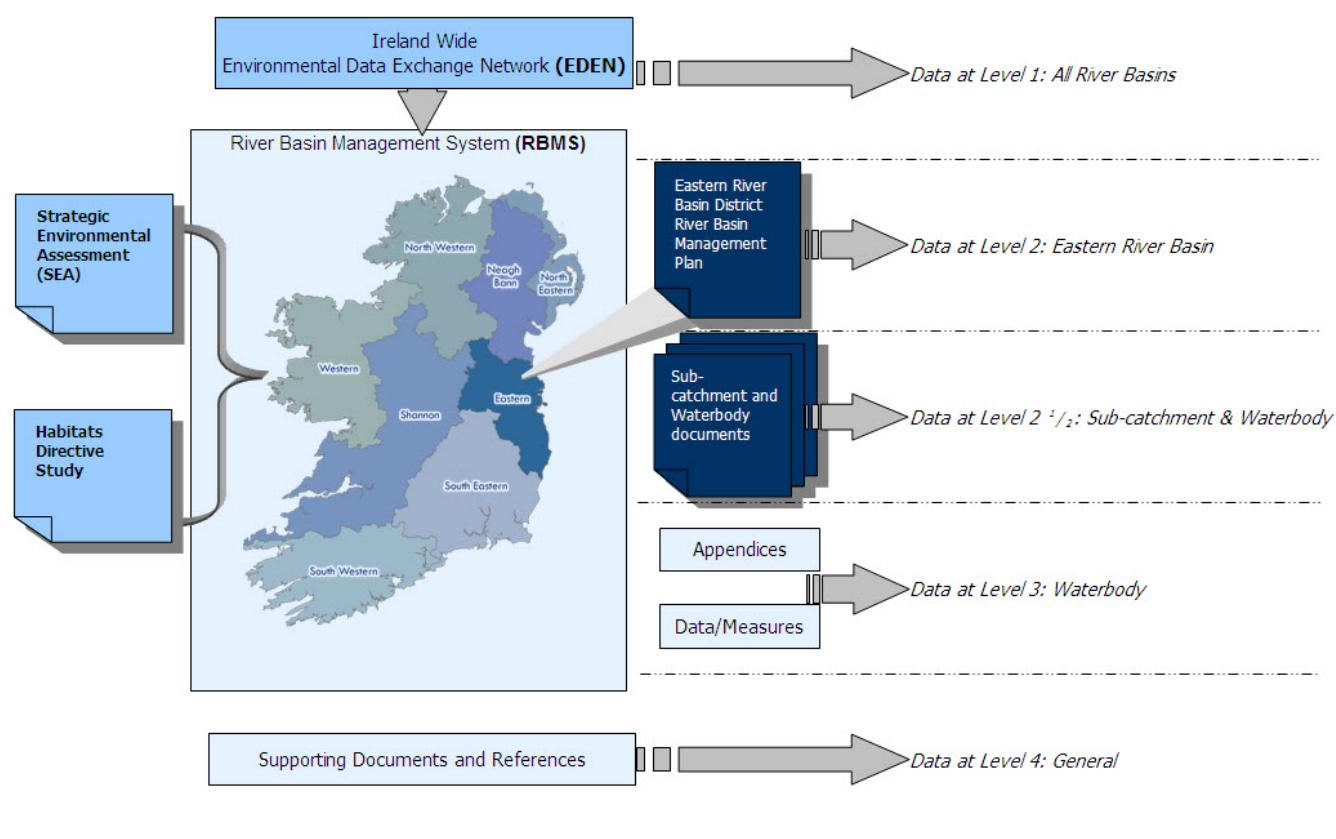


Figure 1.1: Levels of Reporting

This Plan should be read in conjunction with other supplementary documentation, including background reports and in particular should be read in conjunction with the Water Matters Report, which can be accessed at the Eastern River Basin District website at www.erbd.ie, or it can be obtained from your local authority. A Strategic Environmental Assessment and Appropriate Habitats Assessment, under the EU Habitats Directive, have also been prepared as part of the Plan development process. The findings of these reports have been fully considered when developing this document and the Programme of Measures. A full set of supporting documents can be found at www.wfdireland.ie; key documents are listed in the bibliography at the end of this Plan.

It is vital that the public participate in the planning and implementation process. To encourage participation, an Advisory Council has been established for each river basin district. The Advisory Council for the Eastern River Basin District consists of elected representatives, community representatives and other stakeholders. The knowledge, expertise and views of the Advisory and Technical Councils have been integral contributions in the preparation of this Plan.

This Plan will be tabled for formal adoption by each local authority in October/November 2009 in accordance with national legislation. The agreed Programme of Measures, identified in the Plan as being required to rectify the problems identified over the planning process, will then start to be implemented. Implementation will commence from 2010 (with all measures for this first cycle being implemented by 2012), with the target of improving significant numbers of waters to good status by 2015. In addition to improving waters the Plan ensures that no waters will be allowed to deteriorate, including special protected areas such as bathing waters, drinking water sources and protected habitats.

In 2015 a second Plan will be prepared, learning from our experience and successes up to that point. This second Plan will include the development of a new Programme of Measures to manage the waters up until 2021, when a third Plan will be developed.

1.2 Mobile Monitoring Unit

The Eastern River Basin District uniquely established a Mobile Monitoring Unit (MMU) with a watershed warden to undertake investigative monitoring in sub catchments across the Eastern River Basin District. The objective of this work was to help identify the causes of problems in our waters where these were unknown.

The watershed warden worked with specialist staff in the local authorities to investigate causes of pollution and poor ecological status throughout the area. The work was undertaken across the Eastern River Basin District gaining a detailed knowledge of “on-the-ground” conditions and local water quality issues. This area-specific data proved invaluable in assisting the process of selection of corrective actions to protect and enhance our waters.

Intensive investigations were undertaken in approximately 35 sub catchments and in all of the estuaries and coastal waters (comprising 74 monitoring locations ranging from the Boyne to the Avoca Estuary). Map 1.2 shows the areas visited by the watershed warden.

This initiative also had a public participation element, and in tandem with the scientific work, an environmental awareness campaign was successfully implemented in 25 primary schools across the Eastern River Basin District. The programme was aimed at educating primary school children about water quality matters and increasing the visibility of the water generally and it is estimated that 1,000 children participated in the programme.



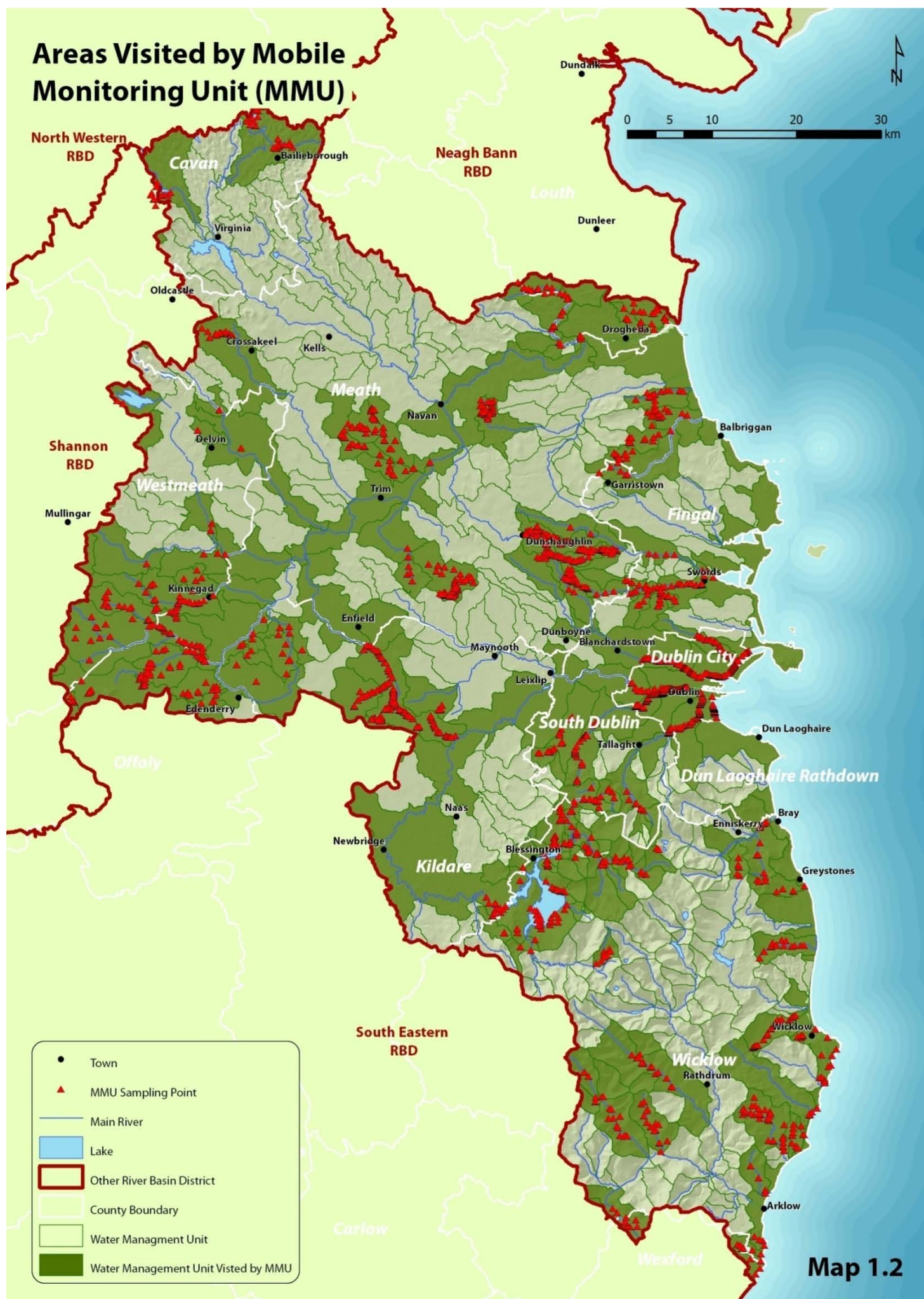
1.3 Comments on the Draft Plan

This Plan will require actions from individuals and industries, along with government bodies. The work so far has required a considerable amount of technical expertise, but has also benefited from the views and knowledge of the public and interested parties whose views have been actively sought at every stage.

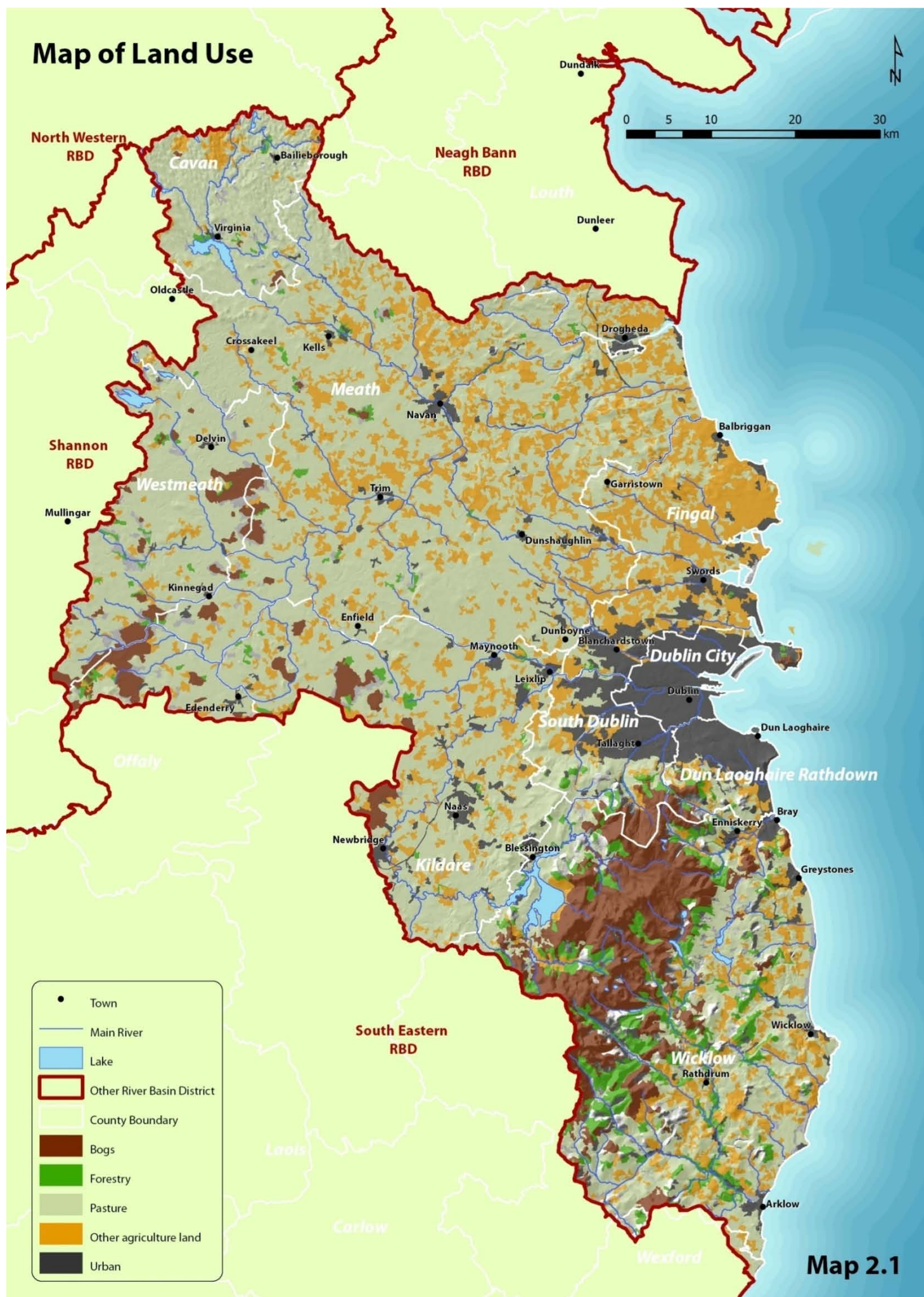
The Plan was subject to a six-month public consultation period (closed 22nd June 2009) and stakeholders' submissions have been collated and taken into account in this final Plan. Submissions and how they were incorporated into the plan are discussed in the Submissions Digest available on the ERBD website and summarised in Appendix A(i). The Plan will come into effect when adopted by the competent authorities as set out in Article 13 of the WFD and in the European Communities (Water Policy) (Amendment) Regulations 2008, S.I. No. 219 of 2008.



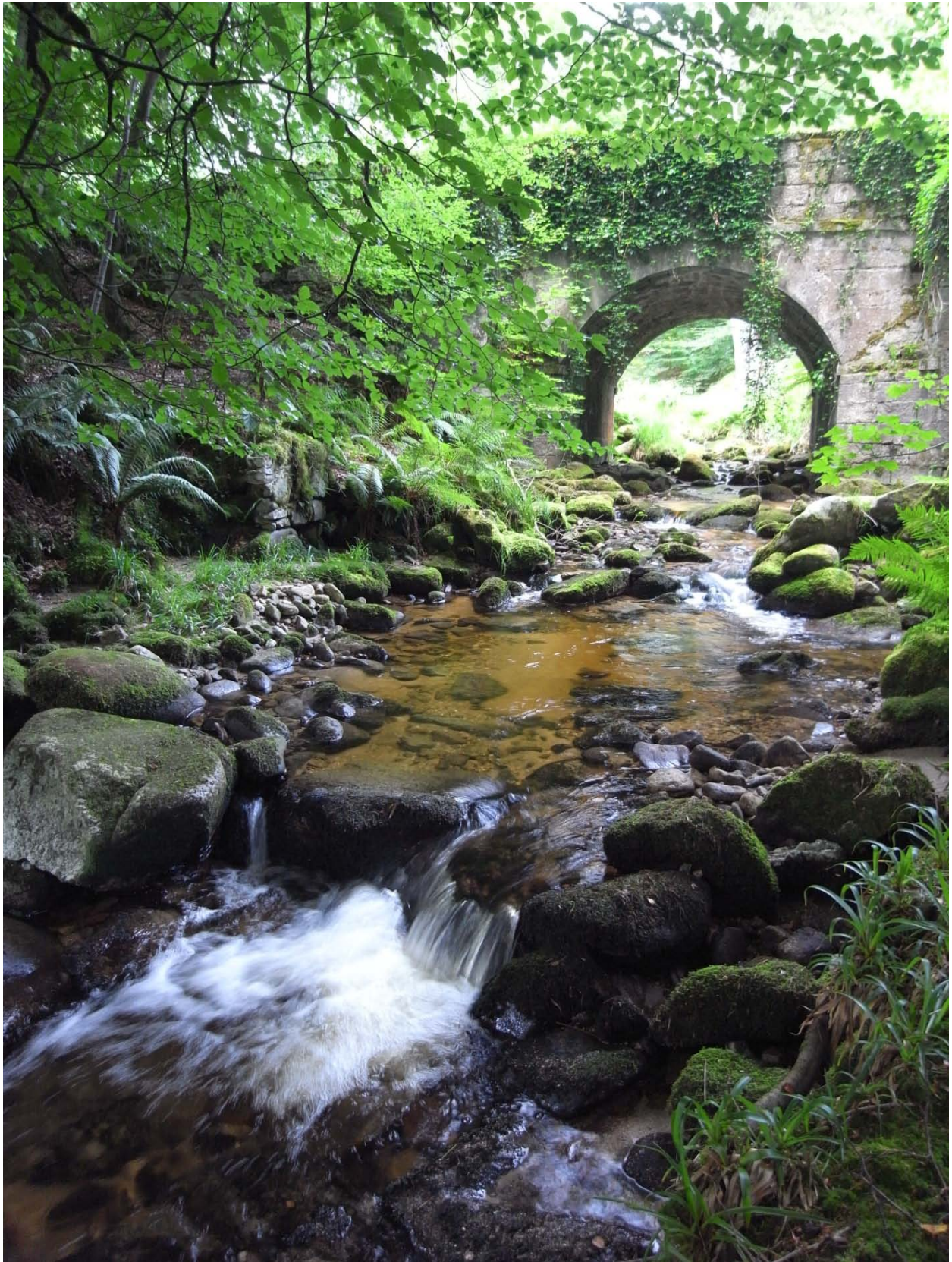
Areas Visited by Mobile Monitoring Unit (MMU)



Map of Land Use



Map 2.1



2 General Description of the Eastern River Basin District

2.1 Background

The Eastern River Basin District (shown on Map 2.1) is home to rich agricultural land, holiday coastline, the city of Dublin and the towns which form the Greater Dublin Area and its commuter belt. With land area of around 6,300 km², the Eastern River Basin District covers about one tenth of the entire country and has 350 km² of marine waters.

2.2 People

Around 1.6 million people, 40% of Ireland's population, live in the Eastern River Basin District. The population is growing every decade, partly due to the internal and external migration to live and work around Dublin.

The distribution of people and their activities varies from rural agricultural communities to the city of Dublin and its commuter belts. The population density is high compared to the rest of Ireland, and the region has seen a population growth of over 10% in the past ten years.



8% of the land area in the basin is urban, 75% agricultural and the remainder natural. Within the last five years the population in Dublin has increased by 4%, whilst Dublin commuter towns have expanded at rates as high as 51%. The greatest population increases have been in villages with a population of between 50 and 1,500 people in Dublin, Meath, Kildare and Wicklow.

Dublin and Greater Dublin are home to 90% of the Eastern River Basin District's population; most of the urban population outside this area is around rivers or ports; others live in smaller towns, villages or one-off houses in rural areas. The growing population, especially in Dublin's commuter belt, is putting increasing pressure on the systems that deliver drinking water and treat wastewater and is also creating development demand throughout the basin.

The Eastern River Basin District incorporates all or part of twelve local authority areas: Dublin City, Meath, Kildare, Wicklow, Cavan, Dun Laoghaire-Rathdown, Fingal, Offaly, South Dublin, Westmeath and small portions of Wexford and Louth.

2.3 Terminology

Within the Water Framework Directive, water bodies have particular definitions based on their geophysical settings and typologies. They are defined as follows:

Surface water means inland waters, except groundwater, transitional waters and coastal waters, except in respect of chemical status for which it shall also include territorial waters (as defined by the United Nations Convention on the Law of the Sea, 1982 and normally extending 12 nautical miles from the shoreline).

Body of surface water means a discrete and significant element of surface water such as a lake, a reservoir, a stream, river or canal, part of a stream, river or canal, a transitional water or a stretch of coastal water.

Groundwater means all water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

Body of groundwater means a distinct volume of groundwater within an aquifer or aquifers

Inland water means all standing or flowing water on the surface of the land, and all groundwater on the landward side of the baseline from which the breadth of territorial waters is measured.

River means a body of inland water flowing for the most part on the surface of the land but which may flow underground for part of its course.

Lake means a body of standing inland surface water.

Transitional waters are bodies of surface water in the vicinity of river mouths which are partly saline in character as a result of their proximity to coastal waters but which are substantially influenced by freshwater flows.

Coastal water means surface water on the landward side of a line, every point of which is at a distance of one nautical mile on the seaward side from the nearest point of the baseline from which the breadth of territorial waters is measured, extending where appropriate up to the outer limit of transitional waters.

Artificial water body means a body of surface water created by human activity.

Heavily modified water body means a body of surface water which as a result of physical alterations by human activity is substantially changed in character, as designated by the Member State in accordance with the provisions of Annex II.

Waters

Rivers: The main river catchments in the Eastern River Basin District are the Boyne, the Nanny/Delvin, the Liffey, and the Avoca/Vartry. The Avoca/Vartry includes many smaller catchments along the coastline (shown in Map 2.2). There are 365 river water bodies in the Eastern River Basin District.

Lakes: The Eastern River Basin District includes 524 natural lakes. Six of these, and two reservoirs, exceed 50 hectares in size, the biggest being Poulaphuca reservoir at around 1,950 hectares. The Directive requires that we report on lakes that exceed 50 hectares or those which contain protected areas – this is a total of 28 lakes and reservoirs in the Eastern River Basin District.

Transitional and Coastal Waters: From Drogheda all the way south to Arklow, the river waters enter the Irish Sea along 130km of coastline from the Boyne estuary, Malahide, Dublin, Killiney and Brittas Bays. The Eastern River Basin District contains all the coastlines of Meath, Fingal, Dublin, Dublin City, Dun Laoghaire and Wicklow (eight water bodies), as well as eleven estuaries and two lagoons.

Groundwaters: As with other basin districts, the water system below ground in the East is quite complex because of the wide range of rock types and soils within the Eastern River Basin District. The underground aquifers can cross surface water catchment and boundaries. There are 75 groundwater bodies in the Eastern River Basin District, some of which are restricted to urban areas.

Artificial Waters: These are the eight man-made water bodies in the Eastern River Basin District.

Table 2.1: The number of water bodies per water type

| Water Type | Number of Water bodies |
|-------------------------|------------------------|
| Rivers | 365 |
| Lakes and Reservoirs | 28 |
| Estuary | 13 |
| Coastal | 8 |
| Groundwater | 75 |
| Artificial Water Bodies | 8 |
| Total | 497 |

All of the activities in the basin have the potential to impact our waters and therefore must be sustainably managed.

The Eastern River Basin District has also produced an additional level of information which is intended to provide detailed supporting information for this Plan. It includes a description of each water body and sub catchment. This is in electronic form and can be downloaded from the website www.erbd.ie.



Hydrometric Areas





3 How Healthy are Our Waters

3.1 Background

In 2004 a report was prepared which provided the first ever comprehensive analysis of data and information in the Eastern River Basin District. This was required by the Directive and was intended to identify those waters which could be at risk of not achieving the objectives of the Directive and to identify gaps in data and information to inform the design of the monitoring networks.

The characterisation was based on the limited data available and on a wide range of risk assessments which evaluated the problems that could be expected based on a variety of factors including known discharges and land use. The percentages of waters that were thought to be “at risk” at that time are shown in the Table 3.1. The water bodies and their risk assessments are shown in Figure 3.1 (surface waters) and Figure 3.2 (groundwaters); the complete Characterisation Report which presents the risk assessments for each water body is available on the website at www.erbd.ie.

It should be noted that the 2004 characterisation risk assessments were based on limited data sets and were intended to be the first step in the WFD process. The data used in the status assessments undertaken in 2008 and 2009 and described later in Section 3, are based on more comprehensive data and improved methods and so provide a more reliable indicator of the condition of our waters.

Table 3.1: Risk Assessment 2004

| Risk Category | Number of water bodies | % by Number | % by Area of RBD |
|----------------------|------------------------|-------------|------------------|
| At Risk | 237 | 49.6 | 48.6 |
| Probably At Risk | 165 | 34.5 | 25.5 |
| Probably Not At Risk | 54 | 11.3 | 23.6 |
| Not at Risk | 22 | 4.6 | 2.3 |
| Total | 478 | 100 | 100 |

Note: these figures exclude artificial water bodies and 2 lakes subsequently included in the WFD process.



Figure 3.1: Risk Assessment for Surface Waters (from Characterisation Report, 2004)

Detailed maps and further information on the risk assessment are available in the Risk Characterisation Report (2004)

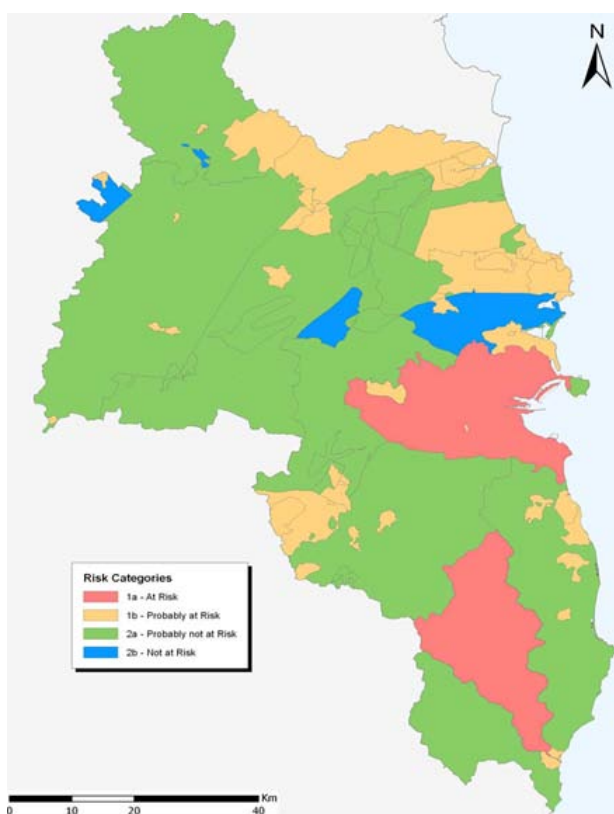


Figure 3.2: Risk Assessment for Groundwaters (from Characterisation Report, 2004)

3.2 Monitoring Network

A network of monitoring sites (shown on Map 3.1) for the Directive was identified by the EPA in 2006, covering rivers, lakes, coastal waters and estuaries as well as groundwater. Several organisations, including local authorities, the EPA and Inland Fisheries Ireland are responsible for data collection. Details of the EPA monitoring network can be seen on www.epa.ie/whatwedo/wfd/monitoring/.



Three types of monitoring have been specified by the Directive:

Surveillance Monitoring: this is intended to be a permanent set of monitoring stations at which all specified ecological and chemical quality elements are examined. The surveillance monitoring programme contains sites representative of all waters nationally and is intended to show long term changes in water quality;

Operational Monitoring: to collect data specific to the pressures being experienced in particular waters; and

Investigative Monitoring: where the reason for a particular exceedance is unknown, or to ascertain the magnitude and impacts of accidental pollution.

Data are collected by a variety of means and reported to the EPA. Some of these data sets are stored in a central database (called Environmental Data Exchange Network (EDEN)). In the Eastern River Basin District, a River Basin Management System has been created to assist in river basin planning (see Section 8). The monitoring data stored in EDEN is also directly accessible through the River Basin Management System thus allowing rapid access to these critical data sets.

In the future this data will allow local authorities and stakeholders to monitor progress in improving the status of waters, assess the impacts of measures that have been implemented and guide the next Plan when it is developed in 2015.

3.3 How We Determine the Status of Our Waters

The Directive's classification process has helped us to improve our understanding of the health (or status) of our waters. In 2007, we began more comprehensive monitoring of our waters to provide results for new classification schemes. Monitoring information is collected by the EPA, Inland Fisheries Ireland, Marine Institute, Office of Public Works, National Parks and Wildlife Service, Waterways Ireland and local authorities. The EPA is responsible for assessing this monitoring data and assigning status to Ireland's surface waters and groundwaters.

This Plan presents the Eastern River Basin District's water status (assigned by the EPA) using the new systems and monitoring information for the first time. These classifications are based on two years of data and reflect the best current understanding of status, however, they are still considered as "interim" by the EPA. We expect changes to water body status as the monitoring data and the scientific tools used to interpret them develop. Over time, we can build a picture of changes in our waters, improvement as a result of actions, or decline due to new problems. The classification systems will help us to plan the actions needed to protect or improve waters in accordance with the Water Framework Directive and, in due course, to show how our waters have benefited.

The monitoring programme started in 2007 and the collected data formed the basis for the classification by the EPA of water status. To enable consistency across all member states the classification scheme has been harmonised so that each country classifies status in a comparable way.

- There are five categories of river and lake water status – high, good, moderate, poor and bad.
- Transitional and coastal waters are classified as high, good or moderate.
- Groundwater is categorised as either good or poor.

Monitoring Network



A detailed description of the classification system can be found on the Eastern River Basin District web site www.erbd.ie and a summary is provided below.

The EPA will periodically update status information as new monitoring information becomes available. The first update was carried out in 2009 to improve confidence in classification for this final river basin management plan.

There may be occasions when a natural event such as a flood or a drought causes waters to drop temporarily below status standards. These cases will be taken into account by the EPA when undertaking future status reviews. Such temporary deteriorations will be investigated to assess their causes and to determine whether practical steps can be taken to mitigate their impacts.

Details of the monitoring programme, classification standards and status setting process for surface and groundwaters are available in our background documents, available through the Eastern River Basin District website www.erbd.ie. More information about the condition of our waters is available in our background documents and the detailed status of individual rivers, canals, lakes, reservoirs, marine waters or groundwaters can also be viewed there.

In the past, we have considered water quality predominantly by looking at water quality results (from samples taken from our waters). The Directive asks us to take a more comprehensive view of the condition of our waters considering not only water quality results but also biology, morphology (physical condition) and hydrology (quantity of water). This balance of interacting issues affecting our waters has been compiled for the first time by the EPA. A summary of these issues is given below, as are the results for the Eastern River Basin District.

Classification of Surface Water Status

Surface waters must achieve at least good ecological status and good chemical status.

Figure 3.3 Status Levels in Our Waters

Surface Water Ecological Status

The ecological status of natural surface waters falls into one of five classes: high, good, moderate, poor or bad.

Some surface waters identified as artificial or heavily modified are subject to a different set of objectives, with the focus on ecological potential rather than ecological status. These waters are classified as either good ecological potential (equivalent to good status) or less than good ecological potential (equivalent to moderate ecological status).

The surface water ecological classification combines three factors: biology; supporting water quality conditions (general conditions and specific pollutants); and supporting hydrology and morphology (physical condition), as described below.

1) Biology

Surface water biology classification systems describe the extent to which human activity has altered the ecological communities present in our waters by comparing the condition of aquatic animals and plants with undisturbed or pristine conditions.

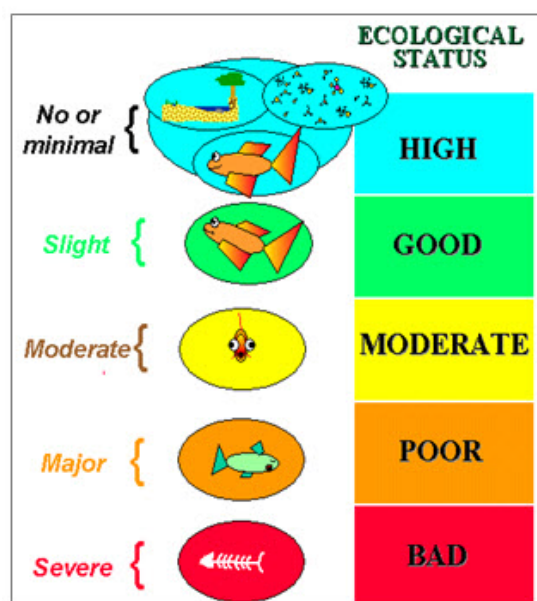


Table 3.2: Ecological Communities in Surface Waters

| | Rivers and lakes | Marine (estuaries and coastal waters) |
|---------|--|---|
| Animals | Fish Aquatic invertebrates (for example insects, crustaceans, molluscs, worms) | Fish (in estuaries) Aquatic invertebrates living in soft sediments on the seabed |
| Plants | Diatoms (microscopic plant organisms) Macrophytes (larger aquatic plants) Filamentous algae Phytoplankton (a microscopic plant containing the green pigment chlorophyll) in lakes and deep rivers | Seaweeds Seagrasses Marine phytoplankton |

2) Supporting water quality conditions (general conditions and specific pollutants)

The classification system also includes supporting factors that affect ecological status, either by providing suitable water quality for aquatic plants and animals to thrive or by reducing that quality:

- General conditions are assessed by measuring oxygen, nutrients, transparency, (water clarity), temperature, acid status and salinity; together, they describe the general physicochemical status of surface waters; and
- The levels of specific pollutants, chemical pollutants (including metals), pesticides and hydrocarbon compounds of local relevance in Ireland.

The levels or concentrations of the physicochemical parameters and specific pollutants are compared to environmental quality standards set to protect the health of our aquatic plants and animals.

3) Supporting hydrology and morphology (physical condition)

Hydrology conditions need to be adequate to support a healthy mix of plants and animals, and are measured by recording river flow, lake level and tidal patterns.

Morphology (or physical condition), which again must be able to support a healthy mix of plants and animals, is assessed by surveying channel, substrate and bed shape and physical conditions.

Classification tools have yet to be developed for a number of biological elements and once available they will be integrated into biological classification system.

Surface Water Chemical Status

There are two classes for the chemical status of surface waters: good or fail. A majority of waters have yet to have chemical status determined. Priority substances are chemical pollutants (including metals, pesticides, hydrocarbons, volatiles and hormone-disrupting compounds) that are of widespread concern across Europe and are monitored to determine the chemical status of our surface waters. The levels or concentrations of these priority substances are compared to European environmental quality standards set to protect the health of our aquatic plants and animals in compliance with the proposed Priority Substances Directive.

Figure 3.4 shows how the various monitored elements combine to give ecological and chemical status.

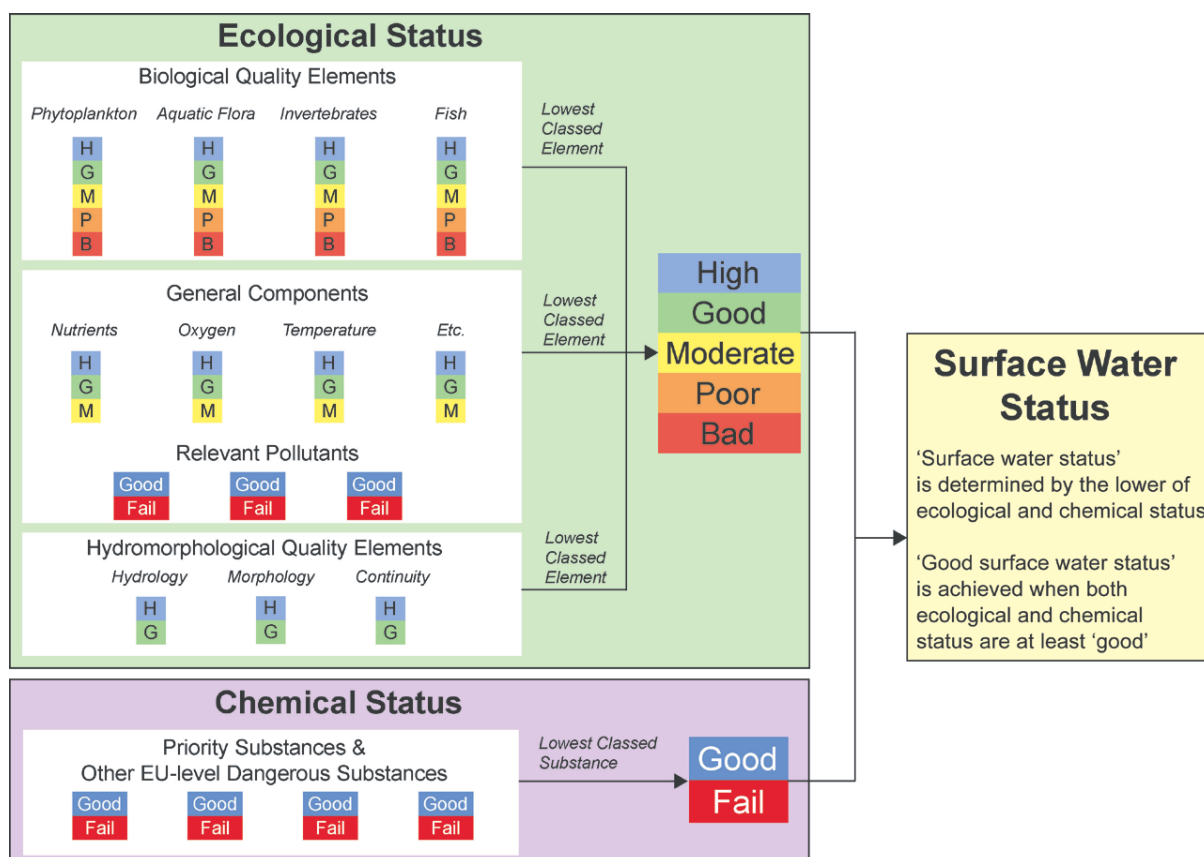


Figure 3.4: Derivation of Status

Classification of Groundwater Status

Groundwater bodies are classified by the EPA as either good or poor status in accordance with the Draft European Communities Objectives (Groundwater) Regulations, with qualifiers which describe the level of confidence in the assigned status (low or high). As with all classification data it is of interim status as present and may be updated.

Groundwater bodies are classified as either good or poor on the basis of quantitative or chemical status. If either the quantitative or chemical status is poor then the overall status will be poor.

In classifying groundwater bodies, certain tests have been carried out by the EPA against environmental standards or thresholds. Good quantitative status is assigned if abstractions are less than the available resource, other uses are not impacted by the abstraction and there is no saline intrusion. Tests that relate to groundwater quantitative status are:

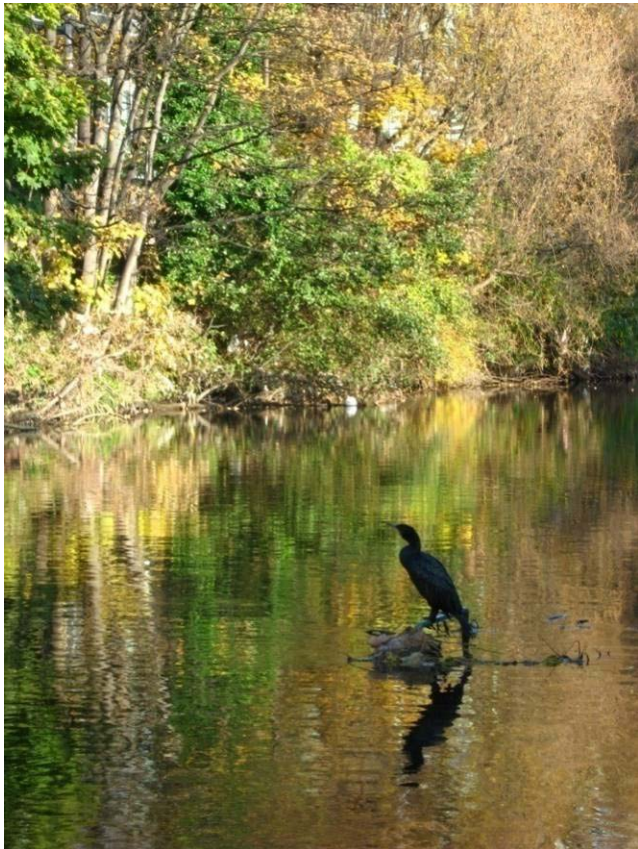
- Water balances of groundwater bodies;
- Impacts to the natural flow conditions of rivers and streams;
- Impacts to groundwater flow, discharges and levels within the catchment boundaries of groundwater-dependent wetlands; and
- Saline intrusion in coastal settings.

Tests that relate to groundwater quality are similar to those for quantity, and examine:

- General water chemistry of the groundwater body;
- Impacts on water quality in drinking water protected areas;
- Impacts to the water quality of surface water bodies;
- Qualitative impacts to the environmental supporting conditions of groundwater-dependent wetlands; and
- Evidence of saline intrusion in coastal settings.

The thresholds set for quantity are intended to ensure the availability of groundwater resources to both humans and groundwater-dependent ecosystems. The thresholds set for quality relate to drinking water standards, background concentrations and surface water quality standards.

3.4 Current Water Status



The Directive requires that all waters achieve high or good status by 2015, with extended time or lesser objectives granted under certain circumstances. The Directive Article 4 (4)(a) permits exemptions to this objective on the basis that:

- (i) the scale of improvements required can only be achieved in phases exceeding the timescale, for reasons of technical feasibility;*
- (ii) completing the improvements within the timescale would be disproportionately expensive;*
- (iii) natural conditions do not allow timely improvement in the status of the body of water.*

In the Eastern River Basin District our waters have been classified on the basis of the first two years of monitored data and the following is based on Status Version 25 as issued by the EPA.

High Status Waters

There are a number of waters which the EPA considers to be of high status. This represents conditions which may be near pristine, and which typically occur in the upper parts of catchments where human activity and development has been limited. In the East 4% of our

ivers are considered to be of high status, whilst 4% of our lakes and reservoirs also achieve this level. Three coastal water bodies are considered to be of high status but none of our transitional waters. Map 3.2 shows the high status river water bodies in the Eastern River Basin District, and Map 3.3 shows the high status lakes and coastal waters.

Protected areas can have stricter status standards; they must, without exception, achieve standards relevant to their designation which may be stricter, in some aspects, than good or high status. Measures are required for protected sites currently failing to achieve their standards which aim to improve environmental conditions sufficiently to support achieving their objectives. Protected areas are discussed in more detail in Section 5.

In this Plan, special measures are defined to continue to protect these areas and to maintain their high status. These measures have been developed on behalf of the EPA and are fully incorporated; they are listed in Table 7.5.

Current Status of Surface Waters

The current ecological status of rivers, lakes, transitional, and coastal waters can be seen on Maps 3.2 and 3.3. The analysis of status for rivers and lakes is shown in Tables 3.1 and 3.2 and in Figures 3.5 and 3.6.

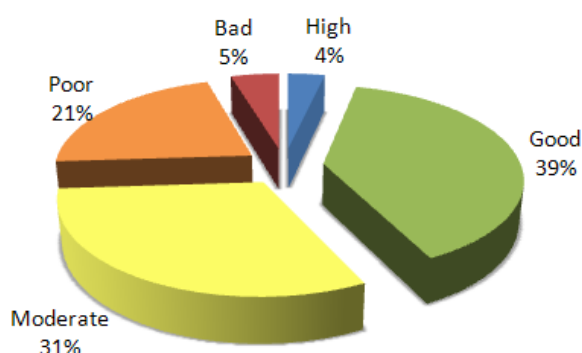


Figure 3.5 Ecological Status of Rivers (by number)

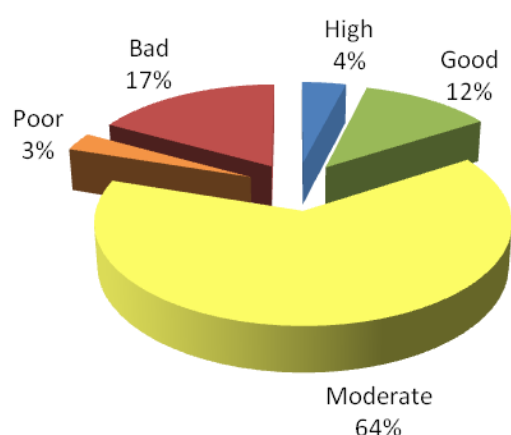


Figure 3.6 Ecological Status of Lakes and Reservoirs (by area)

These show that 43% (by number) of our rivers and 16% (by area) of our lakes achieve either good or high ecological status. In spite of this good news, there is still much work needed to achieve good status in all waters, especially in our rivers and transitional waters. In general, our artificial water bodies are in good condition and all are considered to be at good ecological potential, except Grand Canal Dock which classified as poor ecological potential. The element(s) causing river and lake water bodies to fail to achieve at least good status are shown in Tables 3.6 and 3.7.

Table 3.3: Surface Water Ecological Status/Potential in the Eastern River Basin District

| Surface Water Category | High | Good | Moderate | Poor | Bad | Yet to be Determined |
|---|------------|------------|---------------------|------------|-----------|----------------------|
| River (number of total) (% of total) | 13 4% | 143 39% | 114 31% | 78 21 % | 17 5 % | 0 0% |
| Lakes and reservoirs (km ²) (% of total) | 1.5 4% | 5 12% | 26 64% | 1 3% | 7 17% | 0 0% |
| Transitional (km ²) (% of total) | 0 0% | 0 0% | 24 Moderate 100% | | | 0 0% |
| Coastal (km ²) (% of total) | 207 58% | 0 0% | 94 Moderate 26% | | | 59 16% |
| Artificial water bodies (number of total) (% of total) | | 7 87% | | 1 13% | | 0 0% |

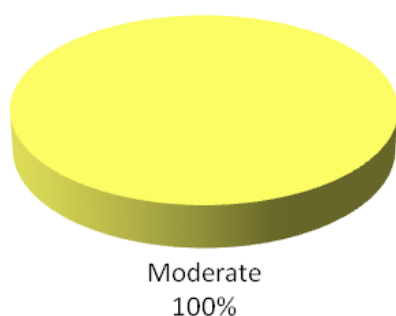


Figure 3.7 Ecological Status of Transitional Water Bodies (by area)

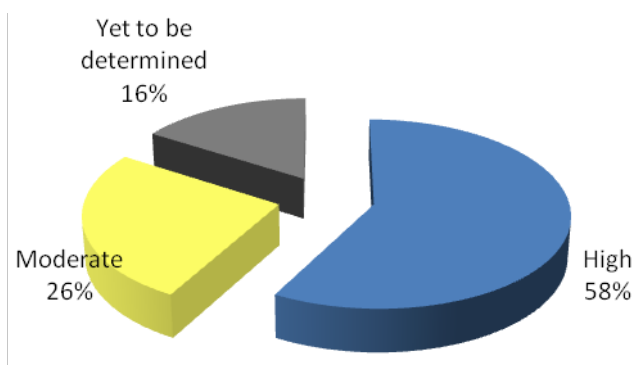


Figure 3.8 Ecological Status of Coastal Water Bodies (by area)

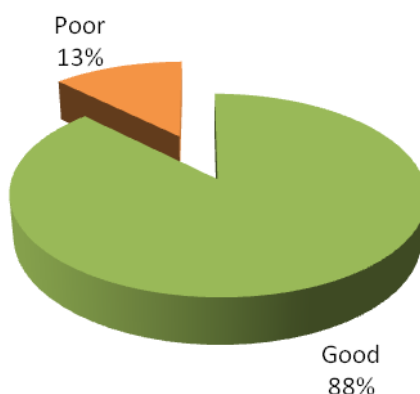


Figure 3.9 Ecological Potential of Artificial Water Bodies (by number)

Coastal waters are generally in good condition from Drogheda to Malahide and from Dalkey to Brittas Bay. Only Dublin Bay, Malahide Bay and the coastal waters stretching between the two have being classified as moderate; the other waters for which data were available are all classified as of high status. Two coastal classifications are not yet available. None of our estuaries achieve good or high status reflecting the fact that they are largely in urban areas and are downstream of rivers which discharge pollutants and nutrients into them. The element(s) causing transitional, coastal and artificial water bodies to fail to achieve at least good status are shown in Tables 3.8, 3.9 and 3.10.

Table 3.4: Surface Water Chemical Status in the Eastern River Basin District

| Surface Water Category | High | Fail | Yet to be Determined |
|--|----------|-----------|----------------------|
| River and canals % of total | 0 0% | 0 0% | 365 100% |
| Lakes and reservoirs (km ²) % of total | 5 12% | 0 0% | 35 88% |
| Estuaries (km ²) % of total | 0 0% | 8 34% | 16 66% |
| Coastal (km ²) % of total | 0 0% | 48 13% | 311 87% |

A fully compliant WFD monitoring programme for transitional and coastal waters will be initiated as a matter of priority and made operational at the latest by December 2011. The classification of all transitional and coastal waters will be completed as soon as EPA deems sufficient monitoring data is available.

To complete an interim classification of transitional and coastal waters, a project, led by the Marine Institute and scheduled for completion in September 2010, is underway. The project aims to identify and process existing data in respect of these waters that can be used to assign status for the reference period 2007-2009, where such information is currently unavailable.

Amendment made by Minister of the Environment, Heritage and Local Government when adopting Plan on 6 July 2010

Current Status of Groundwaters

Groundwater in the ERBD is generally in good condition (see Table 3.5). 90% of the groundwater bodies are classified as good status. Only eight cases were designated as being at poor status, as shown in Map 3.4. One was assigned poor status on the basis of quantitative tests while seven were on the basis of chemical status.

Table 3.5: Groundwater Status in the Eastern River Basin District

| Groundwater Category | Good | Poor |
|--|--------------|------------|
| Chemical Status (km ²) % of total | 5,707 91% | 558 9% |
| Quantitative Status (km ²) % of total | 6,180 99% | 86 1% |
| Combined Status (km ²) % of total | 5621 90% | 644 10% |

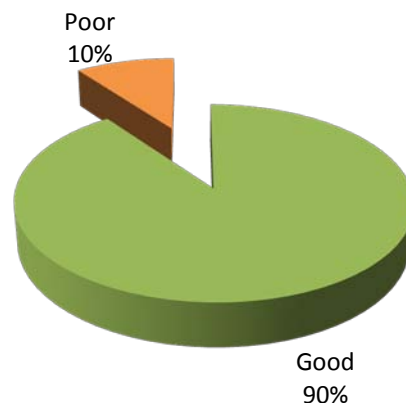


Figure 3.10 Combined Status of Groundwater Bodies (by area)

The poor quantitative status relates to:

- The Lusk Bog of the Ring Aquifer (with abstractions by Fingal County Council).

The water balance test for this aquifer indicates that the recharge available from the Bog of the Ring is 4Megalitres per day. Fingal Count Council is currently abstracting greater than 80% of this value and there are concerns about the impact on the water levels in the aquifer. It is therefore considered by the EPA to be of poor quantitative status, resulting in the entire Bog of the Ring water body being designated poor despite the aquifer being of good chemical status.

The poor status cases due to groundwater quality are related to groundwater discharges which affect the water quality of streams and rivers in the following areas:

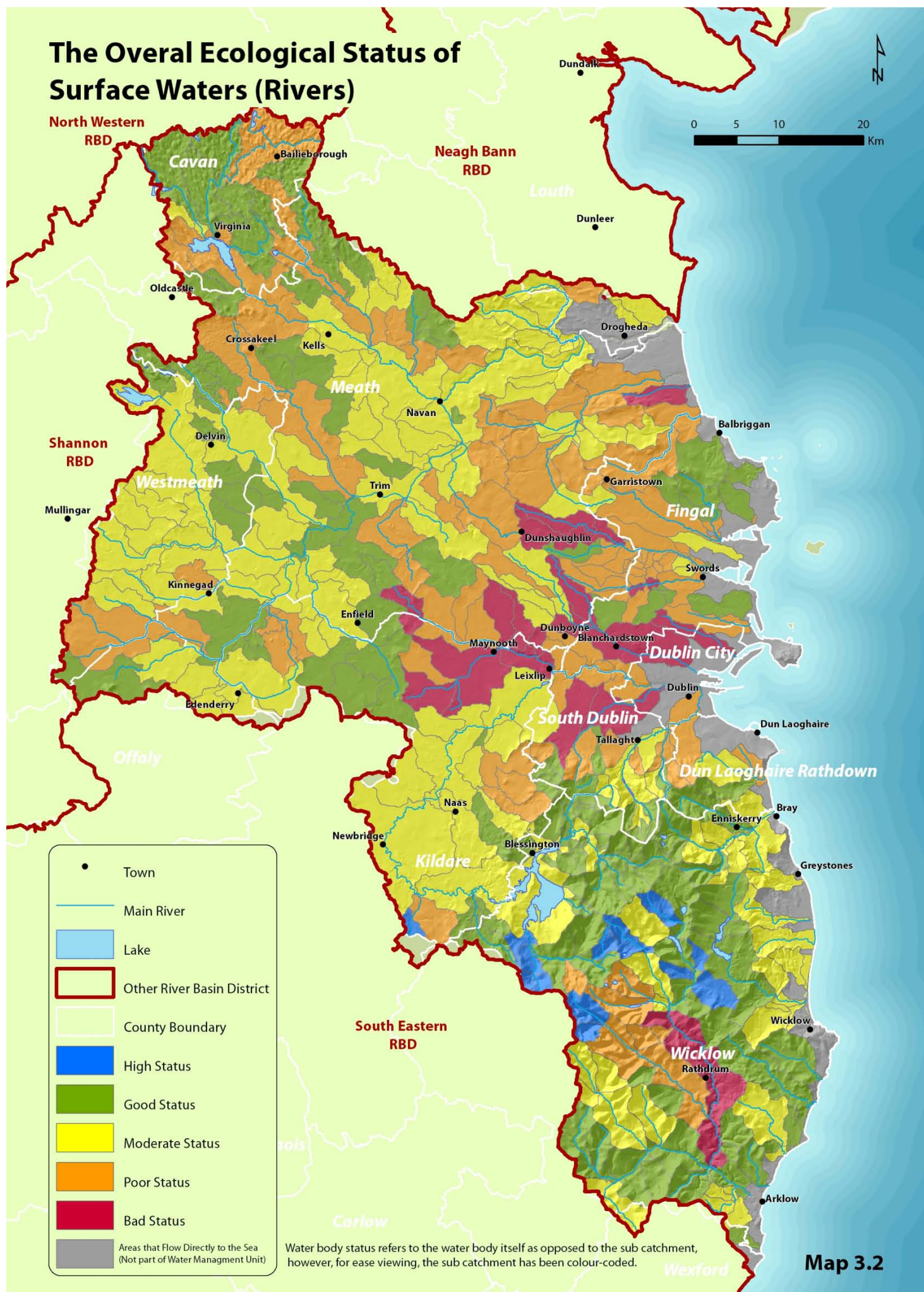
- Wicklow Central (Avoca mine) (Co. Wicklow);
- Lough Lene (Co. Meath and Co. Westmeath);
- Bettystown (Co. Meath);
- Drogheda (Co. Meath and Co. Louth);
- Drogheda_LF (Co. Louth);
- Boyle_CL (Drogheda Town); and
- Drogheda Urban (Co. Meath and Co. Louth).

In the case of Avoca, mine adits on either side of the river are discharging polluted groundwater which contributes to the water quality problems of the river. The Avoca River has been classified as poor status partly on the basis of the mine discharges.

In the other cases, orthophosphate exceed the water quality threshold in a number of streams which flow over the Lough Lene, Bettystown and Drogheda groundwater bodies. These streams have been designated poor status by the EPA. Orthophosphate also exceeds the threshold in groundwater, and groundwater provides significant baseflow to the affected streams. The water quality of the streams is therefore deemed

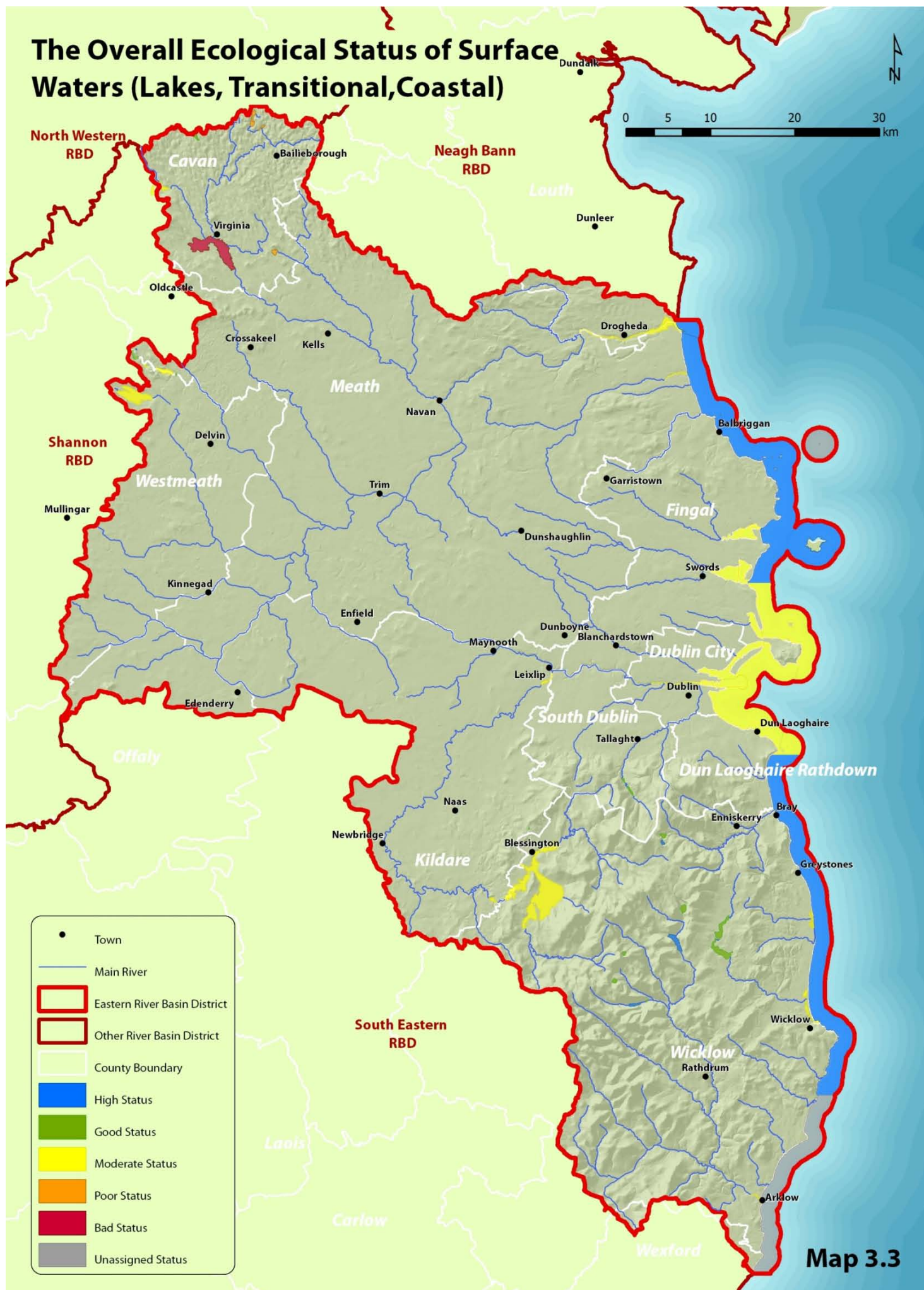


The Overall Ecological Status of Surface Waters (Rivers)



Water body status refers to the water body itself as opposed to the sub catchment, however, for ease viewing, the sub catchment has been colour-coded.

The Overall Ecological Status of Surface Waters (Lakes, Transitional, Coastal)



The Overall Status of Groundwaters (Combined Chemical and Quantitative)

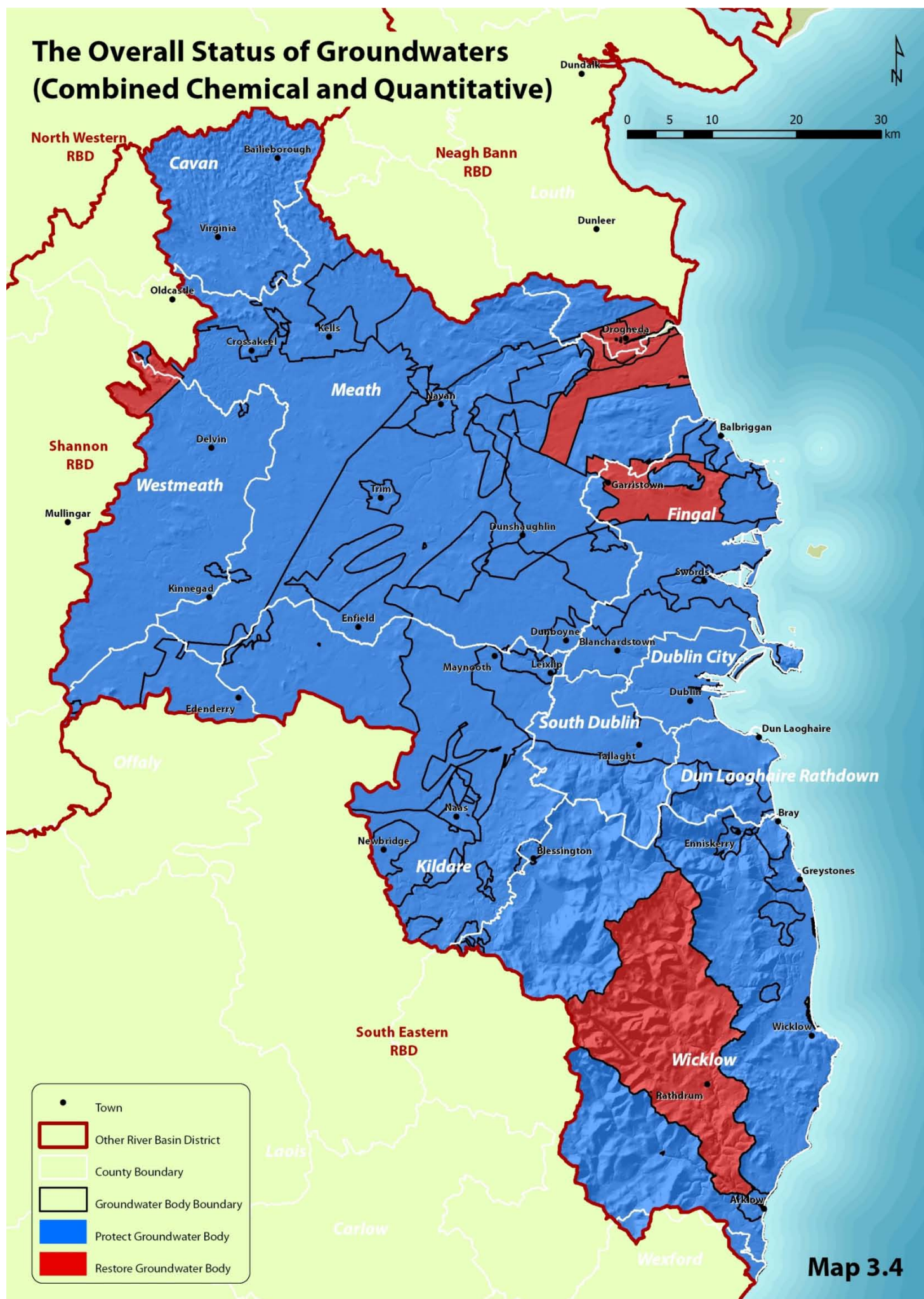


Table 3.6: Elements causing river water bodies to fail to achieve at least good status

| Name | Local Authority | Water Management Unit** | Macroinvertebrates Status | General Physical Chemical Status | Fish Status | Morphology Status | Plants - Diatoms Status | Extrapolated | Interim Overall Status |
|--------------------|-----------------|-------------------------|---------------------------|----------------------------------|-------------|-------------------|-------------------------|--------------|------------------------|
| Fairyhouse Lower | Meath | Broadmeadow | Poor | Moderate | | | | N | Poor |
| Dunshaughlin | Meath | Broadmeadow | Bad | Moderate | | | | N | Bad |
| Nanny Upper | Meath | Nanny | Poor | Moderate | | | | N | Poor |
| Balcultry | Fingal | Broadmeadow | | | | | | Y | Poor |
| Roganstown | Fingal | Broadmeadow | | | | | | Y | Poor |
| Lusk Lower | Fingal | LUSK | | | | | | Y | Poor |
| Corrstown | Fingal | Broadmeadow | | | | | | Y | Poor |
| Gallanstown | Fingal, Meath | Broadmeadow | | | | | | Y | Poor |
| Ward | Fingal | Broadmeadow | Poor | Good | Bad | | | N | Bad |
| Redcross Lower | Wicklow | Potters | | Moderate | | | | N | Moderate |
| Delgany | Wicklow | Newcastle | | Moderate | | | | N | Moderate |
| Ballycreen | Wicklow | Avoca | Moderate | Good | | | | N | Moderate |
| Aghavannagh | Wicklow | Avoca | | | | | | Y | Moderate |
| Glencree Lower | DLRCC, Wicklow | Dargle | High | Good | Moderate | Good | | N | Moderate |
| Deerpark | Wicklow | Dargle | | | | | | Y | Moderate |
| Rathnew Upper | Wicklow | Rathnew | | | | | | Y | Moderate |
| Inchavore | Wicklow | Avoca | | | | | | Y | Moderate |
| Dargle Lower | DLRCC, Wicklow | Dargle | Moderate | Moderate | | | | N | Moderate |
| Glenmacross Lower | Wicklow | Avoca | | Good | Moderate | | | N | Moderate |
| Furnace | Wicklow | Avoca | | | | | | Y | Poor |
| Avonbeg Lower | Wicklow | Avoca | Moderate | Good | Poor | | | N | Poor |
| Rathnew Lower | Wicklow | Rathnew | | | | | | Y | Moderate |
| Ashford | Wicklow | Vartry | | | | | | Y | Moderate |
| Newtownmountkenedy | Wicklow | Newcastle | Moderate | Good | Moderate | | | N | Moderate |
| Glendasan | Wicklow | Avoca | Good | Good | Poor | | | N | Poor |
| Redcross Upper | Wicklow | Potters | Good | Moderate | | | | N | Moderate |
| Pollahoney | Wicklow | Avoca | | | | | | Y | Moderate |
| Ballyduff | Wicklow | Avoca | | | | | | Y | Moderate |
| Avoca Upper | Wicklow | Avoca | Bad | Good | | | | N | Bad |
| Glenealo Lower | Wicklow | Avoca | | | Moderate | | | N | Moderate |
| Ow | Wicklow | Avoca | | | Moderate | | | N | Moderate |

| Name | Local Authority | Water Management Unit** | Macroinvertebrates Status | General Physical Chemical Status | Fish Status | Morphology Status | Plants - Diatoms Status | Extrapolated | Interim Overall Status |
|-----------------|----------------------------------|-------------------------|---------------------------|----------------------------------|-------------|-------------------|-------------------------|--------------|------------------------|
| Coolalug | Wexford, Wicklow | Avoca | Moderate | Good | Moderate | | | N | Moderate |
| Carrighlineen | Wicklow | Avoca | | | | | | Y | Poor |
| Ow Upper | Wicklow | Avoca | Moderate | Good | Moderate | | | N | Moderate |
| Ow Lower | Wicklow | Avoca | Moderate | Good | | | | N | Moderate |
| Carrickmines | DLRCC | Shanganagh | Moderate | Good | | | | N | Moderate |
| Ballinalea | Wicklow | Rathnew | | | | | | Y | Moderate |
| Kilmartin Upper | Wicklow | Newcastle | | | | | | Y | Moderate |
| Lyreen Upper | Kildare | Ryewater | | | | | | Y | Poor |
| Tolka | Meath | Tolka | Moderate | Good | | | | N | Moderate |
| Rye Water Mid | Kildare, | Ryewater | Moderate | Moderate | Poor | | | N | Poor |
| Lyreen Lower | Kildare | Ryewater | Poor | Moderate | Bad | | | N | Bad |
| Tolka Upper | Meath | Tolka | Moderate | Moderate | | | | N | Moderate |
| Rockbrook | South Dublin | Dodder | | | | | | Y | Moderate |
| Tallaght | South Dublin | Dodder | | | | | | Y | Poor |
| Kilcullen Lower | Kildare | Liffey | Poor | Good | Moderate | | | N | Poor |
| Porterstown | Meath | Ryewater | | | Bad | | | N | Bad |
| Gollymochy | Kildare | Liffey | | | | | | Y | Moderate |
| Batterstow | Meath | Tolka | | | | | | Y | Poor |
| Tolka Lower | Dublin City, Fingal, Meath | Tolka | Bad | Moderate | Poor | | | N | Bad |
| Camac Lower | South Dublin, Dublin City | Cammock | Bad | Moderate | Poor | | | N | Bad |
| Kill | Kildare | Liffey | Poor | Good | Poor | | | N | Poor |
| Naas | Kildare | Liffey | | | | | | Y | Moderate |
| Rathmore | Kildare | Liffey | Good | Good | Poor | | | N | Poor |
| Westmanstown | Fingal, Meath | Liffey | | | | | | Y | Poor |
| Dodder Lower | DLRCC, South Dublin, Dublin City | Dodder | Poor | Moderate | Good | | Poor | N | Poor |
| Firhouse | South Dublin | Dodder | | | | | | Y | Poor |
| Dunboyne | Meath | Tolka | | | | | | Y | Moderate |
| Mayne | Fingal, Dublin City | Santry Mayne Sluice | Poor | Moderate | | | | N | Poor |

| Name | Local Authority | Water Management Unit** | Macroinvertebrates Status | General Physical Chemical Status | Fish Status | Morphology Status | Plants - Diatoms Status | Extrapolated | Interim Overall Status |
|-----------------------|---------------------|-------------------------|---------------------------|----------------------------------|-------------|-------------------|-------------------------|--------------|------------------------|
| Santry | Dublin City, Fingal | Santry Mayne Sluice | Poor | Moderate | Bad | Good | | N | Bad |
| Pinkeen | Fingal, Meath | Tolka | | Moderate | Bad | | | N | Bad |
| Broadmeadow 2 | Fingal, Meath | Broadmeadow | Poor | Good | | | | N | Poor |
| Balheary | Fingal | Broadmeadow | | | | | | Y | Poor |
| Maaspool | Meath | Broadmeadow | | | | | | Y | Poor |
| Coolquoy | Fingal, Meath | Broadmeadow | | | | | | Y | Poor |
| Thornton | Fingal, Meath | Broadmeadow | | | | | | Y | Poor |
| Ward Lower | Fingal | Broadmeadow | Poor | Moderate | | | | N | Poor |
| Scatternagh | Meath | Nanny | | | | | | Y | Moderate |
| Donabate | Fingal | Donabate | | Moderate | | | | N | Moderate |
| Delvin Lower | Fingal, Meath | Delvin | Poor | Moderate | Poor | | | N | Poor |
| Broadmeadow 3 | Meath | Broadmeadow | Poor | Moderate | | | | N | Poor |
| Nanny | Meath | Nanny | Good | Moderate | | | | N | Moderate |
| Ballough Stream Upper | Fingal | Ballyboghil | Poor | Good | | | | N | Poor |
| Duleek | Meath | Nanny | | | | | | Y | Poor |
| Bellewstown Upper | Meath | Nanny | | | | | | Y | Poor |
| Bellewstown Lower | Meath | Nanny | | | | | | Y | Moderate |
| Nanny Lower | Meath | Nanny | Poor | Moderate | | | | N | Poor |
| Hurley Lower | Meath | Nanny | Moderate | Moderate | | | | N | Moderate |
| Burtonstown | Meath | Nanny | | | | | | Y | Poor |
| Camac Upper | South Dublin | Cammock | Poor | Good | | | | N | Poor |
| Ryewater Lower | Kildare, Meath | Ryewater | Poor | Moderate | Bad | | Moderate | N | Bad |
| Ryewater Upper | Kildare, Meath | Ryewater | | | Bad | | | N | Bad |
| Clonshambo | Kildare | Ryewater | Poor | Good | Bad | | | N | Bad |
| Griffeen Lower | South Dublin | Liffey | | Good | Bad | | | N | Bad |
| Liffey 3 | Wicklow | Liffey | Moderate | Good | | Good | High | N | Moderate |
| Wheatfield | Kildare | Liffey | | | | | | Y | Moderate |
| Colmanstown | South Dublin | Liffey | | | | | | Y | Poor |
| Brittas Upper | South Dublin | Liffey | Moderate | Good | | | | N | Moderate |
| Kellystown | Kildare, Meath | Ryewater | | | Bad | | | N | Bad |
| Loughlinstown Lower | DLRCC | Shanganagh | Poor | Moderate | | Good | | N | Poor |
| Killough | Wicklow | Dargle | | | | | | Y | Moderate |

| Name | Local Authority | Water Management Unit** | Macroinvertebrates Status | General Physical Chemical Status | Fish Status | Morphology Status | Plants - Diatoms Status | Extrapolated | Interim Overall Status |
|-------------------|-----------------------|-------------------------|---------------------------|----------------------------------|-------------|-------------------|-------------------------|--------------|------------------------|
| Newcastle | Wicklow | Newcastle | Moderate | Good | Good | | | N | Moderate |
| Kish | Wexford, Wicklow | Avoca | | | | | | Y | Moderate |
| Ballyduff Lower | Wicklow | Avoca | Moderate | | | | | N | Moderate |
| Glenealo Upper | Wicklow | Avoca | Poor | Good | | | | N | Poor |
| Vartry Lower | Wicklow | Vartry | Moderate | Good | Good | | | N | Moderate |
| Kilamrtin Lower | Wicklow | Newcastle | | | | | | Y | Moderate |
| Brides | Kildare, Meath | Ryewater | | | | | | Y | Poor |
| Morell | Kildare | Liffey | Moderate | Good | | | | N | Moderate |
| Painestown | Kildare, South Dublin | Liffey | | | Poor | | | N | Poor |
| Morell | Kildare | Liffey | Moderate | Good | | | | N | Moderate |
| Colliersland | Meath | Tolka | | | | | | Y | Moderate |
| Carton | Kildare, Meath | Ryewater | | | Bad | | | N | Bad |
| Gleenreemore | Wicklow | Liffey | | | | | | Y | Poor |
| Awillyinish | Kildare | Liffey | | | | | | Y | Moderate |
| Dodder 2 | South Dublin | Dodder | Moderate | Good | Moderate | Good | | N | Moderate |
| Owenadoher Lower | DLRCC, South Dublin | Dodder | Poor | Good | | | | N | Poor |
| Saddlestown | Meath | Delvin | | | | | | Y | Moderate |
| Hurley Upper | Fingal, Meath | Nanny | | Moderate | | | | N | Moderate |
| Veldonstown | Meath | Nanny | | | | | | Y | Poor |
| Delvin Upper | Fingal, Meath | Delvin | Poor | Moderate | | | | N | Poor |
| Hurley Mid | Meath | Nanny | Poor | Moderate | | | | N | Poor |
| Cushinstown Lower | Meath | Nanny | | | | | | Y | Moderate |
| Saucerstown | Fingal | Broadmeadow | | | | | | Y | Moderate |
| Bishopswood | Fingal | Broadmeadow | | | | | | Y | Poor |
| DunWater Upper | Fingal, Meath | Broadmeadow | | | | | | Y | Poor |
| Kilsallaghan | Fingal | Broadmeadow | | | | | | Y | Poor |
| Mooretown | Fingal | Broadmeadow | | | | | | Y | Moderate |
| DunWater Lower | Fingal, Meath | Broadmeadow | | | | | | Y | Poor |
| Ward Upper | Fingal, Meath | Broadmeadow | Poor | Moderate | | | | N | Poor |
| Broadmeadow Upper | Meath | Broadmeadow | Poor | Moderate | Bad | | | N | Bad |
| Ballyboghil | Fingal | Ballyboghil | Poor | Moderate | | | | N | Poor |
| Cushinstown Upper | Fingal, Meath | Nanny | | | | | | Y | Poor |

| Name | Local Authority | Water Management Unit** | Macroinvertebrates Status | General Physical Chemical Status | Fish Status | Morphology Status | Plants - Diatoms Status | Extrapolated | Interim Overall Status |
|-------------------------|------------------|-------------------------|---------------------------|----------------------------------|-------------|-------------------|-------------------------|--------------|------------------------|
| Mosney | Meath | Mosney | Poor | Moderate | Bad | | | N | Bad |
| Rathdrinagh Lower | Meath | Boyne Lower | | | | | | Y | Moderate |
| Bective | Meath | Boyne Lower | | | | | | Y | Poor |
| Iskaroon Upper | Meath | Boyne Lower | | | | | | Y | Moderate |
| Rathcore | Meath | Blackwater South | | | | | | Y | Moderate |
| Cloghan Upper | Westmeath | Deel | | | | | | Y | Moderate |
| Boyne | Kildare, Meath | Boyne Upper | Moderate | Good | | | | N | Moderate |
| Clady Mid | Meath | Boyne Lower | | Moderate | | | | N | Moderate |
| Yellow Lower | Meath | Blackwater North | Poor | Good | | | | N | Poor |
| Lamberstown | Meath | Boyne Lower | | | | | | Y | Poor |
| Boycetown | Meath | Boyne Lower | Moderate | Good | | | | N | Moderate |
| Stonyford | Meath, Westmeath | Stonyford | Moderate | Good | | | | N | Moderate |
| Athboy Upper | Meath, Westmeath | Athboy | Poor | Good | | | | N | Poor |
| Lough Lene Adeel Stream | Westmeath | Deel | | | | | | Y | Moderate |
| Deel Upper | Meath, Westmeath | Deel | Moderate | | | | | N | Moderate |
| Kinnegad Lower | Meath, Westmeath | Boyne Upper | Moderate | Good | | | | N | Moderate |
| Kinnegad Upper | Westmeath | Boyne Upper | | | | | | Y | Moderate |
| Yellow Lower | Meath, Offaly | Boyne Upper | Moderate | Good | | | | N | Moderate |
| Clady Lower | Meath | Boyne Lower | | Moderate | | | | N | Moderate |
| Abelstown | Meath | Boyne Lower | | | | | | Y | Moderate |
| Glash Lower | Kildare | Boyne Upper | Poor | Good | | | | N | Poor |
| Baltray | Louth | Baltray | | | | | | Y | Moderate |
| Newtownstalaban | Louth | Baltray | | | | | | Y | Moderate |
| Mountwilson | Offaly | Boyne Upper | | | | | | Y | Moderate |
| Ballyhaw | Westmeath | Deel | | | | | | Y | Moderate |
| Nugentstown Lower | Meath | Blackwater North | | | | | | Y | Moderate |
| Edenderry | Kildare, Offaly | Boyne Upper | | | | | | Y | Moderate |
| Rathdrinagh Upper | Meath | Boyne Lower | | | | | | Y | Moderate |
| Dardistown Upper | Westmeath | Deel | | | | | | Y | Moderate |
| Glash Mid | Kildare | Boyne Upper | | | | | | Y | Poor |
| Monasterboice | Louth | Mattock | | | | | | Y | Poor |
| Stackallan | Meath | Boyne Lower | | | | | | Y | Poor |

| Name | Local Authority | Water Management Unit** | Macroinvertebrates Status | General Physical Chemical Status | Fish Status | Morphology Status | Plants - Diatoms Status | Extrapolated | Interim Overall Status |
|---------------------------|--------------------------|-------------------------|---------------------------|----------------------------------|-------------|-------------------|-------------------------|--------------|------------------------|
| Clonmore | Meath | Athboy | | | | | | Y | Moderate |
| Boyne Upper | Kildare, Offaly | Boyne Upper | Moderate | Moderate | | | | N | Moderate |
| Eighter | Cavan, Meath | Blackwater North | | | | | | Y | Poor |
| Milltownpass | Westmeath | Boyne Upper | Moderate | Good | | | | N | Moderate |
| Proudfootstown | Meath | Mattock | | | | | | Y | Moderate |
| Mattock Lower | Louth, Meath | Mattock | Good | Moderate | | | | N | Moderate |
| Skane Upper | Meath | Boyne Lower | Poor | Moderate | | | | N | Poor |
| Deel Lower | Meath, Westmeath | Deel | Moderate | Good | | | | N | Moderate |
| Blackwater Lower | Kildare, Meath | Blackwater South | Moderate | Good | | | | N | Moderate |
| Aleckafin | Kildare | Blackwater South | | | | | | Y | Moderate |
| Devlins | Meath | Mattock | Moderate | Moderate | | | | N | Moderate |
| Mooretown | Meath | Mattock | | | | | | Y | Moderate |
| Clady Upper | Meath | Boyne Lower | | | | | | Y | Moderate |
| Mattock Mid | Louth, Meath | Mattock | Moderate | Moderate | | | | N | Moderate |
| Cloghan Lower | Westmeath | Deel | | | | | | Y | Moderate |
| Moynalty Lower | Cavan, Meath | Blackwater North | Poor | Moderate | | | | N | Poor |
| Kilwarden | Westmeath | Boyne Upper | | | | | | Y | Poor |
| Mattock Upper | Louth, Meath | Mattock | Moderate | Moderate | | | | N | Moderate |
| Drakestown Lower | Meath | Blackwater North | | | | | | Y | Moderate |
| Grange | Meath | Boyne Lower | | | | | | Y | Moderate |
| Garrisker | Kildare | Boyne Upper | | | | | | Y | Poor |
| Blackwater Upper | Cavan | Blackwater North | Poor | Moderate | | | | N | Poor |
| Castlejordan | Meath, Offaly, Westmeath | Boyne Upper | Poor | Moderate | | | | N | Poor |
| Nadreegeel Lough | Cavan | Blackwater North | Moderate | Good | | | | N | Moderate |
| D'arcys Crossroads Stream | Meath, Westmeath | Stonyford | Poor | Good | | | | N | Poor |
| Horath Lower | Meath | Blackwater North | | | | | | Y | Moderate |
| Cortown Lower | Meath | Blackwater North | | | | | | Y | Moderate |
| Knightsbrook | Meath | Boyne Lower | | | | | | Y | Poor |
| Ballivor | Meath, Westmeath | Boyne Lower | | | | | | Y | Moderate |
| Coppanagh | Cavan | Blackwater North | | | | | | Y | Moderate |
| Gibstown | Meath | Blackwater North | | | | | | Y | Poor |
| Glash Upper | Kildare | Boyne Upper | Poor | Moderate | | | | N | Poor |

| Name | Local Authority | Water Management Unit** | Macroinvertebrates Status | General Physical Chemical Status | Fish Status | Morphology Status | Plants - Diatoms Status | Extrapolated | Interim Overall Status |
|---|--------------------------------------|-------------------------|---------------------------|----------------------------------|-------------|-------------------|-------------------------|--------------|------------------------|
| Derreenavagh Stream | Westmeath | Deel | Moderate | Good | | | | N | Moderate |
| Dardistown Lower | Westmeath | Deel | | | | | | Y | Moderate |
| Riverstown | Westmeath | Deel | Moderate | Good | | | | N | Moderate |
| Knightsbrook Lower | Meath | Boyne Lower | Poor | Moderate | | | | N | Poor |
| Hurdlestown | Meath | Blackwater North | | | | | | Y | Moderate |
| Skane Lower | Meath | Boyne Lower | Moderate | Moderate | | | | N | Moderate |
| Athboy Lower | Meath, Westmeath | Athboy | Poor | Moderate | | | | N | Poor |
| Deel | Westmeath | Deel | Moderate | | | | | N | Moderate |
| Drakestown Upper | Meath | Blackwater North | | | | | | Y | Moderate |
| Derrycoris | Kildare, Offaly | Boyne Upper | | | | | | Y | Moderate |
| Philpotstown | Meath | Boyne Lower | | | | | | Y | Poor |
| EA_Boyne159BlackwaterKells_Blackwater1_Lower_1 | Cavan, Meath | Blackwater North | Poor | Good | | | | N | Poor |
| EA_Boyne159BlackwaterKells_Blackwater1_Lower_2 | Meath | Blackwater North | Moderate | Moderate | | | | N | Moderate |
| EA_Boyne159BlackwaterKells_Blackwater1_Lower_3 | Meath | Blackwater North | Good | Moderate | | | | N | Moderate |
| EA_Boyne159Main_Boyne1_Lower_2 | Meath | Boyne Lower | Moderate | Good | | | | N | Moderate |
| EA_Boyne159Main_Boyne1_Lower_3 | Meath | Boyne Lower | Moderate | Good | Moderate | | | N | Moderate |
| EA_Liffey168_Liffey1_Lower_1 | Wicklow, Kildare | Liffey | Moderate | Good | | | | N | Moderate |
| EA_Liffey168_Liffey1_Lower_2 | Kildare | Liffey | Good | Good | Moderate | Good | Good | N | Moderate |
| EA_Liffey168_Liffey1_Lower_3 | Kildare | Liffey | Moderate | Moderate | | Good | | N | Moderate |
| EA_Liffey168_Liffey1_Lower_4 | Kildare, South Dublin | Liffey | Moderate | Moderate | | Good | | N | Moderate |
| EA_Liffey168_Liffey1_Lower_5 | Kildare, Meath, Fingal, South Dublin | Liffey | Poor | Moderate | | Good | Moderate | N | Poor |
| EA_Liffey168_Liffey1_Lower_6 | DCC, Fingal, South Dublin | Liffey | Poor | Moderate | | | | N | Poor |
| **Water management units are a combination of several water bodies which are interconnected and have similar attributes | | | | | | | | | |

Table 3.7: Elements causing lakes water bodies to fail to achieve at least good status

| Name | Local Authority | Biological Status | | General Physical Chemical Status | | Morphology Status | | Monitored/ Desktop status | Interim Overall Status |
|----------------------|-----------------------|-------------------|--------------------------|----------------------------------|------------------------------|-------------------|--------|---------------------------|------------------------|
| | | Status | Reason | Status | Reason | Status | Reason | | |
| Bane (Lough) | Meath, Westmeath | Good | Fish | Good | | Good | | Monitored | Moderate |
| Ben Lough | Westmeath | | | | | | | Desktop status | Moderate |
| Drumkeery Lough | Cavan | Poor | Macrophytes | Moderate | Nutrients - Total Phosphorus | High | | Monitored | Poor |
| Golden Falls | Kildare | Moderate | Chlorophyll | Moderate | Nutrients - Total Phosphorus | | | Monitored | Moderate |
| Leixlip Reservoir | Kildare, South Dublin | | | | | | | Desktop status | Moderate |
| Lene | Westmeath | Good | Fish | Good | | Good | | Monitored | Moderate |
| Mullagh | Cavan | Poor | Chlorophyll | Moderate | Nutrients - Total Phosphorus | | | Monitored | Poor |
| Nadreegeal Loughs | Cavan | Moderate | Macrophytes, Chlorophyll | Moderate | Nutrients - Total Phosphorus | | | Monitored | Moderate |
| Pollaphuca Reservoir | Kildare | Moderate | Macrophytes | Good | | | | Monitored | Moderate |
| Ramor (Lough) | Cavan | Bad | Macrophytes, Chlorophyll | Moderate | Nutrients - Total Phosphorus | | | Monitored | Bad |
| Skeagh Lough Upper | Cavan | Poor | Macrophytes, Chlorophyll | Moderate | Nutrients - Total Phosphorus | High | | Monitored | Poor |

Table 3.8: Elements causing transitional water bodies to fail to achieve at least good status

| Name | Local Authority | Ecology | | Chemical | | Protected Area | | Extrapolated | Interim Overall Status |
|----------------------|---------------------|----------|-------------------------------------|----------|---------------------|----------------|--|--------------|------------------------|
| | | Status | Reason | Status | Reason | Status | Reason | | |
| Avoca Estuary | Wicklow | Moderate | DO | No Data | No Data | Less than good | Unfavourable Conservation Status | No | Moderate |
| Boyne Estuary | Louth, Meath | Moderate | Opportunistic macroalgae | Fail | Priority substances | Less than good | Unfavourable Conservation Status | No | Moderate |
| Broad Lough | Wicklow | Moderate | DO,BOD | No Data | No Data | Less than good | Unfavourable Conservation Status | No | Moderate |
| Broadmeadow Water | Fingal | Moderate | MRP, DO, BOD, Phytoplankton Biomass | No Data | No Data | Less than good | Unfavourable Conservation Status | No | Moderate |
| Dargle Estuary | Wicklow | | | | | | | Yes | Moderate |
| Kilcoole Marsh | Wicklow | | | | | | | Yes | Moderate |
| Liffey Estuary Lower | Dublin City | Good | MRP | Fail | Priority substances | Less than good | Failing to meet sensitive water (UWWTD) objectives | No | Moderate |
| Liffey Estuary Upper | Dublin City | Moderate | MRP, DO, Fish | No Data | No Data | Less than good | Unfavourable Conservation Status | No | Moderate |
| Mayne Estuary | Fingal | | | | | | | Yes | Moderate |
| Nanny Estuary | Meath | | | | | | | Yes | Moderate |
| North Bull Island | Dublin City, Fingal | | | | | | | Yes | Moderate |
| Rogerstown Estuary | Fingal | Moderate | MRP | No Data | No Data | Less than good | Unfavourable Conservation Status | No | Moderate |
| Tolka Estuary | Dublin City | Moderate | MRP, Opportunistic Macroalgae, Fish | No Data | No Data | Less than good | Unfavourable Conservation Status | No | Moderate |

Table 3.9: Elements causing coastal water bodies to fail to achieve at least good status

| Name | Local Authority | Ecology | | Chemical | | Protected Area | | Extrapolated | Interim Overall Status |
|--|-----------------------|----------|------------------------------|----------|---------------------|----------------|--|--------------|------------------------|
| | | Status | Reason | Status | Reason | Status | Reason | | |
| Dublin Bay | Dublin, DLRCC, Fingal | Moderate | Dissolved Inorganic Nitrogen | Fail | Priority substances | Less than good | Unfavourable Conservation Status | No | Moderate |
| Irish Sea Dublin (HA 09) | DLRCC, Fingal | | | | | | | Yes | Moderate |
| Malahide Bay | Fingal | Moderate | Dissolved Inorganic Nitrogen | No Data | No Data | Less than good | Failing to meet bathing water objectives; unfavourable conservation status | No | Moderate |
| Rockabill | Fingal | | | | | | | Yes | Unassigned |
| Southwestern Irish Sea - Brittas Bay (HA 10) | Wexford, Wicklow | | | | | | | Yes | Unassigned |

Table 3.10: Elements causing groundwater bodies to fail to achieve at least good status

| Name | Local Authority | Overall Quantitative Status | | Overall Chemical Status | | Interim Overall Status |
|------------------------------|------------------|-----------------------------|---------------|-------------------------|-----------|------------------------|
| | | Status | Reason | Status | Reason | |
| Bettystown | Meath | Good | | Poor | River MRP | Poor |
| Boyle_CL | Louth | Good | | Poor | River MRP | Poor |
| Drogheda | Meath, Louth | Good | | Poor | River MRP | Poor |
| Drogheda Urban | Meath, Louth | Good | | Poor | River MRP | Poor |
| Drogheda_LF | Louth | Good | | Poor | River MRP | Poor |
| Lough Lene | Meath, Westmeath | Good | | Poor | River MRP | Poor |
| Lusk-Bog of the Ring | Fingal, Meath | Poor | Water Balance | Good | | Poor |
| Wicklow Central (Avoca Mine) | Wicklow | Good | | Poor | Mine | Poor |

Table 3.11: Elements causing artificial water bodies to fail to achieve at least good status

| Name | Local Authority | Description | Interim Overall Status |
|------------------------------------|--|-------------|------------------------|
| Boyne Navigation | Meath | Canal | Good |
| Grand Canal Dock | Dublin City Council | Canal | Poor |
| Grand Canal Main Line E of Lowton | Kildare, Dublin City, South Dublin, Kildare | Canal | Good |
| Grand Canal Main Line W of Lowton | Offaly, Kildare | Canal | Good |
| Grand Canal Edenderry Branch | Offaly | Canal | Good |
| Grand Canal Naas & Corbally Branch | Kildare | Canal | Good |
| Royal Canal Main Line | Meath, Kildare, Westmeath, Dublin City, Fingal | Canal | Good |
| Turlough Hill Reservoir | Wicklow | Reservoir | Good |

4 What are the Problems?

In many waters there are several different pressures, which detrimentally affect the quality of the water and the diversity of the ecology. Therefore, the measures (or actions) necessary to improve the situation have to address all of these pressures. This catchment-based process is an important advance in water management as it overrides the historical approach of single issues dominating the process. Rather than the various individuals and organisations who contribute to the problems pointing the blame elsewhere, this approach highlights all issues and encourages cooperation between all stakeholders in the catchment.

The Water Matters report published in 2007 provided an analysis of the main pressures affecting our waters. Eight major pressures with a widespread impact were identified, in addition to specific local problems that exist from place to place (Table 4.1).

These main water problems are discussed in detail in the Water Matters booklet, outlining for each problem:

- Why they are problems;
- How these problems affect the Eastern River Basin District in particular;
- What existing controls are in place;
- Whether these controls are adequate to meet the Directive targets; and
- What additional actions are proposed.

Comments received on the Water Matters report are summarised in Appendix A(ii).

The activities listed above all cause pressures on surface and ground waters, to different degrees from place to place and in different combinations.

These pressures affect the water quality, the habitats, and the ecology which the waters sustain.

Table 4.1: Main Pressures and Pressure Category

| Pressure | Pressure Category |
|---|-------------------|
| Wastewater and industrial discharges | Physicochemical |
| Landfills, quarries, mines and contaminated lands | Physicochemical |
| Agriculture | Physicochemical |
| Wastewater and unsewered properties | Physicochemical |
| Forestry | Physicochemical |
| Usage and discharge of dangerous substances | Physicochemical |
| Physical modifications | Morphological |
| Abstractions | Hydrological |



The impacts can be direct, such as physical changes to the water body or over abstraction, which can impact on natural habitats; or indirect, such as increased sediment run off which reduces light and causes oxygen deficiencies. In order to improve conditions and achieve good status, all of the pressures will have to be addressed to a degree where no single pressure, or any combination of pressures, remains a problem.

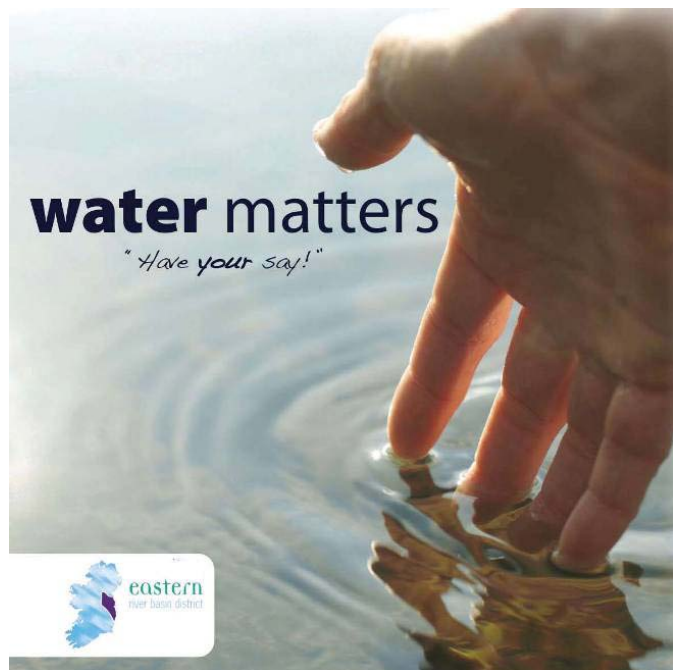
The Water Matters Report 2007 was the starting point for identifying the problems in our waters. Since 2007 the Local Authorities and the Eastern River Basin District Project Team have looked at our waters on a sub catchment level using the River Basin Management System (as discussed in Section 8).

The River Basin Management System (RBMS) allows users to look at all the information that has been collected to date from the Characterisation Report, the Monitoring Sites, Water Matters background report 2007 and the EPA classifications (see Sections 1 to 3 for more information on these reports). Using all this information, and local information and knowledge, it is possible to compare monitoring results to local upstream conditions and begin to identify the unique set of pressures causing the problems in a particular sub catchment.

The following sequence of maps (Maps 4.1 to 4.6) shows the relative degree to which the six pressures within the physicochemical (water quality) pressure category affect the principal water bodies in the Eastern River Basin District as identified by users of the RBMS. In these maps each pressure is assigned a level of importance (in terms of a percentage) for each river. The six physicochemical pressures (identified in the Water Matters report as key pressures nationally) are:

- wastewater point sources;
- landfills, quarries and mines;
- agriculture;
- unsewered properties;
- forestry; and
- dangerous substances.

It should be noted that, in line with the requirements of the Directive, if part of a particular river has been identified as being affected by a given pressure, then is taken to apply to the entire river.



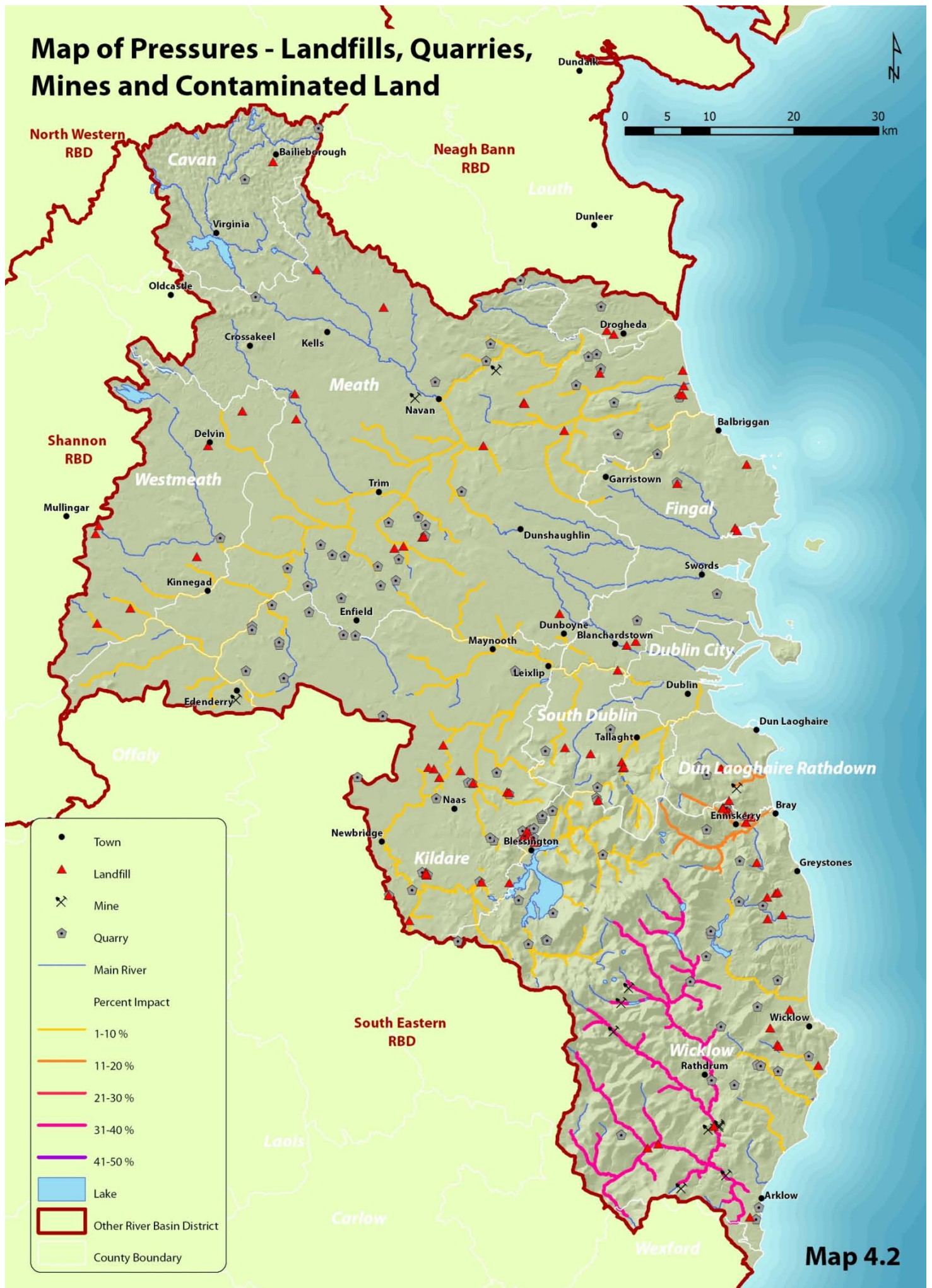
Water bodies are classified as being either at risk or not at risk on the basis of morphological pressures and hydrological pressures. These maps were compiled from the results of research projects commissioned by the DEHLG. The Abstractions map (Map 4.7) shows the rivers found to be at risk or probably at risk from over abstractions. The Morphology map (Map 4.8) shows the rivers at risk or probably at risk from canalisation in addition to all designated heavily modified water bodies (discussed in Section 10).

For more information on the research projects please visit our website or www.wfdireland.ie; a full list of documents is presented in the bibliography at the end of this plan.

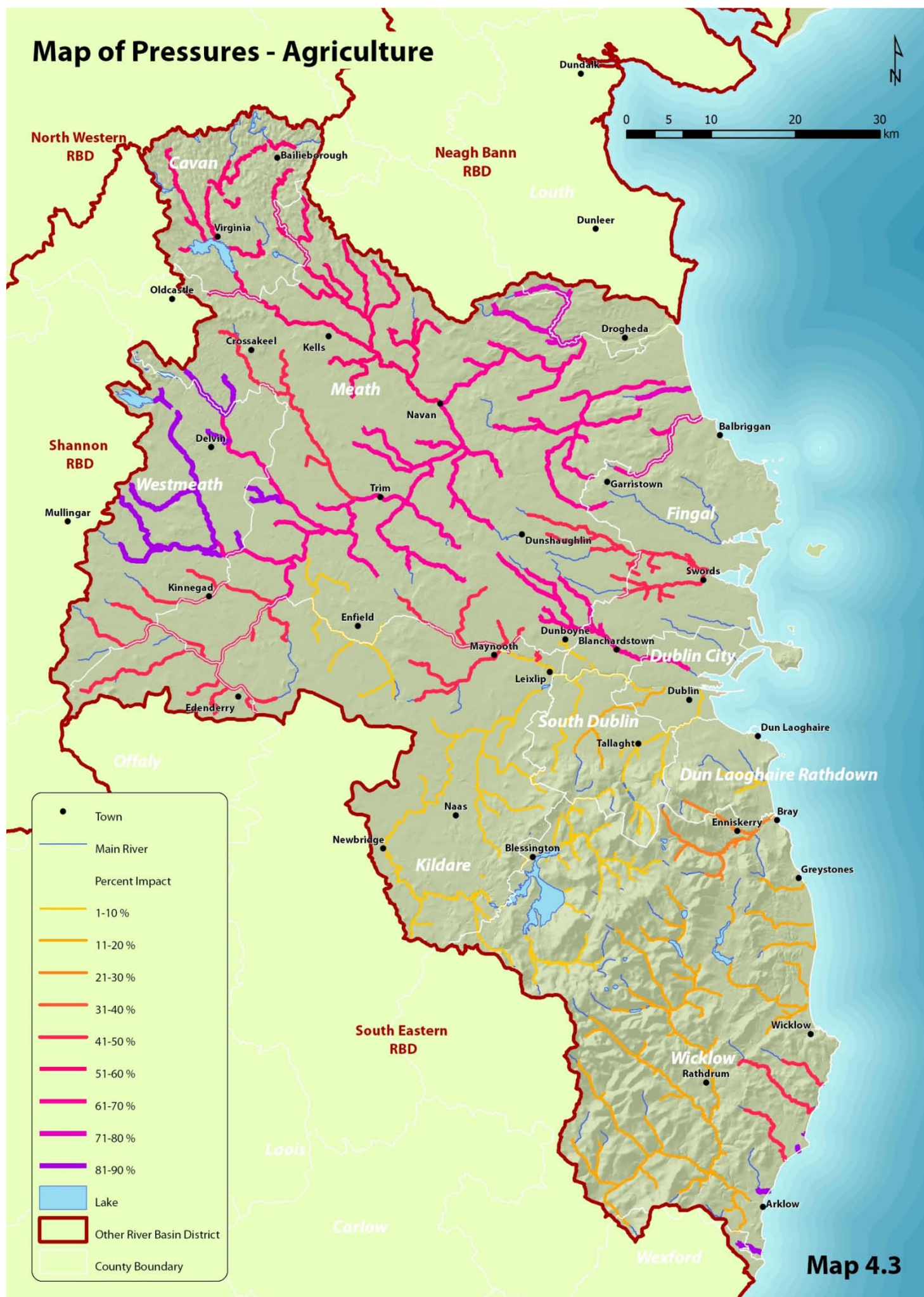
Map of Pressures - Wastewater from Industrial Discharges



Map of Pressures - Landfills, Quarries, Mines and Contaminated Land

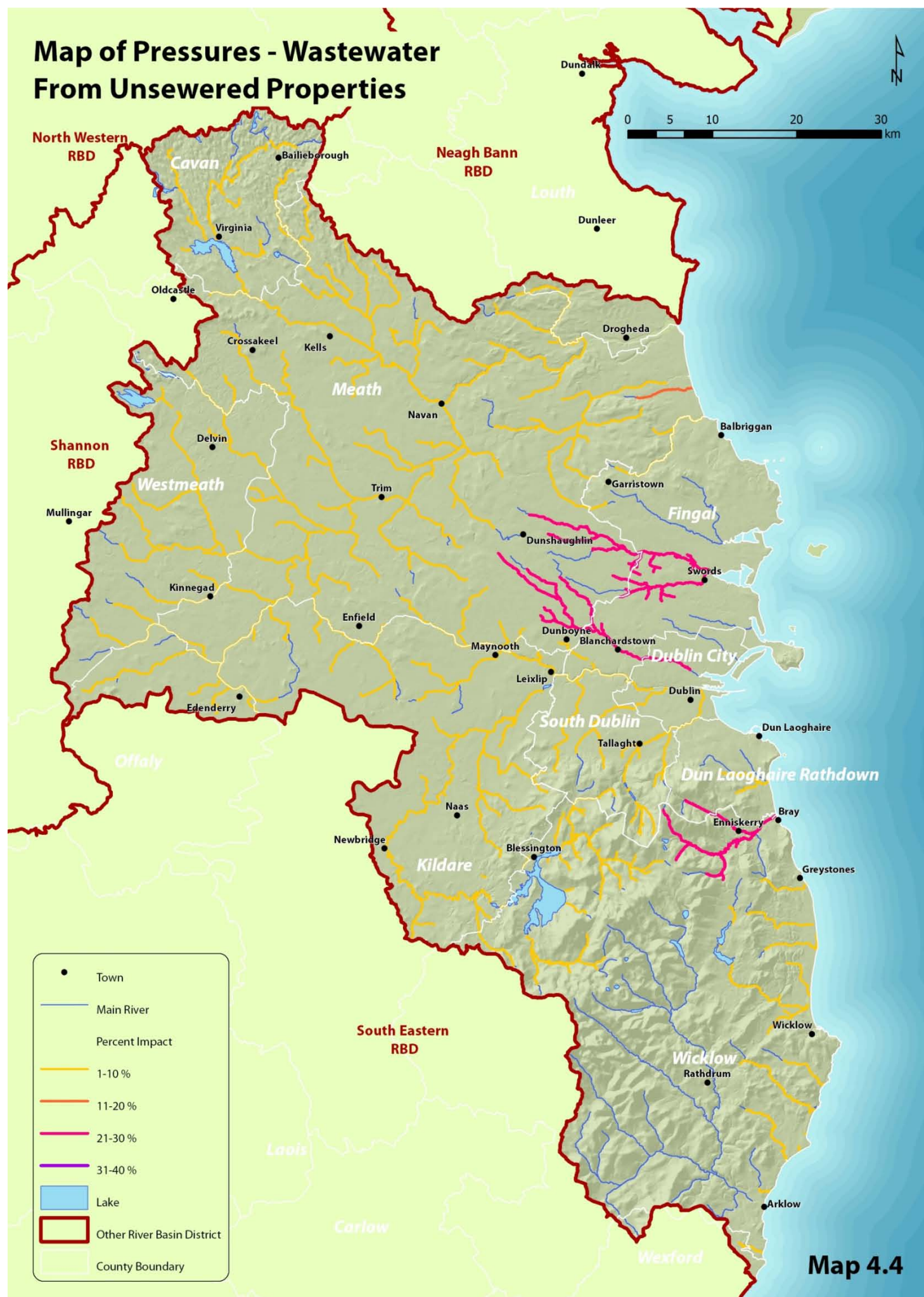


Map of Pressures - Agriculture



Map 4.3

Map of Pressures - Wastewater From Unsewered Properties



Map of Pressures - Forestry

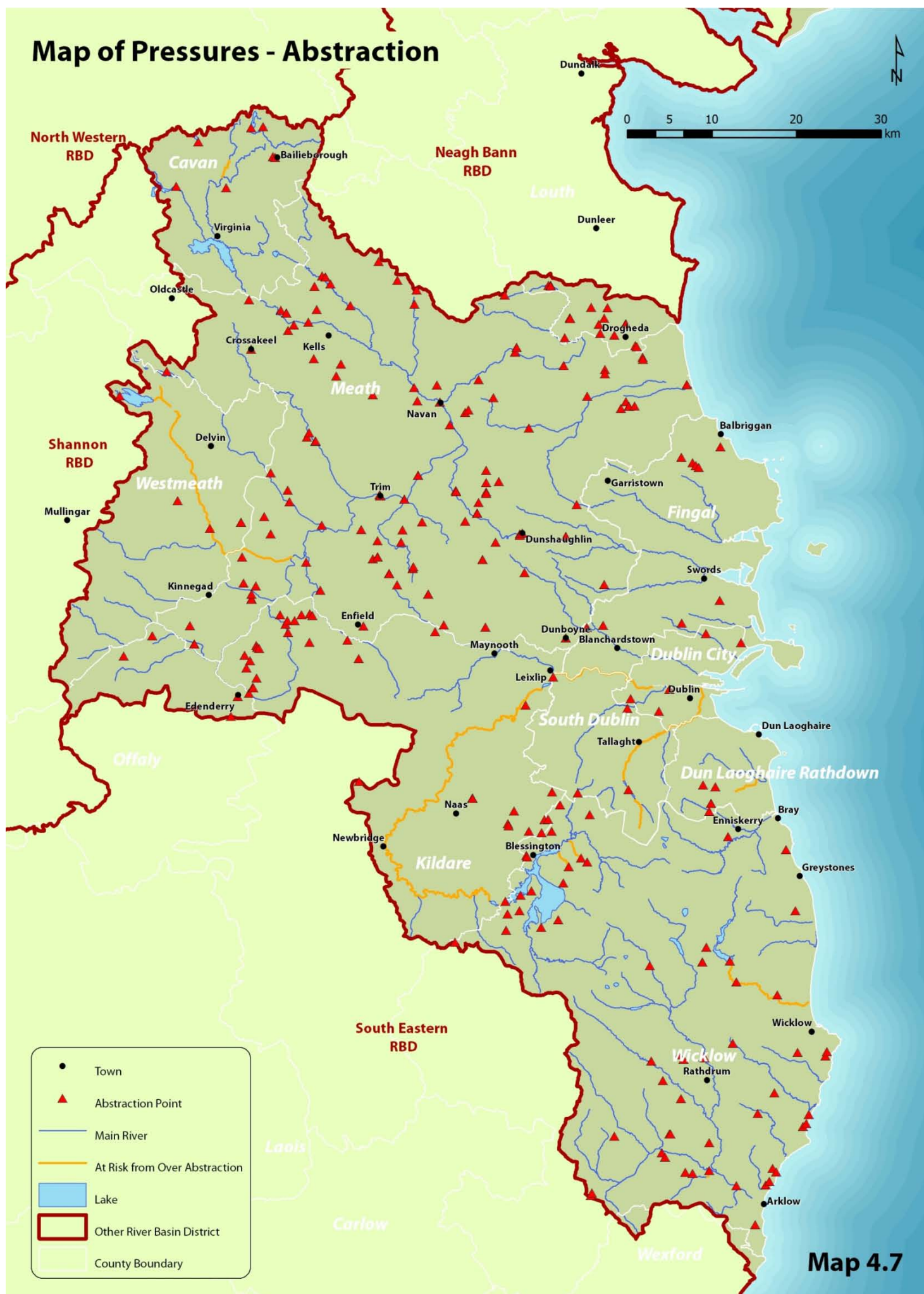


Map 4.5

Map of Pressures - Dangerous Substances



Map of Pressures - Abstraction



Map of Pressures - Morphology



Map 4.8

5 Protected Areas in the Eastern River Basin District

Within the Eastern River Basin District, there are a number of areas that have a special status for environmental reasons. Many of these areas are designated at European level (for example Special Protection Areas under the Birds Directive, Special Areas of Conservation under the Habitats Directive, Shellfish Waters, Bathing Waters). There are also nationally designated areas such as the Natural Heritage Areas. These protected areas come under the responsibility of the National Parks and Wildlife Service.

The protected areas in the Eastern River Basin District are shown in Maps 5.1 and 5.2 and listed in Tables 5.1 – 5.8:

- 16 Special Protection Areas (SPAs);
- 33 candidate Special Areas of Conservation (cSACs);
- 99 Natural Heritage Areas (NHAs) (9 designated as NHAs and 90 Proposed NHAs);
- 4 Nutrient sensitive waters;
- 3 Salmonid rivers;
- 2 Shellfish areas.
- 21 Bathing waters; and
- 104 Protected drinking water areas.

These protected areas are granted special status and their protection is mandatory under European and/or Irish law; the legislation to protect them forms an integral part of this River Basin Management Plan. The EPA maintains a Register of Protected Areas and this register can be accessed at www.wfdireland.ie. It is the aim of NPWS to draw up conservation management plans for all areas designated for nature conservation, and these plans and their objectives run in parallel with the objectives of the Water Framework Directive. The National Biological Record Centre is also currently preparing species distribution maps. In considering the protected status the precise reason for the protected designation should be checked when assessing impacts.

The Eastern River Basin District is the only district in Ireland without any designated waters for *Margaritifera margaritifera* (freshwater pearl mussel) in Ireland. Fresh water pearl mussel will be protected by new regulations defining surface water objectives, which will require measures to be implemented with the aim of ensuring that these designated areas achieve favorable conservation status.

Further information on protected areas in the Eastern River Basin District is available from the website www.erbd.ie in the form of PowerPoint presentations for each local area or through the River Basin Management System.

Table 5.1: Special Protection Areas (SPAs); Water Dependent Habitats and Species

| Name | Conservation Status | Overall Protected Areas Status |
|---------------------------------|---------------------|--------------------------------|
| Baldoyle Bay | Unassigned | Unassigned |
| Boyne Estuary | High | At least good |
| Broad Lough | Moderate | Less than good |
| Broadmeadow/Swords Estuary | Moderate | Less than good |
| Howth Head Coast | Moderate | Less than good |
| Ireland's Eye | Moderate | Less than good |
| Kilcoole Marshes | Unassigned | Unassigned |
| Lambay Island | Moderate | Less than good |
| North Bull Island | Good | Less than good |
| Pollaphuca Reservoir | Unassigned | Unassigned |
| Rockabill | Unassigned | Unassigned |
| Rogerstown | Moderate | Less than good |
| Sandymount Strand/Tolka Estuary | Moderate | Less than good |
| Skerries Islands | Unassigned | Unassigned |
| Wicklow Head | Unassigned | Unassigned |
| Wicklow Mountains | Unassigned | Unassigned |

Note: The conservation status of these protected areas was provided through consultation with NPWS. In some cases, if the 'ecological' and 'chemical' status could not be assessed due to lack of data, a water body was given an 'unassigned' status, even where the conservation status was considered to be favourable. Water bodies containing areas designated for the protection of habitats and species (under the Habitats Directive and the Birds Directive) were considered to be at least than good status, if the status of a water within a water body was insufficient to allow the achievement of the conservation objectives.

Table 5.2: Special Areas of Conservation (SACs); Water Dependant Habitats

Note: all SACs are of "candidate" status

| Name | Conservation Status | Overall Protected Areas Status |
|--|---------------------|--------------------------------|
| Killyconny Bog (Cloghbally) | Unassigned | Unassigned |
| Baldoyle Bay | Unassigned | Unassigned |
| Howth Head | Unassigned | Unassigned |
| Lambay Island | Unassigned | Unassigned |
| Malahide Estuary | Moderate | Less than good |
| North Dublin Bay | Moderate | Less than good |
| Rogerstown Estuary | Moderate | Less than good |
| South Dublin Bay | Moderate | Less than good |
| Red Bog | Unassigned | Unassigned |
| Raheenmore Bog | Unassigned | Unassigned |
| Ballyman Glen | Unassigned | Unassigned |
| Bray Head | Unassigned | Unassigned |
| Carriggower Bog | Unassigned | Unassigned |
| Deputy's Pass Nature Reserve | Unassigned | Unassigned |
| Glen of the Downs | Unassigned | Unassigned |
| Knocksink Wood | Unassigned | Unassigned |
| Buckronev-Brittis Dunes and Fen | Unassigned | Unassigned |
| Vale of Clara (Rathdrum Wood) | Unassigned | Unassigned |
| Glenasmole Valley | Unassigned | Unassigned |
| Rye Water Valley / Carton | Unassigned | Unassigned |
| Kilpatrick Sandhills | Unassigned | Unassigned |
| Magherabeg Dunes | High | At least good |
| White Lough, Ben Lough and Lough Doo | Unassigned | Unassigned |
| Boyne Coast and Estuary | Unassigned | Unassigned |
| Lough Bane and Lough Glass | Unassigned | Unassigned |
| Lough Lene | Unassigned | Unassigned |
| Wicklow Mountains | Unassigned | Unassigned |
| Ireland's Eye | Unassigned | Unassigned |
| The Murrough Wetlands | High | At least good |
| Wicklow Reef | High | At least good |
| River Boyne and River Blackwater | Unassigned | Unassigned |
| Mouds Bog | Unassigned | Unassigned |
| Mount Hevey Bog | Unassigned | Unassigned |
| <p><i>Note: The conservation status of these protected areas was provided through consultation with NPWS. In some cases, if the 'ecological' and 'chemical' status could not be assessed due to lack of data, a water body was given an 'unassigned' status, even where the conservation status was considered to be favourable. Water bodies containing areas designated for the protection of habitats and species (under the Habitats Directive and the Birds Directive) were considered to be at less than good status, if the status of a water within a water body was insufficient to allow the achievement of the conservation objectives.</i></p> | | |

Table 5.3: Natural Heritage Areas (NHAs)

| Name | Type | Conservation Status | Name | Type | Conservation Status |
|---------------------------------------|------|---------------------|---------------------------------------|------|---------------------|
| Arklow Rock-Askintinny | pNHA | Proposed | King William's Glen | pNHA | Proposed |
| Arklow Sand Dunes | pNHA | Proposed | Knock Lake | pNHA | Proposed |
| Arklow Town Marsh | pNHA | Proposed | Knocksink Wood | pNHA | Proposed |
| Avoca River Valley | pNHA | Proposed | Lambay Island | pNHA | Proposed |
| Avondale | pNHA | Proposed | Laytown Dunes/Nanny Estuary | pNHA | Proposed |
| Baldoye Bay | pNHA | Proposed | Liffey At Osberstown | pNHA | Proposed |
| Ballina Bog | pNHA | Proposed | Liffey Bank Above Athgarvan | pNHA | Proposed |
| Ballinacor Wood | pNHA | Proposed | Liffey Valley | pNHA | Proposed |
| Ballinagee Wood | pNHA | Proposed | Liffey Valley Meander Belt | pNHA | Proposed |
| Ballybetagh Bog | pNHA | Proposed | Lough Ramor | pNHA | Proposed |
| Ballyman Glen | pNHA | Proposed | Lough Shesk | pNHA | Proposed |
| Ballynabarny Fen | pNHA | Proposed | Loughlinstown Woods | pNHA | Proposed |
| Balrath Woods | pNHA | Proposed | Loughshinny Coast | pNHA | Proposed |
| Black Castle Bog NHA | NHA | | Lugmore Glen | pNHA | Proposed |
| Bog Of The Ring | pNHA | Proposed | Magherabeg Dunes | pNHA | Proposed |
| Boooterstown Marsh | pNHA | Proposed | Malahide Estuary | pNHA | Proposed |
| Boyne Coast And Estuary | pNHA | Proposed | Milltownpass Bog NHA | NHA | |
| Boyne River Islands | pNHA | Proposed | Molerick Bog NHA | NHA | |
| Boyne Woods | pNHA | Proposed | Mouds Bog | pNHA | Proposed |
| Bray Head | pNHA | Proposed | Mount Hevey Bog | pNHA | Proposed |
| Buckroney-Brittas Dunes And Fen | pNHA | Proposed | Newtown Marshes | pNHA | Proposed |
| Carbury Bog NHA | NHA | | North Dublin Bay | pNHA | Proposed |
| Carriggower Bog | pNHA | Proposed | Portraine Shore | pNHA | Proposed |
| Crewbane Marsh | pNHA | Proposed | Poulaphouca Reservoir | pNHA | Proposed |
| Cromwell's Bush Fen | pNHA | Proposed | Powerscourt Waterfall | pNHA | Proposed |
| Dalkey Coastal Zone And Killiney Hill | pNHA | Proposed | Powerscourt Woodland | pNHA | Proposed |
| Dargle River Valley | pNHA | Proposed | Raheenmore Bog | pNHA | Proposed |
| Devil's Glen | pNHA | Proposed | Rathmoylan Esker | pNHA | Proposed |
| Dingle Glen | pNHA | Proposed | Red Bog | pNHA | Proposed |
| Dodder Valley | pNHA | Proposed | Rockabill Island | pNHA | Proposed |
| Donadea Wood | pNHA | Proposed | Rogerstown Estuary | pNHA | Proposed |
| Dowth Wetland | pNHA | Proposed | Rossnaree Riverbank | pNHA | Proposed |
| Duleek Commons | pNHA | Proposed | Royal Canal | pNHA | Proposed |
| Feltrim Hill | pNHA | Proposed | Rye Water Valley/Carlton | pNHA | Proposed |
| Fitzsimon's Wood | pNHA | Proposed | Santry Demesne | pNHA | Proposed |
| Girley Bog NHA | NHA | | Skerries Islands NHA | NHA | |
| Glen Of The Downs | pNHA | Proposed | Slade Of Saggart And Crooksling Glen | pNHA | Proposed |
| Glenasmole Valley | pNHA | Proposed | Slane Riverbank | pNHA | Proposed |
| Glencree Valley | pNHA | Proposed | Sluice River Marsh | pNHA | Proposed |
| Glenealy Woods | pNHA | Proposed | South Dublin Bay | pNHA | Proposed |
| Grand Canal | pNHA | Proposed | The Murrough | pNHA | Proposed |
| Great Sugar Loaf | pNHA | Proposed | Thomastown Bog | pNHA | Proposed |
| Hodgestown Bog NHA | NHA | | Trim | pNHA | Proposed |
| Howth Head | pNHA | Proposed | Vale Of Clara (Rathdrum Wood) | pNHA | Proposed |
| Ireland's Eye | pNHA | Proposed | Vartry Reservoir | pNHA | Proposed |
| Jamestown Bog NHA | NHA | | White Lough, Ben Loughs And Lough Doo | pNHA | Proposed |
| Killyconny Bog (Cloghbally) | pNHA | Proposed | Wicklow Head | pNHA | Proposed |
| Kilmacanoge Marsh | pNHA | Proposed | Wicklow Town Sites | pNHA | Proposed |
| Kilpatrick Sandhills | pNHA | Proposed | Wooddown Bog NHA | NHA | |
| Kilteel Wood | pNHA | Proposed | | | |

Note: The basic designation for wildlife is the Natural Heritage Area (NHA). In addition, there are proposed NHAs (pNHAs), which following proposal were published on a non-statutory basis in 1995, but have not since been statutorily proposed or designated; this process is managed by NPWS. Under the Wildlife Amendment Act (2000), NHAs are legally protected from damage from the date they are formally proposed for designation.

Table 5.4: Nutrient Sensitive Waters

| Name | Water Body Type | WMU | Overall Status | Conservation Status | Overall Protected Area Status |
|-----------------------------|-----------------------|-------------|----------------|---------------------|-------------------------------|
| River Boyne | River | Boyne Lower | Moderate | Unassigned | Unassigned |
| River Liffey | River | Liffey | Moderate | Unassigned | Unassigned |
| Broadmeadow Estuary (Inner) | Transitional/ Coastal | Donabate | | Moderate | Less than good |
| Liffey Estuary | Transitional/ Coastal | | | Good | Less than good |

Table 5.5: Salmonid Rivers

| Name | Overall Status |
|----------------|----------------|
| Dargle (River) | Moderate |
| Vartry (River) | Moderate |
| Boyne (River) | Moderate |

Table 5.6: Shellfish Waters

| Name | Protection Type |
|---------------------|------------------|
| Balbriggan/Skerries | Shellfish Waters |
| Malahide | Shellfish Waters |

Table 5.7: Bathing Waters

| Name | Local Authority | Level of Compliance (Bathing Season) | | | | | |
|---------------------|------------------------|--------------------------------------|---------------|---------------|---------------|---------------|---------------|
| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
| Clogga Beach | Wicklow | Mandatory | Guide | Guide | Guide | Guide | Guide |
| Brittas Bay south | Wicklow | Non Compliant | Guide | Guide | Guide | Guide | Guide |
| Brittas Bay north | Wicklow | Non Compliant | Guide | Guide | Guide | Guide | Guide |
| Silver Strand | Wicklow | Guide | Guide | Guide | Guide | Guide | Guide |
| Greystones | Wicklow | Guide | Guide | Guide | Guide | Guide | Mandatory |
| Bray | Wicklow | Guide | Non Compliant | Mandatory | Guide | Guide | Mandatory |
| Killiney | Dun Laoghaire Rathdown | Guide | Guide | Guide | Guide | Guide | Guide |
| Seapoint | Dun Laoghaire Rathdown | Guide | Guide | Guide | Guide | Guide | Guide |
| Merrion Strand | Dublin City | Mandatory | Guide | Mandatory | Non Compliant | Guide | Mandatory |
| Sandymount Strand | Dublin City | Mandatory | Mandatory | Mandatory | Mandatory | Guide | Guide |
| Dollymount Strand | Dublin City | Mandatory | Guide | Guide | Guide | Mandatory | Guide |
| Sutton | Fingal | Mandatory | Mandatory | Mandatory | Non Compliant | Mandatory | Mandatory |
| Portmarnock | Fingal | Mandatory | Guide | Guide | Mandatory | Guide | Mandatory |
| Malahide | Fingal | Mandatory | Guide | Guide | Guide | Non Compliant | Mandatory |
| Donabate | Fingal | Guide | Guide | Guide | Guide | Guide | Mandatory |
| Portrane | Fingal | Guide | Guide | Guide | Guide | Guide | Guide |
| Rush | Fingal | Mandatory | Guide | Mandatory | Guide | Guide | Guide |
| Loughshinny | Fingal | Guide | Guide | Mandatory | Mandatory | Mandatory | Mandatory |
| Skerries | Fingal | Mandatory | Mandatory | Non Compliant | Guide | Guide | Mandatory |
| Balbriggan | Fingal | Mandatory | Non Compliant | Non Compliant | Mandatory | Non Compliant | Non Compliant |
| The Cut, Lough Lene | Westmeath | Guide | Guide | Guide | Guide | Guide | Guide |
| Laytown/Bettystown | Meath | Mandatory | Mandatory | Mandatory | Guide | Guide | Mandatory |

Table 5.8: Protected Drinking Waters

| New Name | Water Body Type | WMU | Overall Status |
|------------------------------|-----------------|------------------|----------------|
| Loughlene Adeel Stream | River | Deel | Good |
| Blackwater Upper | River | Blackwater North | Poor |
| Mattock Mid | River | Mattock | Moderate |
| Knightsbrook Lower | River | Boyne Lower | Poor |
| Chapel Lake | River | Blackwater North | Good |
| Athboy Lower | River | Athboy | Poor |
| Nadreegeel Lough Upper | River | Blackwater North | Good |
| Blackwater Lower | River | Blackwater North | Moderate |
| Ankersland | River | Deel | Moderate |
| Avonbeg Lower | River | Avoca | Moderate |
| Ballycreen | River | Avoca | Moderate |
| Glenmacross Lower | River | Avoca | Poor |
| Ballinanty | River | Avoca | High |
| Shanganagh | River | Shanganagh | Good |
| Glencullen | River | Dargle | Good |
| Goldmine Lower | River | Avoca | High |
| Vartry | River | Vartry | Good |
| Avoca Upper | River | Avoca | Bad |
| Potter's | River | Potters | Good |
| Ballyward Upper | River | Liffey | Good |
| Dodder 2 | River | Dodder | Moderate |
| Woodend | River | Liffey | High |
| Liffey Lower | River | Liffey | Moderate |
| Boyne Lower | River | Baltray | Moderate |
| Acurry (Lough) | Lake | Blackwater North | Good |
| Drumkeery Lough | Lake | Deel | Poor |
| Bane (Lough) | Lake | Deel | Moderate |
| Lene (Lough) | Lake | Blackwater North | Moderate |
| Nadreegeal Loughs | Lake | Blackwater North | Moderate |
| Athboy | Groundwater | | Good |
| Trim | Groundwater | | Good |
| Kilcullen | Groundwater | | Good |
| Wicklow East | Groundwater | | Good |
| Dublin Urban | Groundwater | | Good |
| Bailieborough | Groundwater | | Good |
| Wicklow Central (Avoca Mine) | Groundwater | | Good |
| Dublin | Groundwater | | Poor |
| Wicklow South | Groundwater | | Good |
| Wilkinstown | Groundwater | | Good |
| Swords | Groundwater | | Good |
| Duleek | Groundwater | | Good |
| Lusk-West | Groundwater | | Good |
| Lusk-Bog of the Ring | Groundwater | | Poor |
| Moynalty | Groundwater | | Good |
| Bettystown | Groundwater | | Poor |
| Curragh S&G | Groundwater | | Good |
| Longwood | Groundwater | | Good |
| Moynalty | Groundwater | | Good |
| Realtage | Groundwater | | Good |
| Donore | Groundwater | | Good |
| Swords Urban | Groundwater | | Good |
| Lusk-East | Groundwater | | Poor |
| Lough Lene | Groundwater | | Poor |
| Drogheda | Groundwater | | Poor |
| Newbridge Urban | Groundwater | | Good |
| Naas | Groundwater | | Good |
| Hill of Tara | Groundwater | | Good |
| Drogheda Urban | Groundwater | | Poor |
| Navan Sth Urban | Groundwater | | Good |
| Dunshaughlin | Groundwater | | Good |
| Greystones Urban | Groundwater | | Good |
| Hynestown | Groundwater | | Good |
| Bray Urban | Groundwater | | Good |
| Naas Bedrock Sth Urban | Groundwater | | Good |
| Kilcoole S&G | Groundwater | | Good |
| Trim Urban | Groundwater | | Good |
| Enniskerry S&G | Groundwater | | Good |
| Balbriggan | Groundwater | | Good |
| Balbriggan Urban | Groundwater | | Good |

| New Name | Water Body Type | WMU | Overall Status |
|-----------------------------|-----------------|-----|----------------|
| Navan Orebody | Groundwater | | Good |
| Arklow_Urban | Groundwater | | Good |
| Balrothery | Groundwater | | Good |
| Kilrathmurry S&G | Groundwater | | Good |
| Old Kilcullen S&G | Groundwater | | Good |
| Gormanstown S&G | Groundwater | | Good |
| Blessington S&G | Groundwater | | Good |
| Ashbourne Urban Sth | Groundwater | | Good |
| Navan Tailings | Groundwater | | Good |
| Naas Bedrock Nth Urban | Groundwater | | Good |
| Ballymore Eustace S&G | Groundwater | | Good |
| Castlekeeran S&G | Groundwater | | Good |
| Ashford S&G | Groundwater | | Good |
| Ballany S&G | Groundwater | | Good |
| Rush Urban | Groundwater | | Good |
| Skerries Sth Urban | Groundwater | | Good |
| Ashbourne Urban Nth | Groundwater | | Good |
| Navan Nth Urban | Groundwater | | Good |
| Navan Orebody 2 | Groundwater | | Good |
| Skerries Nth Urban | Groundwater | | Good |
| Naas_CL | Groundwater | | Good |
| Swords_CL | Groundwater | | Good |
| Walkinstown_CL | Groundwater | | Good |
| Naas_SG Urban | Groundwater | | Good |
| Fassaroe_LF | Groundwater | | Good |
| Basketstown_LF | Groundwater | | Good |
| Tinnakilly_CL | Groundwater | | Good |
| Boyle_CL | Groundwater | | Poor |
| Aleckafin_CL | Groundwater | | Good |
| Drogheda_LF | Groundwater | | Poor |
| Rye Water Valley GWDTE | Groundwater | | Good |
| Mount Hevey Bog | Groundwater | | Good |
| Killyconny Bog (Cloghbally) | Groundwater | | Good |
| Raheenmore Bog | Groundwater | | Good |
| Newtown Lough | Groundwater | | Good |

Map of Protected Areas (No.1)



Map 5.1

Map of Protected Areas (No.2)



6 What are the Objectives?

As with all Plans, objectives need to be set to enable us to monitor progress and to determine success. The establishment of environmental objectives for each water body is the responsibility of the Local Authorities within the Eastern River Basin District.

This Plan sets out the objectives for our waters and proposes the actions that are needed to achieve these objectives while promoting sustainable use of our waters. The Eastern River Basin District has also produced an additional level of information, which is intended to provide detailed supporting information for this Plan. This is in electronic form and can be downloaded from the website www.erbd.ie.

The purpose of the Directive is to establish a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwaters which:

- a) prevents further deterioration and protects and enhances the status of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystems;
- b) promotes sustainable water use based on a long-term protection of available water resources;
- c) aims at enhanced protection and improvement of the aquatic environment, including through specific measures for the progressive reduction of discharges, emissions and losses of priority substances and the cessation or phasing-out of discharges, emissions and losses of the priority hazardous substances;
- d) ensures the progressive reduction of pollution of groundwater and prevents its further pollution, and
- e) contributes to mitigating the effects of floods and droughts.

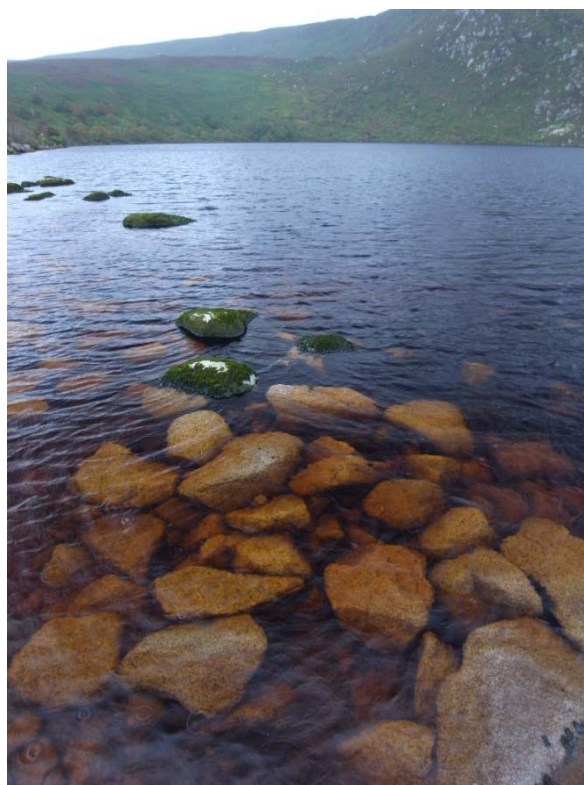
Waters must have sufficient quantity and be of satisfactory quality to protect the aquatic environment and beneficial uses. Many of our surface waters already have a healthy ecology and the first challenge is to take action to preserve these waters. Similarly, many of our groundwaters have satisfactory quality and sustainable levels and these too must be protected.

Both surface waters and groundwaters that support protected areas (e.g. bathing and shellfish waters, nutrient sensitive areas, protected habitats and species) must enable these protected areas to achieve their stricter status standards. These objectives are, in general, to be achieved by target date of 2015.

Water quality objectives have been established for each water body, taking account of how the waters should naturally be, whether they have a special status (such as Special Protection Areas) and whether they have been physically changed in some way which cannot realistically be reversed.

The objective of 'prevent deterioration' applies to all waters and it is, therefore, possible for a water body to have the dual objectives of 'prevent deterioration' and to 'improve to achieve at least good status'.

The definition of objectives is a key step in deciding on Programmes of Measures for each water body and developing the River Basin Management Plan. Interim classifications (or status) for all waters developed by the EPA in 2008 and updated in July 2009 provide the baseline for setting of the environmental objectives for each water body.



6.1 Surface Waters

For high status water bodies there is a clear objective of maintaining their status and special measures have been developed by the EPA to achieve this. In the Eastern River Basin District, 13 river water bodies (out of 365), 4 of our 26 lakes and 3 of our coastal water bodies are of high status.

Waters of good status have an objective of non-deterioration, although some will improve to high status. Some 19 of our lakes and 143 of our rivers currently achieve good status.

The majority of waters are of less than good status and a minimum objective of achieving good status has been set for many of these water bodies. In tandem with this objective is the objective of no deterioration which applies to all waters. Maps 6.1, 6.2 and 6.3 show the water bodies that will be restored to good status and those that must be protected from deterioration. It is anticipated that the measures selected for each water body will improve their status, but it is recognised that this process could be lengthy, both in terms of implementing the measures in all waters throughout the District (this is addressed in more detail in Section 10) and recovery rates. This first Plan will deliver widespread improvements by 2015 by addressing the major pressures affecting our waters. Subsequent Plans will be more focused and will be based on more data and a better understanding of the benefits of the various measures; these later planning cycles should include the improvement of more waters to high status.

6.2 Groundwater

Groundwaters are classified as either good or poor status. As described in Section 3.5, only 10% of the groundwater bodies in the ERBD are classified as poor status. Our objectives, as shown in Map 6.3, are therefore to:

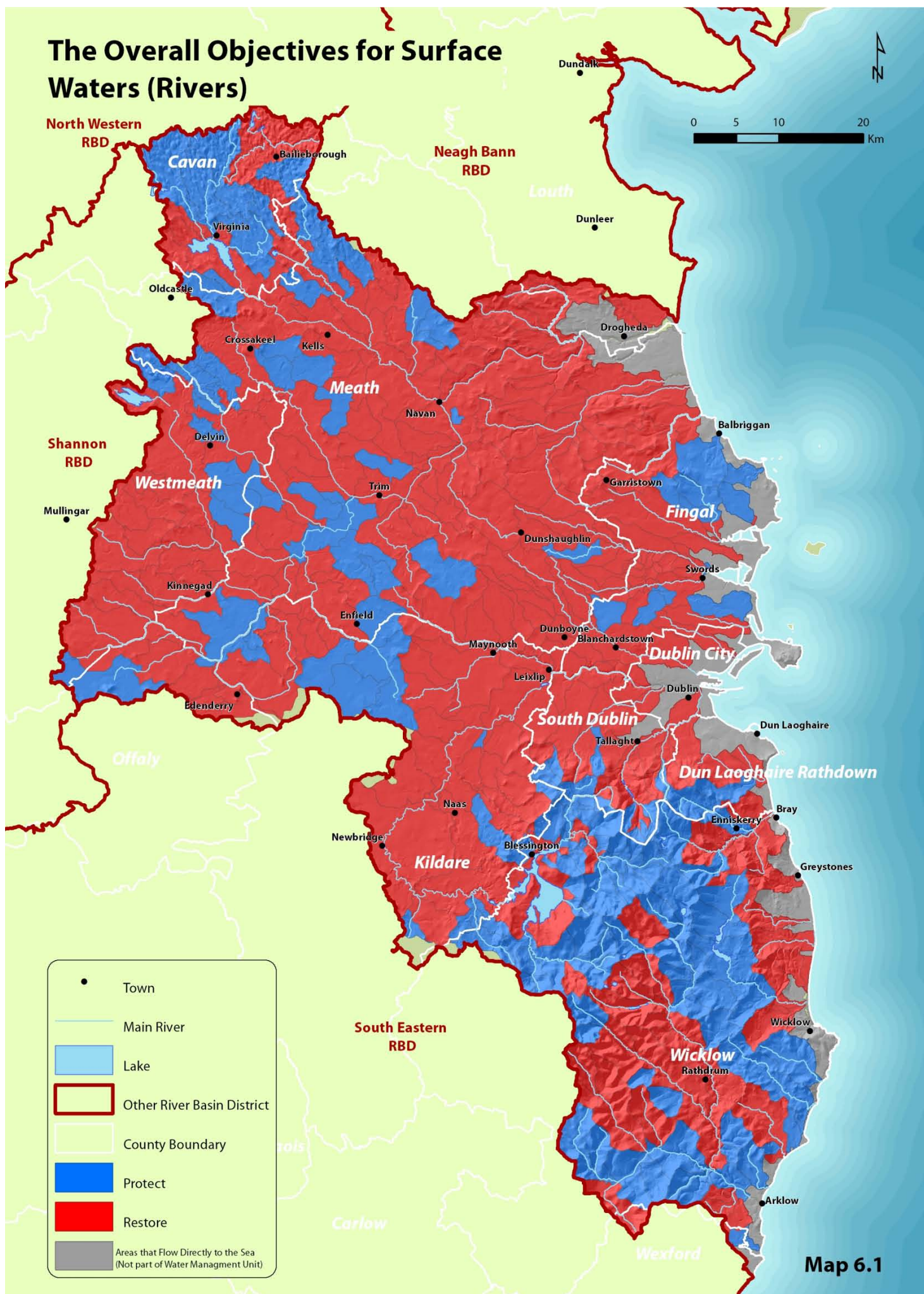
- Achieve good status in those groundwater bodies which are presently classified as being at poor status; and
- Protect those groundwater bodies that are currently at good status (i.e. maintain their good status).

The measures that have been selected to achieve this are highlighted in Section 9, but two groundwater bodies warrant clarification:

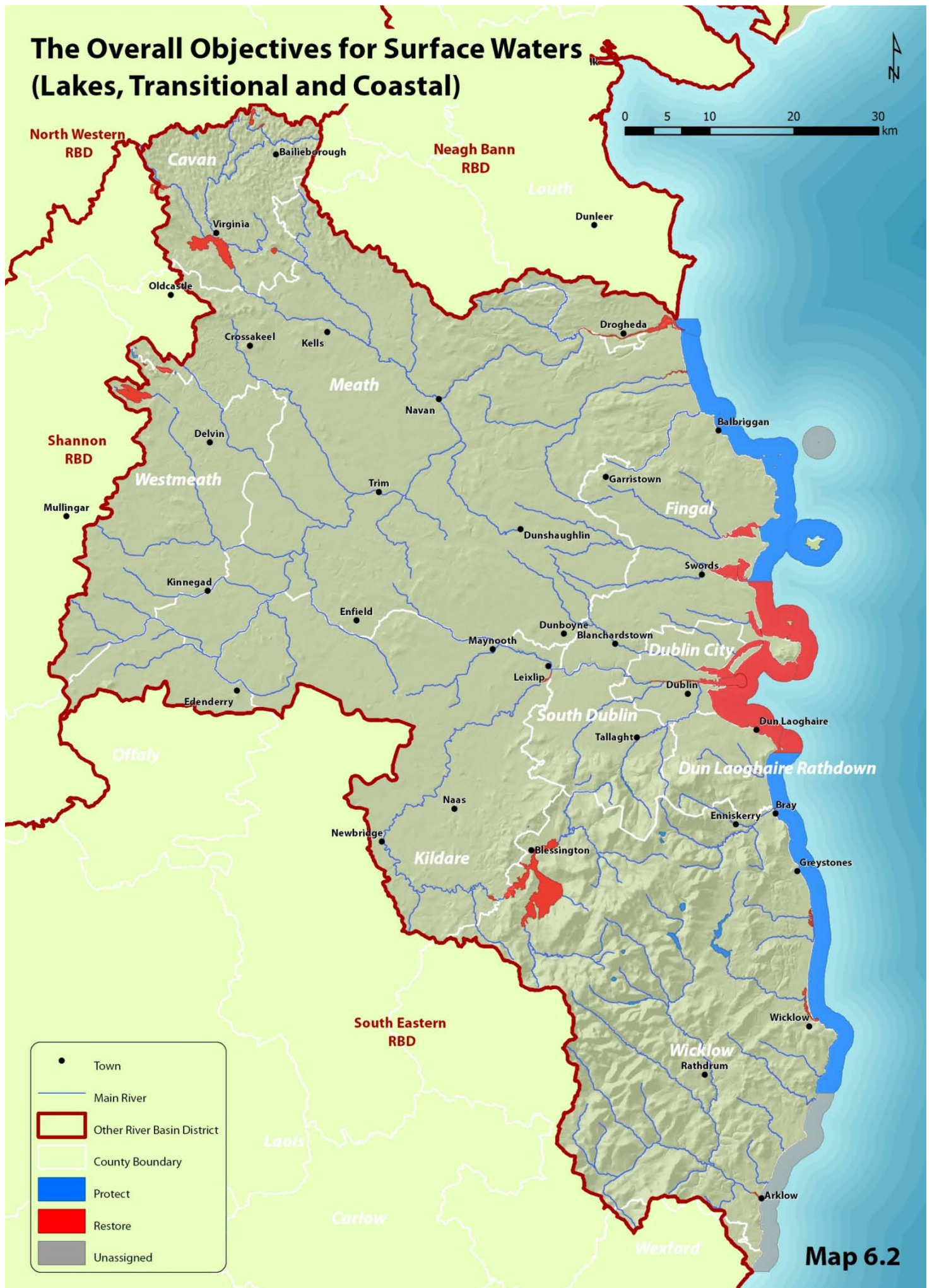
The **Lusk Bog of the Ring** has been designated as being of good chemical status but poor quantitative status. Since the start of 2009 abstraction rates at the Bog of the Ring water treatment plant have averaged approximately 3.5 megalitres/day. Recent construction of a new pipeline to Jordanstown reservoir has allowed a reduction in abstraction from the aquifer to 2.7 megalitres/day. This is considerably lower than the 80% of available recharge required by the EPA. Abstraction rates in the future will be limited by Fingal County Council to 3.15 megalitres/day. Water levels in wells surrounding the plant will continue to be monitored and are expected to show stable or rising groundwater levels in the near future. The intent is to restore the aquifer to good quantitative status before the next assessment by the EPA in 2012; however, it is recognised that groundwater recovery can be slow and so in this Plan a precautionary target date of 2021 for full quantitative recovery has been set in line with EPA recommendations. If recovery does occur by 2021 then this will be rectified in the next planning cycle.

The **Wicklow Central (Avoca)** groundwater body represents a special case. A recently completed feasibility study of remediation options (CDM, 2008) suggest that it will be technically very difficult and costly to remediate the mine waste within the timeframes stipulated in the Directive for achieving good status. Treating the point source discharges to the river from the mine has been proven to be viable, but dealing with the pollutants moving through the natural fissures in the rocks and through the spoil is very much more difficult; in addition, health and safety issues at the disused mine site will take priority when defining the course of action to be taken. There is insufficient data available to confirm the viability of restoring this groundwater water body and so a detailed investigative study has been recommended (Section 9) to establish the technical viability of restoration and the costs and benefits of such actions. For the purposes of this Plan, the Avoca groundwater body has been identified as potentially requiring a Less Stringent Objective, but this must be confirmed by a full cost benefit analysis during the first planning cycle.

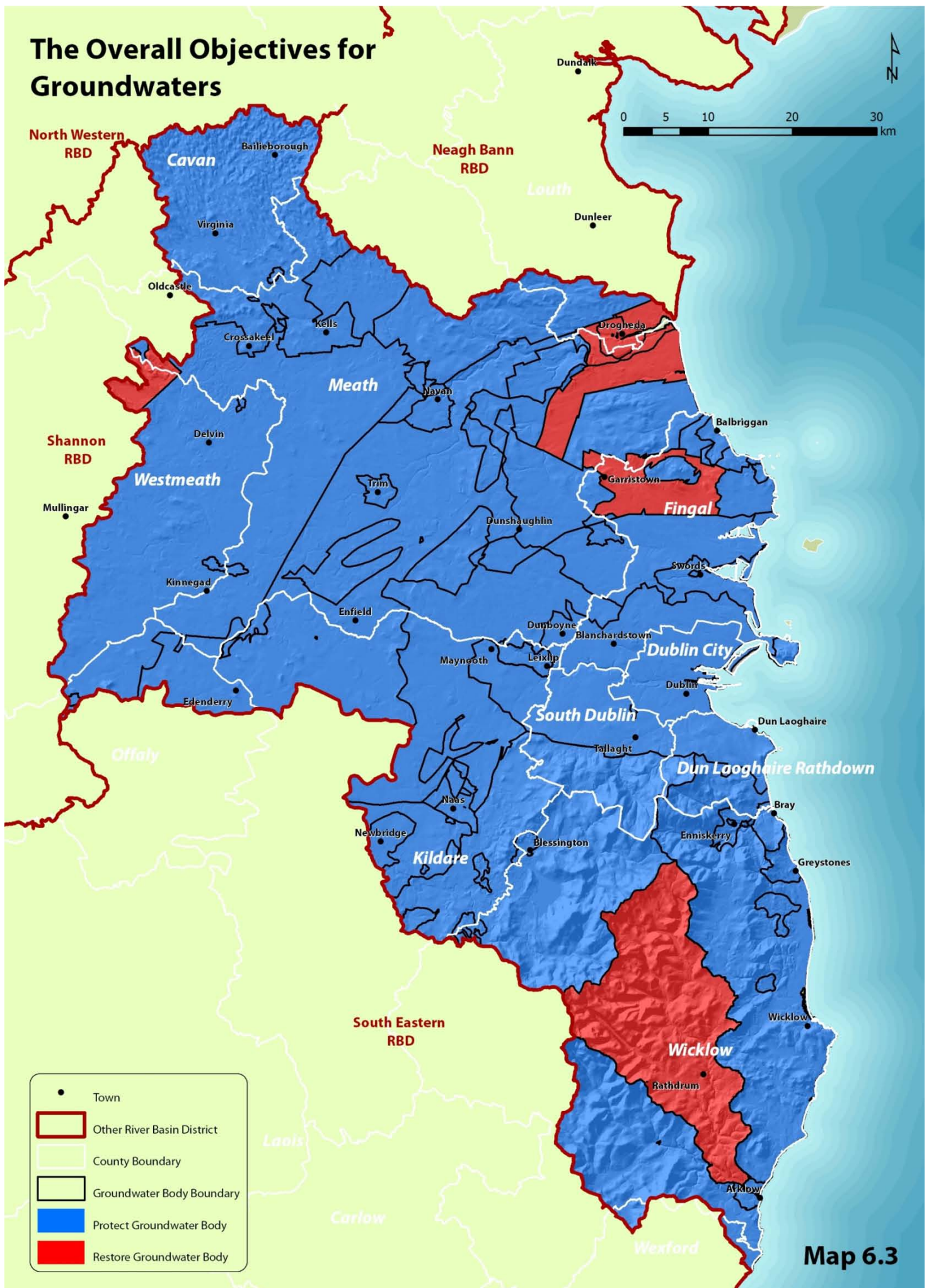
The Overall Objectives for Surface Waters (Rivers)



The Overall Objectives for Surface Waters (Lakes, Transitional and Coastal)



The Overall Objectives for Groundwaters





7 Types of Measures

The improvements to our waters required by the Directive will require specific actions (or measures). Measures are our response to restore waters where there are existing problems and to protect healthy waters from threat. The collection of necessary actions required for each water body is termed the Programme of Measures and these are to be implemented in a coordinated way in each catchment to provide comprehensive protection.

There are two types of measures specified in the Directive, basic and supplementary. However, in the ERBD we have also identified potential new legislation and various types of guidance and guidelines. The following groups of measures are described in the following sections:

- Basic measures;
- Measures for high status waters and protected areas;
- Measures for heavily modified and artificial water bodies;
- Supplementary measures; and
- Planned and potential measures.

7.1 Basic Measures

Basic measures are those required by various pieces of existing legislation, i.e. required by law and are not optional in any water body. These are defined in the Directive. There are eleven key European Directives which must be implemented by all Member States and 11 other basic measures to be addressed. We have also identified nine other relevant European Directives. The European Directives with their equivalent Irish legislation are listed in the Tables 7.1, 7.2, 7.3 and 7.4.

Table 7.1: Water Framework Directive

| EU Directive | Irish Legislation | Purpose | Responsible Organisations |
|--|---|---------------------------|---|
| Water Framework Directive (2000/60/EC) | S.I. 722 European Communities (Water Policy) Regulations 2003 | Water resource management | DEHLG, Local Authorities, Other Public Bodies |

Table 7.2: 11 Key Basic Directives

| EU Directive | Irish Legislation | Purpose | Responsible Organisations |
|---|---|---|--|
| The Bathing Water Directive (2006/7/EC) (76/160/EEC repealed) | S.I. 79 of 2008 Bathing Water Quality Regulations, 2008 | Bathing waters for human health | Local Authorities, EPA, DEHLG |
| The Birds Directive (79/409/EEC) | S.I. 291 of 1985 EC (Conservation of Wild Birds) and amendments | Bird and habitat conservation | DEHLG, NPWS, Local Authorities, An Bord Pleanála, All Public Authorities |
| The Drinking Water Directive (98/83/EC) (80/778/EEC repealed 25/12/2003) | S.I. 278 of 2007 EC (Drinking Water Regulations) (No 2) | Quality of drinking water for human health | EPA, HSE, Local Authorities, DEHLG |
| The Major Accidents (Seveso) Directive (96/82/EC) extended by Directive 2003/105/EC | S.I. 74 of 2006 EC (Control of Major Accident Hazards Involving Dangerous Substances) Regulations, 2006 | Major hazards and risks | Manufacturers, Local Authorities, DETE |
| The Environmental Impact Assessment Directive (85/337/EEC) as amended by Directive 97/11/EC | S.I. 349 of 1989 EC (Environmental Impact Assessment Regulations) 1989 and amendments | Environmental consequences of individual projects | EPA, Local Authorities |
| The Sewage Sludge Directive (86/278/EEC) | S.I. 148 of 1998 Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 – 2001 | Human, animal, soil and vegetation protection | Local Authorities, DEHLG |
| The Urban Wastewater Treatment Directive (91/271/EEC) | S.I. 254 of 2001 Urban Waste Water Treatment Regulations, 2001 and 2004 | Collection, treatment and discharge of domestic and certain industrial waste waters | Local Authorities |

| EU Directive | Irish Legislation | Purpose | Responsible Organisations |
|--|--|---|--|
| The Plant Protection Products Directive (91/414/EEC) | S.I. 83 of 2003 EC (Authorisation, Placing on the market, use and control of Plant Protection Products) Regulations, 2003 and amendments S.I. 224 of 2005 and S.I. 381 of 2006. S.I. 624 of 2001 EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001. S.I. 320 of 1981 EC (Prohibition of certain active substances in plant protection products). S.I. 565 of 2008 EC (Pesticides Residues) Regulations 2008 | Protection of human and animal health | Pesticide Control Service, DEHLG, Relevant persons |
| The Nitrates Directive (91/676/EEC) | S.I. 378 of 2006 EC Good Agricultural Practice for Protection of Waters Regulations, 2009 | Protect surface and groundwater from agricultural pollution | DEHLG, DAFF, EPA, Local Authorities |
| The Habitats Directive (92/43/EEC) | S.I. 94 of 1997 EC (Natural Habitats) Regulations, 1997 – 2005 | Habitat conservation and species protection | DEHLG, NPWS, Local Authorities, An Bord Pleanála, All public authorities |
| The Integrated Pollution Prevention Control Directive (96/61/EC) | S.I. 85 of 1994 EPA (Licensing) Regulations, 1994 & 2004 | Minimise pollution from industrial sources | EPA, DEHLG, Local Authorities |

Bathing Waters

The purpose of these regulations (S.I. 79 of 2008 Bathing Water Quality Regulations) is to preserve, protect and improve the quality of bathing waters, thereby protecting human health. The new actions require Local Authorities to undertake comprehensive monitoring programmes, identify pollution sources and draw up management plans (with active involvement from users of the sites) to minimise risks to bathers. If a site has water quality problems, preventative and remedial actions must be taken. Local Authorities must also make information about quality and management readily available to the public. Bathing waters are part of the Water Framework Directive's register of protected areas.



Birds and Habitats



Both of these directives have similar conservation aims: protecting natural habitats, fauna and flora and creating a European network of protected sites including water-dependent species and habitats. The resulting Special Areas of Conservation and Special Protection Areas designated by Member States make up the European Natura 2000 network.

Irish natural habitats laws were introduced in 1997 and updated in 1998 and 2005 to transpose both nature conservation directives (S.I. 291 of 1985 EC (Conservation of Wild Birds and S.I. 94 of 1997 EC (Natural Habitats) Regulations, 1997 – 2005). Key provisions include the Minister of the Environment, Heritage and Local Government's powers to control damaging activities within and outside designated sites, and powers devolved to other ministers and agencies requiring them to incorporate Natura 2000 site protection into all their plans and programmes by carrying out appropriate assessment in accordance with Article 6 of the Habitats Directive. Conservation measures for Natura 2000 sites are to be established in management plans. Natura 2000 sites are also part of the Water Framework Directive's register of protected areas.

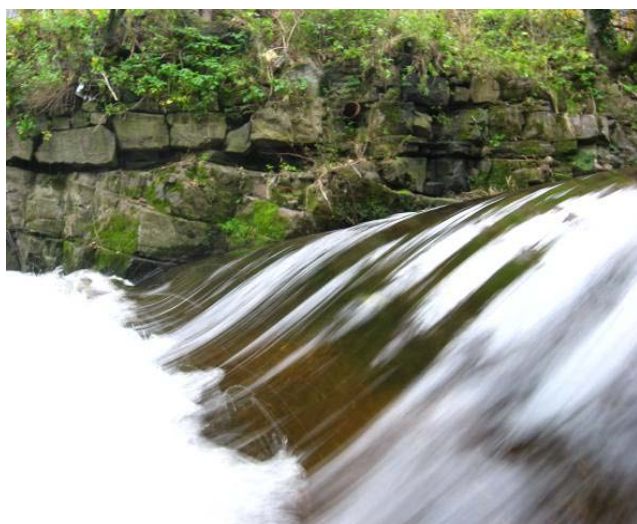
Drinking Waters

The objective of these regulations (S.I. 278 of 2007 EC (Drinking Water Regulations)) is to protect the health of consumers by ensuring that the quality of water intended for human consumption is wholesome and clean. Local Authorities are responsible for Ireland's water service provision, with major capital schemes delivered under the Water Services Investment Programme and smaller schemes falling under the Rural Water Programme.

The Department of the Environment, Heritage and Local Government sets government policy, administers major schemes and ensures that funding is available. In 2007, the Water Services Act introduced a new policy requiring Water Services Strategic Plans to support proper planning and sustainable development, with clear links to both development plans and river basin plans. Technical guidance and training on the preparation of Water Service Strategic Plans have been developed under the supervision of the Environmental Services National Training Group. Local Authorities must prepare Water Services Strategic Plans taking full account of objectives established for waters in river basin plans. In addition, the Water Framework Directive requires new measures to be taken to protect drinking water sources, which are also part of the Directive's register of protected areas.

Major Accidents

National regulations (S.I. 74 of 2006 EC (Control of Major Accident Hazards Involving Dangerous Substances) Regulations), concern the control of major hazards involving dangerous substances. The Health and Safety Authority must organise a system of inspections or other suitable control measures for relevant establishments. Internal and external emergency plans prepared by operators and the local competent authority, addressing the risks posed by relevant installations, must take full account of objectives established for nearby waters in river basin plans.



Environmental Impact Assessment

These regulations (S.I. 349 of 1989 EC (Environmental Impact Assessment Regulations)) ensure that environmental consequences of individual projects are identified and systematically assessed, with any adverse effects being avoided, reduced or offset before authorisation can be given under planning law. Review of regional planning guidelines, county development plans and local area land-use and spatial plans should take account of objectives established for waters in river basin management plans; thus ensuring that new projects will consider Water Framework Directive objectives. Regulations introduced in 2004 to transpose the Strategic Environmental Assessment Directive also provide for further linkage between river basin management and land-use planning at a strategic level.

Sewage Sludge

National law, made in 1991 through Waste Management Regulations (amended in 1998 and 2001), sets standards and practices to be followed by Local Authorities for using sewage sludge in agriculture; encouraging use whilst regulating activities to prevent harmful effects on soil, vegetation, animals and humans. To this end, all Local Authorities have prepared sludge management plans in line with Ireland's Code of Good Practice for the Use of Biosolids in Agriculture; they are also required to maintain a register of sludge/biosolids movement and advance notification of spreading is required in accordance with a nutrient management plan. Local Authorities will assess whether their sludge management plans need revision or review with regard to the objectives set in river basin management plans.

Urban Wastewater Treatment

S.I. 254 of 2001 Urban Waste Water Treatment Regulations deal with the collection, treatment and discharge of urban wastewater and wastewater from certain industrial sectors. As with water supply, Local Authorities are responsible for sewerage service delivery under Water Services Investment and Rural Water Programmes and must prepare Water Services Strategic Plans with the river basin management plans in mind. Local Authorities must undertake monitoring at treatment plants and make provision for pre-treatment requirements for industrial wastewater entering collection systems and treatment plants. Proposed Environmental Objectives Regulations, due to be made in 2009, will provide a basis for deciding on the appropriate treatment required in order to meet objectives, enabling necessary infrastructure and operational improvements to be prioritised in line with Water Framework Directive objectives.

Plant Protection Products

These regulations, introduced in 1981 and amended in 2001 and 2003, concern authorisation of plant protection products for marketing or use and aim to ensure no harmful human and animal health effects and no unacceptable environmental impact. Pesticides Control Service (Department of Agriculture, Fisheries and Food) operates the authorisation system. Only products which can be used safely are authorised and this list is kept under review.

The EU Commission is developing a strategy for sustainable use of pesticides focusing on the use-phase in the life-cycle of pesticides and introducing specific measures to protect waters from the impact of pesticides. The 2006 draft Sustainable Use of Pesticides Directive proposes measures to establish pollution reduction programmes, which must include measures such as buffer strips or the use of particular technical equipment to reduce spray drift. There are also proposed measures to significantly reduce or ban the use of pesticides in safeguard zones used to protect drinking water sources and in sensitive areas (such as Natura 2000 sites) based on relevant risk assessments. The National Action Plan for Sustainable Use of Pesticides is discussed in more detail in Section 7.7.

Nitrates

These regulations, S.I. 378 of 2006 EC Good Agricultural Practice for Protection of Waters Regulations, amended in 2009, protect waters against pollution caused by nitrates (and also phosphorus) from agricultural sources. Ireland set up a National Action Programme covering the whole national territory. The Minister for the Environment, Heritage and Local Government publishes action programmes following consultation with the Minister Agriculture, Fisheries and Food and other interested parties. The Good Agricultural Practice for Protection of Waters Regulations aim to reduce water pollution caused or induced by nitrates and phosphates from agricultural sources and to prevent further such pollution. Compliance is primarily a matter for individual farmers. The effectiveness of implementation is monitored by surveys of water quality and agricultural practices, including studies of agricultural mini-catchments.

The Nitrate Regulations deal with three main areas of farmyard management:

- Keeping soiled water to a minimum;
- Collecting effluents, organic fertilisers, etc.; and
- Storing effluents and organic fertilisers properly.

All storage facilities for organic fertilisers must now comply with construction specifications from the Department of Agriculture and Food. They must be designed and constructed to prevent runoff and seepage directly or indirectly, into groundwater or surface water. The Nitrates Regulations divide the country into three zones with varying required storage capacity for organic fertiliser.



Storage facilities are required for:

- livestock manure;
- dairy washings;
- soiled water;
- effluents from dungsteads;
- effluents from farmyard manure pits; and
- effluents from silage pits.

The Department of Agriculture, Fisheries and Food, Local Authorities and the Environmental Protection Agency have responsibilities for monitoring and identifying waters which are polluted or likely to become polluted and for developing and implementing action programmes to reduce and prevent such pollution. The EPA has ongoing water quality monitoring programmes. Recently amended regulations strengthen the enforcement role of Local Authorities.

Technical guidance and training on agricultural pollution inspections are currently being developed under the supervision of the Environmental Services National Training Group to ensure consistent and effective enforcement nationwide. Teagasc commenced mini-catchment work in 2007 to review the effectiveness of the current National Action Programme. The outputs from the monitoring of water quality, farm practices and representative mini-catchments will be critical to demonstrating the effectiveness of the action programme and will determine the

modifications (if any) needed to the programme during its review process. The current programme will be reviewed in 2009 and, where appropriate, adjustments will be introduced in the second 4 year action programme starting in 2010.

Integrated Pollution Prevention Control

This Directive aims to minimise pollution from various industrial sources (including intensive agricultural enterprises), in order to ensure a high level of protection of the environment. It has been implemented in national law through the Environmental Protection Agency Acts and the associated licensing regulations. Operators of certain industrial installations are required to obtain an authorisation (environmental permit) from the EPA. The permit conditions include emission limit values; soil, water and air protection measures; and waste management measures; and must be based on Best Available Techniques. The establishment of environmental objectives in river basin management plans will require permits to take full account of these objectives.

The 11 Basic Directives have a direct impact on water protection; the areas in which they contribute to addressing our water issues are shown in Table 7.3.

Table 7.3: Roles of the 11 Basic Directives

| Basic Measure | Wastewater, Industrial & Other Point Sources | Agriculture | Unsewered Properties | Forestry | Physical Modifications | Dangerous Substances | Abstractions | Landfills, Quarries & Mines |
|---|--|-------------|----------------------|----------|------------------------|----------------------|--------------|-----------------------------|
| Bathing Waters | ✓ | ✓ | ✓ | ✓ | | | | ✓ |
| Birds | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | |
| Habitats | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | |
| Drinking Waters | ✓ | | | | | | ✓ | ✓ |
| Major Accidents | ✓ | | | | | ✓ | | |
| Environmental Impact Assessment | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| Sewage Sludge | | ✓ | | | | | | |
| Urban Wastewater Treatment | ✓ | | | | | | | |
| Plant Protection Products | | ✓ | | ✓ | | ✓ | | |
| Nitrates | | ✓ | | | | | | |
| Integrated Pollution Prevention Control | ✓ | ✓ | | | | ✓ | | ✓ |

The Directive lists eleven other relevant Directives which also benefit the water environment or its users; these are shown in Table 7.4.

Table 7.4: Other Relevant Directives

| EU Directive | Irish Legislation | Purpose | Responsible Organisations |
|--|---|---|---|
| The Groundwater Directive (80/68/EEC) (To be revoked 22/12/2013) | S.I. 684 of 2007 Waste Water Discharge (Authorisation) Regulations, 2007. S.I. 41 of 1999 Protection of Groundwater Regulations, 1999 (to be revoked 22/12/2013) | Protecting groundwater from discharges and unsuitable artificial recharge | DEHLG, EPA, Local Authorities |
| The Dangerous Substances Directive (2006/11/EC) (76/464/EEC Repealed) and Daughter Directives | S.I. 684 of 2007 Waste Water Discharge (Authorisation) Regulations, 2007. Water Services Act 2007. S.I. 12 of 2001 Water Quality Dangerous Substances Regulations, 2001. Local Government (Water Pollution) Act, 1977 and amendments (Section 4 and 16). | Human and ecological health | Health & Safety Authority, Operators, EPA, DEHLG, Local Authorities |
| Surface Water Abstraction Directive (75/440/EEC) | S.I. 294 of 1989 Quality of Surface Water intended for the Abstraction of Drinking Water | Human health | DEHLG, Local Authorities |
| The Shellfish Water Directive (79/923/EEC) | S.I. 268 of 2006 The Quality of Shellfish Waters Regulation Regulations, 1998 | Human health | NPWS, DEHLG, Local Authorities |
| Strategic Environmental Assessment Directive (2001/42/EC) | Planning and Development Regulations 2001 - 2007 (S.I. 436 of 2004) | Environmental consequences of plans and programmes | EPA, Local Authorities |
| EU Directive on port reception facilities for ship-generated waste and cargo residues (2000/59/EC) | S.I. 117 of 2003 EC (Port Reception Facilities for Ship Generated Waste and Cargo Residues) Regulations, 2003 | Environmental protection | Port Authorities, DETE |
| Dangerous Substances | EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC) | Human and ecological health | Health & Safety Authority, Operators, EPA, DEHLG, Local Authorities |

| EU Directive | Irish Legislation | Purpose | Responsible Organisations |
|--|--|--|---------------------------|
| The Floods (Directive 2007/60/EC) | Required to be transposed into Irish law before 26 November 2009 | Assessment and Management of Flood Risks | OPW |
| Directive on the Protection of groundwater against pollution 2006/118/EC | Required to be transposed into Irish Law in 2009 | Protection of Groundwater | EPA, DEHLG |

Other Basic Measures

Whilst the European Directives listed above can be quite prescriptive in how they must be implemented, the 11 Other Basic Measures listed in the WFD and presented below can be implemented by the Member States individually. In Ireland several of these measures are already addressed through existing legislation. Some of the existing legislation may require amendment to incorporate the measures below or in some cases new legislation must be implemented.

- Cost Recovery for water use (DEHLG, Local Authorities);
- Measures to promote efficient and sustainable water use (DEHLG, Local Authorities, owners/occupiers);
- Protection of drinking water sources (DEHLG, EPA);
- Control of abstraction and impoundment (DEHLG, Local Authorities, ESB, relevant persons);
- Authorisation of discharges to groundwater (DEHLG, EPA);
- Control of point source discharges (Local Authorities, EPA, DETE, DCENR, Inland Fisheries Ireland, NPWS, relevant persons);
- Control of diffuse point discharges (Local Authorities, EPA, DETE, DCENR, Inland Fisheries Ireland, NPWS, relevant persons);
- Control of priority substances (Health & Safety Authority, Operators, EPA, DEHLG, Local Authorities);
- Controls on physical modifications of surface waters (DEHLG, Local Authorities, Port Authorities);
- Controls on other activities impacting on water status (relevant organisations and individuals); and
- Prevention or reduction of the impact of accidental pollution incidents (Local Authorities, An Garda Síochána, HSE, DEHLG, Department of Health and Children, Department of Justice, Equality and Law Reform).

In addition to the basic measures (existing legislation) listed above, the Irish government is scheduled to develop new legislation addressing several issues, including implementing some of the 11 Other Basic Measures. When this new legislation is enacted, it will be included in the actions proposed for the Eastern River Basin District.

The implementation of existing and new basic measures will have a major beneficial impact on waters in the Eastern River Basin District. All relevant EU Directives have been or are being transposed to Irish law in recent years and they are being progressively implemented.

7.2 Measures for High Status and Protected Areas

In addition to the basic measures, the Western River Basin District Project developed (on behalf of the EPA) measures specifically to protect high status and protected areas (Table 7.5). As with the basic measures, these will be mandatory for all such waters.

Table 7.5: National measures for high status waters and protected areas developed on behalf of the EPA (courtesy of the EPA/Western River Basin District Project)

| Action | Objective of measure | Responsible Agency | Type |
|---|----------------------|-------------------------------------|------------|
| Continued monitoring and survey by NPWS to confirm conservation status. | Protect/Restore | NPWS | Monitoring |
| Clarification of location of the features at unfavourable conservation status. | Restore | NPWS | Monitoring |
| Implementation of land management measures within protected areas. | Restore | NPWS | Management |
| Notification of appropriate agencies if water status issues are found to arise. | Restore | NPWS | Management |
| Update National Abstractions Register. | Protect | Local Authorities | Data |
| Identify alternative solutions where existing abstractions are implicated in causing unfavourable conservation status. | Restore | Local Authorities/Private | Management |
| Use existing analyses of risks and pressures in relevant catchments to identify the suite of WFD Measures that will contribute to resolving unfavourable conservation status for individual SACs. Include examination of ortho-photography in the review. LA Biodiversity Officers should be involved. Consult with NPWS. | Restore | RBM Planners/Local Authorities/NPWS | Management |

| Action | Objective of measure | Responsible Agency | Type |
|--|----------------------|-------------------------------------|------------|
| Consult with NPWS on identifying any additional risks and sensitivities, and any additional Measures relevant to individual sites/features at unfavourable conservation status, including investigative/operational monitoring needs. | Restore | RBM Planners/Local Authorities/NPWS | Management |
| Document plans specific to each SAC unfavourable conservation status issue, (with reference to Sections 4 and 5 of the guidance, submit to and implement in consultation with NPWS. | Restore | RBM Planners/Local Authorities/NPWS | Management |
| GIS mapping of the currently known extent of Freshwater Pearl Mussel populations onto the EPA river sections, including any distribution updates available from the rapid assessment survey during 2008, with annual updates in 2009 and 2010 with any additional distribution data. | Protect | NPWS | Data |
| Notification and distribution by NPWS of the FPM database to all relevant Local Authorities and other agencies including the EPA, Forest Service, Coillte, COFORD, Inland Fisheries Ireland. | Protect | NPWS | Management |
| Notification by NPWS of all Freshwater Pearl Mussel monitoring transect locations to other monitoring agencies, to avoid any accidental damage by them. | Protect | NPWS | Management |
| Review water status, risks and pressures in catchments associated with Freshwater Pearl Mussel populations, in order to assist NPWS in identifying the more readily recoverable populations, and in identifying potential translocation rivers for <i>M. durrovensis</i> . | Protect/Restore | RBM Planners | Management |
| On-going identification by NPWS of Freshwater Pearl Mussel populations for which there is evidence that existing pressures are such that populations may be recoverable, with a view to applying appropriate conservation measures to them. | Protect/Restore | NPWS | Monitoring |
| Investigative monitoring of river water quality parameters in association with NPWS rapid assessment monitoring. | Protect/Restore | EPA/Local Authorities | Monitoring |
| Review controls on use and disposal of pesticides including sheep-dip. | Protect/Restore | DAFF | Management |
| Assessment of known populations of <i>Vertigo</i> species by NPWS is on-going; it is recommended that assessments are updated annually to 2010 to inform Programmes of Measures for these species. | Protect/Restore | NPWS | Monitoring |
| Locational data for <i>Vertigo</i> species in GIS should be made available by NPWS to the relevant implementing agencies. | Protect/Restore | NPWS | Data |
| Use guidance on Article 6 assessment for Plans and Projects (Section 6 of Guidance Document). | Protect | LA/Private | Management |
| Use sensitivities of water dependent habitats and species to water quality and hydrological pressures as set out in Sections 3 and 5 to guide decision making. | Protect | LA/Private | Management |
| Consult with NPWS. | Protect | All | Management |
| Develop a Code of Good Practice for construction activity in and adjoining watercourses. | Protect | ERFB | Management |
| Update the Register of Protected Areas in respect of SACs designated under the Habitats Directive for Annex I listed water dependent habitats and Annex II species. (SAC Water Dependency database field WD H S). | Protect | EPA | Data |
| The SAC Water Dependency database must be included in the EPA ENVision Online Mapviewer WFD protected areas. | Protect | EPA | Data |
| NPWS to maintain and update the SAC Water Dependency database and notify updates annually. | Protect | NPWS | Data |
| Update Register of Protected Areas and EPA ENVision Online Mapviewer in respect of SPAs; additional sites have been designated since 2005. | Protect | EPA | Data |
| Clarify which SPAs are designated for water dependent bird species. | Protect | NPWS | Data |
| NPWS habitat and species databases should include fields cross-referencing individual habitat features and species distribution to EPA water body codes for river sections, lakes, transitional waters, coastal waters, and ground waters. | Protect/Restore | NPWS | Data |

| Action | Objective of measure | Responsible Agency | Type |
|--|----------------------|--------------------|------------|
| EPA databases on water body status should include fields cross-referencing individual features to SAC Site Code, SPA Site Code and NPWS Site Name, where the features occur within the boundaries of an SAC or SPA. Fields should also be included to cross-reference lakes to Habitats Directive Annex I listed lake habitats and turloughs, and updated as more habitat information becomes available from NPWS. | Protect/Restore | EPA | Data |
| The National Abstractions Register should include fields cross-referencing abstractions to the Site Code and Site Name of SACs and SPAs they are located in. | Protect/Restore | EPA | Data |
| It is recommended that a central Register of relevant databases is established, to include reference to all Water Framework Directive – relevant databases developed and maintained by all relevant agencies including NPWS, EPA, GSI, Inland Fisheries Ireland, Marine Institute, Forest Service, Local Authorities. | Protect/Restore | EPA | Data |
| All agencies holding relevant databases should establish procedures for regular update and notification of updates. | Protect/Restore | All | Data |
| Agencies displaying information provided and up-dated by other agencies should establish procedures for updating this information, and a means of identifying which version is currently displayed. | Protect/Restore | All | Data |
| A review of Notifiable Activities by NPWS is in progress. It is recommended that these include review of the findings of monitoring programmes carried out under Commonage Framework Plans. | Protect/Restore | NPWS | Management |
| Administrative measures relating to the implementation of approved farm plans are recommended. | Protect/Restore | NPWS | Management |
| Supports for organic farming within protected areas are recommended. | Protect/Restore | NPWS/DAFF | Management |
| Nutrient and silt loading issues should be addressed with regard to the ecological requirements of individual Annex listed habitats and species present in individual protected areas, with provision for site-specific variation in soils and underlying geology, slope, livestock type, and seasonal restrictions on grazing and/or mowing regimes. | Protect/Restore | NPWS | Management |

7.3 Measures for Heavily Modified and Artificial Water Bodies

Some surface waters have been substantially changed in character to allow uses such as navigation, water storage, public supply, flood defence and land drainage. These waters are called “heavily modified” or in the case of entirely new water bodies that would not otherwise have existed, “artificial”. Heavily modified water bodies and artificial water bodies are listed and described in Section 10.1.

Due to their modified or artificial condition these water bodies can require additional measures to improve their ecological potential. In many cases the structures affect the hydrological regime but often there is inadequate data to assess the impact; the necessary hydrometric data should be collected by the responsible authorities at these sites.

Measures for these special waters were recommended by Waterways Ireland, the South Eastern River Basin District Project (through a DEHLG research project), and the Eastern River Basin District (Tables 7.6 and 7.7).

Table 7.6: Heavily Modified Water Bodies Measures

| Water Body | Recommended Measure | Responsible Authorities |
|----------------------------|---|-------------------------|
| River Cammock | Increase in-channel morphological diversity, e.g., install instream features, 2 stage channels. Protect and enhance ecological value of marginal aquatic habitat, banks and riparian zone. Protect and restore historic aquatic habitats. | LA, OPW, CFB, NPWS |
| River Dodder | Install Fish Passes (provided a guaranteed rating can be provided to the EPA, DCC and OPW for the new configuration post-works) Protect and enhance ecological value of marginal aquatic habitat, banks and riparian zone | LA, OPW, CFB, NPWS |
| River Liffey | Hydrometric stations to be erected upstream of Pollaphuca Online dataloggers to be installed at Station 09008 Osberstown, Station 09006 Celbridge and downstream of Leixlip, | LA, EPA |
| River Santry | Examination of structures to assess opportunities for improvement. Use of soft engineering techniques and sustainable drainage where possible. | LAs |
| River Tolka | Increase in-channel morphological diversity, e.g., install instream features, 2 stage channels. Protect and enhance ecological value of marginal aquatic habitat, banks and riparian zone. | LA, OPW, CFB, NPWS |
| Glenasmole Reservoir Lower | None identified | |
| Glenasmole Reservoir Upper | None identified | |
| Golden Falls | Station 09007 Golden Falls to be upgraded to an online data logger | |
| Leixlip Reservoirs | Ecological potential study | LAs, NPWS |
| Lough Nahanagan | None identified | |
| Pollaphuca | None identified | |
| Vartry Reservoir Lower | Hydrometric station to be erected downstream of the Vartry reservoir | LA, EPA |
| Varty Reservoir Upper | None identified | |
| Boyne Estuary | Increase in-channel morphological diversity. Restore / create / enhance aquatic and marginal habitats. | LA, OPW, CFB, NPWS |
| Broadmeadow Estuary | None identified | |
| Dargle Estuary | Restore / create / enhance aquatic and marginal habitats | LAs, DEMNR, NPWS |
| Liffey Estuary Lower | None identified | |
| North Bull Island Lagoon | No additional measures | |
| Tolka Estuary | Increase in-channel morphological diversity. Restore / create / enhance aquatic and marginal habitats. | LA, OPW, CFB, NPWS |
| Upper Liffey Estuary | Increase in-channel morphological diversity Restore / create / enhance aquatic and marginal habitats | LA, OPW, CFB, NPWS |
| Dublin Bay | Restore / create / enhance aquatic and marginal habitats | LA, OPW, NPWS, DEMNR |

Table 7.7: Artificial Water Bodies Measures

| Water Body | Recommended Measure | Responsible Authorities |
|------------------------------------|---|-------------------------|
| Grand Canal Dock | Elimination of surface water outfalls where possible. Appropriate controls on diffuse pollution. | Local Authority |
| Grand Canal Edenderry Branch | None identified | |
| Royal Canal Main Line | None identified | |
| Grand Canal Main Line W of Lowtown | None identified | |
| Grand Canal Main Line E of Lowtown | None identified | |
| Grand Canal Naas & Corbally Branch | None identified | |
| Boyne Navigation | None identified | |
| Turlough Hill Reservoir | None identified | |

7.4 Supplementary Measures

Supplementary Measures are required in places where the basic measures alone are judged to be inadequate to achieve good status. These may be specific to particular locations and could be actions included in various good practice and guidance recommendations; alternatively, they may be techniques commonly used in other countries to reduce the impacts of particular pressures.

Supplementary measures identified in this Plan reflect an absence of legislation in some areas of water protection. For example there are few measures in existence to address the problems created by morphological changes to our waters and so it has been necessary to address this gap.

Other supplementary measures have been introduced by users of the River Basin Management System (see Section 8) reflecting their local knowledge of the pressures and their experience of efficient actions to rectify these problems. In the draft Plan these supplementary measures were identified separately, were numerous and were widely applied (following cost effectiveness analysis). It is now recognised that any actions necessary to deal with pollution already fall under existing broadly based legislation, particularly the Water Pollution Act (soon to be replaced by the Water Services Act). In this Plan the programme of measures for each water body comprises a combination of the measures previously termed supplementary and certain key elements of basic measures which, jointly, are considered to be the necessary to achieve good status. These have been termed “Priority Actions” to emphasise that it is these actions that are required to achieve the objectives of the Water Framework Directive.

The supplementary measures element of the priority actions identified by the Eastern River Basin District as being necessary in our water bodies or sub catchments are listed in Appendix B. These have been based on detailed assessments of the pressures in each locality, the monitoring data available and local knowledge of the site.

7.5 Recent Legislation Supporting the Implementation of the Programme of Measures

Significant progress has been made in recent years in putting the necessary legislation in place to support the implementation of river basin plans and programmes of measures in Ireland. The core requirements of the Water Framework Directive (2000/60/EC) were transposed under the Water Policy Regulations (SI 722 of 2003 as amended). In addition, the Surface Waters Environmental Objectives Regulations (SI 272 of 2009) and the Groundwater Environmental Objectives Regulations (SI 9 of 2010) were made to give effect to the measures needed to achieve surface water and groundwater environmental objectives established in river basin management plans. The Regulations place a legal obligation on public authorities to aim to achieve those objectives in the context of their statutory functions. For example, both sets of Regulations require the relevant authorities to review all pollutant discharge authorisations to take account of the objectives established in river basin plans. These include, inter alia

- licences issued under the Water Pollution Acts
- IPPC licences
- licences issued under the Waste Water Discharge (Authorisation) Regulations 2007
- Certificates of Authorisation under the Waste Management Regulations 2008.

Other legislation introduced in recent years, gives effect to various measures required by the Water Framework Directive. These include:

- The Waste Water Discharge (Authorisation) Regulations (SI 684 of 2007) which establish an authorisation system of local authority wastewater discharges operated by the Environmental Protection Agency.
- The Water Services Act (No. 30 of 2007) which introduces strategic planning in relation to water services provision, strengthening the administrative arrangements for planning the delivery of water services at national and local level. Water Services Strategic Plans prepared by water services authorities in accordance with Section 36 of this Act must take full account of the proper planning and sustainable development of their functional areas including, amongst other things, the provisions of river basin management plans prepared for the relevant area.
- The Bathing Water Quality Regulations (SI 79 of 2008) which transposed the new Bathing Waters Directive (2006/7/EC) establishes a new classification system for bathing water quality and require monitoring and management plans to preserve, protect and improve the quality of bathing waters.
- The European Communities Environmental Objectives (Freshwater Pearl Mussel) Regulations (SI 296 of 2009) which set legally binding objectives for water quality in rivers, or parts of rivers, inhabited by freshwater pearl mussels (*Margaritifera*) and designated as a Special Area of Conservation to protect those species. The Regulations also require authorities to take the steps necessary to attain those objectives. They also require the Minister for

Environment, Heritage and Local Government, subject to consultations, to prepare a programme of measures for the attainment of the ecological objectives in rivers containing protected populations; and to publish a sub-basin management plan for each relevant river.

- The Quality of Shellfish Waters Regulations 2006 (SI 268 of 2006) which set water quality requirements, provide for the designation of shellfish growing areas and also for the establishment of pollution reduction programmes for the designated waters in order to support shellfish life and growth. The Regulations were amended in 2009 (SI 55 of 2009 and SI 464 of 2009) to designate an additional fifty shellfish waters. There are now a total of sixty-four shellfish waters, nationally.

- The Good Agricultural Practice for Protection of Waters Regulations (SI 101 of 2009), which provide statutory support for good agricultural practice to protect waters against pollution from agricultural sources and include measures aimed at achieving that objective. These regulations revised and replaced previous regulations made in 2006 and 2007 and provided for strengthened enforcement provisions and for better farmyard management.

- Amendments to the Urban Waste Water Treatment Regulations 2001 (SI 48 of 2010) which designate an additional 10 sites as Sensitive Areas. This brings the total number of sites designated nationally to 43

- The European Communities (Control Of Dangerous Substances From Offshore Installations) Regulations 2009 (SI 358 of 2009) which provide for the permitting of discharges of certain dangerous substances from offshore installations into the Irish territorial sea by the Minister for Communications, Energy and Natural Resources. The Regulations also provide for the preparation of a pollution reduction programme by the Minister.

The Planning and Development Bill 2010, due to be enacted in the middle of this year, includes important new provisions in support of the Water Framework Directive. Firstly, the Bill includes a new mandatory objective requiring local authorities to integrate water management with planning policies and objectives in the preparation of their development plan. It specifically requires local authorities to ensure that the development plan supports the promotion of compliance with environmental standards and objectives established under both the Surface Waters and Groundwater Regulations. In order to ensure that both development planning and management are fully compliant with Water Framework Directive objectives, the Department of the Environment, Heritage and Local Government will issue Section 28 guidance to planning authorities on the new Planning Bill and its relationship with the implementation of the RBMPs, after enactment and not later than 2011. This will be supported by regional seminars.

Secondly, significant new provisions are included in the Bill in relation to the regulation of quarries. The Bill requires each planning authority to identify quarries in its administrative area which, having regard to the dates of implementation of the EIA Directive and the Habitats Directive, respectively, would have required environmental impact assessment or appropriate assessment and which have not had either or both of these assessments, as appropriate. Where the quarries identified commenced operations before the establishment of the planning code in 1964, or since obtained permission and are registered, they will be required to apply for a new consent, known as a "substitute consent" with a remedial EIA. However where the quarry commenced after October 1964 and never obtained planning permission, or failed to register in 2004-2005 under Section 261 of the Act, if required to do so, it will be subject to enforcement action.

Thirdly, the Bill removes the exemption status for infill of wetlands carried out under the Land Reclamation Act. Other forms of planning exemption for wetland infill will be restricted or removed in forthcoming amendments to the Planning Regulations.

The legislative framework will be further enhanced to protect and improve water quality through the introduction of strengthened controls on abstractions of water and physical modifications of water bodies. A scoping study on the legislative requirements in this area is underway and work on the drafting of new WFD-compliant regulations to include a modernised system of registration and prior authorisation will commence later in 2010. These regulations will be in place at the latest by end 2012.

New legislation will be proposed to provide for prior consideration of the nature, location and cumulative effects of certain agri-development projects to ensure that the obligations under the Environmental Impact Assessment (EIA) Directive are fully met. This is in response to the November 2008 ECJ ruling that Ireland was over reliant on size thresholds to determine whether an EIA is required in relation to certain agri-developments.

The categories of agri-development include:

- projects for the restructuring of rural land holdings;

- projects for the use of uncultivated land or semi-natural areas for intensive agricultural purposes; and
- water management projects for agriculture, including irrigation and land drainage projects.

The combined result of the above legislative changes will strengthen controls on physical development activities and bring greater coherence between the planning code and the objectives of the river basin management plans.

Amendment made by Minister of the Environment, Heritage and Local Government when adopting Plan on 6 July 2010

7.6 Planned and Potential Measures

A series of comprehensive research projects commissioned by the DEHLG were designed to advance knowledge in specific areas of each of the main pressures identified in the Water Matters report (www.erbd.ie). Several of these projects recommended additional legislation or improvements in best practice; many of these have not yet passed into legislation, but the main elements of existing legislation and how they should be strengthened, in terms of the major pressures affecting waters in the Eastern River Basin District, are presented in the following sections.

Wastewater and Industrial Discharges

Existing wastewater legislation requires treatment levels dictated by the Ireland's urban wastewater treatment regulations (S.I. 254 of 2001) and, where appropriate, higher levels of treatment to achieve standards for protected areas (for example, bacteria standards in designated bathing areas).

The recently introduced wastewater discharge licensing regulations will be supported by improved decision-support, management and monitoring systems to improve operational control of municipal facilities (S.I. 684 of 2007).

Consent systems for industrial discharges are already in place under the IPPC and Local Authority industrial licensing systems. The Waste Management, Planning and Development, Minerals Licensing and Energy Acts all have systems which also provide for controls of other point discharges such as landfills, quarries, mines and contaminated lands.

New environmental objectives regulations, which the DEHLG plans to introduce to support the Directive, will require review of all wastewater treatment and industrial discharge licences to ensure compliance with Directive's standards in receiving waters.

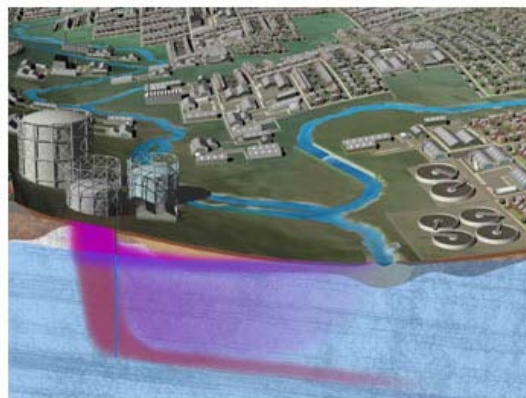
Industrial and wastewater treatment upgrade works will generally be effective within the first two planning cycles (by 2021). However, where substantial impact has taken place, particularly if groundwaters have been polluted, recovery could take longer.

Urban Pressures

Pressures from urban areas are generated from a combination of point discharges and diffuse discharges into water bodies within the urban catchments. These generally add to any contaminants already discharged upstream.

Existing wastewater legislation dictates treatment levels and discharge levels. The recently introduced wastewater discharge licensing regulations (S.I. 684 of 2007) will improve operational control of both foul/combined sewer systems and wastewater treatment plants. These regulations will also result in the licensing/setting of discharge consents for every combined sewer system overflow (CSO) and waste water treatment plant discharge.

New DEHLG environmental objectives regulations will require a review of all existing or proposed wastewater treatment plant and CSO discharge licences to ensure compliance with the Directive's standards in receiving waters.



In future, higher levels of treatment may have to be put in place in key locations to achieve compliance with agreed national chemical water quality standards for key parameters other than nutrients (for example, metals).

Stormwater collection system discharges are not currently regulated. There may be a future requirement for the introduction of measures to regulate these types of discharges.

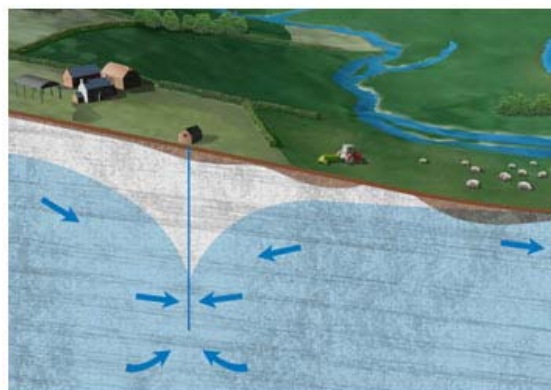
Wastewater treatment and sewer collection system upgrade works will generally be effective within the first cycle after implementation. However, in the case of any capital works associated with improved wastewater catchment management, such as the introduction of screening units on storm sewers, the phasing of such works could take many years.

Abstractions

Regulatory and statutory controls including the Water Supplies Act address abstractions to a certain extent, however updating of the provisions of this act is required. This may be supplemented in future by a requirement for licensing.

The DEHLG is proposing new measures in the form of a new regulatory regime for abstractions, initially for groundwaters and supported by decision support tools and monitoring programmes.

In addition, a national water conservation programme is being implemented under the Water Service Investment Programme to reduce leakage and support sustainable water use. Further cost recovery mechanisms are also being considered.



It will take at least one cycle for ecology to recover once measures are applied and status objectives need to allow for the system to re-naturalise. In waters designated as heavily modified because abstractions have substantially altered the physical characteristics or the flow regime, the objectives that will be set by the EPA will take account of these changes.

Physical Modifications

There are few existing regulations but the DEHLG is proposing new regulations for freshwater and marine morphology activities which will be supported by decision support tools, monitoring programmes and further research in this area. This will control all significant activities going forward. Some physical modifications protect communities through flood schemes.

It will take at least one cycle for ecology to recover after remediation.



Dangerous Substances

The key existing pieces of legislation for dangerous substances are plant protection product controls and improved monitoring data and information (which is being collected on the usage, loss and discharges of substances through compliance with European regulations such as Registration, Evaluation and Authorisation of Chemicals (REACH) and European Pollutant Release and Transfer Register (EPTR)).

These basic controls will have to be reviewed regularly as new concerns emerge about substances, such as hormone levels in waters.

Pollution reduction programmes are to be put in place by 2012 and will be effective for point source pollution within the first planning cycle. However, where severe point or diffuse pollution problems are identified it may take more than one cycle for ecology to recover.

Forestry

Existing forestry activities are required to operate under EU and National legislation as well as comply with codes of best practice. The requirements are regularly reviewed and updated and will be further strengthened by proposed new guidance on the management of sensitive areas, harvesting methods and restocking practices especially on peat lands. Revision of the Forestry Act is ongoing and should consider current requirements for replanting following felling irrespective of the nature of the site.



The Forest Service will review the Forestry and Water Quality Guidelines (published, July 2000) during the first cycle of the river basin management plans to ensure that they reflect the new water quality objectives and standards.

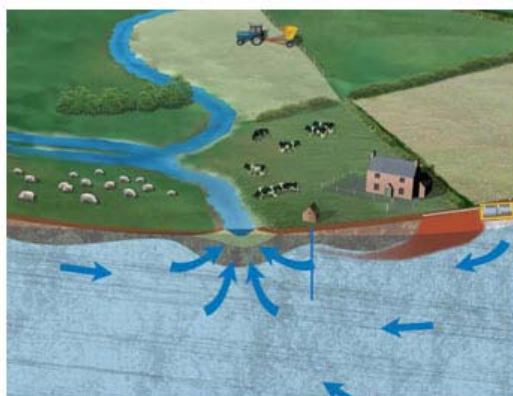
New regulations, to update the European Communities (Environmental Impact Assessment) (Amendment) Regulations, 2001 (S.I. No. 538 of 2001) will be finalised this year. The new regulations will provide for statutory EIA screening for all sub-threshold afforestation and forest road development (but excluding access to public roads which will require planning permission and EIA, if necessary). It will also transpose the Public Participation Directive insofar as it concerns forestry and will introduce penalties for unauthorised development.

Amendment made by Minister of the Environment, Heritage and Local Government when adopting Plan on 6 July 2010

As the forest rotation is lengthy, the effect of the measures will not be immediate and it may also take up to a full cycle for ecological status to be restored.

Agriculture

The existing measures in the Good Agricultural Practice regulations (S.I. 378 of 2006) are a legally binding code of practice detailing storage requirements and closed period manure spreading and other nutrient controls. This is supported by EPA in their water quality monitoring and by Teagasc in their Agriculture Catchments Programme which determines the degree to which the measures address the problem. It is further supported by DAFF and Local Authority farm inspections and cross compliance cross reporting arrangements.



The Nitrates Regulations represent a major step forward in protecting waters from agricultural sources of pollution and are expected to deliver significant improvement in water quality when fully effective. Evidence suggests, however, that they will not be sufficient to fully deliver the requirements of the Water Framework Directive in some areas of the country, e.g.:

- The National monitoring programme has indicated a number of patterns of concern. Elevated nitrate concentrations have been consistently observed in the east and southeast of the country in both groundwater and surface waters (EPA, 2008 and 2009). The presence of intensive agricultural practices on free draining soils in the southeast suggests that diffuse agricultural sources are the cause of the elevated nitrate concentrations. Also, the estuaries of the south-east and south of the country, such as the Slaney, Blackwater and Bandon were found to be the most seriously eutrophic. It is suspected that the nitrogen loads from upstream catchments is a significant contributing factor as nitrogen is the main growth-limiting nutrient in seawater.

- The vulnerable nature of the karst limestone aquifers in the west (Galway, Mayo and Roscommon) may explain the elevated phosphate concentrations in groundwater. The groundwater may be contributing to eutrophication in rivers and lakes in these areas. Phosphorus deposited as organic or chemical fertiliser on shallow soils over fissured karst limestone may enter groundwater readily and may then discharge to rivers through springs. Approximately 20% of the area of Ireland consists of karstified limestone.

- Elevated phosphorus levels have also been observed in areas covered by heavy gley soils with high phosphorus content (Index 4) including parts of counties Cavan and Monaghan in the North Western IRBD, and

■ In some of the High Status Sites.

The three scenarios described above pose particular difficulties for water quality management and the agricultural sector in the areas mentioned. Even with the full implementation of the Nitrates Regulations and the National Action Programme it is unlikely that the objective of good status for groundwater and/or surface waters will be met by the 2015 deadline in those areas and the need for supplementary measures will arise. The nature and extent of such measures will be considered when the findings of the Agricultural Catchments Programme start to become available in 2012. Challenges include slow natural rates of water quality recovery, which may extend up to 20 years, and certain ground conditions (hydrogeological and soil characteristics), which cause groundwater bodies to be vulnerable to pollution from nutrient inputs from agricultural activities. Time extensions for achieving water quality objectives have been applied to waters in such areas in order to provide adequate time to investigate the extent of impacts, to identify and implement appropriate management measures and to allow time for water quality to recover.

Amendment made by Minister of the Environment, Heritage and Local Government when adopting Plan on 6 July 2010

Other schemes, such as the voluntary Rural Environmental Protection Scheme (REPS), provide important additional actions which significantly benefit the water environment.

New measures under consideration include establishing source protection zones to protect drinking water supplies and the development of fertiliser/ manure/ soiled water/effluent/ slurry/ silage storage facilities to prevent seepage to ground or surface water.

In terms of achieving good status objectives the response to agricultural measures will improve water quality. It takes time for soil nutrient levels to reduce after lowering stock levels or fertiliser application rates. This means that the timescale to achieve the objectives could be extended beyond one cycle. Note that earlier indicators of agricultural compliance with the Nitrates Action Plan are in built to the programme (e.g. nutrient excess reduction targets to show progress whilst the physical recovery of the system's water quality takes place).

Mobile Organic Compounds (Pesticides) in Groundwater

Pesticides are used in a wide array of settings, including agriculture, forestry, transportation, (urban) amenity (including golf courses), and industry. The largest quantities are used in the agricultural sector, primarily for pest control associated with grassland management, fodder crops (e.g., maize), and arable farming (cereals and root crops). Compared to agriculture and forestry, quantities used in other sectors are small.

Based on past and present usage data, the chemical characteristics of identified pesticides, and experiences from other countries (including the UK), a shortlist of active ingredients has been recommended for the EPA's monitoring efforts for the Directive's purposes.

Overall, risk of groundwater pollution from diffuse pesticide applications in the Eastern River Basin District is considered to be limited. The highest risks are associated with applications in areas of extreme groundwater vulnerability.

EPA is presently undertaking a comprehensive sampling programme of more than 200 wells and springs nationally; 19 of these are in the Eastern River Basin District. The data generated from this programme will be analysed by the EPA in context of the Directive's water quality objectives and status classification for all groundwater bodies in Ireland.

The issue of pesticides is not limited to groundwater alone, however, as they have been detected in surface waters on repeated occasions, with implications for surface water abstractions. Existing legislation exists to protect human and animal health, and the environment, from harmful effects of pesticides, and The Pesticide Control Service of the Department of Agriculture, Fisheries and Food is responsible for implementing regulations associated with plant protection products and biocides.

Wastewater from Unsewered Properties (including Septic Tanks)

Existing basic measures for on-site systems require prior authorisation of new installations through the planning regulations. It is anticipated that these controls will be supported by improved information and guidance on the suitability of proposed sites and stricter enforcement regimes for the inspection of installations. Permits will be required to take into account the environmental objectives of the Plan. This will include new environmental quality standards as published in European Communities Environmental Objectives (Surface Waters) Regulations 2008.

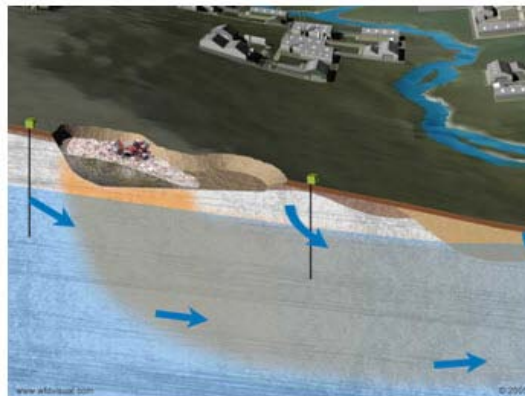
For existing installations, current controls allow for pollution enforcement actions; these powers are to be strengthened in new regulations under the Water Services Act which places a duty of care on owners of unsewered premises to ensure that their treatment systems do not cause a risk to human health or to the environment.

On-site system remediation works will generally be effective within the first cycle provided they are in place by 2012. Sludge management should be considered when assessing treatment plant capacity.

Landfills, Mines and Quarries

The Waste Management, Planning and Development, Minerals Licensing and Energy Acts all have systems providing controls for point discharges such as landfills, quarries, mines and contaminated lands. Landfills must be in compliance with the Landfill Directive and assessment should be carried out on a case-by-case basis

Further information including details of the pressures affecting the waters and the measures needed to deal with these pressures is in electronic form and can be downloaded from the website www.erbd.ie.



The waste management (certification of historic unlicensed waste disposal and recovery activity) Regulations 2008 (SI 524 of 2008) introduced a statutory requirement for local authorities to register all closed landfills, as defined under on the regulations, by the 30th June 2009. 321 sites have been registered throughout the State.

Almost all initial Tier 1 risk assessments (desk study and site walk over) have been completed for each site. More in-depth Tier 2 risk assessments (on-site monitoring) were applied to 18 sites under a pilot project initiated in October 2009, funded by the Department of Environment, Heritage and Local Government. A second pilot project to support the application of Tier 3 risk assessments (more detailed site investigations) was announced in March 2010.

All sites must be authorised by the EPA. The authorisation, called a Certificate of Authorisation (COA), will specify the appropriate management measures to be applied at each site on a case-by-case basis. The EPA will be required to have regard to the environmental quality standards established by the 2009 Surface Waters regulations and the 2010 Groundwater regulations when undertaking its investigations and specifying the appropriate management measures for the purposes of these regulations.

With regard to historic mines an inventory and risk assessment was completed in March 2010 in response to the extractive industries waste Directive (2006/21/EC). The Historic Mine Sites - Inventory and Risk Classification (HMS-IRC) Project was a joint project of the Environmental Protection Agency (EPA) and the Department of Communications, Energy and Natural Resources (DCENR).

The objectives of project were:

- to identify any significant risks to the environment, including human and animal health risks, at these historic mine sites so that these risks ultimately can be managed and the sites made safe.
- to plan for the forthcoming EU Directive 2006/21/EC on the Management of Wastes from the Extractive Industries.

This Directive requires the preparation of an inventory of closed waste facilities in the State by 1st May 2012. The inventory does not include closed stone, sand and gravel quarries, which also require management under the Directive.

A total of 32 mine sites and districts were investigated. Of these 27 mine sites/districts (encompassing 82 individual sites) were scored relative to each other for the purpose of future actions.

The project has resulted in the most comprehensive inventory of historic mines in Ireland that includes a detailed geochemical analysis. It gathers together all the existing information on historic mine sites in Ireland along with significant new information derived from site investigations that will point the way towards future rehabilitation work on mines in Ireland. Rehabilitation works will have regard to the environmental quality standards established by the 2009 Surface Waters regulations and the 2010 Groundwater regulations.

Amendment made by Minister of the Environment, Heritage and Local Government when adopting Plan on 6 July 2010

National Action Plan for sustainable use of Pesticides

The Minister for Agriculture, Fisheries and Food is currently developing a National Action Plan for the sustainable use of pesticides in consultation with other stakeholders. The National Action Plan is a requirement of Directive 2009/128/EC (establishing a framework for Community action to achieve the sustainable use of pesticides) and must be communicated to the Commission and to other Member States by 14 December 2012. The Directive is aimed at ensuring more sustainable use of pesticides, thereby reducing the impact of pesticides on human health and on the environment (including the aquatic environment).

The National Action Plan will include quantitative targets for reducing risks and impacts of pesticide use on the environment. The plan will address areas such as training and certification of pesticide users, distributors and advisors, calibration and certification of pesticide application equipment, and integrated pest management techniques. The plan will have a particular focus on the protection of the aquatic environment and drinking water supplies from potential impacts of pesticide use, and will specifically address the issue of safeguard zones around water abstraction points.

The list of Water Framework Directive Priority Substances is due to be reviewed by 13 January 2011. It has been proposed that sixteen substances including the pesticide cypermethrin will be taken forward for environmental quality standard derivation.

Amendment made by Minister of the Environment, Heritage and Local Government when adopting Plan on 6 July 2010

Aquaculture

Finfish aquaculture is licensed by the Department of Agriculture, Fisheries and Food under the Fisheries (Amendment) Act, 1997. Licences issued under the Act set limits on the amount of fish that may be grown as well the use of chemicals and medicines at the facility. Licences lay down requirements for monitoring, which include benthic monitoring, water quality monitoring and sea lice monitoring. Benthic monitoring is undertaken each year and includes visual examination of the seabed beneath the cages, as well as analysis for organic carbon and redox.

The European Communities (Control of Dangerous Substances in Aquaculture) Regulations 2008) S.I. No. 466 of 2008) give effect to Directive 2006/11/EC of the European Parliament and of the Council on pollution caused by certain dangerous substances into the aquatic environment in so far as the Directive relates to the protection of waters in the marine environment from aquaculture activities.

The Regulations inter alia require that the level of discharge of an emission set by a licensing authority must be based on the relevant environmental quality standards or objectives set by the Minister for the Environment, Heritage and Local Government in accordance with the Water Framework Directive.

All licences will be reviewed to ensure compliance with the WFD objectives (as laid down in the 2009 Surface Water Regulations) for the receiving water body, taking into account the assimilative capacity of receiving waters.

Amendment made by Minister of the Environment, Heritage and Local Government when adopting Plan on 6 July 2010

Measures to address the pressures on Coastal Waters

There are many pressures on the coastal zone ranging from certain fishing practices through to recreational pressures, coastal development, dredging activities and dumping at sea, the extraction of marine aggregates and marine waste and litter. The impact of nutrient enrichment and the process of eutrophication is a major concern in the marine environment; assessment is mainly based on data collected by EPA. National Regulations to implement the EU directives on urban waste water treatment and nitrates from agricultural sources are among the most important measures in place to combat eutrophication. Ireland has applied the EU nitrates directive across its whole territory and has designated the relevant estuarine waters as 'sensitive' where required to do so under the Urban Waste Water Directive. Nutrient reduction is required at the larger urban agglomerations discharging into sensitive waters.

Work undertaken for the purpose of the WFD Article 5 risk assessments concluded that 35% of transitional water bodies and 18% of coastal water bodies were 'at risk' or 'probably at risk' of failing to meet the WFD objective of good status due to physical alteration. Morphological pressures on the marine environment include coastal defence, built structures (urbanisation and ports and harbours) and dredging.

The proposed amendment to the legislative framework, to regulate physical modifications having an adverse impact on the water environment (Section 5.1), will, inter alia, provide a formal legal mechanism to address these pressures in the marine environment, including providing for the exemption provisions of Article 4(7) of the WFD where this is justified within the rules of the Directive. The proposed regulations will be subject to prior public consultation and will be in place at the latest by end 2012.

Additional measures will be developed to address other pressures in the context of integrated coastal zone management.

Amendment made by Minister of the Environment, Heritage and Local Government when adopting Plan on 6 July 2010

Invasive Alien Species

Regulations will be introduced in 2010 to restrict the trade in invasive alien species, including the banning of certain proscribed species. The proposed regulations are intended to ban the possession of listed species for 'the purpose of sale or dispersal or to transfer the species from one place to another within the country'. Where a problem already exists in relation to an invasive alien species, the regulations will provide for Ministerial powers to make a threat response plan and for the power to compel the relevant public authorities to address the threat. The regulations will be put out for public consultation shortly.

The Department of the Environment, Heritage and Local Government and the Northern Ireland Environment Agency have funded a series of invasive species projects and are implementing the recommendations of the original report. Risk assessments have been undertaken of high risk invasive species and rapid mechanisms, increased stakeholder involvement and best practice guidelines are being developed.

Amendment made by Minister of the Environment, Heritage and Local Government when adopting Plan on 6 July 2010

Peat Extraction

Peat excavation can impact on water quality through release of nutrients (particularly phosphorus) contributing to eutrophication and through peat silt entering river systems and impacting on aquatic life. Peat harvesting is one of the pressures contributing to the loss of high quality and protected areas.

All excavation of peat in areas above 50 hectares must be licensed under the IPPC regime and private peat producers falling into this category, that are not already licensed, will be brought into the IPPC system by the EPA.

Below this threshold, planning legislation applies and the Local Government (Planning and Development) (Amendment) Regulations, 2001 reduced the planning threshold for peat extraction from 50 to 10 hectares. The 2001 EIA Regulations reduced the threshold for mandatory EIA from 50 to 30 hectares and this provision will be enforced.

It is proposed to amend the Planning and Development Act to ensure effective enforcement against ongoing unauthorised peat extraction irrespective of when the extraction may have commenced. The Department of the Environment, Heritage and Local Government has funded research into the use of remote sensing to identify and gather evidence in relation to unauthorised peat extraction.

It should be noted that, in respect of discharges from smaller private enterprises, local authorities have the option to licence activity under the Water Pollution Acts and this option should be exercised on a risk-assessment basis, in pursuit of WFD water quality objectives.

Amendment made by Minister of the Environment, Heritage and Local Government when adopting Plan on 6 July 2010

Ecological Measures

Many of the measures described in this section address water quality as this will be a key factor in maintaining or improving ecological status. However, other measures will be required to protect and improve habitats and to protect individual species from external pressures. This Plan has identified the need for the creation of improved habitats in several water bodies (notably heavily modified waters and where abstractions are significant) and it is envisaged that such measures will become more important in subsequent plans when water quality has been improved. However, it is recommended that other ecologically based actions are fully considered, including salmon restoration plans where they have been developed.

7.7 Plans and Programmes

Article 13(4) of the Water Framework Directive requests a register of any more detailed programmes and management plans for the river basin district dealing with particular sub catchments, sectors, issues or water types, together with a summary of their content. Up to 300 plans and programmes were identified as listed in the tables in Appendix E of this report. County/City Development Plans are of particular importance as they represent a key element of spatial planning in Ireland.

Flood Risk Management Plans

At a technical level integration with the Floods Directive will be particularly important. The Directive requires that the implementation of the Water Framework Directive and the Floods Directive are coordinated, and that certain aspects of their implementation are based on consistent information. The Report of the Flood Policy Review Group, approved by Government in 2004, set out a new policy on the management of flood risks. This included the preparation of catchment based Flood Risk Management Plans (FRMPs) that will set out the long-term strategy and a prioritised set of measures for managing flood risks, both structural and non-structural. The development of such plans is also a requirement of the Floods Directive (2007/60/EC), which came into force in November 2007, with transposition required by November 2009.

Sustainable flood management measures such as floodplain reclamation and restoration, have ancillary benefits for climate change, biodiversity and nutrient attenuation and have an important role to play in flood risk management planning.

Amendment made by Minister of the Environment, Heritage and Local Government when adopting Plan on 6 July 2010

7.8 Targeted Research to Support the Plan

The development of the plan has identified a number of priority areas where research is needed to improve knowledge and to help identify appropriate measures to further protect and improve water quality.

The Agricultural Catchments Programme (ACP), a major research project, is intended to provide a scientific evaluation of the effectiveness of the measures in the National Action Programme under the Good Agricultural Practice Regulations and where necessary to underpin the basis for any modifications of the measures that might be required to achieve Water Framework Directive water quality objectives. The ACP is an agri-environmental and socio-economic research programme at the catchment scale supported by a team of scientists, advisors and technicians and managed by Teagasc. It will initially run for a four-year period (2008 –2011). Six agricultural catchments are being intensively managed and monitored nationally. The catchments were selected to represent various typical agricultural enterprise types and typical environmental risks to groundwater and surface water. Two of these catchments contain a high proportion of tillage. One of these is located on free draining soils where the greatest risk is of nitrogen loss through leaching and the other is located on heavier soils where phosphorus loss through surface run-off is more likely. There are four grassland-dominated catchments. One of these involves high risk of nitrogen loss, while the other three relate predominantly to risk of phosphorus loss (with varying levels of risk of nitrogen loss).

The ACP is intended to identify challenges in implementation of the National Action Programme. The ACP is intended to identify challenges in implementation of the National Action Programme and will provide a basis for modifications to the programme and/or recommendations for new agricultural measures for the protection of water, where necessary.

As regards other sectors and issues identified, the following projects are either underway or will be commissioned in 2010:

- The 2009 Indicators Report from the EPA noted the serious decline in the number of high quality sites over the past 20 years (see Section 2.2.1 above). A research project to identify the reasons behind this loss and to propose management strategies to address the matter will commence in 2010 with a timeline for delivery early in 2011.
- SIMBIOSYS, a major 4 year project aimed at assessing the impacts of aquaculture on marine biodiversity, commenced in April 2008 and is due for completion in 2012. The project includes the development of innovative approaches to reduce impacts.
- A scoping desk study aimed at assessing and managing exceedances of specific pollutants, priority & hazardous substances in surface waters and preventing and limiting inputs of hazardous and non-hazardous substances into groundwaters, will be included in a call for proposals in 2010.

■ A study to assess disposal options for treated wastewater from single houses in low permeability soil/subsoil settings will be included in a call for proposals in 2010.

Amendment made by Minister of the Environment, Heritage and Local Government when adopting Plan on 6 July 2010

7.9 National Initiatives

The programme of measures identified for each water body addresses the specific problems of that water body; however, there are several issues which apply to all of the waters in the Eastern River Basin District and which are best addressed at a district or national level. These fall under broad headings and are addressed below:

- Hydrological;
- Sustainable use of pesticides;
- Public awareness;
- Climate change; and
- Alien species.

Hydrological Issues

The Protection of Drinking Water is a key issue for human health and measures to address this risk are given high priority by Local Authorities responsible for managing Drinking Water Infrastructure. The Drinking Water Safety Plans produced by Local Authorities for each water source (surface or ground) should be reviewed as required on a site by site basis. Where necessary, detailed field and/or modelling investigations should be undertaken to establish the presence, source and risks from pollutants. Site specific measures should be identified to mitigate the risks; the issues of ensuring their implementation and enforcement should also be addressed as part of the plan implementation process.

The potential for funding of measures to protect drinking water under the Rural Development Programme (Department of Community, Rural and Gaeltacht Affairs) should also be considered by the relevant agencies when addressing resources for Drinking Water protection.

There is also a need for legislation to be revised, where appropriate, in the context of abstractions and compensation flow. In particular, the Liffey Reservoir Act (1936) and the permissions and obligations therein, should be assessed with a view to the objectives and commitments of the Water Framework Directive.

Abstractions are a significant pressure on waters in the Eastern River Basin District because of the population density in the major urban areas. Water sources in the regions are well established, but increasing demand is necessitating greater abstractions of the use of new sources. The EPA has denoted the Lusk Bog of the Ring aquifer as being of poor quantitative status because of over abstraction; it is anticipated that further monitoring will confirm improving water levels now that the abstraction rates have been reduced

More generally, increased efforts should be made to reduce water demand on a regional (or national) scale through the implementation of well established measures such as rainwater harvesting. Leakage reduction in the distribution systems is already being addressed in the Greater Dublin region and DEHLG intend to place a high emphasis on the issue.



National Action Plan for Sustainable Use of Pesticides

New statutory provisions covering the use phase of pesticides will be agreed at EU level during 2009, as part of the EU Thematic Strategy for Pesticides.

These provisions are aimed at ensuring more sustainable use of pesticides, thereby reducing the impact of pesticides on human health and on the environment (including the aquatic environment). A key element of the Thematic Strategy is the proposed Sustainable Use Directive, which will introduce a legal requirement for Member States to draw up National Action Plans with quantitative targets for reducing risks and impacts of pesticide use on the environment. Ireland will begin drafting its National Action Plan for pesticides in the second half of 2009. The plan will address areas such as training and certification of pesticide users, distributors and advisors, calibration and certification of pesticide application equipment, and integrated pest management techniques. It will have a specific focus on the protection of surface water and groundwater.

Public Awareness Campaigns and Schemes

Public awareness campaigns and schemes on a number of issues will contribute to the achievement of environmental improvements. These should include:

- A public awareness campaign on the use and disposal of chemicals such as oils, detergents, paints and solvents. Consideration should also be given to targeting specific audiences on issues such as location of septic tanks, discharges to water and the importance of wetland sites to water quality;
- Campaigns promoting positive actions among groups such as fat removal from hotel and restaurant waste or zero phosphate policies in detergents. Such actions can then be used in promotional marketing material while providing water quality benefits; and
- An information and advice campaign targeted at farmers focused on prevention first, followed by Best Management Practices. Adequate consideration should be given not just to water and biodiversity but also soils and cultural heritage. The campaign should include issues such as:
 - Best practice in the sector in order to demonstrate that an economically viable farming operation is possible within such schemes;
 - Opportunities for agri-tourism as a way to supplement farm income while protecting the environment;
 - Information relating to implementation in areas protected for biodiversity;
 - Information on the National Action Plan on Sustainable Use of Pesticides; and
 - Legislation applied to agriculture and the associated requirements and issues.
- A scheme to publicly identify water bodies meeting good or high status (similar to, for example, the Tidy Towns Scheme or the RIPPLE Project in Northern Ireland) would increase a sense of local ownership; and
- A focused awareness campaign on water use and the value of water should be implemented to reduce the volumes of water used or wasted.

Climate Change

The Water Framework Directive's approach to water management, which requires the review of river basin management plans every six years, provides an effective mechanism to prepare for and adapt to climate change.

Projected climate impacts have been summarised in a number of recent publications including "A Summary of the State of Knowledge on Climate Change Impacts for Ireland" (EPA), and "Climate Change: Meeting the Challenge of Adaptation", (Irish Academy of Engineering). These provide expert reviews of impacts and recommendations that are relevant to the management of the river basin district.

Flood and drought management both of which will assume greater importance under climate change scenarios, will need to take a sustainable, catchment-based approach. Measures to reconnect wetlands and riparian ecosystems to the river channels may have an important role to play, e.g. in terms of water storage, nutrient attenuation and can also contribute towards providing habitat for native species.

Studies such as those referred to above have highlighted the likely impacts of climate change. As part of the process of developing a national response to the impacts of climate change the EPA will shortly be commencing a project which will bring together all the available information on vulnerabilities on a sector by sector basis. It is anticipated that this material will be available by the end of 2010; this will assist in assessing the risk of climate change and in prioritising adaptive actions.

On foot of a commitment contained in the National Climate Change Strategy, the Department of Environment, Heritage and Local Government is currently in the process of developing a National Climate Change Adaptation Framework. This work is proceeding in parallel with development of the Climate Change Bill which will contain specific provisions in relation to adaptation at national, sectoral and local levels.

The purpose of the Bill is to provide a statutory basis for key national policies and measures on climate change, including national emission reduction targets for 2020 and 2050 and a Climate Change Committee to advise Government. The Bill will provide the statutory framework within which national policy on transition to a low-carbon, climate resilient and environmentally sustainable society can be pursued as a national priority.

The Heads of Bill and the Adaptation Framework will be published as soon as possible.

Amendment made by Minister of the Environment, Heritage and Local Government when adopting Plan on 6 July 2010

There is a need to consider the possible effects of climate change when selecting and implementing measures. We highlight the need to integrate river basin management planning with land use planning, climate change and wider environmental issues, all of which are key issues for overall implementation of the Directive.

The Advisory Council received a presentation from a climate change specialist at the National University of Ireland in Maynooth and it is clear that the impacts on rainfall, rivers and lakes, due to climate change, could be profound.

In the Eastern River Basin District it is predicted that less rain will fall during the year, but that more intense storms will be experienced. Year on year the conditions will vary significantly, and from catchment to catchment, and it is not yet clear what conditions should be accommodated.

Heavier winter rain and summer storms may cause more flash flooding, causing an increase in diffuse pollution loads to our waters from soil run-off or the overflow from CSOs and raising demand for flood controls. Summer droughts are more likely and there may be a reduction in drinking water supplies. Temperature changes might give invasive alien species a competitive advantage in our waters, thus affecting biodiversity.

The Strategic Environmental Assessment also assesses the impacts that the action plan could have on the wider environment, including climate.



A critical impact of climate change will be the likely changes to habitats and the flow conditions in rivers and lakes. The Eastern River Basin District has been undertaking research work on the effects of abstractions on river and lake ecology to develop an understanding of the relationship between hydrology, flow, depth and habitats for key species. Potential impacts on water body status are detailed in Table 7.8.

Table 7.8: Potential Climate Change Impacts on Status

| Parameters | Potential Impacts |
|---------------------------------|---|
| Physicochemical (Water Quality) | Changes in water temperature and dissolved oxygen. Decreased dilution capacity of receiving waters due to lower flows. Increased erosion and diffuse pollution. More frequent spilling of combined sewer outflows. Photoactivation of toxicants. Exceedence of water quality standards. |
| Biological | Changing metabolic rates of organisms. Changing ecosystem productivity and biodiversity. Fish migration patterns and dispersal corridors. Increased eutrophication and prevalence of algal blooms. Changes in aquatic fauna and flora at reference sites. Changes in species assemblages in designated areas. |
| Hydro-morphological | Changing river flows and sea levels can lead to erosion or sedimentation. Indirect impacts from land-use practices and agriculture. Hydrological connectivity of slopes, channels and coastal zones. Diffuse and point sources of sediment. Long-term bed load and channel change. Geomorphological processes creating dynamic/diverse habitats. |

The strategy of this Plan is to deal with the major problems affecting water quality and ecology in the Eastern River Basin District through widespread implementation of existing legislation and supporting supplementary measures. The effect of these measures will be monitored over time so that they can be evaluated. At the same time more climatic data will become available and predictions of the future climate will become more reliable.

Member State Water Directors recommend making “climate checks” of the programmes of measures in the first river basin management plans. These climate checks should identify the measures best suited to strengthening river basins’ capacities to adapt to climate change.

Further work to incorporate climate change in river basin management planning will be needed when the management plans are revised in 2015 and 2021. Measures will need to be resilient to climate change impacts. This will be especially important for expensive and long-term investments such as large infrastructure projects. Planning for droughts, water scarcity and flood prevention will also become increasingly crucial.

Continuous monitoring of resources and procedures will be required to achieve the objectives of this River Basin Management Plan. This will need to take account of additional climate monitoring and research results as they become available.

Subsequent river basin management cycles will address this topic in more detail, including:

- More focussed monitoring;
- Target water body ‘type’ and ecological status reference conditions for certain water bodies might need to be reconsidered;
- It may be possible to ‘climate-proof’ the Programme of Measures; and
- Contributions may be considered that contribute to global mitigation.

In accordance with the Guidance Document “Water Framework Directive – Draft River Basin Management Plans, Adapting the Plans to Climate Change”, measures specified in the Plan take account of potential impacts of Climate Change through the following requirements in the Directives (Tables 7.9 and 7.10):

Table 7.9: Climate Change in Basic Directives

| EU Directive | Climate Change Adaptation |
|---|--|
| The Bathing Water Directive (2006/7/EC) (76/160/EEC repealed) | Actions should allow for sea level rise and increasing storm surge, including potential washout of pollutants in coastal areas. |
| The Birds Directive (79/409/EEC) | Actions may be required to replace habitat lost through sea level rise or increased flooding |
| The Drinking Water Directive (98/83/EC) (80/778/EEC repealed 25/12/2003) | Plans should allow for reduced summer low flows and for increasing flood flows in source contribution zones. |
| The Major Accidents (Seveso) Directive (96/82/EC) extended by Directive 2003/105/EC | Plans should allow for increasing temperatures. |
| The Environmental Impact Assessment Directive (85/337/EEC) as amended by Directive 97/11/EC | Projects should assess impacts in the context of climate change. |
| The Sewage Sludge Directive (86/278/EEC) | Plans should consider potential climate change adaptation issues such as increasing temperature and rainstorms. |
| The Urban Wastewater Treatment Directive (91/271/EEC) | Consider potential for reduced assimilative capacity in rivers in summer and for changing estuarine flows. |
| The Plant Protection Products Directive (91/414/EEC) | None |
| The Nitrates Directive (91/676/EEC) | Actions should allow for potential washout of pollutants to surface waters during increasing rainstorms and for changes in groundwater contribution to surface waters. |
| The Habitats Directive (92/43/EEC) | Monitor changes in hydrological pressures and review and adjust abstractions and other pressures which reduce groundwater levels in protected areas for groundwater dependent and/or supported habitats and species. Actions to reduce erosion and sedimentation pressures should be able to meet increased risk of extreme events. Consider potential for habitat creation in managed retreat from rising sea level |
| The Integrated Pollution Prevention Control Directive (96/61/EC) | None |

Table 7.10: Climate Change in Other Basic Measures

| Other Basic Measure | Climate Change Adaptation |
|---|---|
| Cost recovery for water use | Increasing efficiency of use of water will be a priority in the context of reducing river low flows in summer, supported by metering, leakage control and potential water harvesting. |
| Measures to promote efficient and sustainable water use | Increasing efficiency of use of water will be a priority in the context of reducing river low flows in summer, supported by metering, leakage control and potential water harvesting. |
| Protection of drinking water sources | Plans should allow for reduced summer low flows and for increasing flood flows in source contribution zones. |
| Control of abstraction and impoundment | Controls should allow for reduced summer low flows and for increased temperatures. Instream impoundments will need to allow for increasing flood flows. |
| Authorisation of discharges to groundwater | Point source emission limits should allow for changes in temperature. |
| Control of point source discharges | Authorisation should allow for reduced summer low flows and for increasing flood flows. The range of water table levels may increase in the context of increased winter rainfall and reduced summer rainfall. |
| Control of diffuse point discharges | Authorisation should allow for reduced summer low flows and for increasing flood flows. The range of water table levels may increase in the context of increased winter rainfall and reduced summer rainfall. |
| Control of priority substances | None |
| Controls on physical modifications of surface waters | Authorisation system should require that modifications are adaptable to climate change. |
| Controls on other activities impacting on water status | None |
| Prevention or reduction of the impact of accidental pollution incidents | Plans should allow for increasing temperatures and increasing rainstorms and flooding. |

In addition to the basic and supplementary measures the Western River Basin District Project has developed measures specifically to protect high status and protected areas. As with the basic measures, these will be mandatory for all such waters.

Climate change adaptation of measures relating to high status sites and protected areas for water dependent habitats and species under the Habitats and Birds Directives will need to address (Table 7.11):

- Reduced habitat fragmentation and protect and restore areas of floodplains and wetlands;
- Changes to ground and surface water flow regime;
- Changes to erosion and sedimentation pressures;
- Changes to diffuse and point source nutrient loadings; and
- Avoidance of adverse impacts in forward planning.

Similar measures are likely where status is downgraded due to water dependent habitats and species being at unfavourable conservation status under the Habitats Directive. Sub catchment plans should be adaptable to allow for climate change induced changes in pressures

Table 7.11: Measures for High Status Waters and Protected Areas developed by the EPA (courtesy of the Western River Basin District Project)

| Action | Climate Change Element of Measure |
|--|--|
| Continued monitoring and survey by NPWS to confirm conservation status | Monitoring will address impact of changes to water regime and water dependent habitats and species |
| Identify alternative solutions where existing abstractions are implicated in causing unfavourable conservation status | Monitoring will address impact of changes to water regime and water dependent habitats and species |
| Use existing analyses of risks and pressures in relevant catchments to identify the suite of WFD Measures that will contribute to resolving unfavourable conservation status for individual SACs. Include examination of ortho-photography in the review. LA Biodiversity Officers should be involved. Consult with NPWS | Will address impact of changes to water regime and water dependent habitats and species |
| Consult with NPWS on identifying any additional risks and sensitivities, and any additional Measures relevant to individual sites/features at unfavourable conservation status, including investigative/operational monitoring needs | Avoidance of adverse impacts in forward planning. |
| Document plans specific to each SAC unfavourable conservation status issue, (with reference to Sections 4 and 5 of the guidance, submit to and implement in consultation with NPWS | Will address impact of changes to water regime and water dependent habitats and species |

| Action | Climate Change Element of Measure |
|--|---|
| Use sensitivities of water dependent habitats and species to water quality and hydrological pressures as set out in Sections 3 and 5 to guide decision making | Avoidance of adverse impacts in forward planning |
| Update the Register of Protected Areas in respect of SACs designated under the Habitats Directive for Annex 1 listed water dependent habitats and Annex 2 species. (SAC Water Dependency database field WD H S) | Will address impact of changes to water regime and water dependent habitats and species |
| It is recommended that a central Register of relevant databases is established, to include reference to all Water Framework Directive – relevant databases developed and maintained by all relevant agencies including NPWS, EPA, GSI, Inland Fisheries Ireland, Marine Institute, Forest Service, Local Authorities | Contribute to the avoidance of adverse impacts in forward planning |
| Nutrient and silt loading issues should be addressed with regard to the ecological requirements of individual Annex listed habitats and species present in individual Protected Areas, with provision for site-specific variation in soils and underlying geology, slope, livestock type, and seasonal restrictions on grazing and/or mowing regimes | Will address impact of changes to water regime and water dependent habitats and species |

Invasive Species

Alien species are non-indigenous invasive flora and fauna, which threaten the native ecology. Invasive alien species negatively impact Irish biodiversity through competition, herbivory, predation, habitat alteration and introduction of parasites or pathogens and thus pose a risk to the genetic integrity of our native species. Terrestrial and aquatic habitats can be negatively affected, resulting in severe damage to conservation and economic interests, such as agriculture, fisheries, forestry and various recreational activities.

Three particular species of concern are present in the Eastern River Basin District: Japanese Knotweed (*Fallopia japonica*), Giant Knotweed (*Fallopia sachalinensis*) and Himalayan Balsam (*Impatiens glandulifera*). Japanese Knotweed out-competes local species, such as sea grasses and kelp, for space and light.

Preventing the spread of alien species and new introductions of alien species is an issue of shared responsibility and requires the involvement of government agencies, academia, and private and voluntary sectors. The Invasive Species Ireland project began in 2006 and aims to reduce the impact and threats from invasive species on the island of Ireland and is a joint initiative between the National Parks and Wildlife Service and Northern Ireland Environment Agency.

In Ireland the most prominent of the negative impacts appears to be direct competition with native biota, whilst alteration to habitats and the influence of parasites and pathogens are also important. Habitats under threat include freshwater river systems, coastal floodplain, coastal saltmarsh and coastal sand dunes.

Several departments and agencies have responsibility for managing aspects of invasive species and so several different legislative instruments are relevant (Table 7.12). Ireland also has international obligations to address invasive species issues, principally the Convention on Biological Diversity, International Plant Protection Convention, Bern Convention and the Habitats Directive. Key existing obligations and legislation include:

Table 7.12: Key Obligations and Legislation for Alien Species

| European legislation relevant to non-native species | | |
|--|--------------|--|
| Wildlife Trade Regulation: Council Regulation (EC) No 338/97 on the protection of species of wild fauna and flora by regulating trade therein Commission Regulation (EC) No 939/97 laying down detailed rules concerning the implementation of Council Regulation (EC) No 338/97 Commission Regulation (EC) NO191/2001 suspending the introduction into the Community of specimens of certain species of wild fauna and flora | 1997 | Trade-related agreements/Biodiversity conservation |
| Habitats Directive: Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora | 1992 | Biodiversity conservation |
| Birds Directive: Council Directive 79/409/EEC on the conservation of wild birds | 1979 | Biodiversity conservation |
| Environmental Impact Assessment Directive Council Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment Council Directive 97/11/EC amending Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment | 1985 1997 | Environmental protection |
| Forest Reproductive Material Directive Council Directive 1999/105/EC on the marketing of forest reproductive material | 1999 | Phytosanitary measures & biodiversity conservation |
| Plant Health Directive Council Directive 2000/29/EC on protective measures against the introduction into the Community of organisms harmful to plants or plant products and against their spread within the community | 2000 | Phytosanitary measures & biodiversity conservation |
| Plant Protection Products Directive Council Directive 91/414/EEC of 15 July 1991 concerning the placing of plant protection products on the market | 1991 | Phytosanitary measures & biodiversity conservation |

| European legislation relevant to non-native species | | |
|---|------|---------------------------|
| Fish Health Directive Council Directive 91/67/EEC concerning the animal health conditions governing the placing on the market of aquaculture animals and products | 1991 | Sanitary measures |
| Animal Health Directives Council Directive 90/425/EEC concerning veterinary and zootechnical checks applicable in intra-Community trade in certain live animals and products with a view to the completion of the internal market. | 1990 | Sanitary measures |
| Domestic legislation relevant to non-native species | | |
| Wildlife Act | 1976 | Biodiversity conservation |
| Wildlife (Amendment) Act | 2000 | Biodiversity conservation |
| Environmental Protection Agency Act | 1992 | Biodiversity conservation |
| Heritage Act | 1995 | Biodiversity conservation |
| Marketing of ornamental plant propagating material (Amended 1999) | 1995 | Phytosanitary measures |
| Marketing of Forest Reproductive Material Regulations S.I. 2002/618 | 2002 | Forestry |
| The Foot and Mouth Disease (Hay, Straw and Peat Moss Litter) Order | 2001 | Sanitary Measures |
| Forestry Act | 1988 | Forestry |
| The Fisheries Act | 1980 | Fisheries |
| Dumping at Sea Act | 1996 | Marine |
| International instruments concerning non-native species relevant to Ireland | | |
| Convention on Biological Diversity (CBD) | 1993 | Biodiversity Conservation |
| Bern Convention on conservation of European wildlife and Natural Habitats. | 1982 | Biodiversity Conservation |
| Bonn Convention on the Conservation of Migratory Species of Wild Animals | 1983 | Biodiversity Conservation |
| IUCN Guidelines for the prevention of Biodiversity loss caused by alien invasive species | 2000 | Biodiversity Conservation |
| Convention on Wetlands of International importance especially as Waterfowl Habitat (Ramsar Convention) | 1975 | Biodiversity Conservation |
| Agenda 21 | 1992 | Biodiversity Conservation |
| Ministerial Conference for the Protection of Forest in Europe | 1993 | Biodiversity Conservation |
| International Maritime Organisation (IMO) Guidelines for the control and management of ships' ballast water to minimise the transfer of harmful aquatic organisms and pathogens | 1997 | Aquatic environment |
| International Council for Exploration of the Sea (ICES) Code of Practice on the Introductions and Transfers of Marine Organisms, 1994 | 1994 | Aquatic environment |
| United Nations Convention on the Law of the Sea (UNCLOS) | 1994 | Aquatic environment |
| Food and Agriculture Organisation (FAO) Code of Conduct for Responsible Fisheries | 1995 | Phytosanitary measures |
| International Plant Protection Convention (IPPC) | 1951 | Phytosanitary measures |
| Food and Agriculture Organisation (FAO) Code for the Import and Release of Exotic Biological Control Agents. | 1996 | Phytosanitary measures |
| Convention on International Trade in Endangered species of wild fauna and flora (CITES) | 1975 | Trade-related agreements |
| WTO Agreement on Sanitary and Phytosanitary measures (SPS Agreement) | 1995 | Trade-related agreements |
| International Civil Aviation Organisation (ICAO) Resolution on Preventing the Introduction of Invasive Alien Species | 1998 | Transport |

The National Invasive Species Database project has compiled a Priority Species List of particular concern for both non-plant and plant species (Table 7.13 and Table 7.14).

Table 7.13: Priority List for Non-plant Species

| Taxon name | Common name | Habitat |
|-----------------------------------|-------------------------|-------------|
| <i>Ameiurus nebulosus</i> | Brown Bullhead Catfish | Freshwater |
| <i>Anguillicola crassus</i> | none | Parasitic |
| <i>Arthurdendyus triangulatus</i> | New Zealand Flatworm | Terrestrial |
| <i>Balanus improvisus</i> | none | Marine |
| <i>Branta canadensis</i> | Canada Goose | Terrestrial |
| <i>Cervus nippon</i> | Sika Deer | Terrestrial |
| <i>Crangonx pseudogracilis</i> | Freshwater Shrimp | Freshwater |
| <i>Crassostrea gigas</i> | Pacific Oyster | Marine |
| <i>Cyprinus carpio</i> | Carp ISI | Freshwater |
| <i>Didemnum</i> species | none ISI | Marine |
| <i>Dreissena polymorpha</i> | Zebra Mussel ISI | Freshwater |
| <i>Eriocheir sinensis</i> | Chinese Mitten Crab ISI | Freshwater |
| <i>Gammarus pulex</i> | Freshwater Shrimp | Freshwater |
| <i>Gammarus tigrinus</i> | Freshwater Shrimp | Freshwater |
| <i>Lepus europeus</i> | Brown Hare | Terrestrial |
| <i>Leuciscus cephalus</i> | Chub | Freshwater |
| <i>Leuciscus leuciscus</i> | Dace | Freshwater |
| <i>Mustela furo</i> | Feral Ferret | Terrestrial |
| <i>Mustela vison</i> | American Mink | Terrestrial |
| <i>Oxyura jamaicensis</i> | Ruddy Duck | Terrestrial |
| <i>Perca fluviatilis</i> | Perch | Freshwater |
| <i>Physella acuta</i> | none | Terrestrial |
| <i>Physella gyrina</i> | Tadpole Physa | Terrestrial |

| Taxon name | Common name | Habitat |
|-----------------------------|---------------|-------------|
| <i>Rattus norvegicus</i> | Brown Rat | Terrestrial |
| <i>Rattus rattus</i> | Ship Rat | Terrestrial |
| <i>Rutilus rutilus</i> | Roach | Freshwater |
| <i>Sciurus carolinensis</i> | Grey Squirrel | Terrestrial |

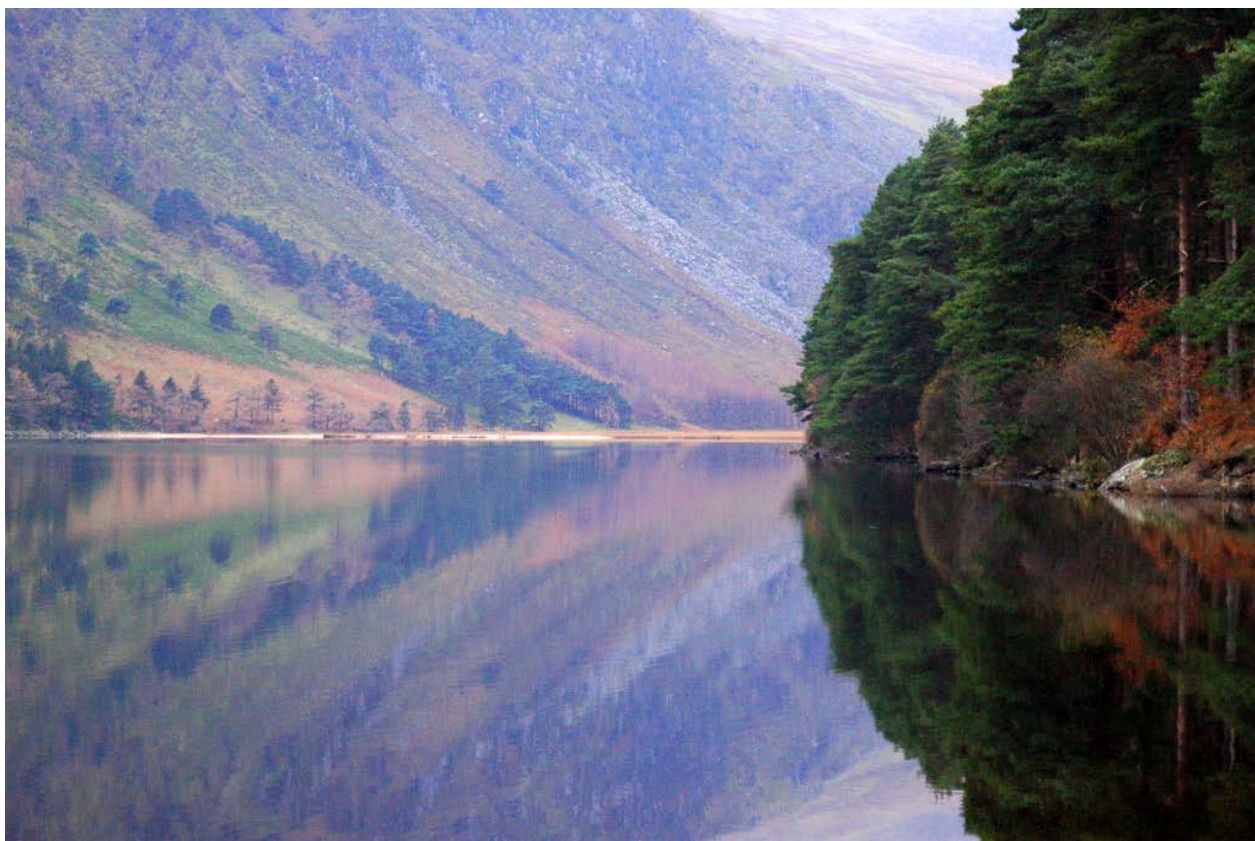
Table 7.14: Priority List for Plant Species

| Taxon name | Common name | Habitat |
|--|-----------------------------|-------------|
| <i>Acaena anserinifolia</i> | Bronze Pirri-pirri-bur | Terrestrial |
| <i>Acaena novae-zelandiae</i> | Biddy Biddy/Pirri-pirri-bur | Terrestrial |
| <i>Acaena ovalifolia</i> | Two-Spined Acaena | Terrestrial |
| <i>Acer pseudoplatanus</i> | Sycamore | Terrestrial |
| <i>Aponogeton distachyos</i> | Cape-pondweed | Freshwater |
| <i>Azolla filiculoides</i> | Water Fern | Freshwater |
| <i>Carpobrotus edulis</i> | Hottentot-fig | Freshwater |
| <i>Clematis vitalba</i> | Traveller's Joy | Terrestrial |
| <i>Cornus sericea</i> | Red Osier Dogwood | Terrestrial |
| <i>Cotoneaster horizontalis</i> | Wall Cotoneaster | Terrestrial |
| <i>Cotoneaster integrifolius</i> | Entire-leaved Cotoneaster | Terrestrial |
| <i>Crassula helmsii</i> | New Zealand Pigmyweed | Freshwater |
| <i>Crocsmia x crocosmiiflora</i> | Montbretia | Terrestrial |
| <i>Cyperus eragrostis</i> | Pale Galingale | Terrestrial |
| <i>Egeria densa</i> | South American Waterweed | Freshwater |
| <i>Elodea canadensis</i> | Canadian Waterweed | Freshwater |
| <i>Elodea nuttallii</i> | Nuttall's Waterweed | Freshwater |
| <i>Gaultheria mucronata</i> | Prickly Heath | Terrestrial |
| <i>Gaultheria shallon</i> | Shallon | Terrestrial |
| <i>Fallopia japonica</i> | Japanese Knotweed | Terrestrial |
| <i>Fallopia sachalinensis</i> | Giant Knotweed | Terrestrial |
| <i>Glyceria maxima</i> | Reed Sweet-grass | Terrestrial |
| <i>Gunnera tinctoria</i> | Giant-rhubarb | Terrestrial |
| <i>Heracleum mantegazzianum</i> | Giant Hogweed | Terrestrial |
| <i>Hippophae rhamnoides</i> | Sea Buckthorn | Terrestrial |
| <i>Hottonia palustris</i> | Water-violet | Freshwater |
| <i>Hyacinthoides hispanica</i> | Spanish Bluebell | Terrestrial |
| <i>Hyacinthoides non-scripta x hispanica</i> | none | Terrestrial |
| <i>Hydrocotyle ranunculoides</i> | Floating Pennywort | Freshwater |
| <i>Impatiens glandulifera</i> | Himalayan Balsam | Terrestrial |
| <i>Juncus planifolius</i> | Broad-leaved Rush | Terrestrial |
| <i>Lagarosiphon major</i> | Curly Waterweed | Freshwater |
| <i>Lagarus ovatus</i> | Hare's-tail | Terrestrial |
| <i>Lemna minuta</i> | Least Duckweed | Freshwater |
| <i>Libertia formosa</i> | Chilean Iris | Terrestrial |
| <i>Lonicera japonica</i> | Japanese Honeysuckle | Terrestrial |
| <i>Lupinus polyphyllus</i> | Garden Lupin | Terrestrial |
| <i>Lysichiton americanus</i> | Yellow Skunk-cabbage | Freshwater |
| <i>Mycelis muralis</i> | Wall Lettuce | Terrestrial |
| <i>Myriophyllum aquaticum</i> | Parrot's Feather | Freshwater |
| <i>Petasites fragrans</i> | Water Heliotrope | Terrestrial |
| <i>Picea sitchensis</i> | Sitka Spruce | Terrestrial |
| <i>Pinus contorta</i> | Lodgepole Pine | Terrestrial |
| <i>Phormium tenax</i> | New Zealand Flax | Terrestrial |
| <i>Prunus laurocerasus</i> | Cherry-laurel | Terrestrial |
| <i>Rhododendron ponticum</i> | Rhododendron | Terrestrial |
| <i>Rosa rugosa</i> | Japanese Rose | Terrestrial |
| <i>Rubus spectabilis</i> | Salmonberry | Terrestrial |
| <i>Sagittaria rigida</i> | Canadian Arrowhead | Freshwater |
| <i>Sarracenia purpurea</i> | Pitcherplant | Terrestrial |
| <i>Sargassum muticum</i> | Wire Weed | Marine |
| <i>Sasa palmata</i> | Broad-leaved Bamboo | Terrestrial |
| <i>Sedum album</i> | White Stonecrop | Terrestrial |
| <i>Senecio cineraria</i> | Silver Ragwort | Terrestrial |
| <i>Sisyrinchium californicum</i> | Yellow-eyed-grass | Terrestrial |
| <i>Spartina anglica</i> | Common Cord-grass | Terrestrial |
| <i>Stratiotes aloides</i> | Water-soldier | Terrestrial |
| <i>Symphoricarpos albus</i> | Snowberry | Terrestrial |
| <i>Nymphoides peltata</i> | Fringed Water-lily | Freshwater |

This Plan recommends that to minimise negative impacts from invasive species:

- Best Practice Management Guidelines for Invasive Species should be followed where appropriate; and
- Invasive Species Action Plans should be followed where appropriate.

In parallel with the concern about invasive species and the implementation of Action Plans, biosecurity plans should be put in place where necessary to prevent negative impacts to fish populations and their habitats including the transmission of diseases or parasites.



8 River Basin Management Planning

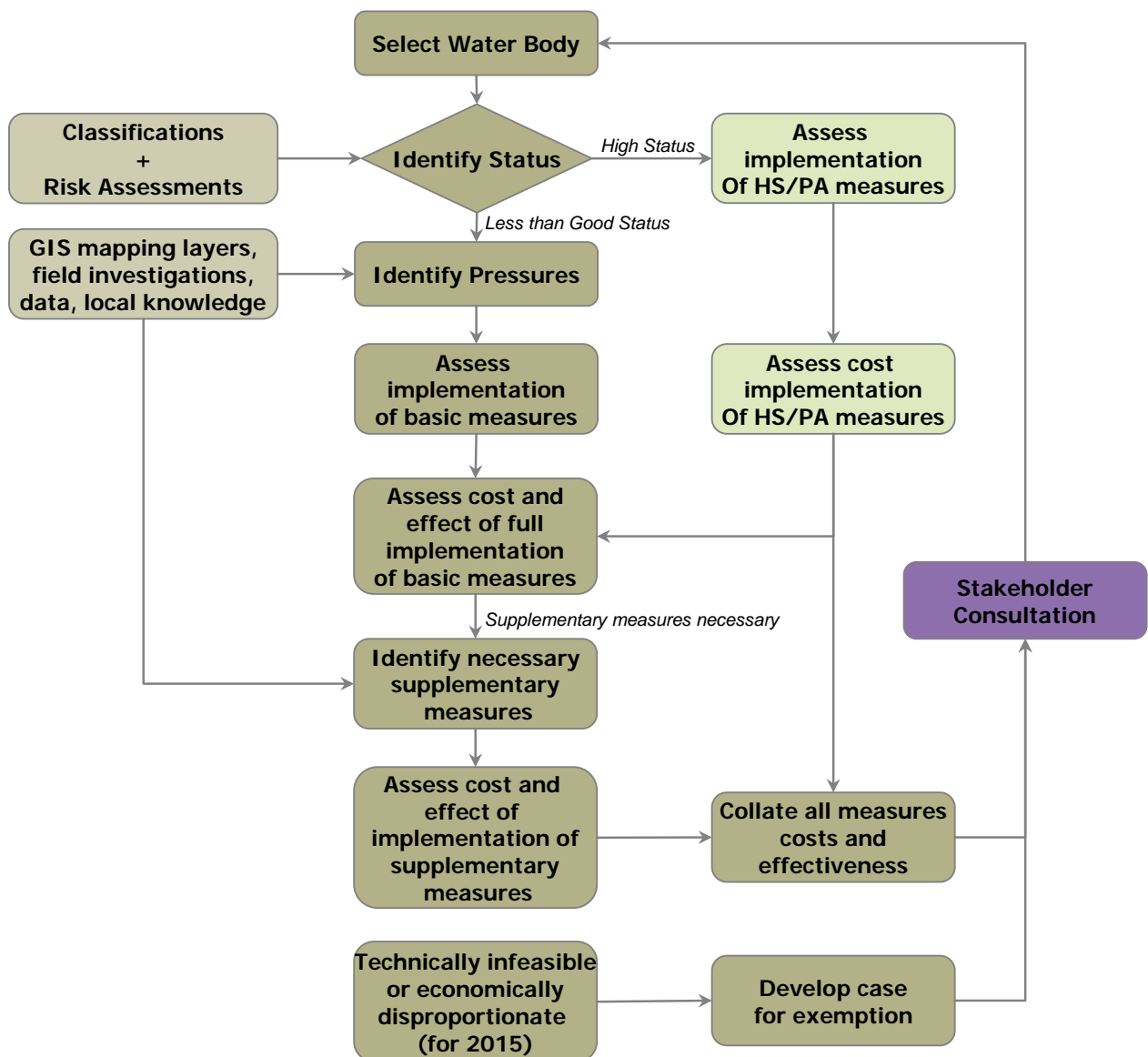
A specific programme of measures is required for each of the water bodies in the Eastern River Basin District. This is an enormous task made more complex by the number of waters (488), the differences in the pressures affecting them and the interrelationships between waters throughout each catchment.

In the Eastern River Basin District the philosophy of catchment management has been rigorously adopted. Surface waters have been grouped into sub catchments (the term “water management unit” is used to describe groups of water bodies), where the waters have similar characteristics and pressures. Transitional waters, coastal and groundwaters are treated as individual units as these can surface cross catchment boundaries. Lakes are also treated individually, but relationships with their surface catchments are considered.

For each sub-catchment or water body, a comprehensive process has been followed which reflects the overall structure of the Directive: understanding the pressures affecting the waters; evaluating their relative importance; identifying the measures that will address the specific problems; and assessing the cost and effectiveness of each measure. In this way a detailed profile and plan for each of our waters has been developed.

The approach which is being used for measures selection is outlined in Figure 8.1

Figure 8.1: Approach for Measures Selection



The ecological objectives of waters that are artificial or which have been physically modified are different from those associated with waters in their natural condition, but the process of measures selection outlined in the figure remains unchanged, so that all of our waters are treated in a coherent and consistent manner.

It should be recognised that this approach to management of our waters has not been attempted before in Ireland and that the scale of the work is immense. In addition, there are important items of information and data that are not yet available and so this Plan is based on all of the available information and supplemented, where needed, with expert judgment.

The Eastern River Basin District has developed a River Basin Management System (RBMS) to help facilitate the process of selecting measures. The RBMS is an International Water Association award-winning information management system specifically developed by Dublin City Council/CDM which serves a variety of purposes including facilitating a structured approach to the selection of measures. It leads the user through a series of steps culminating in an implementation plan for the measures. All available data and information describing the waters and pressures in the District together with potential measures are available within the system. The user is required to undertake the sequence of tasks, shown in Table 8.1, for each sub-catchment or water body:



Table 8.1: River Basin Management System Tasks

| Task | Purpose | Data Sets Available | Output |
|----------------------------|--|--|--|
| 1. Monitoring Data | Import and analysis of monitoring data from local authorities and EDEN | Surveillance, operational and investigative monitoring data | Up to date information available for view and analysis |
| 2. Updated Risk Assessment | Examine available monitoring and survey data, compare them to allowable limits and ascertain what problems (risks) occur in each sub-catchment or water body | 2004 Characterisation risk assessment Monitoring data GIS with all point and diffuse pollutant sources, land use, etc. EPA Status Classification Local knowledge | Location and extent of risks to meeting the requirements of the Water Framework Directive |
| 3. Pressure Identification | Identify which pressures are causing problems and focus on the key pressures in each sub-catchment or water body | 2004 Characterisation risk assessment Monitoring data GIS data sets Updated risk assessment Local knowledge | Identification and ranking of unique set of pressures affecting each sub-catchment or water body |
| 4. Measures Selection | Selection of different potential sets of measures to address the pressures in each sub-catchment and water body | Updated risk assessment GIS data sets Capital cost budgets Local knowledge Basic measures Possible supplementary measures. | Alternative sets of measures with full costs and effective estimates |
| 5. Actions | Definition of an implementation plan for the selected programme of measures | The preferred programme of measures Resource availability. | WFD Implementation plan |

The RBMS offers a number of key benefits:

- Imposing a consistent process for each water body;
- Providing a facility to record the assumptions and decisions that have been made for each water body;
- Transparency of the decision making process (which is important for stakeholder involvement);
- Providing a platform (and requirement) for estimates of costs and effectiveness of individual measures;
- A mapping environment to enable users to readily examine pressures, land uses and monitoring data, in any water body or sub-catchment of the district; and
- Easily updated to evaluate alternative programmes of measures.

8.1 Public Access

This Plan is a substantial document and to support this there is a great deal of detail which is presented in electronic databases. The Plan aims to provide an overview of the process and objectives of the WFD; describe the status of the water bodies in the District; the pressures affecting them; and what measures are required to improve and protect them.

More supporting information and data are available in 4 main locations:

- ERBD's website at www.erbd.ie;
- EPA's WFD website at www.wfdireland.ie;
- River Basin Management System (via Local Authority offices); and
- Electronic PowerPoint slides (at www.erbd.ie).

ERBD Web Site

www.erbd.ie provides an overview of the Directive and the ERBD project as well as public access to all of the key WFD deliverables and records of the Advisory Council and Technical Council meetings.

EPA's Web Site

www.wfdireland.ie provides access to all supporting documentation and studies undertaken in Ireland as part of the WFD implementation since 2002 (the most relevant of these are listed in the bibliography at the end of this Plan).

River Basin Management System

The RBMS provides access to all data, assumptions, measures, how and why measures have been selected and the cost and effective estimates of those measures for all water bodies in the ERBD. A public access area in the system is available via each Local Authority; this offers a map based facility for users to:

1. Select waters of interest;
2. Display the objectives and status of that water;
3. Display the measures prescribed; and
4. Print reports.

An RBMS user guide is available on the ERBD web site (www.erbd.ie) and provides an overview of the process encapsulated in the RBMS and step by step guidance through its various elements. A summary is provided below.

Note: All screen shots are for illustrative purposes only. All information is available through accessing the RBMS at Local Authority offices.

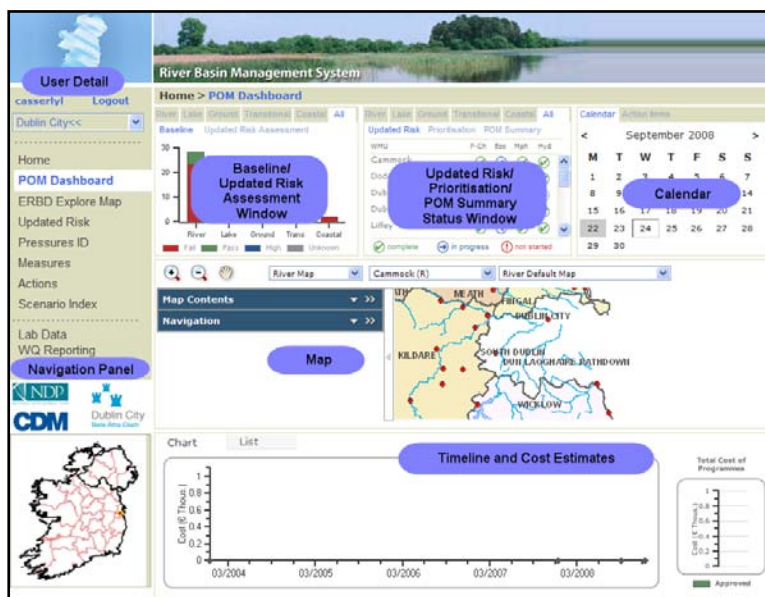
Home screen

Key elements of background information are available on the system, including the Directive itself, SI 722, responsible authorities and timescales.



Overview screen

The first active screen is a Dashboard which gives summary information. Each window within the screen can be interrogated to provide more detail. By using the navigation links to the left of the screen the user is required to step through a set process for each water body in the Eastern River Basin District by taking a number of sequential steps.



Updated Risk Assessment

This requires users to assess the condition of each water body by comparing recent/best known data to the EPA's environmental quality standards. The values used must be supplemented by an explanation in the "Notes" field for each parameter. This process is required for four different pressure categories: Physicochemical, Ecological, Morphological and Hydrological and helps develop an understanding of what pressures are detrimentally affecting each water body.



Identification of Key Pressures

For each water body the user estimates the relative importance of each pressure in terms of its effect on that water body. This estimate is supported by explanatory comments in the "Notes" field. The purpose of this step is to provide focus to measures selection.

Both the risk assessment and pressures identification benefit from the use of the GIS facility, which provides all known data and information about the ERBD.



- Monitoring data can be accessed from the EDEN database; this is important during the risk assessment process, identifying pressures and tracking improvements and the benefits of measures in future years. Data can be selected by site, area, parameter and time.

Electronic Information: PowerPoint Slide Presentation

The Directive is clear that each water body has to be addressed, and that a catchment approach is required to manage waters. In the ERBD, the rivers have been grouped into water management units to allow a catchment based approach. The information is also managed at individual water body level so that reporting can be constructed at either scale.

With 488 water bodies, many protected areas, multiple pressures, extensive data sets and hundreds of possible measures, the scale of data and information management challenge is extensive. To assist readers who wish to investigate particular waters in more detail, a set of more comprehensive information is contained within slide presentations on the ERBD website (www.erbd.ie). For each water management unit or individual lake, coastal or transitional water, extensive information is presented on the local area, the various pressures, the status and the measures selected. A summary example is provided below for the Athboy water management unit in the Boyne catchment. Equivalent data is available for all waters in the Eastern River Basin District.

The first slide provides an overview of the information in the file, which in effect is a mini plan for this particular set of waters. Subsequent slides then provide general background on the WFD.

An overview of the water management unit, the population centres, land use and administrative boundaries is shown in map form. In the example shown the water management unit is depicted in yellow overlain on an Ordnance Survey map showing towns and roads to help orientate the user.

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Final Programme of Measures Athboy WMU

1. Water Framework Directive
2. Water Management Unit
3. Status of Water
4. Objective
5. Protected Areas
6. What are the Problems to address?
7. Programme of Measures
8. Action Measures
9. Target Date

Appendix 1: Programme of Measures

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Overview of Water Management Unit

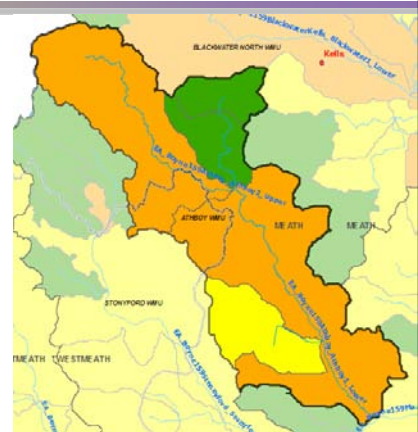
Geography

- Local Authorities: 90% Meath, 10% Westmeath
- River Length: 43 km
- Land use: Predominant land use is Agriculture
 - 60% Pasture,
 - 18% Arable,
 - 10% of other Agricultural land,
 - Urban populations cover 0.5% of the area for example at Athboy, Kildalkey, Ossakeel and Clonmellon.

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The existing condition of our waters was determined by the Environmental Protection Agency using water quality, ecology and morphology monitoring data.

| | |
|----------|-----|
| Good | 20% |
| Moderate | 20% |
| Poor | 60% |



The percentage status is determined by the number of reportable segments or sub-basins. For this reason the percentage might not seem representative.

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5. Protected Areas

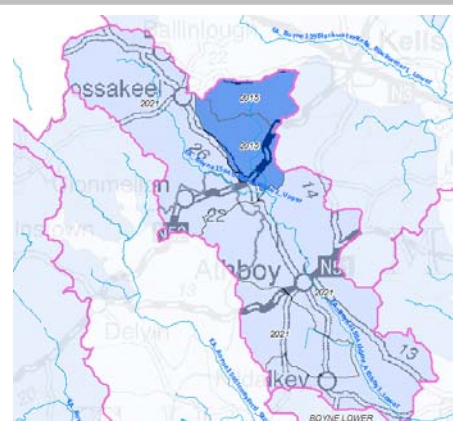
- Some areas require greater protection because they contain rare and vulnerable habitats or wildlife. Other protected areas are sensitive because of their beneficial use for humans, such as drinking water sources or shellfish areas.

| | | |
|---|---|----------------------------------|
| Drinking Water (1) | i | River Tremblestown |
| Special Areas of Conservation (Habitat) (2) | i | River Boyne and River Blackwater |
| Natural Heritage Areas (2) | i | Lough Shesk and Girley Bog |

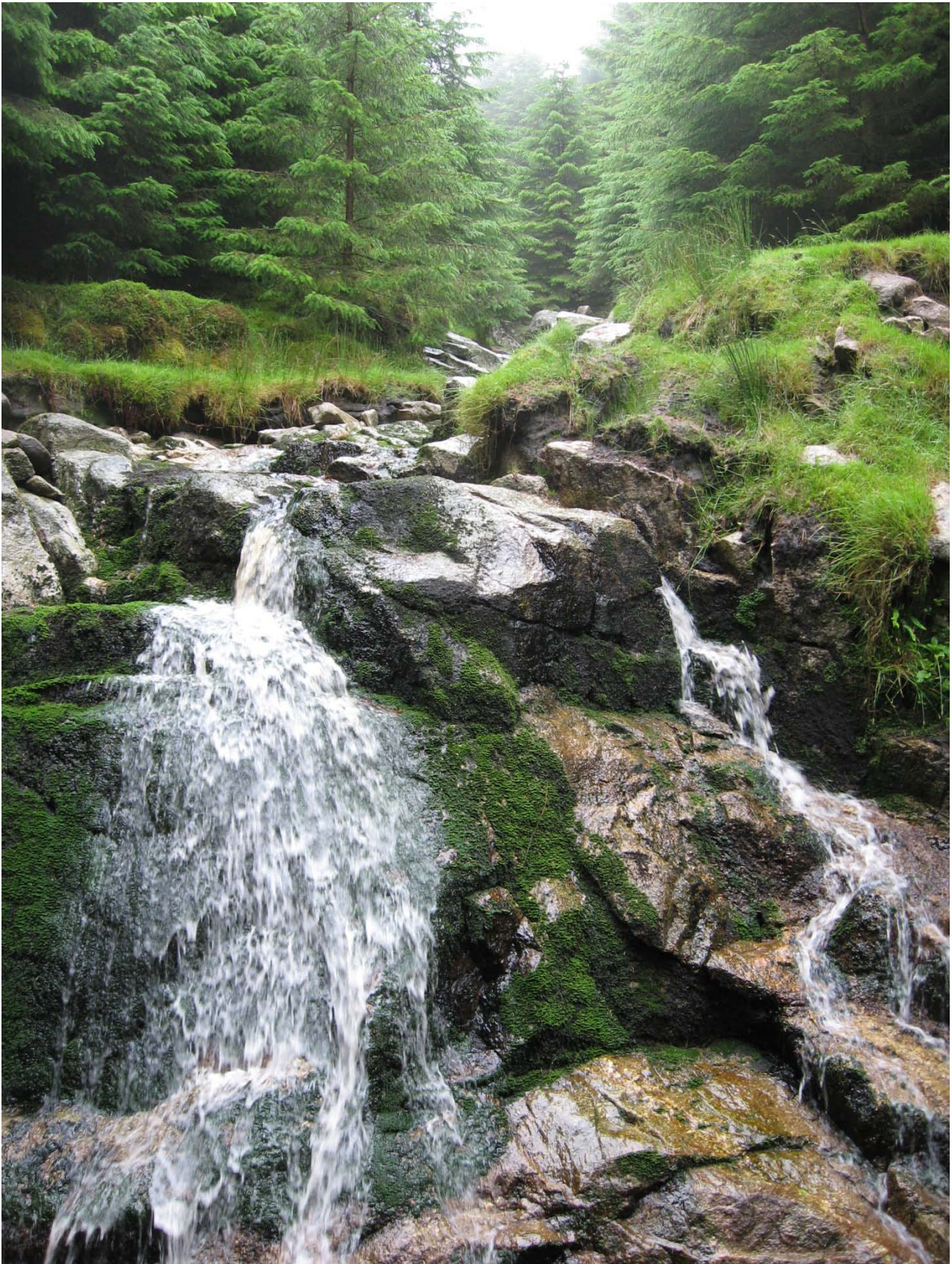


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- | | |
|------|------|
| 2015 | 40% |
| 2021 | 80% |
| 2027 | 100% |



The percentage status is determined by the number of reportable segments or sub-basins. For this reason the percentage might not seem representative.



9 Proposed Measures

The measures that are proposed have been selected jointly by the Eastern River Basin District project and the constituent Local Authorities. Descriptions of each individual water body or sub catchment, the pressures affecting it and the proposed measures are provided in a series of separate, more detailed, electronic documents (see Section 8) which can be downloaded from the Eastern River Basin District website www.erbd.ie.

The initial selections were reviewed internally by different groups within the Local Authorities, and then by the Technical and Advisory Councils prior to the publication of the Draft Plan in December 2008. A greater level of detail together with the data and assumptions used, on a water body by water body basis, can be seen in the River Basin Management System (see Section 8). This can be viewed in each Local Authority and will allow interested parties to look in detail at individual water bodies and sub catchments and the process that was adopted.

The programme of measures for each water body comprises those basic measures (existing legislation) and additional specific actions considered necessary to achieve the objectives of the WFD; this combination of measures is termed “priority actions” in this Plan. A full list of basic measures can be seen in Section 7, whilst the supplementary measures and additional actions chosen for each sub-catchment or water body in the Eastern River Basin District can be read in Appendix B.

The tables in the accompanying Programme of Measures document present the priority actions to address the major pressures affecting each water management unit or water body, the agencies responsible for their implementation and other bodies which have a critical role in their success. These tables also show the present status of each water body and their target dates to achieve good status. The priority actions represent those measures that are considered necessary to achieve good status and include both existing legislation and other measures. The tables are grouped by water body type (rivers, lakes, transitional, coastal and groundwater) and are presented alphabetically within those groups.

Tables 9.1 and 9.2 present a summary of the priority actions (the combination of selected basic and supplementary measures), together with their relative costs, that are recommended to be applied in each water body or sub catchment grouped by the source of pressure, for example wastewater treatment plants or abstractions. A unique combination of measures has been identified to address the particular set of pressures that affect each sub catchment or water body. Maps 9.1 – 9.3 show the water management units and water bodies individually. Table 9.3 provides the names of the groundwater bodies represented by number codes on Map 9.3. The most frequently selected measures, by source, can be seen in Appendix D.

Estimates of cost and effectiveness have been developed for each individual measures in the programme of measures for each sub-catchment or water body for the period 2009 – 2015 and these are available in the river basin management system; a summary is provided in Section 10. At this stage the costs are approximate, sometimes based on unit values or capital costs for works already planned. All of the assumptions that have been used in the process of measures selection and evaluation have been recorded in the RBMS and are also available for review. As more accurate information becomes available through pilot studies and other sources, then this can readily be incorporated, and the cost calculations revised accordingly.

It is recommended that a precautionary approach is adopted whereby some of the measures selected are implemented by pilot studies accompanied by intensive monitoring and modelling. It is sensible that measures are not widely imposed before full confidence in their effectiveness and appropriateness is gained through these preliminary activities.

This Plan identifies some water bodies which are not expected to achieve good status by 2015. However, the vast majority are expected to attain good status in the subsequent planning cycles when the measures have been fully tested and evaluated.

Table 9.4 lists the wastewater treatment works in the Eastern River Basin District, the planned improvements and a date by which they need to perform satisfactorily if the target dates for good status are to be achieved. These are presented on Map 9.4. The improvement of treatment plants will be a key element of achieving good status in many waters, either through increased capacity or additional levels of treatment. However, it is important that this work is carefully considered at the design stage since achieving the requirements of the Urban Wastewater Directive may not, in itself, provide adequate protection to the environment, especially where the discharges are into small rivers and streams or lakes which have low assimilative capacity. Similarly, in some areas other pollutant sources are more important and installation of additional levels of treatment may not be cost effective.

Table 9.1: Recommended Programme of Measures: Basic Measures
Measures to Reduce Impact from Source Type

| | Measures to Reduce Impact from Source | | | | | | | | | | | | |
|------------------------------------|---------------------------------------|--|---------------------------------------|---------------------|---|----------------------|----------|--------------------|--------------------|-------------------|-------------------------------------|-----------------------------|------------------|
| Water Management Unit / Water Body | Abstractions | Agricultural Point and Diffuse Sources | Unlicensed Agricultural Point Sources | Chemical Fertiliser | Planning, Development and other sources | Dangerous Substances | Forestry | Industrial Sources | Manure Fertilisers | Intensive Landuse | Local Authority Licenced Discharges | Wastewater Treatment Plants | Indicative Total |
| Acurry (Lough) | €€ | € | € | € | | | | | | | | | €€ |
| Aleckafin_CL | | | | | | | | * | | | | | * |
| Annagh Lough or White Lough | € | | | | | | €€ | | € | | | | €€ |
| Ashford S&G | | * | * | | | | | | * | | | | * |
| Athboy | € | € | €€€€ | | € | | | | €€ | | € | €€€ | €€€€ |
| Athboy (001) | | * | * | | | | | | * | | | | * |
| Avoca | € | €€ | €€€€€ | | € | € | | € | €€ | | €€ | € | €€€€€ |
| Avoca Estuary | | | | | € | €€€ | | | | € | € | €€€€€ | €€€€€ |
| Ballany S&G | | * | * | | | | | | * | | | | * |
| Ballyboghil | € | € | €€€ | | | | | | € | | € | €€€€€€ | €€€€€€ |
| Ballymore Eustace S&G | | * | * | | | | | | * | | | | * |
| Baltray | € | €€ | €€€ | € | € | | | | € | | € | | €€€ |
| Balytunny | € | € | €€ | | | | | | € | | € | | €€ |
| Bane (Lough) | €€ | | | | | | | | | | | | €€ |
| Basketstown_LF | | | | | | | | * | | | | | * |
| Bettystown | | | | | | € | | | | | | | € |
| Blackwater North | € | €€€€ | €€€€€ | | € | | | | €€ | | €€ | €€€ | €€€€€ |
| Blackwater South | € | €€€ | €€€ | | €€ | | | | €€ | | €€ | €€€ | €€€€ |
| Blessington S&G | | | | | | € | | | | | | | € |
| Boyle_CL | | | | | | | | * | | | | | * |
| Boyne Estuary | | €€ | | | | €€ | | | | | | €€€€ | €€€€€ |
| Boyne Estuary Plume Zone | | | | | | | | | | | | | € |
| Boyne Lower | € | €€ | €€€€€ | | € | | | | €€ | | €€ | €€€€€ | €€€€€€ |
| Boyne Upper | € | €€€€ | €€€ | | €€ | | | | €€ | | €€ | €€€€€ | €€€€€€ |
| Bray Lower (Lough) | | | | | | | | | | | | | €€ |

| | Measures to Reduce Impact from Source | | | | | | | | | | | | |
|------------------------------------|---------------------------------------|--|---------------------------------------|---------------------|---|----------------------|----------|--------------------|--------------------|-------------------|-------------------------------------|-----------------------------|------------------|
| Water Management Unit / Water Body | Abstractions | Agricultural Point and Diffuse Sources | Unlicensed Agricultural Point Sources | Chemical Fertiliser | Planning, Development and other sources | Dangerous Substances | Forestry | Industrial Sources | Manure Fertilisers | Intensive Landuse | Local Authority Licenced Discharges | Wastewater Treatment Plants | Indicative Total |
| Broad Lough | | €€€ | | | | | | | | | | | €€€€ |
| Broadmeadow | € | € | €€€ | | | | | | €€ | | €€ | €€€€€€€ | €€€€€€€ |
| Broadmeadow Water | | €€€ | | | € | €€ | | | | | € | €€€€€€€ | €€€€€€€ |
| Cammock | € | € | €€ | | €€ | €€ | | €€ | € | | €€€€ | €€ | €€€€€ |
| Dargle | € | € | €€€ | | €€ | €€ | | | €€ | | € | € | €€€€ |
| Deel | € | €€ | €€ | | € | | | | € | | € | € | €€€ |
| Delvin | € | € | €€€ | | | | | | €€ | | € | €€€€€€€ | €€€€€€€ |
| Devlin (Mattock) | € | €€ | €€€€ | € | | € | | | €€ | | € | | €€€€ |
| Dodder | € | €€ | €€ | | €€€ | €€€ | | €€ | | | €€€ | €€ | €€€€ |
| Donabate | € | € | €€ | | | | | | € | | € | €€€€€€€ | €€€€€€€ |
| Doo (Lough) | € | | | | | | | | | | | | € |
| Drogheda | | * | * | | | € | | | * | | | | € |
| Drogheda Urban | | * | * | | | € | | * | * | | | * | € |
| Drogheda_LF | | | | | | | | * | | | | | * |
| Drumkeery Lough | €€ | € | €€ | | | | | | €€€ | | | | €€€ |
| Dublin Bay | | | | | €€€ | €€€€ | | | | | €€€ | €€ | €€€€ |
| Dublin Urban | | * | * | | | * | | * | * | | | * | * |
| Duleek | | * | * | | | | | | * | | | | * |
| Dunshaughlin | | * | * | | | | | | * | | | | * |
| Enniskerry S&G | | * | * | | | € | | | * | | | | € |
| Fassaroe_LF | | | | | | | | * | | | | | * |
| Glass (Lough) | € | | | | | | | | | | | | € |
| Glenasmole Reservoirs (068) | €€€ | € | €€ | € | €€ | | | | | | € | € | €€€ |
| Glenasmole Reservoirs (070) | € | € | €€ | € | € | | | | | | € | € | €€ |
| Glendalough Lower Lake | | | | | | | €€ | | € | | | | €€ |
| Glendalough Upper Lake | | | | | | | €€ | | € | | | | €€ |
| Golden Falls Reservoir | | € | | | € | | | | | | | | € |

| Water Management Unit / Water Body | Measures to Reduce Impact from Source | | | | | | | | | | | | |
|------------------------------------|---------------------------------------|--|---------------------------------------|---------------------|---|----------------------|----------|--------------------|--------------------|-------------------|-------------------------------------|-----------------------------|------------------|
| | Abstractions | Agricultural Point and Diffuse Sources | Unlicensed Agricultural Point Sources | Chemical Fertiliser | Planning, Development and other sources | Dangerous Substances | Forestry | Industrial Sources | Manure Fertilisers | Intensive Landuse | Local Authority Licenced Discharges | Wastewater Treatment Plants | Indicative Total |
| Irish Sea Dublin (HA 09) | | | | | €€ | | | | | € | | | €€€ |
| Kilcoole S&G | | | | | | € | | | | | | | € |
| Kilcullen | | | | | | | | | | | | | * |
| Kilmurry | € | € | €€ | | € | € | | € | € | | € | € | €€€ |
| Leixlip Liffey Reservoir | € | | | | €€ | | | | | | | € | €€€ |
| Lene (Lough) | €€ | | | | € | | | | | | | | €€ |
| Liffey | €€€ | €€€€ | €€€€ | | €€€€ | €€€ | | €€ | €€ | | €€€ | €€€€€€€ | €€€€€€€ |
| Liffey Estuary Lower | | | | | | €€ | | | | | € | €€€€€€€ | €€€€€€€ |
| Liffey Estuary Upper | | | | | | €€ | | €€ | | | € | | €€€ |
| Lough Lene | | | | | | | | | | | | | * |
| Lusk | € | € | €€€ | | | | | | €€ | | € | €€€€€€€ | €€€€€€€ |
| Lusk-Bog of the Ring | * | * | * | | | € | | | * | | | | € |
| Lusk-West | | | * | | | € | | | | | | | € |
| Malahide Bay | | | | | € | €€ | | | | | | €€€€ | €€€€ |
| Mayne Estuary | | | | | € | € | | | | € | | | €€€ |
| Mosney | € | € | €€€ | | | | | | € | | € | | €€€ |
| Moynalty | | * | * | | | € | | | * | | | | € |
| Naas | | * | * | | | * | | | * | | | | * |
| Naas_CL | | | | | | | | * | | | | | * |
| Nadreegeal Loughs | €€ | € | €€ | | | | | | €€ | | | | €€€ |
| Nahanagan (Lough) | | | | | | | | | | | | | €€ |
| Nanny | € | €€ | €€€€ | | | | | | €€ | | €€ | €€€ | €€€€ |
| Nanny Estuary | | €€€ | | | | € | | €€ | | | | | €€€ |
| Navan Orebody | | * | * | | | | | | * | | | | * |
| Newcastle | € | € | €€€ | | | | | | €€ | | € | | €€€ |
| Newtown Lough | | * | * | | | | | | * | | | | * |
| North Bull Island | | | | | | | | | | | | | €€€ |

| | Measures to Reduce Impact from Source | | | | | | | | | | | | |
|--|---------------------------------------|--|---------------------------------------|---------------------|---|----------------------|----------|--------------------|--------------------|-------------------|-------------------------------------|-----------------------------|------------------|
| Water Management Unit / Water Body | Abstractions | Agricultural Point and Diffuse Sources | Unlicensed Agricultural Point Sources | Chemical Fertiliser | Planning, Development and other sources | Dangerous Substances | Forestry | Industrial Sources | Manure Fertilisers | Intensive Landuse | Local Authority Licenced Discharges | Wastewater Treatment Plants | Indicative Total |
| Northwestern Irish Sea (HA 08) | | | | | €€ | €€ | | €€ | | | € | €€€€€€€ | €€€€€€€ |
| Old Kilcullen S&G | | * | * | | | | | | * | | | | * |
| Pollaphuca Reservoir | | € | €€€ | | €€ | €€ | €€ | €€ | €€ | | € | €€€€ | €€€€ |
| Potters | € | € | €€€€ | | € | | | | €€ | | € | | €€€€ |
| Ramor (Lough) | | € | €€€ | | | €€ | | €€ | €€ | | €€ | €€€€ | €€€€ |
| Rathnew | € | € | €€€ | | | | | | € | | € | | €€€ |
| Rogerstown Estuary | | €€ | | | €€ | €€ | | €€ | | € | | €€€€€€€ | €€€€€€€ |
| Rye Water Valley GWDTE | | | | | | € | | * | | | | * | € |
| Ryewater | € | €€€€ | €€€€ | | €€ | | | | €€ | | €€ | €€€ | €€€€€ |
| Santry_Mayne_Sluice | € | € | €€ | | €€ | | | € | € | | €€€ | €€ | €€€ |
| Shanganagh | € | € | | | €€€ | € | | € | | | € | | €€€ |
| Southwestern Irish Sea - Brittas Bay (HA 10) | | | | | €€€ | €€€€ | | €€ | | € | € | | €€€€ |
| Southwestern Irish Sea - Killiney Bay (HA10) | | | | | €€€ | € | | € | | € | €€ | €€€€€€€ | €€€€€€€ |
| Stonyford | € | €€ | €€€ | | | | | | € | | € | € | €€€ |
| Swords_CL | | | | | | | | * | | | | | * |
| Tay (Lough) | | | | | | | €€ | | € | | | | €€ |
| Tempelrainy | € | € | €€ | | | | | | € | | | | €€€ |
| Tinnakilly_CL | | | | | | | | * | | | | | * |
| Tolka | € | € | €€€€ | | €€ | | | € | €€ | | €€€ | €€€€ | €€€€€ |
| Tolka Estuary | | | | | | €€ | | | | | € | | €€€ |
| Trim | | * | * | | | €€ | | * | * | | | | €€ |
| Upper Lough Skeagh | €€ | € | €€ | | | | | | €€€ | | | | €€€ |
| Vartry | € | € | €€€ | | € | | | | €€ | | € | | €€€ |
| Vartry Reservoir Lower | €€ | | | | €€ | | | | | | | € | €€ |
| Vartry Reservoir Upper | €€ | | | | €€ | | | | | | | € | €€ |
| Walkinstown_CL | | | | | | | | * | | | | | * |
| Wicklow Central (Avoca Mine) | | | | | | €€ | | | | | | | €€ |

| | Measures to Reduce Impact from Source | | | | | | | | | | | | |
|------------------------------------|---------------------------------------|--|---------------------------------------|---------------------|---|----------------------|----------|--------------------|--------------------|-------------------|-------------------------------------|-----------------------------|------------------|
| Water Management Unit / Water Body | Abstractions | Agricultural Point and Diffuse Sources | Unlicensed Agricultural Point Sources | Chemical Fertiliser | Planning, Development and other sources | Dangerous Substances | Forestry | Industrial Sources | Manure Fertilisers | Intensive Landuse | Local Authority Licenced Discharges | Wastewater Treatment Plants | Indicative Total |
| Wicklow East | * | * | * | | | | | | * | | | | * |
| Wilkinstown | | * | * | | | € | | | * | | | | € |
| Grand Total | €€€ | €€€€€€€ | €€€€€€€ | €€ | €€€€€ | €€€€€ | €€ | €€€ | €€€€ | € | €€€€€ | €€€€€€€ | €€€€€€€ |

| | |
|---------|---|
| * | This indicates that the chosen measure benefits both surface and groundwater and the costs have only been applied to surface water (rivers, lakes, transitional and coastal) to avoid double counting |
| € | €100,000 |
| €€ | €1,000,000 |
| €€€ | €5,000,000 |
| €€€€ | €15,000,000 |
| €€€€€ | €30,000,000 |
| €€€€€€ | €50,000,000 |
| €€€€€€€ | >€50,000,000 |

Table 9.2: Recommended Programme of Measures: Supplementary Measures
Measures to Reduce Impact from Source Type

| Water Management Unit / Water Body | Measures to Reduce Impact from Source | | | | | | | | | | | | | | | |
|------------------------------------|---------------------------------------|--|---------------------------------------|---------------------|---|-------------------------------|----------------------|----------|-------------------------------|--------------------|-------------------|-------------------------------------|-------------------------------------|-------------------------|-----------------------------|------------------|
| | Abstractions | Agricultural Point and Diffuse Sources | Unlicensed Agricultural Point Sources | Chemical Fertiliser | Planning, Development and other sources | An Absence of sufficient data | Dangerous Substances | Forestry | To Protect High Status Waters | Manure Fertilisers | Intensive Landuse | Local Authority Licenced Discharges | Onsite Wastewater Treatment Systems | Urban Diffuse Pollution | Wastewater Treatment Plants | Indicative Total |
| Acurry (Lough) | € | | | | € | | | | | | | | | | | € |
| Aleckafin_CL | | | | | * | | | | | | | | * | | € | € |
| Annagh Lough or White Lough | | | | | € | | | € | | € | | | | | | € |
| Arklow_Urban | | | | | * | | | | | | | | * | | € | € |
| Ashbourne Urban Nth | | | | | * | | | | | | | | * | | € | € |
| Ashbourne Urban Sth | | | | | * | | | | | | | | * | | € | € |
| Ashford S&G | | | | | * | | | | | | | | * | | € | € |
| Athboy | € | | €€ | € | € | € | | | | € | € | | €€ | | €€€€ | €€€€ |
| Athboy (001) | | | | € | * | | | | | | | | * | | €€ | €€ |
| Avoca | €€ | | €€ | | € | €€€ | €€€€€ | €€ | | | €€ | | €€€ | € | €€€€ | €€€€€€ |
| Avoca Estuary | | | | | € | €€ | | | € | | €€ | | €€ | €€ | | €€€ |
| Bailieborough | | | | | * | | | | | | | | * | | €€ | €€ |
| Balbriggan | | | | € | * | | | | | | | | * | | € | € |
| Balbriggan Urban | | | | € | * | | | | | | | | * | | € | € |
| Ballany S&G | | | | | * | | | | | | | | * | | € | € |
| Ballyboghil | € | | €€ | | € | | | | | | | | €€ | | €€ | €€€ |
| Ballymore Eustace S&G | | | | | * | | | | | | | | * | | € | € |
| Balrothery | | | | € | * | | | | | | | | * | | € | € |
| Baltray | € | | | | € | € | | | | | | | €€€ | | €€ | €€€ |
| Balytunny | € | | € | | € | €€ | | | | | | | € | | €€ | €€ |
| Bane (Lough) | €€ | | | | € | € | | | | | | | | | | €€ |
| Basketstown_LF | | | | | * | | | | | | | | * | | € | € |
| Ben Lough | | | | | € | €€ | | | | | | | | | | €€ |
| Bettystown | | | | € | | €€ | € | | | | | | * | | €€ | €€ |

| | Measures to Reduce Impact from Source | | | | | | | | | | | | | | | |
|------------------------------------|---------------------------------------|--|---------------------------------------|---------------------|---|-------------------------------|----------------------|----------|-------------------------------|--------------------|-------------------|-------------------------------------|-------------------------------------|-------------------------|-----------------------------|------------------|
| Water Management Unit / Water Body | Abstractions | Agricultural Point and Diffuse Sources | Unlicensed Agricultural Point Sources | Chemical Fertiliser | Planning, Development and other sources | An Absence of sufficient data | Dangerous Substances | Forestry | To Protect High Status Waters | Manure Fertilisers | Intensive Landuse | Local Authority Licenced Discharges | Onsite Wastewater Treatment Systems | Urban Diffuse Pollution | Wastewater Treatment Plants | Indicative Total |
| Blackwater North | €€ | | €€ | € | € | €€ | | | | € | € | | €€€ | €€ | €€€€ | €€€€€ |
| Blackwater South | € | | €€ | € | € | €€ | | | | € | € | | €€€ | | €€€ | €€€€ |
| Blessington S&G | | | | € | * | | € | | | | | | * | | € | € |
| Boyle_CL | | | | | * | * | | | | | | | * | | € | € |
| Boyne Estuary | | | | | € | €€ | € | | € | | € | | | €€ | €€€ | €€€ |
| Boyne Estuary Plume Zone | | | | | € | | | | | | | | | | | € |
| Boyne Lower | € | € | €€ | € | € | €€ | | | | € | | | €€€ | | €€€€€ | €€€€€ |
| Boyne Upper | € | | €€ | € | € | €€ | € | | | € | €€ | | €€€ | | €€€ | €€€€ |
| Bray Lower (Lough) | | | | | € | € | | | € | | | | | | | € |
| Bray Upper (Lough) | | | | | € | € | | | | | | | | | | € |
| Bray Urban | | | | | * | | | | | | | | * | | € | € |
| Broad Lough | | | | | € | € | | | € | | | | | €€ | €€ | €€€ |
| Broadmeadow | € | € | €€ | € | € | €€ | | | | € | € | | €€€€ | | €€ | €€€€ |
| Broadmeadow Water | | | | | € | € | | | € | | € | | | €€ | €€€ | €€€ |
| Cammock | € | | | | € | €€€ | | | | | € | | | €€€€ | €€€€€€ | €€€€€€ |
| Castlekeeran S&G | | | | | * | | | | | | | | * | | € | € |
| Curragh S&G | | | | € | * | | | | | | | | * | | € | € |
| Dan (Lough) | | | | | € | | | | | | | | | | | € |
| Dargle | € | | €€ | | € | €€ | € | € | € | | €€€€ | | €€€ | € | €€€€€ | €€€€€ |
| Dargle Estuary | | | | | € | € | | | | | € | | | | | € |
| Deel | €€ | | € | | € | €€ | | | | € | | | €€ | | €€€ | €€€ |
| Delvin | € | | €€ | € | € | € | | | | € | | | €€ | | €€€€€ | €€€€€ |
| Devlin (Mattock) | € | | €€ | | € | € | | | | € | € | | €€€ | | €€€ | €€€ |
| Dodder | €€€ | | | | €€ | €€€€ | | | €€ | | €€€€ | | | €€€€ | €€€€€€€ | €€€€€€€ |
| Donabate | € | | € | | € | € | | | | | | | €€ | | €€€€€€ | €€€€€€ |
| Donore | | | | | * | | | | | | | | * | | € | € |

| | Measures to Reduce Impact from Source | | | | | | | | | | | | | | | |
|------------------------------------|---------------------------------------|--|---------------------------------------|---------------------|---|-------------------------------|----------------------|----------|-------------------------------|--------------------|-------------------|-------------------------------------|-------------------------------------|-------------------------|-----------------------------|------------------|
| Water Management Unit / Water Body | Abstractions | Agricultural Point and Diffuse Sources | Unlicensed Agricultural Point Sources | Chemical Fertiliser | Planning, Development and other sources | An Absence of sufficient data | Dangerous Substances | Forestry | To Protect High Status Waters | Manure Fertilisers | Intensive Landuse | Local Authority Licenced Discharges | Onsite Wastewater Treatment Systems | Urban Diffuse Pollution | Wastewater Treatment Plants | Indicative Total |
| Doo (Lough) | | | | | € | € | | | | | | | | | | € |
| Drogheda | | | | € | * | €€ | € | | | | | | * | | €€ | €€ |
| Drogheda Urban | | | | | * | €€ | € | | | | | | * | | €€ | €€ |
| Drogheda_LF | | | | | * | * | | | | | | | * | | € | € |
| Drumkeery Lough | € | | | | € | € | | | € | | | | €€ | | | €€ |
| Dublin | | | | € | * | | | | | | | | * | | € | € |
| Dublin Bay | | | | | € | €€ | € | | € | | € | €€ | | €€€ | €€€ | €€€ |
| Dublin Urban | | | | € | * | | € | | | | | | * | | €€ | €€ |
| Duleek | | | | € | * | | | | | | | | * | | € | € |
| Dunshaughlin | | | | | * | | | | | | | | * | | € | € |
| Enniskerry S&G | | | | € | * | | € | | | | | | * | | € | € |
| Fassaroe_LF | | | | | * | | | | | | | | * | | € | € |
| Glass (Lough) | | | | | € | € | | | | | | | | | | € |
| Glenasmole Reservoirs (068) | €€ | | | | | € | | | € | | € | | | | | €€ |
| Glenasmole Reservoirs (070) | € | | | | | € | | | € | | € | | | | | € |
| Glendalough Lower Lake | | | | | € | | | € | | € | | | | | | € |
| Glendalough Upper Lake | | | | | € | € | | € | | € | | | | | | € |
| Golden Falls Reservoir | €€ | € | € | | | € | | | | | | | € | | | €€ |
| Gormanstown S&G | | | | € | * | | | | | | | | * | | € | € |
| Greystones Urban | | | | | * | | | | | | | | * | | € | € |
| Hill of Tara | | | | | * | | | | | | | | * | | € | € |
| Hynestown | | | | € | * | | | | | | | | * | | € | € |
| Irish Sea Dublin (HA 09) | | | | | € | €€ | | | | | | | | | | €€ |
| Kilcoole Marsh | | | | | € | € | | | | | | | | | | € |
| Kilcoole S&G | | | | € | * | | € | | | | | | * | | € | € |
| Kilcullen | | | | € | * | | | | | | | | * | | €€ | €€ |

| | Measures to Reduce Impact from Source | | | | | | | | | | | | | | | |
|------------------------------------|---------------------------------------|--|---------------------------------------|---------------------|---|-------------------------------|----------------------|----------|-------------------------------|--------------------|-------------------|-------------------------------------|-------------------------------------|-------------------------|-----------------------------|------------------|
| Water Management Unit / Water Body | Abstractions | Agricultural Point and Diffuse Sources | Unlicensed Agricultural Point Sources | Chemical Fertiliser | Planning, Development and other sources | An Absence of sufficient data | Dangerous Substances | Forestry | To Protect High Status Waters | Manure Fertilisers | Intensive Landuse | Local Authority Licenced Discharges | Onsite Wastewater Treatment Systems | Urban Diffuse Pollution | Wastewater Treatment Plants | Indicative Total |
| Killyconny Bog (Cloghbally) | | | | | * | | | | | | | | * | | € | € |
| Kilmurry | € | | € | | € | € | | | | | | | € | | €€ | €€ |
| Kilrathmurry S&G | | | | | * | | | | | | | | * | | € | € |
| Leixlip Liffey Reservoir | € | | | | | € | | | € | | € | | | | | €€ |
| Lene (Lough) | € | | | | € | € | | | | | | | | | | €€ |
| Liffey | €€€ | | €€ | | € | €€€€ | € | € | € | | €€ | | €€€ | €€€€ | €€€€€€€ | €€€€€€€ |
| Liffey Estuary Lower | | | | | | € | | | € | | € | € | | €€ | €€€€€€ | €€€€€€ |
| Liffey Estuary Upper | | | | | € | € | | | € | | € | € | | €€ | €€€€€€ | €€€€€€ |
| Longwood | | | | | * | | | | | | | | * | | € | € |
| Lough Lene | | | | | * | €€ | | | | | | | * | | €€ | €€ |
| Lusk | € | | €€ | | € | € | | | | | | | €€ | | | €€ |
| Lusk-Bog of the Ring | €€ | | | € | | | € | | | | | | * | | € | €€ |
| Lusk-East | | | | € | * | | | | | | | | * | | € | € |
| Lusk-West | | | | € | * | | € | | | | | | * | | € | € |
| Malahide Bay | | | | | € | € | | | € | | | | | €€ | €€€ | €€€ |
| Mayne Estuary | | | | | € | € | | | € | | €€ | | | €€ | €€ | €€€ |
| Mosney | € | | € | € | € | | | | | € | | | €€ | | €€ | €€ |
| Mount Hevey Bog | | | | | * | | | | | | | | * | | € | € |
| Moynalty | | | | | * | | € | | | | | | * | | € | € |
| Moynalty | | | | | * | | | | | | | | * | | € | € |
| Naas | | | | | * | | | | | | | | * | | € | € |
| Naas Bedrock Nth Urban | | | | | * | | | | | | | | * | | € | € |
| Naas Bedrock Sth Urban | | | | | * | | | | | | | | * | | € | € |
| Naas_CL | | | | | * | | | | | | | | * | | € | € |
| Naas_SG Urban | | | | | * | | | | | | | | * | | € | € |
| Nadreegeal Loughs | € | | | | € | € | | | € | | | | | | | €€ |

| | Measures to Reduce Impact from Source | | | | | | | | | | | | | | | |
|------------------------------------|---------------------------------------|--|---------------------------------------|---------------------|---|-------------------------------|----------------------|----------|-------------------------------|--------------------|-------------------|-------------------------------------|-------------------------------------|-------------------------|-----------------------------|------------------|
| Water Management Unit / Water Body | Abstractions | Agricultural Point and Diffuse Sources | Unlicensed Agricultural Point Sources | Chemical Fertiliser | Planning, Development and other sources | An Absence of sufficient data | Dangerous Substances | Forestry | To Protect High Status Waters | Manure Fertilisers | Intensive Landuse | Local Authority Licenced Discharges | Onsite Wastewater Treatment Systems | Urban Diffuse Pollution | Wastewater Treatment Plants | Indicative Total |
| Nahanagan (Lough) | | | | | € | € | | | | | € | | | | | € |
| Nanny | € | | €€ | € | € | €€ | | | | € | | | €€€€ | | €€€€ | €€€€€ |
| Nanny Estuary | | | | | € | € | | | | | | | | | €€ | €€ |
| Navan Nth Urban | | | | | * | | | | | | | | * | | € | € |
| Navan Orebody | | | | | * | | | | | | | | * | | € | € |
| Navan Orebody 2 | | | | | * | | | | | | | | * | | € | € |
| Navan Sth Urban | | | | | * | | | | | | | | * | | € | € |
| Navan Tailings | | | | | * | | | | | | | | * | | € | € |
| Newbridge Urban | | | | | * | | | | | | | | * | | € | € |
| Newcastle | € | | € | | € | €€ | | | | | | | € | €€ | €€€ | €€€ |
| Newtown Lough | | | | | * | | | | | | | | * | | € | € |
| North Bull Island | | | | | € | € | | | | | €€€ | | | €€€ | €€ | €€€ |
| Northwestern Irish Sea (HA 08) | | | | | € | | | | | | | | | | | € |
| Old Kilcullen S&G | | | | | * | | | | | | | | * | | € | € |
| Ouler (Lough) | | | | | € | € | | | | | | | | | | € |
| Pollaphuca Reservoir | € | | | | | € | | | € | | € | | | | | €€ |
| Potters | € | | €€ | | € | €€ | € | | | | | | € | € | €€ | €€€ |
| Taheenmore Bog | | | | | * | | | | | | | | * | | € | € |
| Ramor (Lough) | | | | | € | € | | | € | | | | €€ | | | €€ |
| Rathnew | € | | € | | € | € | | | | | | | € | | €€€€ | €€€€ |
| Realtage | | | | | * | | | | | | | | * | | € | € |
| Redbog | | | | | € | € | | | | | | | | | | € |
| Rockabill | | | | | € | € | | | | | | | | | | € |
| Rogerstown Estuary | | | | | € | € | | | | | €€ | | €€ | €€ | €€ | €€€ |
| Rush Urban | | | | | * | | | | | | | | * | | € | € |
| Rye Water Valley GWDTE | | | | | * | | € | | | | | | * | | € | € |

| Water Management Unit / Water Body | Measures to Reduce Impact from Source | | | | | | | | | | | | | | | |
|--|---------------------------------------|--|---------------------------------------|---------------------|---|-------------------------------|----------------------|----------|-------------------------------|--------------------|-------------------|-------------------------------------|-------------------------------------|-------------------------|-----------------------------|------------------|
| | Abstractions | Agricultural Point and Diffuse Sources | Unlicensed Agricultural Point Sources | Chemical Fertiliser | Planning, Development and other sources | An Absence of sufficient data | Dangerous Substances | Forestry | To Protect High Status Waters | Manure Fertilisers | Intensive Landuse | Local Authority Licenced Discharges | Onsite Wastewater Treatment Systems | Urban Diffuse Pollution | Wastewater Treatment Plants | Indicative Total |
| Ryewater | € | | €€ | | € | €€ | | | | € | € | | €€€ | | €€ | €€€€ |
| Santry_Mayne_Sluice | € | | € | | € | €€€€ | | | | | € | | €€€ | €€€ | €€€€€ | €€€€€€ |
| Shanganagh | €€€ | | | | €€ | €€ | | | | | €€€€ | | | | €€€€€€ | €€€€€€ |
| Skerries Nth Urban | | | | | * | | | | | | | | * | | € | € |
| Skerries Sth Urban | | | | | * | | | | | | | | * | | € | € |
| Southwestern Irish Sea - Brittas Bay (HA 10) | | | | | € | €€ | € | | | | €€ | | | | €€€ | €€€€ |
| Southwestern Irish Sea - Killiney Bay (HA10) | | | | | € | €€ | € | | € | | €€ | | €€ | €€ | €€€€ | €€€€ |
| Stonyford | € | | €€ | | € | € | | | | € | | | €€ | | €€€ | €€€ |
| Swords | | | | | * | | | | | | | | * | | € | € |
| Swords Urban | | | | | * | | | | | | | | * | | € | € |
| Swords_CL | | | | | * | | | | | | | | * | | € | € |
| Tay (Lough) | | | | | € | € | | € | | € | | | | | | € |
| Tempelrainy | € | | € | | € | € | | | | | | | € | € | €€ | €€ |
| Tinnakilly_CL | | | | | * | | | | | | | | * | | € | € |
| Tolka | € | | €€ | | € | €€€€ | | | | € | € | | €€€€€€€ | €€€ | €€€€€€€ | €€€€€€€ |
| Tolka Estuary | | | | | | € | | | € | | € | | | €€ | €€€€€€ | €€€€€€ |
| Trim | | | | €€ | * | | €€ | | | | | | * | | €€ | €€ |
| Trim Urban | | | | | * | | | | | | | | * | | € | € |
| Turlough Hill | | | | | € | € | | | | | | | | | | € |
| Upper Lough Skeagh | € | | | | € | € | | | € | | | | €€ | | | €€ |
| Vartry | €€ | | € | | € | €€ | € | € | | | | | € | € | €€€€ | €€€€ |
| Vartry Reservoir Lower | €€ | | | | | € | | | € | | € | | | | | €€ |
| Vartry Reservoir Upper | €€ | | | | | € | | | € | | € | | | | | €€ |
| Walkinstown_CL | | | | | * | | | | | | | | * | | € | € |
| Wicklow Central (Avoca Mine) | | | | | * | * | €€€ | | | | | | * | | € | €€€ |
| Wicklow East | | | | | * | | | | | | | | * | | €€ | €€ |

| | Measures to Reduce Impact from Source | | | | | | | | | | | | | | | |
|------------------------------------|---------------------------------------|--|---------------------------------------|---------------------|---|-------------------------------|----------------------|----------|-------------------------------|--------------------|-------------------|-------------------------------------|-------------------------------------|-------------------------|-----------------------------|------------------|
| Water Management Unit / Water Body | Abstractions | Agricultural Point and Diffuse Sources | Unlicensed Agricultural Point Sources | Chemical Fertiliser | Planning, Development and other sources | An Absence of sufficient data | Dangerous Substances | Forestry | To Protect High Status Waters | Manure Fertilisers | Intensive Landuse | Local Authority Licenced Discharges | Onsite Wastewater Treatment Systems | Urban Diffuse Pollution | Wastewater Treatment Plants | Indicative Total |
| Wicklow South | | | | | * | | | | | | | | * | | €€ | €€ |
| Wilkinstown | | | | | * | | € | | | | | | * | | €€ | €€ |
| Indicative Total | €€€€ | € | €€€€ | €€ | €€ | €€€€€€ | €€€€€ | €€€ | €€ | €€ | €€€€€ | €€ | €€€€€€€ | €€€€€€ | €€€€€€€ | €€€€€€€ |

| | |
|---------|---|
| * | This indicates that the chosen measure benefits both surface and groundwater and the costs have only been applied to surface water (rivers, lakes, transitional and coastal) to avoid double counting |
| € | €100,000 |
| €€ | €1,000,000 |
| €€€ | €5,000,000 |
| €€€€ | €15,000,000 |
| €€€€€ | €30,000,000 |
| €€€€€€ | €50,000,000 |
| €€€€€€€ | >€50,000,000 |

Location Map for River Water Management Units



Map 9.1

Location Map for Lakes, Transitional and Coastal Water Bodies



Table 9.3: Key to Groundwater Bodies Map

| ID | Groundwater Body |
|----|------------------------|
| 1 | Dunshaughlin |
| 2 | Hill of Tara |
| 3 | Hynestown |
| 4 | Longwood |
| 5 | Moynalty |
| 6 | Moynalvy |
| 7 | Realtage |
| 8 | Swords_CL |
| 9 | Aleckafin_CL |
| 10 | Basketstown_LF |
| 11 | Tinnakilly_CL |
| 12 | Bettystown |
| 13 | Donore |
| 14 | Boyle_CL |
| 15 | Drogheda_LF |
| 16 | Naas_CL |
| 17 | Walkinstown_CL |
| 18 | Duleek |
| 19 | Ballany S&G |
| 20 | Ballymore Eustace S&G |
| 21 | Blessington S&G |
| 22 | Kilrathmurry S&G |
| 23 | Lusk-Bog of the Ring |
| 24 | Navan Orebody 2 |
| 25 | Navan Tailings |
| 26 | Naas_SG Urban |
| 27 | Naas Bedrock Nth Urban |
| 28 | Rush Urban |
| 29 | Newbridge Urban |
| 30 | Curragh S&G |
| 31 | Ashbourne Urban Nth |
| 32 | Ashbourne Urban Sth |
| 33 | Trim Urban |
| 34 | Lusk-East |
| 35 | Skerries Sth Urban |
| 36 | Skerries Nth Urban |
| 37 | Wilkinstown |
| 38 | Navan Sth Urban |
| 39 | Trim |

| ID | Groundwater Body |
|-----|------------------------------|
| 40 | Drogheda Urban |
| 41 | Swords |
| 42 | Wicklow South |
| 43 | Old Kilcullen S&G |
| 44 | Balbriggan |
| 45 | Balrothery |
| 46 | Castlekeeran S&G |
| 47 | Drogheda |
| 48 | Gormanstown S&G |
| 49 | Lough Lene |
| 50 | Lusk-West |
| 51 | Naas |
| 52 | Wicklow Central (Avoca Mine) |
| 53 | Arklow_Urban |
| 54 | Kilcoole S&G |
| 55 | Ashford S&G |
| 56 | Bray Urban |
| 57 | Greystones Urban |
| 58 | Enniskerry S&G |
| 59 | Balbriggan Urban |
| 60 | Kilcullen |
| 61 | Naas Bedrock Sth Urban |
| 62 | Navan Nth Urban |
| 63 | Navan Orebody |
| 64 | Swords Urban |
| 65 | Wicklow East |
| 66 | Fassaroe_LF |
| 67 | Dublin Urban |
| 68 | Rye Water Valley |
| 69 | Dublin |
| 70 | Raheenmore Bog |
| 71 | Newtown Lough |
| 72 | Mount Hevey Bog |
| 73 | Killyconny Bog (Cloghbally) |
| 74 | Athboy |
| 75 | Bailieborough |
| S&G | Sand& Gravel |
| CL | Contaminated Land |
| LF | Landfill |

Location of Groundwater Bodies



See Table 9.3

Table 9.4 Wastewater Treatment Plants in the Eastern River Basin District

| Name | County | Present Treatment | Type of Treatment | Date of New Works (Year) | WSIP Cost | Population | Receiving Water | Status of Receiving Water | Good Status Target Date |
|---|------------------------|---|---------------------------|---|-------------|------------|-----------------------------------|---------------------------|-------------------------|
| Population Equivalent greater than 15,000 | | | | | | | | | |
| North Dublin Drainage System (Howth) | Dublin City / Fingal | No Treatment, Secondary Treatment. Plant Under Construction | | Upgrade due 2012 | | 30,000 | North Dublin Bay | | |
| Ringsend WwTW | Dublin City | Secondary. | Sequential Batch Reaction | Extension: Start 2009, Finish 2016 | €66,000,000 | 1,900,000 | Liffey Estuary | Moderate | 2027 |
| Shanganagh WwTW | Dun-Laoghaire Rathdown | Preliminary Treatment. Secondary Treatment Plant Under Construction | | Start 2007 - 2009 | €76,000,000 | 67,500 | SW Irish Sea (Killiney Bay HA 10) | High | 2015 |
| Swords WwTW | Fingal | Secondary with NR | Conventional Aeration | 2012 | | 60,000 | Broadmeadow Estuary | Moderate | 2027 |
| Skerries WwTW | Fingal | New Secondary Treatment Plant Constructed in 2008 | Septic Tank | | | 12,500 | Northwestern Irish Sea (HA 08) | High | 2015 |
| Balbriggan Outfall | Fingal | New Secondary Treatment Plant Constructed in 2008 | | | | 13,000 | NW Irish Sea (HA 08) | High | 2015 |
| Leixlip WWTP | Kildare | Secondary with NR | Activated Sludge | Lower Liffey Valley Sewerage Scheme (Treatment Plant & Collection System for Kilcock, Celbridge, Maynooth and Leixlip). At construction | €35,700,000 | 80,000 | River Liffey Lower | Poor | 2027 |
| Osberstown WWTP | Kildare | Secondary with NR | Conventional Aeration | Work Ongoing: Sewerage Scheme Stage 3 (Osberstown) | €18,000,000 | 80,000 | River Liffey Lower | Moderate | 2027 |
| Drogheda WWTP | Louth | Secondary | | | | 101,000 | Boyne Estuary | Moderate | 2027 |
| Navan WwTW | Meath | Secondary with NR | Extended Aeration | | | 40,000 | Boyne River | Moderate | 2021 |
| Population Equivalent 10,000 – 15,000 | | | | | | | | | |
| Malahide WwTW | Fingal | Secondary | Conventional Aeration | Upgrade due 2012 | | 21,000 | Broadmeadow Estuary | Moderate | 2027 |
| Trim WwTW | Meath | Secondary with NR | Extended Aeration | | | 12,000 | Boyne River | Moderate | 2021 |
| Arklow | Wicklow | No Treatment | | Arklow Sewerage Scheme | €15,900,000 | 15,000 | Avoca Estuary | Moderate | 2027 |
| Population Equivalent 2,000 – 10,000 | | | | | | | | | |
| Mullagh WWTP | Cavan | Secondary with NR | Biological Filtration | | | 3,000 | Moynalty Lower | Poor | 2021 |
| Virginia WWTP | Cavan | Secondary with NR | Extended Aeration | Virginia & Bailieborough Sewerage Scheme Extension Stage 3 Primary Report for upgrading Virginia WWTP completed. Start 2007 – 2009? | €8,000,000 | 3,000 | Lough Ramor | Bad | 2027 |
| Bailieborough WWTP | Cavan | Secondary with NR | Extended Aeration | See above | €8,000,000 | 2,500 | Blackwater Upper | Poor | 2015 |
| Portrane WwTW | Fingal | Secondary | Extended Aeration | Portrane/ Donabate/ Rush/ Lusk Sewerage Scheme. Start 2009, Finish 2011 | €62,400,000 | 8,000 | Northwestern Irish Sea (HA 08) | High | 2015 |
| Lusk Waste WwTW | Fingal | Primary Treatment Only | Septic Tank | Donabate/ Rush/ Lusk Sewerage Scheme. | €62,400,000 | 3,000 | Rogerstown Estuary | Moderate | 2021 |
| Rush Outfall | Fingal | No Treatment | | Portrane/ Donabate/ Rush/ Lusk Sewerage Scheme. | €62,400,000 | 12,500 | Northwestern Irish Sea (HA 08) | High | 2015 |

| Name | County | Present Treatment | Type of Treatment | Date of New Works (Year) | WSIP Cost | Population | Receiving Water | Status of Receiving Water | Good Status Target Date |
|---------------------------------------|------------------------|----------------------------|---|--|-------------|------------|--------------------------------|---------------------------|-------------------------|
| Dunshaughlin WwTW | Meath | Secondary with NR | Extended Aeration | | | 4,500 | Broadmeadow Upper | Bad | 2021 |
| Johnstown Bridge Sewage WwTW | Meath | Secondary with NR | Extended Aeration | | | 3,500 | Ballycorron River | Good | 2015 |
| Kells Waste WwTW | Meath | Secondary | Extended Aeration | Kells Sewerage Scheme. Start 2007 - 2009 | €11,000,000 | 8,000 | Blackwater Lower River | Poor | 2015 |
| Stamullen WwTW | Meath | Secondary with NR | Extended Aeration | | | 2,500 | Delvin Lower | Poor | 2021 |
| Athboy Waste WwTW | Meath | Secondary | Extended Aeration | Meath Grouped Towns & Villages Sewerage Scheme - Works underway. Finish Early 2010 | €37,000,000 | 2,500 | Trimblestown River | Poor | 2021 |
| Duleek Waste WwTW | Meath | Secondary with NR | Extended Aeration | Meath Grouped Towns & Villages Sewerage Scheme - Works underway. Finish End 2009 | €37,000,000 | 2,500 | Nanny River | Poor | 2027 |
| Mornington | Meath | Preliminary Treatment Only | | Pumped to Drogheda since 2003 | | 6,000 | | | |
| Edenderry WwTW | Offaly | Secondary with NR | Extended Aeration | Edenderry Sewerage Scheme - Interim Plant commissioned 12/2007. Included in WSIP 2009. Start 2007 - 2009 | €14,300,000 | 7,700 | Boyne Upper | Moderate | 2015 |
| Kinnegad WwTW | Westmeath | Secondary with NR | Extended Aeration | Plant Upgrade Planned | No Info | 2,800 | Kinnegad Lower | Moderate | 2021 |
| Rochfortbridge WwTW | Westmeath | Secondary | Extended Aeration | Rochfortbridge Sewerage Scheme Phase 1. Start 2007 - 2009 | €5,870,000 | 2,700 | Castlejordan River | Poor | 2027 |
| Kilcoole WwTW | Wicklow | Secondary | Extended Aeration | | | 3,000 | Kilcoole Marsh | Moderate | 2021 |
| Blessington WwTW | Wicklow | Secondary with NR | Extended Aeration | Start 2007 - 2009 | €3,445,000 | 3,000 | Golden Falls Reservoir | | |
| Enniskerry WwTW | Wicklow | Secondary with NR | Extended Aeration | | | 3,000 | Dargle River | Good | 2015 |
| Population Equivalent less than 2,000 | | | | | | | | | |
| Coliemore Outfall | Dun-Laoghaire Rathdown | No Treatment | | | | 812 | Dublin Bay | Moderate | 2027 |
| Toberburr WwTW Plant | Fingal | Secondary | Extended Aeration | | | 650 | Ward Lower | Poor | 2027 |
| Loughshinny WwTW | Fingal | Primary Treatment Only | Septic Tank | | | 2,000 | Northwestern Irish Sea (HA 08) | High | 2015 |
| Ballymore Eustace WWTP | Kildare | Primary Treatment Only | Dortmund Tank | Plant Upgrade planned. Start 2007 - 2009 | €1,400,000 | 1,000 | Liffey Lower | Moderate | 2021 |
| Kilmeague WWTP | Kildare | Secondary | Activated Sludge | | | 700 | Awillyinish Stream | Moderate | 2021 |
| Tullyallen WwTW | Louth | Secondary | Extended Aeration with Nutrient Removal | | | 1500 | Boyne Estuary | Moderate | 2027 |
| Collon WWTP | Louth | Secondary | Nutrient Removal and tertiary polishing | Serviced Land Initiative | | 1200 | River Mattock | Moderate | 2021 |
| Ballivor WwTW | Meath | Secondary with NR | Extended Aeration | | | 500 | Ballivor River | Moderate | 2021 |
| Kildalkey WWTP | Meath | Secondary | | | | 137 | Athboy Lower | Poor | 2021 |
| Slane Waste WwTW | Meath | Secondary | Extended Aeration | | | 1,500 | Boyne Lower | Moderate | 2027 |
| Longwood WwTW | Meath | Secondary with NR | Extended Aeration | | | 700 | Blackwater Lower | Moderate | 2021 |
| Summerhill WwTW | Meath | Secondary | Extended Aeration | Meath Grouped Towns & Villages Sewerage Scheme. Start 2007 - 2009 (Works underway - mid 2010) | €37,000,000 | 700 | Clonmeath River | Good | 2015 |

| Name | County | Present Treatment | Type of Treatment | Date of New Works (Year) | WSIP Cost | Population | Receiving Water | Status of Receiving Water | Good Status Target Date |
|---------------------|-----------|------------------------|---|--|------------|------------|------------------|---------------------------|-------------------------|
| Kentstown | Meath | Secondary with NR | Extended Aeration | | | 600 | Nanny Upper | Poor | 2027 |
| Carlanstown WwTW | Meath | Secondary with NR | Extended Aeration | | | 600 | Moynalty Lower | Poor | 2021 |
| Kilmessan | Meath | Secondary | | | | | Skane Lower | Moderate | 2021 |
| Rhode WwTW | Offaly | Secondary with NR | Imhoff Tank | Rhode Sewerage Scheme. Start 2007 - 2009, Interim Plant commissioned 12/2007. Included in WSIP 2009. | €3,832,000 | 976 | Yellow Upper | Good | 2015 |
| Clonmellon WwTW | Westmeath | Secondary | Extended Aeration | Plant Upgrade Planned. Start 2007 - 2009 | €689,000 | 500 | Athboy Lower | Poor | 2021 |
| Delvin WwTW | Westmeath | Secondary | Extended Aeration | Start 2007 - 2009 | €4,300,000 | 800 | Stonyford | Moderate | 2021 |
| Killucan WwTW | Westmeath | Secondary | Extended Aeration | | | 700 | Riverstown | Moderate | 2021 |
| Kilpedder WwTW | Wicklow | Secondary | Extended Aeration | Kilpedder WWTP connection to Greystones Scheme. Sewerage laid 2009. Pumping stations dependant on Development. On hold | | 600 | Knickitty Stream | | |
| Avoca | Wicklow | Primary Treatment Only | Septic/Imhoff Tank | | | 500 | Avoca Upper | Bad | 2027 |
| Roundwood | Wicklow | Secondary | | Roundwood WWTP upgrade to 1,600PE. Completed in 2006 | | 460 | Avonmore Upper | Good | 2015 |
| Ballinaclash WwTW | Wicklow | Secondary with NR | Extended Aeration | Ballinaclash WWTP Upgrade to 600PE. Completed | | 270 | Avonbeg Lower | Poor | 2027 |
| Rathnew WwTW | Wicklow | Secondary | Extended Aeration | | | 1,530 | Rathnew Upper | Moderate | 2021 |
| Rathdrum WwTW | Wicklow | Primary Treatment Only | Septic/Imhoff Tank | Plant Upgrade planned. Start 2007 - 2009 | €4,432,000 | 1,500 | Avoca Upper | Bad | 2027 |
| Aughrim WwTW | Wicklow | Secondary | SBR | | | 1300 | Aughrim River | Good | 2015 |
| Ashford WwTW | Wicklow | Secondary | Oxidation Ditch | Ashford WWTP Decommission. Connect to Wicklow Sewerage Scheme, 2010 | | 1090 | Vartry Lower | Moderate | 2015 |
| Laragh | Wicklow | Secondary | Extended Aeration | | | 1000 | Avonmore Lower | Good | 2015 |
| Newcastle WwTW | Wicklow | Secondary | Extended Aeration | Newcastle / Rathcoole / Saggart Water Supply and Sewerage Scheme (Development of Services). Start 2007 - 2009 | €5,170,000 | 1000 | Newcastle River | Moderate | 2021 |
| Redcross | Wicklow | Secondary | Extended Aeration | Redcross WWTP Upgrade to 800PE + . Completed 2008polishing Filter | | 800 | Redcross Upper | Moderate | 2021 |
| Other Plants | | | | | | | | | |
| Oldtown | Fingal | Secondary | Extended Aeration | | | 500 | | | |
| Naul | Fingal | Secondary | Conventional Aeration | | | 400 | Glendasan | Poor | 2021 |
| Ballyboghill | Fingal | Secondary | Conventional Aeration with Nutrient Removal | | | 250 | Oldtown | Poor | 2021 |
| Garristown | Fingal | Secondary | Extended Aeration with Nutrient Removal | | | 200 | River Delvin | | |
| Balgriffin | Fingal | Secondary | | | | 100 | Mayne | Poor | 2027 |
| Colecot WwTW | Fingal | Primary | | | | 100 | Wimbletown Upper | Good | 2009 |
| Turvey WwTW | Fingal | Primary | Septic Tank | | | 100 | Oldtown | Poor | 2021 |
| Rolestown | Fingal | Primary | Septic Tank | Upgrade finalised 2010 | | 100 | Broadmeadow | Poor | 2027 |

| Name | County | Present Treatment | Type of Treatment | Date of New Works (Year) | WSIP Cost | Population | Receiving Water | Status of Receiving Water | Good Status Target Date |
|------------------|-----------|-------------------|----------------------|--|------------|------------|----------------------|---------------------------|-------------------------|
| Clonuff | Kildare | Unknown | Septic Tank | | | 60 | Glash Mid | Poor | 2021 |
| Newtown Enfield | Kildare | Unknown | Puraflo | | | 80 | Newtown Stream | | |
| Donore | Kildare | Unknown | Puraflo | Works underway. 2007 - 2010 | | 90 | Awillyinish | Moderate | 2021 |
| Clogherinko | Kildare | Unknown | MBBR Aeration System | | | 60 | Ballycowan | Good | 2015 |
| Rathcoffey | Kildare | Unknown | Puraflo | | | 100 | Ryewater | | 2027 |
| Julianstown WwTW | Meath | Unknown | Pumped to Drogheda | | | 600 | Nanny Lower | Poor | 2027 |
| Donore WwTW | Meath | Secondary | Extended Aeration | Meath Grouped Towns & Villages Sewerage Scheme . 2007 - 2009 | 37,000,000 | 500 | Boyne Lower | Good | 2021 |
| Crossakeel | Meath | Secondary | | | | 400 | Athboy Upper | Poor | 2021 |
| IDA (Kells) | Meath | Unknown | | Kells Sewerage Scheme. '07 – '09 | 11,000,000 | 400 | Blackwater Lower | Poor | 2027 |
| Dunderry | Meath | Unknown | | | | 200 | Clady Mid | Moderate | 2021 |
| Moynalty | Meath | Unknown | | Meath Grouped Towns & Villages Sewerage Scheme | 37,000,000 | 200 | Moynalty Lower | Poor | 2021 |
| Clonard | Meath | Unknown | | | | 100 | Kinnegad Lower | Moderate | 2021 |
| Ballinabrackey | Meath | Unknown | | | | 50 | Castlejordan River | | |
| Enfield | Meath | Secondary | | | | 3500 | Blackwater | Good | 2015 |
| Bohermeen | Meath | Unknown | | | | 50 | Ditch | | |
| Laytown WwTW | Meath | Secondary | Extended Aeration | | | 2500 | NW Irish Sea (HA 08) | High | 2015 |
| Ratarney | Westmeath | Unknown | | | | 140 | Deel | Moderate | 2015 |
| Milltownpass | Westmeath | Unknown | | Milltownpass Sewerage Scheme. 2007 - 2009 | 2,300,000 | 80 | Milltownpass | Moderate | 2015 |
| Thomastown | Wicklow | Unknown | | | | 150 | Ballyduff Upper | Moderate | |
| Glenealy WwTW | Wicklow | Secondary | RBC | | | 450 | Rathnew Upper | Moderate | 2021 |
| Hollywood WwTW | Wicklow | Secondary | Extended Aeration | | | 250 | Longstone | Good | 2015 |
| Glendalough WwTW | Wicklow | Secondary | Extended Aeration | | | 200 | Glendasan | Poor | 2027 |
| Barndarrig | Wicklow | Unknown | | | | 200 | Potters | Good | 2015 |
| Kirakee | Wicklow | Unknown | | | | 50 | Avonbeg Lower | Poor | 2027 |
| Knockiernan | Wicklow | Unknown | | | | | Pollaphuca River | | |

Map of Wastewater Treatment Works



Map 9.4

10 Target Objectives and Exemptions and Implementation of Measures

10.1 Introduction

This Plan describes the objectives of the Water Framework Directive (WFD), the present status of the waters in the Eastern River Basin District, the Programme of Measures (POM) that have been developed to protect and improve the waters and when these are expected to achieve good status in each water body.

Article 4 of the WFD sets out the environmental objectives and is clear that where several exist the most stringent will apply. It recognizes the special cases of Heavily Modified and Artificial water bodies and sets out specific objectives for these. In addition, exemptions are permissible based on:

- **Extensions of deadline;** the Directive Article 4 (4)(a) permits exemptions to this objective on the basis that:
 - *the scale of improvements required can only be achieved in phases exceeding the timescale, for reasons of technical feasibility;*
 - *completing the improvements within the timescale would be disproportionately expensive;*
 - *natural conditions do not allow timely improvement in the status of the body of water.*
- **Less stringent objectives;**when they are so affected by human activity, as determined in accordance with Article 5(1), or their natural condition is such that the achievement of these objectives would be infeasible or disproportionately expensive;
- **Temporary deteriorations;**if this is the result of circumstances of natural cause or force majeure which are exceptional or could not reasonably have been foreseen.... ;and
- **New modifications;**those modifications or alterations are of overriding public interest and/or the benefits to the environment and to society of achieving the objectives set out in paragraph 1 are outweighed by the benefits of the new modifications or alterations to human health, to the maintenance of human safety or to sustainable development, and the beneficial objectives served by those modifications or alterations of the water body cannot for reasons of technical feasibility or disproportionate cost be achieved by other means, which are a significantly better environmental option.....

Note: text in italics above is from the WFD

The EU Common Implementation Strategy states that the exemptions are an integral part of the environmental objectives set out in Article 4 and the planning process.

The Programme of Measures for each water body or sub-catchment described in this Plan has been designed to achieve good status in the majority of waters in the Eastern River Basin District. However, some exceptions remain, as permitted under the Directive, and these are described in this section of the Plan. The WFD intends that all waters achieve their objectives (ecological, quantitative and chemical) by 2015; however, it recognises that this will not be possible in all cases and reasons for this are also identified in this section. Further detailed information is available for download from www.erbd.ie.

10.2 Alternative Objectives - Heavily Modified Waters and Artificial Waters

Some surface waters have been substantially changed in character to allow uses such as navigation, water storage, public supply, flood defence and land drainage. To recognise that the benefits from such modifications often need to be retained, these waters are designated as heavily modified. The same reasoning applies to artificial waters (for example canals) created for human activities.

Heavily modified and artificial waters (shown in Table 10.1 and 10.2 and Map 10.1) are expected to achieve good ecological potential and this requires that measures addressing, for example, water quality are still implemented. Good potential acknowledges that the use of the water has an important economic benefit but requires that whilst that use should be preserved, other attributes of the conditions of the water must reach their full potential. Good potential has not yet been defined by the EPA, but an interim potential has been provided courtesy of the EPA and

Map of Heavily Modified and Artificial Water Bodies



Map 10.1

Waterways Ireland (Tables 10.1 and 10.2). It is expected that the characteristics of good potential will be unique to each water body and will require measures that improve water quality and habitats where necessary. In the ERBD measures have been defined to address these issues, but they may require adjustment after the first cycle when good potential for each water body has been defined.

Table 10.1: Heavily Modified Waters

| Water Body | Reason | Current Potential (as supplied by the EPA) |
|----------------------------|---|--|
| River Cammock | Flood Defences | Less than Good |
| River Dodder | Flood Defences, multiple weirs, reservoirs | Less than Good |
| River Liffey | Flood Defences | Good |
| River Santry | Flood Protection | Good |
| River Tolka | Flood Defences | Less than Good |
| Glenasmole Reservoir Lower | Impoundment for drinking water supply | Good |
| Glenasmole Reservoir Upper | Impoundment for drinking water supply | Good |
| Golden Falls | Hydro-electric Power / Drinking water supply | Less than Good |
| Leixlip Reservoirs | Impoundment for drinking water supply | Less than Good |
| Lough Nahanagan | Pumped hydro-electric power system | Good |
| Pollaphuca | Impoundment for drinking water supply | Less than Good |
| Vartry Reservoir Lower | Impoundment for drinking water supply | Good |
| Varty Reservoir Upper | Impoundment for drinking water supply | Good |
| Boyne Estuary | Flood Defences, Navigation, Dredging | Less than Good |
| Broadmeadow Estuary | Causeway for Dublin-Belfast railway line | Good |
| Dargle Estuary | Flood Defences | Less than Good |
| Liffey Estuary Lower | Flood Defences, Port and navigation, Dredging | Good |
| North Bull Island Lagoon | Flood Defences, Navigation | Good |
| Tolka Estuary | Flood Defences | Less than Good |
| Upper Liffey Estuary | Flood Defences, Navigation, Dredging | Less than Good |
| Dublin Bay | Flood Defences, Navigation, Dredging | Less than Good |

Table 10.2: Artificial Waters

| Water Body | Reason | Current Potential (as supplied by the EPA and Waterways Ireland) |
|------------------------------------|------------------------------------|--|
| Boyne Navigation | Man-made canal | Good |
| Grand Canal Dock | Man-made canal | Poor |
| Grand Canal Edenderry Branch | Man-made canal | Good |
| Grand Canal Main Line E of Lowtown | Man-made canal | Good |
| Grand Canal Main Line W of Lowtown | Man-made canal | Good |
| Grand Canal Naas & Corbally Branch | Man-made canal | Good |
| Royal Canal Main Line | Man-made canal | Good |
| Turlough Hill Reservoir | Pumped hydro-electric power system | Good |

10.3 Alternative Objectives – New Modifications or Developments

Alternative objectives can also be set for waters where it is known that a new modification or development, requiring tailored objectives, will take place during the period of plan. Such development proposals must have over-riding social and economic benefits and new developments must still allow waters to achieve good status. Proposals have to be assessed on a case by case basis and have to satisfy a series of tests of sustainability. Options have to be examined, such as alternative locations and different scales or designs, to ensure that all practicable steps are taken to mitigate adverse impacts as required by Regulation 33 of the European Communities Environmental Objectives (Surface Waters) Regulations, S.I. No. 272 of 2009.¹ In the Eastern River Basin District the following major proposed developments are known:

- Flood defences for Dublin (Dublin City Council);

¹ Amendment made by Minister of the Environment, Heritage and Local Government when adopting Plan on 6 July 2010

- Beach Nourishment Project, Laytown (Meath County Council);
- Scotsman Bay (Dun Laoghaire Rathdown County Council);
- Transport 21 (Greater Dublin Area);
- Portmarnock Dune Stabilisation (Fingal County Council);
- Flood Defences for Rogerstown Estuary (Fingal County Council);
- Dublin Gateway Project (Dublin Port Company)
- 6-Year Maintenance Dredging Plan (2009-1015) (Dublin Port Company)
- Bulk Handling Facility (Dublin Port Company)
- Capital Dredging (Berths and Basins) (Dublin Port Company)
- Bremore Port in coastal Fingal/Meath (Fingal & Meath County Councils); and
- Water transfer to Greater Dublin from the Shannon River (Dublin City Council).

All of the above projects are still at an early stage and it is premature to comment on them individually. All such projects would be subject to normal planning processes, including the requirements for Environmental Impact Statements and Strategic Environmental Assessments as appropriate. These processes will, in turn, require compliance with the Directive.

10.4 Programmes of Measures

The POM in this Plan addresses the problems being experienced in each water body and identifies the priority actions that need to be taken to mitigate these pressures. It is anticipated that these measures will ultimately result in the achievement of good status in all waters except for one – the Wicklow Central (Avoca) Groundwater body which is detrimentally affected by leachate from both mine workings and an unlined landfill; a less stringent objective is proposed for this groundwater body. (This does not mean that action will not be taken to address pollution problems; it just recognises that the scientific information is not to hand to confirm that good status is achievable at a cost which would not be disproportionate; a detailed series of actions are proposed in this plan with review in 2014 to guide the subsequent plans).

The WFD includes many references to economic aspects of implementation, the most important of which are:

- Member States were required to carry out an Economic Analysis of Water Use by 2004;
- Member States are required to have a water pricing policy in place by 2010;
- Programmes of (supplementary) Measures must be the most cost effective combination of measures;
- Heavily Modified Water Bodies can be designated on the grounds of disproportionate cost to return them to their natural state;
- A longer timeframe for achieving good status is possible if the cost of achieving it by 2015 is disproportionate; and
- Modifications to water bodies that result in not achieving good status are possible if there is no alternative without incurring disproportionate cost.

During the preparation of this Plan, full account has been taken of the requirements of the Directive and guidance provided by DEHLG through the “Guidance Manual on Economic Analysis Required by the Water Framework Directive” (April 2009) prepared by Goodbody Economic Consultants.

The date at which it is anticipated that each water body will achieve good status varies and is dependent on a number of factors:

- The period of natural recovery (especially for soils and groundwaters);
- The location in the catchment (downstream areas will not fully recover until the upstream waters are of satisfactory condition);
- The sequencing of implementing the measures; and
- The necessity to gather data in those waters where none is yet available prior to implementation of expensive measures.

The process of measures selection in the ERBD has been extensive and detailed. The Co-ordination Authority project team and Consultant CDM project team have led and coordinated the process, and all the local authorities in the ERBD have fully engaged; their specialist staff, with their detailed local knowledge, identified the pressures and appropriate measures for each sub catchment or water body throughout their respective geographic areas. This involvement by local specialists was fundamental to a realistic identification of measures for individual water bodies and water management units.

During the process of measures selection, the degree of implementation of all existing legislation in each water management unit or water body has been estimated, providing a valuable indicator of future implementation effort that will be required to fully implement those laws in each area. The WFD expects that prior legislation is fully

implemented and that the cost of implementing all such legislation should not be included in any disproportionate cost calculation used to justify an exemption.

Legislation is implemented to varying degrees of completeness often dependent on available resources and this has been considered when identifying measures; it is important that the benefits from full implementation are assessed when considering what supplementary actions may be necessary. The POM that has been developed in this Plan has focused on those elements of existing legislation and any necessary additional actions that are judged to be the minimum necessary to achieve good status, given the pressures in the particular water.

For clarity and completeness the Plan presents all of the measures required by legislation, but for each water body, highlights those actions that are considered essential to deliver good status and are thus considered to be “priority actions”.

It must be emphasised that all legislation will be fully implemented; however, a sub set of these (together with the supplementary actions) may be required to achieve the objectives of the WFD in any particular water body and it is these that are identified in the POM. For example, if a piece of legislation is already fully implemented in an area, then identifying it as a priority action is unnecessary. Similarly, some legislation is specific to certain types of waters and these would not be helpful to achieving good status elsewhere where those types of waters are not physically present.

10.4.1 Overall Costs

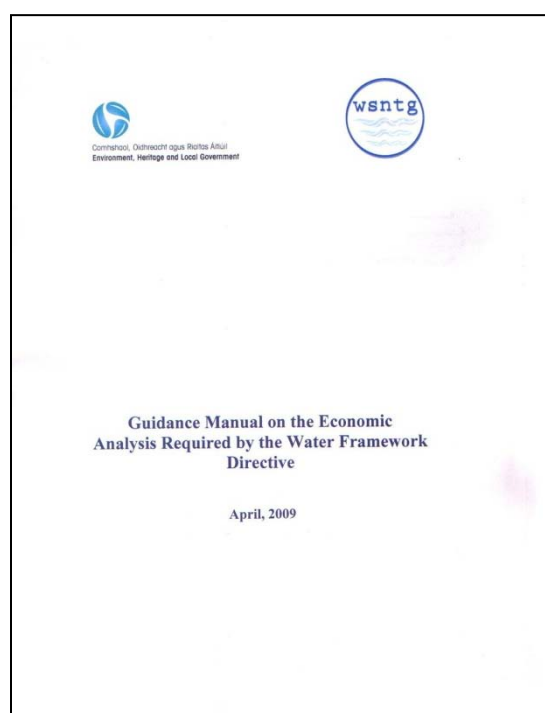
During the process of identifying the priority actions, the costs of implementing each has been estimated for individual water management units or water bodies at 2008 rates; the project team endeavoured to include costs for all parties. These costs represent the best estimates based on available data and the specialist knowledge available to the project team. This should be viewed as a first step in a continuing process and as experience of implementing some of the actions develops and the planning and design stages of capital projects are completed, then the cost estimates can be refined.

In the ERBD all of the cost data and assumptions made in deriving them are recorded in the River Basin Management System (RBMS). The intent is that these data sets can be continually refined throughout the first, and subsequent, cycles of the WFD. The RBMS also provides a harmonised, comparable and transparent approach throughout the Eastern River Basin District.

This is a first attempt at quantifying the costs required to achieve good status in Ireland. It has been a complex process due to the limited cost data, and because consideration must also be given to environmental and social costs, which are difficult to define. Cost effectiveness of measures is emphasised in the WFD; the approach taken here provides a starting point to estimate the relative cost effectiveness of different actions, the overall costs of implementation and helps us to make difficult prioritisation decisions. National guidance on the application of cost effective analysis and disproportionate cost analysis were followed in arriving at this final Plan.

The total cost of the POMs to deliver the stated objectives of this Plan for the entire Eastern River Basin District is estimated at €2,950,000,000. This is not to say that implementing the WFD will cost this sum, as significant elements are due to priority implementation of existing legislation. Rather, it is to provide the funding agencies with an indication of **broad budgetary requirements** that will be necessary to achieve the objectives of the WFD.

Figure 10.1 shows the proportion of total costs likely to be incurred in each Local Authority within the Eastern River Basin District. The majority of costs fall within the 4 Dublin authorities which together account for over two thirds of the total costs reflecting the needs of the Greater Dublin Area in the areas of wastewater treatment works, sewer systems and combined storm overflows and the population density.



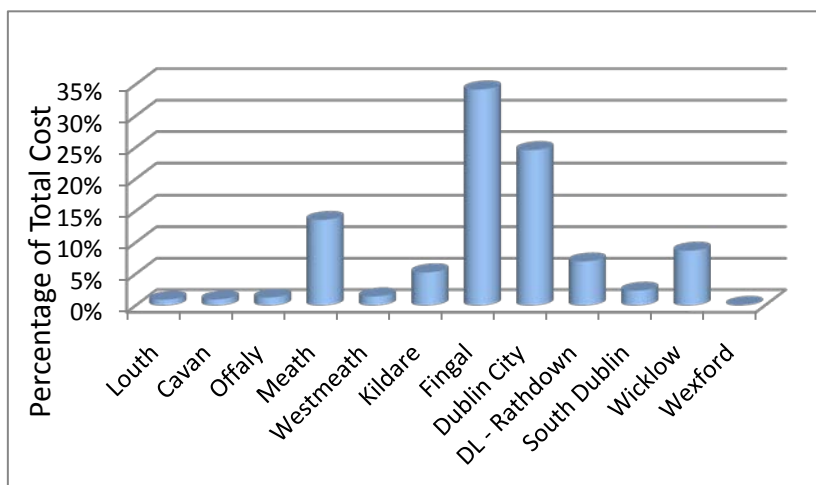


Figure 10.1: Cost of Measures by Local Authority

It should be noted that these costs are for the first planning cycle (in terms of staff resources) but assume that all capital works are constructed in that period. It should also be noted that these costs do not include operations and maintenance of WWTWs as it is not clear at this stage which plants will be constructed and operational in which years; for budgetary purposes we estimate that the O&M costs for all WWTWs in the ERBD would be in the order of €1,000,000,000 for the first planning cycle.

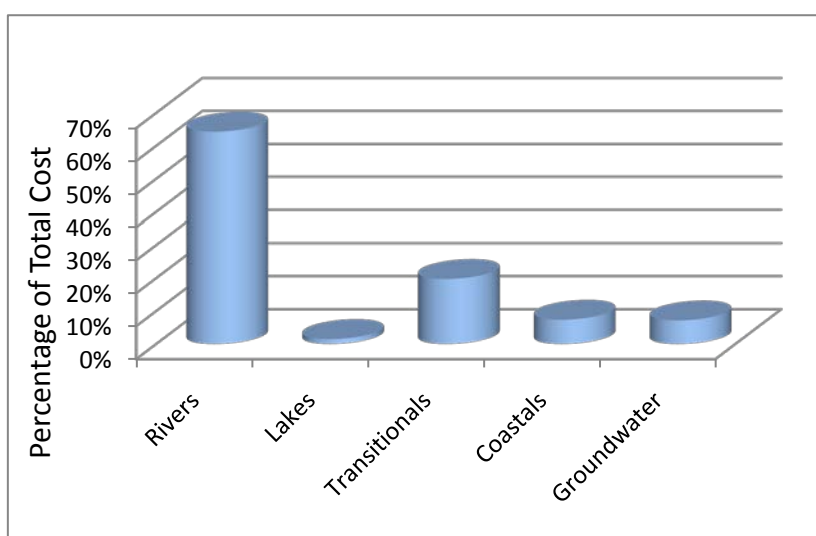


Figure 10.2: Cost of Measures by Water Body Type

Projected costs for each water body type are presented in Figure 10.2. It should be noted that very significant costs associated with a proposed wastewater treatment works in north Dublin has been included in the rivers' costs.

Note: the costs of measures addressing diffuse surface pollution are included in the surface waters measures and have not been duplicated in the groundwater costs.

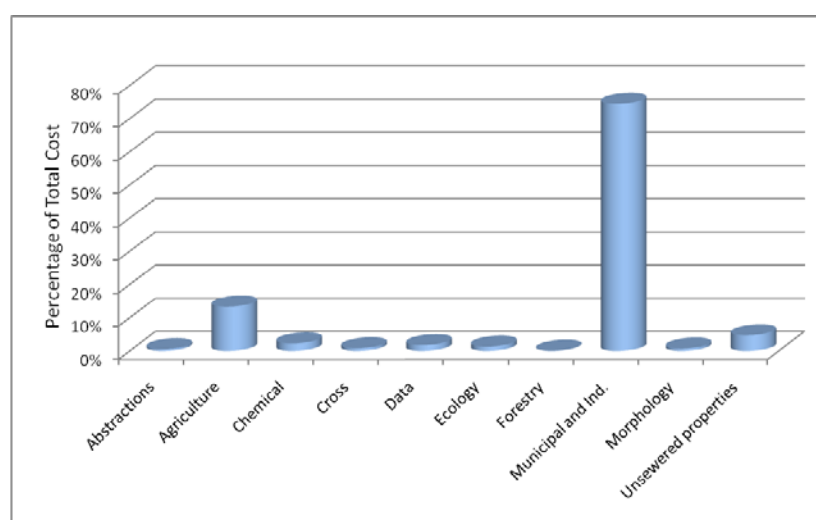


Figure 10.3: Cost of Measures by Economic Sector

Figure 10.3 presents the breakdown of total costs for different pressure types. It can be seen that approximately 75% of the cost of measures is projected to fall within the municipal and industrial sectors to rectify point source discharges and urban pollution. Agriculture accounts for 13% of the costs and unsewered properties 5%. Several pressures including chemical, cross and data will impact several sectors.

The issue of funding and budgets is a matter for government (Central and Local). If good status is to be achieved in all waters by 2015, or as soon as possible thereafter, then the measures presented in the Plan will have to be implemented at the appropriate time in the initial cycle before 2015. Implementation of the full POM across the entire Eastern River Basin District is a massive task requiring careful programme planning and management and the coordination of several state and semi state agencies. It would require allocation of adequate budgets by each of the funding sources (mainly governmental) and the deployment of large numbers of staff resources by several organisations. The DEHLG intends to establish a high level advisory group to support the finalisation and subsequent implementation of the River Basin Management Plans and the Programmes of Measures. It is planned that the membership of the group will be made up from DEHLG, City and County Managers Association, the EPA and other government bodies as appropriate, including, for example, DAFF.

To be more cost effective, the Plan recommends a strategy of focussing on delivering the most effective measures in as many waters as possible. It is recognised in the Common Implementation Strategy (CIS) developed by the Member States that all problems facing the water environment cannot be addressed within a single planning cycle; the Directive allows for this by incorporating the use of exemptions to allow for prioritisation of actions to improve the water environment over a series of planning cycles. The CIS also recognises that objective setting and exemptions *should* be used to prioritise actions. Those measures not implemented in the first cycle will be addressed in subsequent cycles.

It is anticipated that the vast majority of waters in the ERBD will achieve good status over the three planning cycles ending in 2027 and that time based exemptions will reduce in each planning cycle. Figure 10.4 shows the planned progressive achievement of good status for all water bodies during the three planning cycles.

If funding arrangements make it necessary to implement the measures over an even more extended time period, then good status would inevitably be attained somewhat later. In these circumstances the order of implementation of measures will have a very significant effect on the short term success of the programme.

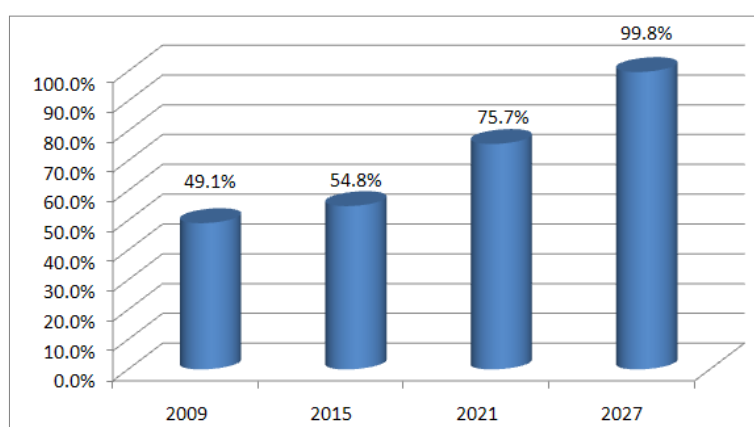


Figure 10.4: Progressive Achievement of Good Status (Numbers of Water Bodies)

It is clear that if upstream pressures are not addressed, then good status will not be achieved in the lower reaches of the rivers and estuaries; this catchment philosophy is at the very heart of the Directive. This would not provide an excuse to ignore pressures lower down the catchment, but such work would not necessarily result in good status (this is addressed in more detail in Section 10.6). Good status would only develop as the impacts from upstream sources are also reduced. It is for this reason that the Plan places the initial emphasis on the upstream areas of catchments so that priority is given to measures that deliver multiple benefits. Similarly, if rural pressures are addressed without consideration of which areas they impact the most, then the best result will not be achieved in the short term.

This Plan includes some changes (from the draft Plan) in target dates for some rivers as it has been recognised that for some waters the interim status assessments have necessarily been based on extrapolated data rather than site specific measurements. In these cases the first action that will be taken is to initiate monitoring at those sites to confirm their status and the influencing factors; as a consequence the achievement of good status has been delayed by one cycle in these water bodies.

Economic Issues

The Directive requires that the programmes of measures selected are cost effective so that improvements are achieved in an economic way. The RBMS has been developed to allow estimates of both cost and effectiveness of individual measures to be recorded and collated (see Section 8). The estimates themselves have evolved based on capital investment programmes already developed by the local authorities and the DEHLG (as part of the National Development Plan and Water Services Investment Programme), past experience of similar measures and expert judgment.

A cost effectiveness analysis was completed for supplementary measures for the draft Plan to ensure that the supplementary measures selected at that time were cost effective. Following advice from DEHLG's economics specialists, the Eastern River Basin District undertook pilot studies to compare alternative groups of supplementary measures. Four representative water management units were selected: the Blackwater North, Nanny, Shanganagh and Vartry. During the development of this final Plan and after further review of legislation, it has been concluded that many of the measures selected as supplementary would in fact be covered by legislation, such as the Water Pollution Act (soon to be replaced by the Water Services Act), which provides powers to rectify any act of pollution regardless of source. Such measures should not therefore be termed supplementary and instead they are an integral part of the priority actions which define the programmes of measures.

The Blackwater North and Nanny catchments are examples of typical rural areas in the Eastern River Basin District, with agricultural production being the primary water pressure. The Blackwater North is located in the north of the area in Counties Meath and Cavan; the Nanny catchment is located mainly in the southern part of County Meath. The Shanganagh catchment is a representative example of an urbanised environment in Dun Laoghaire - Rathdown County Council. The Vartry catchment is a rural mountainous region within County Wicklow; agriculture dominates land use.

The tables show how the cost effectiveness ratios vary markedly for individual measures. This ratio is a measure of the cost (capital, operations, maintenance and staff) over 30 years compared with the benefit in terms of achieving improvements in water status. In terms of the values, a smaller ratio equates to a more cost effective measure. For example, in the first alternative in Table 10.3, the non capital measures for the Blackwater North, such as restricting cattle access, prove to be the most effective, but capital works for treatment plants less so (by more than one order of magnitude).

Figure 10.5 shows the results of phosphorus modelling undertaken by the Eastern River Basin District. The model simulates point sources, topography, land use and soil mineralogy. Water quality models assist in understanding how nutrients migrate to surface waters therefore allowing us to focus measures to the areas where they will be most beneficial and therefore more cost effective. The darker areas in the map below show where the risks of nutrients migrating to surface waters are highest. Conversely, the whiter areas define land where the nutrients will tend to persist in the soils for longer.



However, the underlying fact is that the supplementary measures chosen for both alternatives already include a strong element of expert judgment and they are generally less expensive than basic measures. This also results in the variability in cost effectiveness being relatively small.

The information derived from this pilot study has informed the selection of measures in the Eastern River Basin District and allowed us to select both individual and sets of actions for the different types of catchments which offer a cost effective approach to water management. The more cost effective measures have been used widely in similar catchments throughout the Eastern River Basin District, whilst still taking account of pressures in each locality.

Table 10.3: Alternative 1 – Supplementary Measures

| Sub-catchment | Supplementary Measure | Cost Effective Ratio |
|-------------------------|--|----------------------|
| Blackwater North | | |
| Meath | Enforce Regulations on Septic Systems | 0.15 |
| | Upgrade WWTW <2000 PE | 0.27 |
| | Upgrade WWTW and Collecting Systems <2000 PE | 0.65 |
| | Restrict Cattle Access to rivers - Create Cattle Drinking points | 0.01 |
| | Implement Upstream Programmes of Measures | 0.00 |
| | Tertiary Treatment | 0.81 |
| | TOTAL | 1.89 |
| Cavan | Enforce Regulations on Septic Systems | 0.001 |
| Shanganagh | | |
| Dun Laoghaire Rathdown | GDSDS Compliance - CSOs | 5.47 |
| | Investigate and eliminate misconnections | 0.49 |
| | Investigate Fats, Oils and Grease Issues | 0.03 |
| | River Polishing - Reed Bed | 0.01 |
| | TOTAL | 5.99 |
| Vartry | | |
| Wicklow | Diffuse Runoff (Urban) - Implement SUDS | 0.01 |
| | Inspections and Upgrades | 0.01 |
| | Mitigate impact of quarry activities | 0.00 |
| | Upgrade WWTW and Collecting Systems <2000 PE | 1.98 |
| | TOTAL | 2.00 |
| Nanny | | |
| Meath | Tertiary Treatment | 1.80 |
| | Enforce Regulations on Septic Systems | 0.63 |
| | Upgrade WWTW and Collecting Systems <2000 PE | 0.26 |
| | Restrict Cattle Access to rivers - Create Cattle Drinking points | 0.03 |
| | TOTAL | 2.71 |

Table 10.4: Alternative 2 – Supplementary Measures

| Sub-catchment | Supplementary Measure | Cost Effective Ratio |
|-------------------------|--|----------------------|
| Blackwater North | | |
| Meath | Install sewage systems in rural areas with ICW as tertiary treatment | 0.53 |
| | Introduce Integrated Constructed Wetlands where practical to treat polluted river discharges | 0.11 |
| | Introduce Agricultural Bye Laws though Water Pollution Act 1977 to eliminate animal access to water courses. Enforce new bye law | 0.05 |
| | Farm-Specific Constructed Wetland (Requires Regulatory Site Assessment) | 0.29 |
| | Install additional WWTP <PE 2000 | 0.30 |
| | Digesters for nutrient surplus | 0.75 |
| | TOTAL | 2.03 |
| Cavan | Provide a grant system for the maintenance and upgrading of septic tanks | 1.82 |
| Shanganagh | | |
| Dun Laoghaire Rathdown | GDSDS Compliance & Storm Sewer Separation | 6.03 |
| | Site-Specific Riparian Buffer Requirement on Residential Developments | 0.54 |
| | Site-Specific Retention Pond for Residential Developments (Requires Regulatory Site Assessment) (per cubic metre capacity) | 0.05 |
| | Gullies Management | 0.33 |
| | TOTAL | 6.96 |
| Vartry | | |
| Wicklow | Create buffer zones and collection systems | 0.04 |
| | Provide a grant system for the maintenance and upgrading of septic tanks | 0.19 |
| | Mitigate impact of quarry activities | 0.00 |
| | Install 2 additional WWTP <2000 PE & Collecting system | 2.37 |
| | TOTAL | 2.61 |
| Nanny | | |
| Meath | Introduce Agricultural Bye Laws though Water Pollution Act 1977 to ban animal access to water courses. Enforce new bye law | 0.08 |
| | Install new sewage systems in rural areas with ICW as tertiary treatment | 2.57 |
| | Nutrient removal at WWTP >2000PE | 1.80 |
| | Install additional WWTP < 2000PE | 1.03 |
| | TOTAL | 5.40 |

Disproportionate Costs

A detailed cost benefit analysis is required if the Plan proposes to adopt Less Stringent Objectives or a delay in achieving good status on the grounds of cost. In the Eastern River Basin District the Plan:

- Proposes delays in achieving good status because of technical reasons (primarily natural recovery and catchment linkage issues). Cost benefit analyses are not required for these.
- Proposes one water body (Wicklow Central (Avoca)) to have a less stringent objective; it would probably be possible to remedy the problems associated with the landfill site polluting these waters, but it is doubtful if leachate from the disused mine and from the natural fissures and faults could be prevented from continuing to cause a problem. No suitable data is presently available to develop a rigorous cost benefit analysis for this site and the Plan proposes that such a study is undertaken soon after adoption of the Plan. Should the study prove that the costs are not disproportionate then the Plan will be modified in 2015. A qualitative analysis has been undertaken in line with DEHLG guidance and this is presented in Table 10.5 which indicates the very high costs of addressing the problems in this water body; in financial terms the benefits will be considerably lower. Remedying the groundwater body is not the only action required to return the Avoca River to good status so the benefits associated with improved river ecology would not necessarily be accounted in the groundwater cost benefit analysis.
- Proposes to achieve good status in the Avoca River by 2027. This is based on an assumption that the acid mine point source discharges can be successfully treated and that actions to reduce pollution from the spoil tips are also successful. However, the river is connected to the underlying groundwater body which is polluted by mine and landfill waste and it is possible that the impact of this will continue to negatively affect the status of the river. It is recommended that the inter relationships are the subject of a detailed study in the near future and the outcome used to refine the 2015 Plan. Cost benefit analysis is not required for the Avoca River since it is planned to return it to good status by 2027.

Table 10.5: Avoca Groundwater Body: Cost Benefit Assessment

| Cost Element | Impact on achieving good status | Cost Rating |
|---|---------------------------------|--------------|
| Remediate and reline landfill | High | High |
| Remediate mine shafts | High | Very High |
| Continue long term shaft management | High | Very High |
| Remediate spoil dumps to eliminate infiltration and improve Health and Safety | Medium | High |
| Habitat destruction | Nil | Nil |
| Use Value | | Value Rating |
| Industrial process | N/A | Medium |
| Water supply | N/A | Low |
| River Baseflow* | Medium | High |
| Human Health and Safety | N/A | High |
| Biodiversity | Low | High |

**Note: if improved baseflow quality proves essential to achieving good status in the River Avoca, then additional benefits would need including such as fisheries, amenity use, etc.*

10.5 Measures Implementation

The full POM will require the implementation of a selection of the hundreds of different actions (Section 9) in all 488 water bodies. It will require funding, staff resources and coordination across several national and local agencies and recognition of fundamental constraints including differing budget cycles. This Plan presents a comprehensive description of what is needed to be done, where, by whom and the priorities, but it cannot address resource allocation. However, clear targets are set for achievement of good status and this should provide guidance for detailed implementation planning.

We expect to implement many of the measures defined in this plan during the first cycle (before 2015) and to achieve many of the objectives described in Section 6 in a progressive manner as the measures start to take effect. Alternative objectives are proposed for waters where the combination of basic and supplementary measures will not fully achieve the objectives by 2015.

Where it is considered that the objectives can be achieved, but not by 2015, then an explanation and justification is provided. For example, the land acquisition, design, procurement and construction of new treatment works, extensions to treatment works or collection systems can take many years. Similarly, diffuse pollutants and nutrients in agricultural and forestry lands can take several years to be purged from the soils and aquifers even if their use is eliminated or restricted to acceptable levels.

The overall timescale for waters to achieve good status will be dictated by the slowest response to basic and supplementary measures. For example, even if a treatment plant is installed in the first plan cycle, it may take a further cycle for the waters to show improvement in areas with particular types of soil that are also impacted by agricultural activities. Similarly, recovery of groundwater is dictated by flow rates in the aquifers and improvements in these waters will inevitably take many years.

In these cases, we have estimated when compliance will be achieved in the matrix and figures below. It should be emphasised that the Plan includes all necessary actions to achieve the objective of good status – it is just that the effects of these actions will only become evident after several years.

It is important that the Plan is realistic in its targets and so we have tried to identify all waters where recovery is likely to be slow.

One of the problems that we face is addressing the extensive diffuse pollution in the rural areas in the upper parts of the catchments. There are very many farms, septic tanks and forestry areas which will need to achieve compliance with the various standards and this in turn will require an intensive enforcement effort. Realistically this process will take several years and until the water quality improves in the upstream parts of the catchments, those lower down are unlikely to achieve good status. This can be seen in Maps 10.2 to 10.9 which tend to show improvements in the lower reaches of the rivers and in the estuaries over longer periods of time.

Similarly, bog and peat lands introduce nutrients to surface waters in the upper parts of some catchments and this will continue to occur.

A further factor in the delay in achieving good status is the necessity to ensure that the current status is an accurate assessment before expenditure is incurred. The status defined by the EPA is based on limited or absent data for some waters. In the ERBD 221 river water bodies have no surveillance or operational monitoring data and so their status has been based on similar and/or neighbouring waters where data are available. In these cases the first measure will be to gather more data to confirm the assessment and also to determine which pressures are of greatest concern.

Based on experience and expert judgment and a review of research evidence, we have set out, in Table 10.6, the general reasons for which the timescales for achieving objectives in some waters will have to be extended.

Table 10.6: Overview of Timescales

| Key Issue | 2015 | 2021 | 2027 or likely LSO cases |
|---|--|--|--|
| Wastewater | Waters where upgrades are in place by 2012 | Waters where investigations are in place by 2015 | Waters where investigations are in place by 2021 |
| Industrial discharges | Majority of waters | Waters where investigations are in place by 2015 | |
| Landfills, quarries, mines and contaminated lands | Majority of waters | Majority of waters | Waters at risk from mine impacts |
| Agriculture | Water in upstream areas | Waters where measures or investigations are in place by 2015 | Waters where measures or investigations are in place by 2021 |
| Wastewater from unsewered properties | Waters where upgrades are in place by 2012 | Waters where measures or investigations are in place by 2015 | Waters where measures or investigations are in place by 2021 |
| Forestry | Areas replanted in first cycle | Areas replanted in second cycle | Areas replanted in third cycle or post 2027 |
| Dangerous substances & chemical pollution | Majority of waters | Waters where investigations are in place by 2015 | |

| Key Issue | 2015 | 2021 | 2027 or likely LSO cases |
|------------------------|--------------------|---|---|
| Physical modifications | Majority of waters | Waters where remediation schemes are in place by 2015 | Waters where remediation schemes are in place by 2021 |
| Abstractions | Majority of waters | Waters where remediation schemes are in place by 2015 | Waters where remediation schemes are in place by 2021 |

The recommended exemptions are listed in Table 10.7 below. The Target Date column in the table represents the date of achievement of good status. Our rivers have been grouped into river sub-catchments (as shown on Map 9.1). Dates within these groups vary and the latest target date for each group is given below.

Table 10.7: Overview of Exemptions

| Water body | Water Body Type | Alternative Objective Type | WFD Section 4 (a) | Reason |
|--|-----------------|----------------------------|--|---|
| Dublin Bay | Coastal | 2027 | Technical feasibility | Upstream diffuse agricultural, septic tank and urban pollution; flood defences; upstream point source pollution |
| Irish Sea Dublin (HA 09) | Coastal | 2021 | Technical feasibility | Require more monitoring data for status. Upstream transitional water body exemption = 2027. Future Modification - Dune Stabilisation. |
| Malahide Bay | Coastal | 2027 | Technical feasibility | Upstream diffuse agricultural and septic tank pollution, WWTP's upstream |
| Rockabill | Coastal | 2021 | Technical feasibility | Require more monitoring data |
| Southwestern Irish Sea - Brittas Bay (HA 10) | Coastal | 2021 | Technical feasibility | Require monitoring data for status. |
| | | | | |
| Bettystown | Groundwater | 2027 | Technical feasibility | EPA: Chemical Status=Poor, Diffuse pollution from Quarry. Abstraction. River water body less than good status. |
| Boyle_CL | Groundwater | 2027 | Technical feasibility | EPA: Overall Chemical Status=Poor Contaminated Land, River water body status less than good. |
| Drogheda | Groundwater | 2027 | Technical feasibility | EPA: Chemical Status=Poor. Abstraction. Diffuse pollution from Quarry. River water body less than good status. |
| Drogheda Urban | Groundwater | 2027 | Technical feasibility | EPA: Overall Chemical Status=Poor. Diffuse Urban Pollution |
| Drogheda_LF | Groundwater | 2027 | Technical feasibility | EPA: Overall Chemical Status=Poor. Land fill, Diffuse urban pollution. River water body less than good status. |
| Lough Lene | Groundwater | 2027 | Technical feasibility | EPA: Chemical Status=Poor. River water body less than good status. |
| Lusk-Bog of the Ring | Groundwater | 2021 | Technical feasibility | EPA: Quantitative Status=Poor. At risk from abstraction. |
| Wicklow Central (Avoca Mine) | Groundwater | LSO | Technical feasibility | Diffuse Mine |
| | | | | |
| Ben Lough | Lake | 2021 | Technical feasibility | Desktop status. Require more monitoring data. |
| Golden Falls Reservoir | Lake | 2021 | Technical feasibility | River water segment - 09_1870 exemption 2021. |
| Leixlip Liffey Reservoir | Lake | 2021 | Technical feasibility | Desktop status - Require more monitoring data for status. Upstream river subcatchment = Poor, Exemption = 2021. |
| Pollaphuca Reservoir | Lake | 2021 | Technical feasibility | Macrophytes old. Upstream river subcatchment status = Poor, Exemption = 2021. |
| Ramor (Lough) | Lake | 2027 | Technical feasibility, Disproportionately expensive. | Point Sources, diffuse agricultural pollution. Macrophytes, Chlorophyll (poor), Nutrients - Total Phosphorus. Upstream river sub catchment status = Poor, Exemption = 2027. EPA comment: ERBD_RBMP_050_c023 |
| | | | | |
| Athboy WMU | River | 2027 | Technical feasibility | Point source, diffuse agricultural pollution. Extrapolated sub-catchments - need more data. |
| Avoca WMU | River | 2027 | Technical feasibility | Diffuse Mine pollution. Extrapolated sub-catchments - need more data. |

| Water body | Water Body Type | Alternative Objective Type | WFD Section 4 (a) | Reason |
|-------------------------|-----------------|----------------------------|---|--|
| Ballyboghil WMU | River | 2021 | Technical feasibility | Diffuse agricultural and septic tank pollution |
| Baltray WMU | River | 2021 | Technical feasibility | Extrapolated sub-catchments - need more data. |
| Blackwater North WMU | River | 2027 | Technical feasibility | Diffuse agricultural and septic tank pollution, point source pollution. Extrapolated sub-catchments - need more data. |
| Blackwater South WMU | River | 2027 | Technical feasibility | Diffuse agricultural and septic tank pollution. Extrapolated sub-catchments - need more data. |
| Boyne Lower WMU | River | 2027 | Technical feasibility | Upstream diffuse agricultural, septic tank and landfill pollution. Extrapolated sub-catchments - need more data. |
| Boyne Upper WMU | River | 2027 | Technical feasibility, Natural Conditions | Due to peatlands: naturally occurring ammonia. Diffuse agricultural and wastewater point source pollution. Extrapolated sub-catchments - need more data. |
| Broadmeadow WMU | River | 2027 | Technical feasibility, Natural Conditions | Diffuse septic tank, diffuse urban pollution, naturally high level of nutrients in ground. Extrapolated sub-catchments - need more data. |
| Cammock WMU | River | 2027 | Technical feasibility | Urban Diffuse pollution |
| Dargle WMU | River | 2027 | Technical feasibility | Point source pollution and urban diffuse pollution. Extrapolated sub-catchments - need more data. |
| Deel WMU | River | 2027 | Technical feasibility | Diffuse agricultural and septic tank pollution, wastewater point source pollution. Extrapolated sub-catchments - need more data. |
| Delvin WMU | River | 2027 | Technical feasibility | Septic tank pollution and vulnerable ground conditions. Extrapolated sub-catchments - need more data. |
| Devlin (Mattock) WMU | River | 2027 | Technical feasibility | Diffuse agricultural and septic tank pollution. Extrapolated sub-catchments - need more data. |
| Dodder WMU | River | 2027 | Technical feasibility | Urban Diffuse Pollution. Extrapolated sub-catchments - need more data. |
| Liffey WMU | River | 2027 | Technical feasibility | Diffuse agricultural pollution. Extrapolated sub-catchments - need more data. |
| Lusk WMU | River | 2027 | Technical feasibility | Extrapolated sub-catchments - need more data. |
| Mosney WMU | River | 2021 | Technical feasibility | Diffuse agricultural and septic tank pollution |
| Nanny WMU | River | 2027 | Technical feasibility, Natural Conditions | Wastewater point source pollution and naturally high level of nutrients in the ground. Extrapolated sub-catchments - need more data. |
| Newcastle WMU | River | 2027 | Technical feasibility | Diffuse agricultural, septic tank pollution and wastewater point source pollution. Extrapolated sub-catchments - need more data. |
| Potters WMU | River | 2021 | Technical feasibility | Diffuse agricultural and septic tank pollution |
| Rathnew WMU | River | 2027 | Technical feasibility | Extrapolated sub-catchments - need more data. |
| Ryewater WMU | River | 2027 | Technical feasibility, Natural Conditions | Diffuse agricultural, septic tank pollution and naturally high level of nutrients. Extrapolated sub-catchments - need more data. |
| Santry Mayne Sluice WMU | River | 2027 | Technical feasibility | Diffuse urban pollution |
| Shanganagh WMU | River | 2021 | Technical feasibility | Wastewater point source pollution |
| Stonyford WMU | River | 2021 | Technical feasibility | Diffuse agricultural pollution and wastewater points source pollution |
| Tolka WMU | River | 2027 | Technical feasibility | Diffuse agricultural, septic tank pollution and urban diffuse pollution. Extrapolated sub-catchments - need more data. |
| Vartry WMU | River | 2021 | Technical feasibility | Extrapolated sub-catchments - need more data. |
| | | | | |
| Avoca Estuary | Transitional | 2027 | Technical feasibility | Upstream diffuse mine pollution |
| Boyne Estuary | Transitional | 2027 | Technical feasibility | Upstream diffuse agricultural and septic tank pollution, Future modification - Rail line |
| Broad Lough | Transitional | 2021 | Technical feasibility | Upstream diffuse agricultural and septic tank pollution |

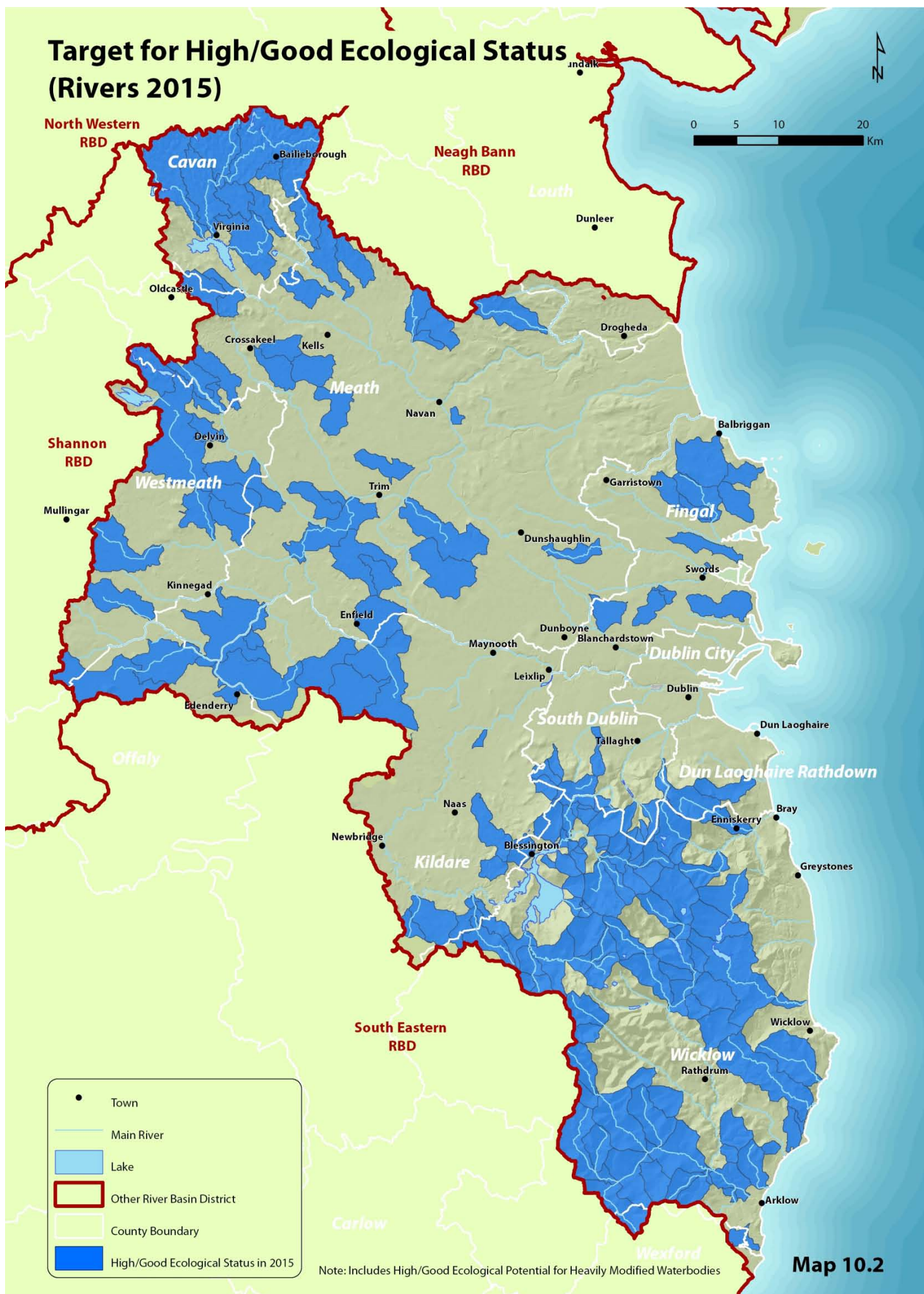
| Water body | Water Body Type | Alternative Objective Type | WFD Section 4 (a) | Reason |
|----------------------|-----------------|----------------------------|---|---|
| Broadmeadow Water | Transitional | 2027 | Technical feasibility | Upstream diffuse agricultural and septic tank pollution. Future modifications - Flood defences |
| Dargle Estuary | Transitional | 2021 | Technical feasibility | Require monitoring data for Status. |
| Kilcoole Marsh | Transitional | 2021 | Technical feasibility | Require more monitoring data for Status. Upstream River exemption until 2021. Upstream diffuse agricultural and septic tank pollution |
| Liffey Estuary Lower | Transitional | 2027 | Technical feasibility | Upstream diffuse agricultural, septic tank and urban diffuse pollution. Future modification - Flood Defences |
| Liffey Estuary Upper | Transitional | 2027 | Technical feasibility | Upstream diffuse agricultural, septic tank and urban diffuse pollution. Future Modification-Flood Defences |
| Mayne Estuary | Transitional | 2027 | Technical feasibility | Require monitoring data for status. Upstream river exemption until 2027. Upstream diffuse agricultural, septic tank and urban diffuse pollution. Future Modification - Coastal Protection |
| Nanny Estuary | Transitional | 2027 | Technical feasibility, Natural Conditions | Upstream river exemption until 2027. Require monitoring data for status. Upstream diffuse agricultural, septic tank and urban diffuse pollution. Naturally high concentration of upstream nutrients |
| North Bull Island | Transitional | 2027 | Technical feasibility | Require monitoring data for status. Upstream river exemption until 2027. Upstream urban diffuse pollution, Future Modifications-Flood Defence |
| Rogerstown Estuary | Transitional | 2021 | Technical feasibility | Upstream river exemption until 2021. Upstream diffuse agricultural and septic tank pollution. Future Modifications - Flood Defence |
| Tolka Estuary | Transitional | 2027 | Technical feasibility | Upstream river exemption until 2027. Upstream diffuse agricultural and septic tank pollution |

*Article 4 of the WFD sets out the environmental objectives and is clear that where several exist the most stringent will apply. It recognizes the special cases of Heavily Modified and Artificial water bodies and sets out specific objectives for these. In addition, exemptions are permissible based on:

- Extensions of deadline; the Directive Article 4 (4)(a) permits exemptions to this objective on the basis that:
 - *the scale of improvements required can only be achieved in phases exceeding the timescale, for reasons of technical feasibility;*
 - *completing the improvements within the timescale would be disproportionately expensive;*
 - *natural conditions do not allow timely improvement in the status of the body of water.*
- Less stringent objectives;when they are so affected by human activity, as determined in accordance with Article 5(1), or their natural condition is such that the achievement of these objectives would be infeasible or disproportionately expensive;
- Temporary deteriorations;if this is the result of circumstances of natural cause or force majeure which are exceptional or could not reasonably have been foreseen....; and
- New modifications;those modifications or alterations are of overriding public interest and/or the benefits to the environment and to society of achieving the objectives set out in paragraph 1 are outweighed by the benefits of the new modifications or alterations to human health, to the maintenance of human safety or to sustainable development, and the beneficial objectives served by those modifications or alterations of the water body cannot for reasons of technical feasibility or disproportionate cost be achieved by other means, which are a significantly better environmental option.....

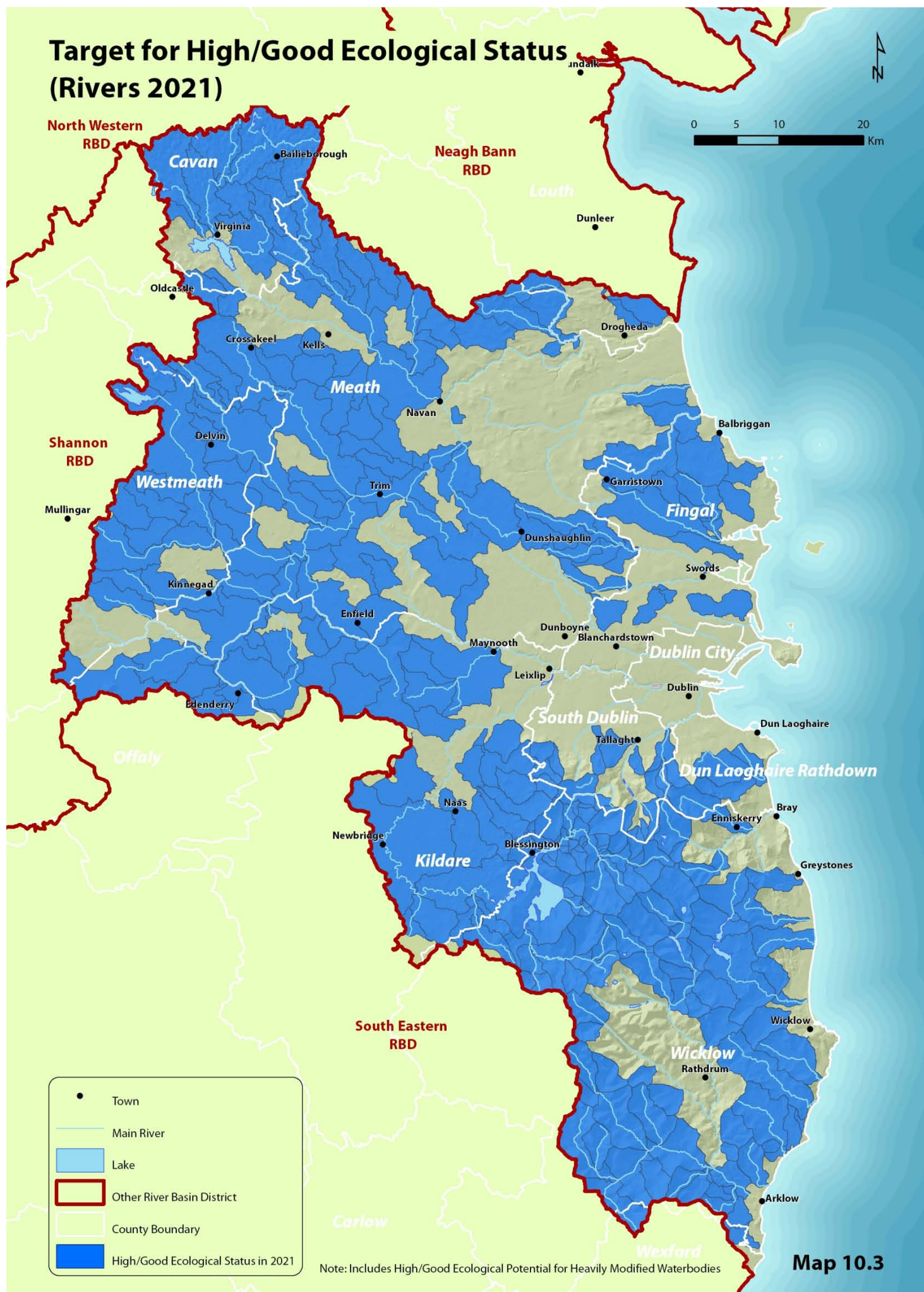
Note: text in italics above is from the WFD

Target for High/Good Ecological Status (Rivers 2015)

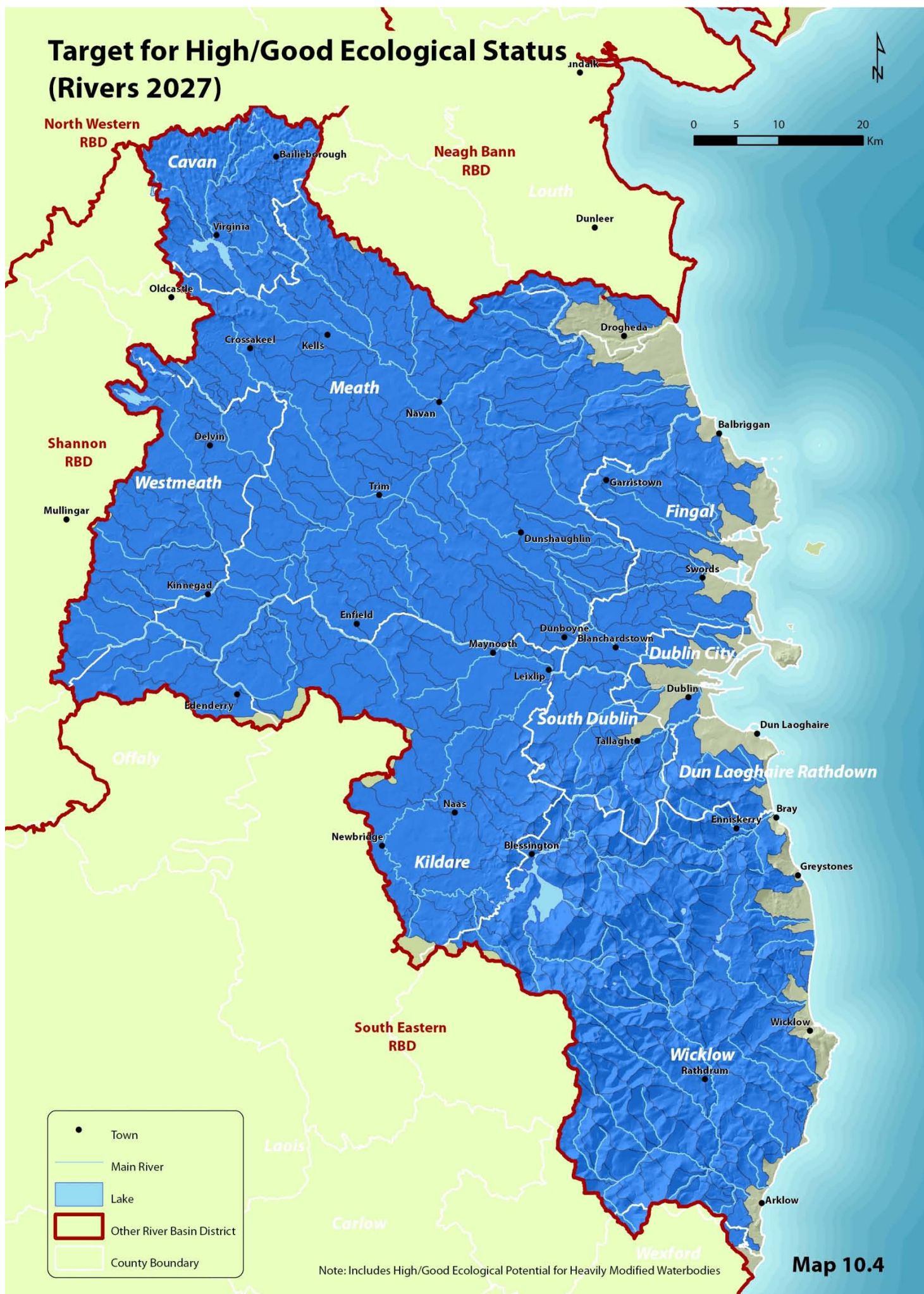


Map 10.2

Target for High/Good Ecological Status (Rivers 2021)



Target for High/Good Ecological Status (Rivers 2027)



Target for High/Good Ecological Status (Lakes, Transitional, Coastal in 2015)



Map 10.5

Target for High/Good Ecological Status (Lakes, Transitional, Coastal in 2021)

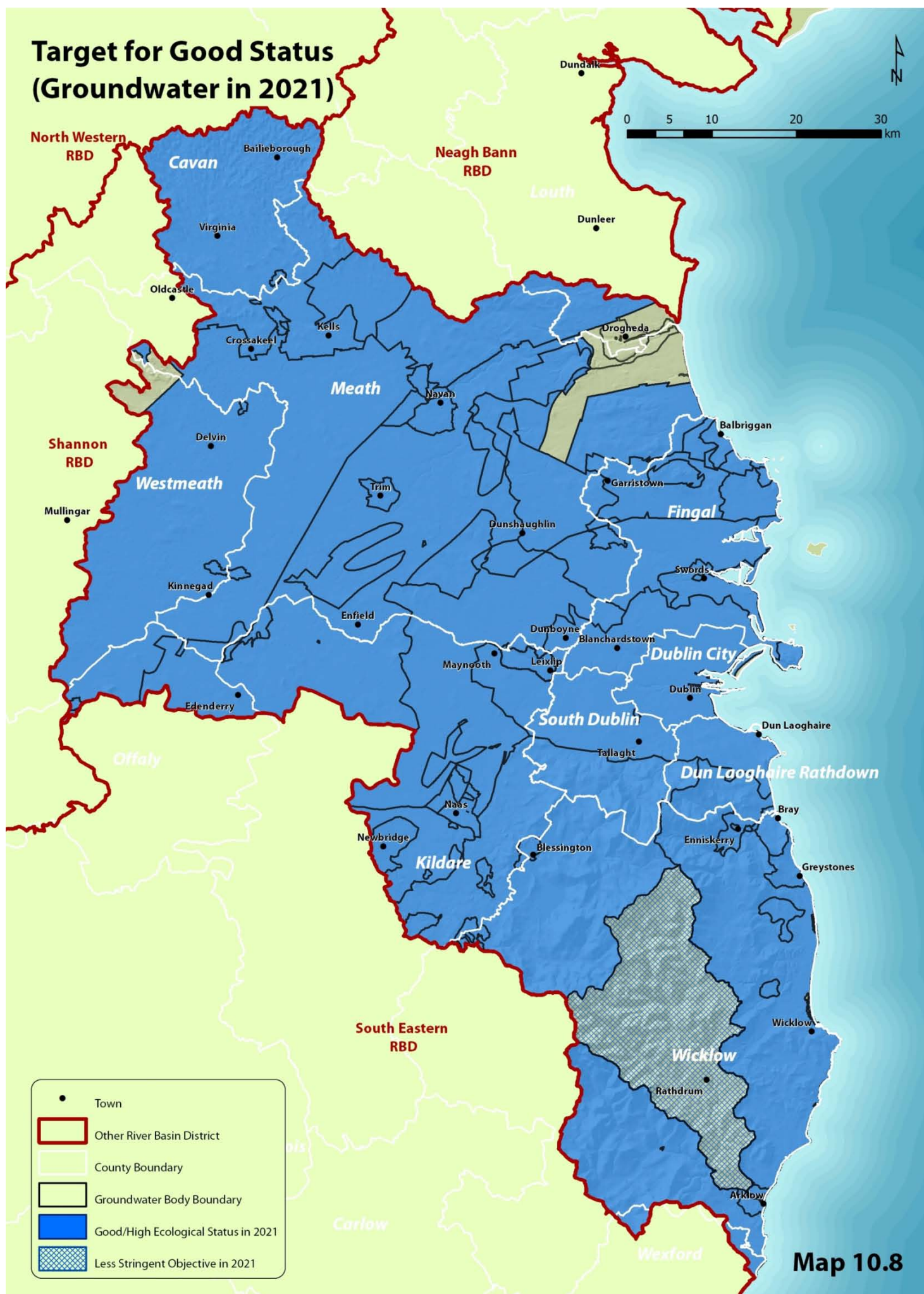


Map 10.6

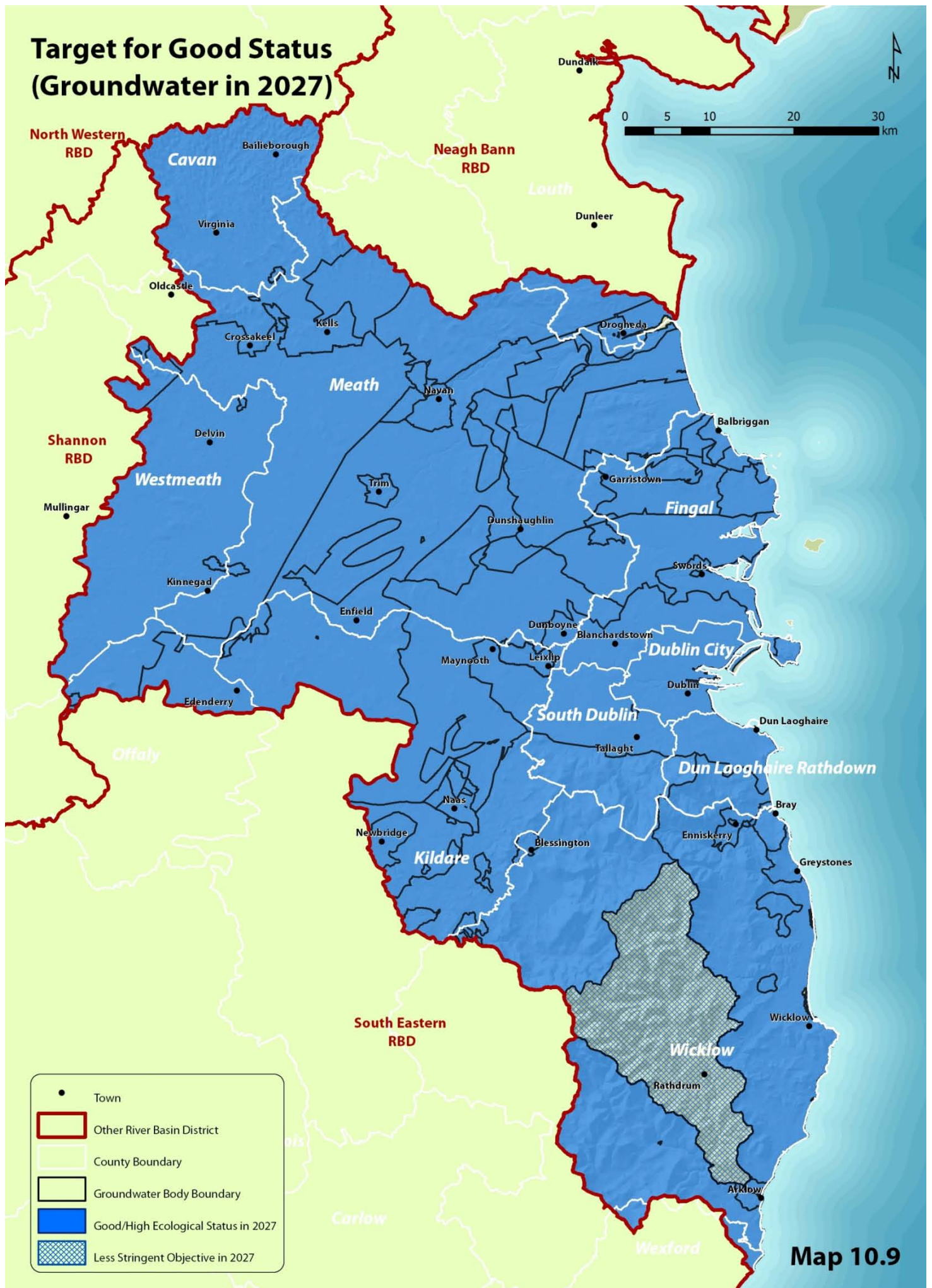
Target for High/Good Ecological Status (Lakes, Transitional, Coastal in 2027)



Target for Good Status (Groundwater in 2021)



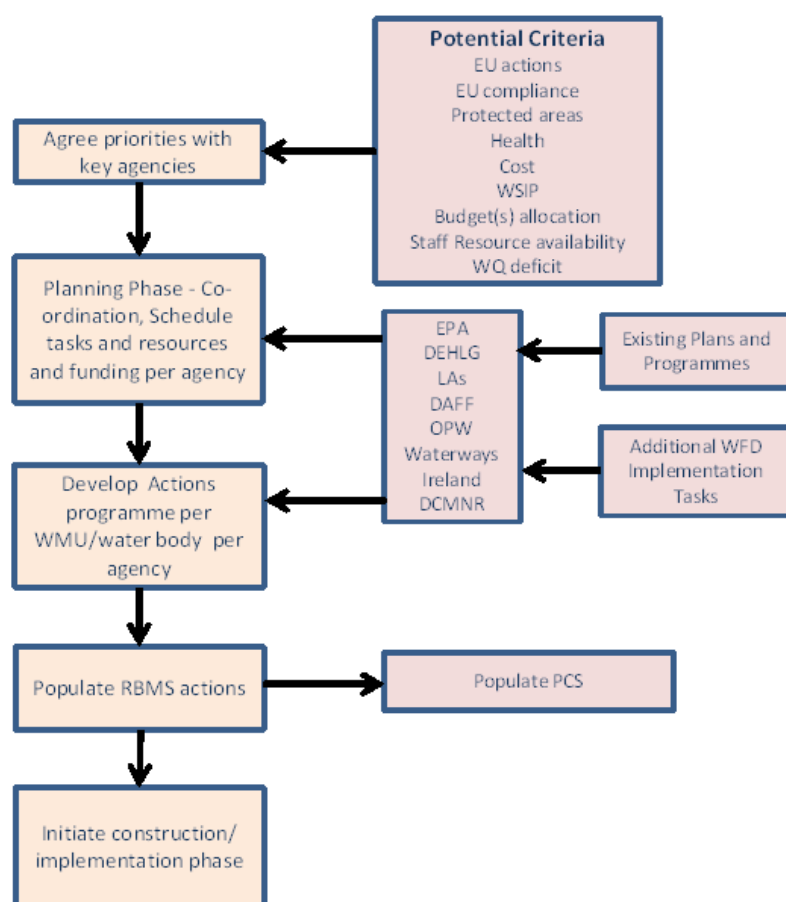
Target for Good Status (Groundwater in 2027)



A work programme of this scale will require detailed planning and management and a series of steps are suggested (see Figure 10.12):

- The Plan identifies which waters will achieve good status first, but other priorities may be considered imperative and these should be reviewed in detail at water body level;
- Once the priorities are finalised the responsibilities of each agency need careful definition and acceptance;
- Actions under existing plans and programmes within each agency should be fully integrated into the WFD POM;
- A coordinated programme of work should then be developed and agreed; funding and scheduling within and between agencies would be required;
- The measures should be broken down into actions for each agency for each water body;
- The actions should be scheduled and allocated (within the RBMS environment);
- Linkage would be needed with the WSIP management system; and
- Measures should then be undertaken.

Figure 10.12: Prioritisation of Measures Implementation



10.6 Prioritisation

The CIS is clear that good status will not be achieved during the first planning cycle in all waters and that the implementation of measures will inevitably have to be prioritised. There are many criteria which should influence this priority setting, many of which are matters for government and society; these might include:

- Compliance with EU Directives;
- Protection and enhancement of protected areas;
- Human health;
- Cost;
- Integration with the Water Services Investment Programme;
- Budget(s) allocation;
- Staff Resource availability; and
- WQ deficit

In this Plan the criteria have been limited to a rational approach to protecting and improving our waters based on water status and catchment management principles. In 2008 a workshop with all of the Local Authorities in the Eastern River Basin District reviewed the existing condition of each water management unit or water body and the pressures affecting it. Neighbouring authorities developed an approach as to which waters would be expected to be improved first based on the nature and scale of pressures affecting them.

There was agreement to start this process at the top of the catchments and then to recognise that waters not achieving good status by 2015 for reasons of either natural recovery or programming would detrimentally affect downstream waters and so these would be expected to improved at a later date. In the rural areas the local authorities should co-ordinate their farm inspection programmes so that catchments which include land in multiple administrative areas are simultaneously targeted. This will facilitate the control of agricultural wastes and should be addressed as part of the measures implementation planning work and in conjunction with the EPA and DAFF.

The outcome of this workshop was a clear definition of which waters would be improved in each planning cycle, with steady progress through until 2027. By 2015 it was expected that 61.5% of our waters would be at good status (improved from 45.5% in 2007). It was felt that this level of ambition was realistic and rational.

Revised status information and acceptance that significant numbers of status estimates are based on inadequate data has prompted the need to increase the amount of monitoring as the first action in many water bodies; this has reduced the numbers of water bodies now expected to achieve good status in 2015 to 55.3%.

The Irish government intends to set up a high level committee of major stakeholders to consider the whole issue of prioritisation in the autumn of 2009 and so some further modifications to this target should be expected. For example, measures to protect drinking waters should be one of the higher priorities and measures in accordance with a drinking Water Safety Plan approach implemented in water source areas first.

10.7 Programming

The programming of implementation should follow the prioritisation criteria developed in this Plan, as modified by the DEHLG committee. With several agencies involved, 488 water bodies to address and very many measures it is anticipated that this will be a complex task requiring extensive consultation and collaborative working. Measures need to be effective by 2015 for many water bodies and the full POM should be implemented by 2012. It is recommended that the lead authority initiates this process as a matter of urgency with the objective of having a draft implementation plan prepared in early 2010 so that the first actions can be taken at that time. Subsequent refinement can then be accommodated in later actions during 2010 and 2011.

It is further recommended that sub catchment committees are established to monitor progress and encourage local interest and participation which will be particularly important in helping to address diffuse sources. Ideally, these groups should be comprised of key stakeholders but also a strong cross section of the public.

10.8 Pilots

The ERBD project has undertaken extensive local scale investigations in selected areas to better understand the waters and the pressures affecting them. These studies have been extremely enlightening and demonstrated the importance of having detailed and accurate information before initiating expensive programmes of measures. These pilots have found very many small scale point sources in the upper catchments which together contribute significantly to pollution in rural areas. Other pilots have investigated the effects of septic tanks on poorly draining soils, pollution risk in drinking water catchments and the effects of combined sewer outfalls on estuary water quality.

These investigative pilot studies have been acknowledged by the EPA and Local Authorities as being of high value; the involvement in several Local Authorities in each pilot has also started the process of catchment based management rather than in administrative areas.

It is recommended that this pilot approach be extended into the measures implementation phase and that sub catchments with differing characteristics and problems are targeted early in 2010 to test the veracity of the POMS prior to widespread implementation. Logically, these pilot catchments would follow the investigative pilots and those sub catchments targeted for improvement by 2015. Suggested pilot projects are presented in Section 12.

11 Strategic Environmental Assessment

An Environmental Report has been prepared as part of the Strategic Environmental Assessment of the River Basin Management Plan and Programme of Measures (POM) for the Eastern River Basin District (ERBD) in accordance with national and EU legislation. This is presented here and has been carried out as part of the North South Share Project and the full Strategic Environmental Assessment and supporting documents can be downloaded from www.wfdireland.ie.

11.1 What is Strategic Environmental Assessment?

Strategic Environmental Assessment (SEA) is a systematic method of considering the likely significant environmental effects of a Plan or Programme by integrating environmental factors into the development of the Plan and related decision-making. The purpose of this SEA is to ensure that the environmental consequences of the RBMP and POM for the ERBD are assessed both during their preparation and prior to adoption. The SEA ensures that the Plan and POM are as robust as possible in the context of the wider environment.

What is involved in SEA?

There are four main steps in the SEA Process

1. Screening – Is an SEA needed?
2. Scoping – What should it include?
3. Environmental Assessment and Report – What are the potential environmental impacts of the draft Plan and its alternatives?
4. SEA Statement – How has the SEA influenced the adopted Plan?

We are currently at the SEA Statement stage of the process for the Plan and POM. The main purpose of the SEA Statement is to provide information on the decision-making process and to document how environmental considerations, the views of consultees and the recommendations of the Environmental Report have been taken into account in the Plan and POM for the Eastern River Basin District. It also illustrates how decisions were taken, thereby making the process more transparent. An SEA Statement will be made available to the public to accompany the Plan and POM.



How does the Habitats Directive fit into the process?

In addition to the SEA process influencing the development of the Plan and POM, a related assessment under the EU Habitats Directive (92/43/EEC) was also undertaken as part of the overall plan development and SEA. The SEA Directive and Habitats Directive are broadly complementary pieces of legislation, albeit with one focused at a broad (SEA), as opposed to a narrow (Habitats), interpretation of “environment”.

While SEA looks at the wider environment, the Habitats Directive is focused on impacts to Natura 2000 sites (i.e. SACs and SPAs) and the features for which that site was designated. The Habitats Directive Assessment (HDA) ran in conjunction with the SEA and Plan making processes to ensure that appropriate consideration was given to Natura 2000 sites throughout the development of the RBMP and POM for the ERBD. The findings from the HDA have been fully integrated into the SEA Environmental Report and these in turn have been integrated into the RBMP and POM for the ERBD.

Who carried out the SEA?

The SEA for the Plan and POM was carried out by a team of SEA experts, supplemented by ecological experts in relation to the HDA. This team was directed by a River Basin Management Plan and Programme of Measures Strategic Environmental Assessment Steering Group, with representatives from all eight River Basin Districts (RBDs) on the island of Ireland and also representatives from the statutory bodies for SEA in Ireland and Northern Ireland (EPA, DoEHLG, DCENR and NIEA).

11.2 What has happened to date?

Following screening by the competent authorities, in consultation with the statutory bodies for SEA in Ireland and Northern Ireland, it was determined that an SEA was required for each of the Plans and POMs on the island of Ireland (eight in total). Scoping of the content and level of detail to be included in the environmental report was subsequently undertaken for each of the individual RBDs, again in consultation with the statutory bodies and with guidance from the Steering Group. The SEA Scoping Document for the Eastern RBMP and POM is available at www.erbd.ie/.

An Environmental Report was then prepared for the draft Plan and POM for the ERBD in accordance with national and EU legislation. The purpose of this Environmental Report was to:

- a) inform the development of the Plan;
- b) identify, describe and evaluate the likely significant effects of the Plan and its reasonable alternatives; and
- c) provide an early opportunity for the statutory authorities and the public to offer views through consultation.

The draft Plan, POM and Environmental Report were placed on public display from December 22, 2008 to June 22, 2009. Open days were held at a number of venues (see below) where representatives from the Plan team and the SEA team were available to answer questions on the various documents and generally inform the public of the purpose of the RBMP and POM for the ERBD and also the purpose of the SEA and HDA.

| | | |
|---|---|-----------|
| ■ | Dublin City Civic Offices, Dublin | 06-May-09 |
| ■ | Solstice Centre, Navan | 11-May-09 |
| ■ | Aras Chill Dara, Naas | 12-May-09 |
| ■ | County Library, Tallaght | 13-May-09 |
| ■ | County Buildings, Wicklow County Council, Wicklow | 14-May-09 |
| ■ | County Buildings, Fingal County Council, Swords | 12-Jun-09 |



How have the SEA and HDA influenced the Eastern RBMP and POM?

The SEA and HDA were ongoing throughout the development of the draft Eastern RBMP and POM, with the SEA, HDA and Plan teams working together closely to identify potential environmental issues/constraints at the earliest possible stage in the Plan making process.

The SEA and HDA teams were involved in the:

- Development of the alternatives considered in the draft Plan and POM, SEA and HDA;
- Early identification of environmental sensitivities in the ERBD in order to amend the draft Plan and POM and to avoid impacts on the environment;
- Recommendation of mitigation measures to address the potential impacts arising from the alternatives considered in the draft RBMP and POM; and
- Development of a monitoring plan to track the environmental performance of the final RBMP and POM once implemented.

What alternatives were considered in the SEA?

The SEA team initially produced a document, 'A Working Approach for the Development and Assessment of Alternatives' which was circulated to the SEA Steering Group for consideration and in order to generate debate and discussion on the reasonable alternatives available for consideration. A workshop was subsequently held with Plan Team to determine the level of detail contained within the alternatives and to discuss how the alternatives would be dealt with in the SEA. To assist in Plan development, the SEA team provided an initial high-level review of the main alternatives to highlight key environmental issues going forward.

The main alternatives scenarios considered in the SEA were:

- Business as Usual – i.e. implementation of the 11 Existing Directives listed in Article 10 and part A of Annex VI of the WFD;
- Business as Usual plus – i.e. as above but with other required measures noted in Article 11(3) of the WFD; and
- Individual Supplementary Measures.

Which alternatives were assessed?

The "Business as Usual" measures were initially sieved to focus the assessment on elements that could be reasonably assessed. For example, general requirements for further education and awareness campaigns or additional monitoring were not assessed; however, possible changes to land use planning or introduction of specific infrastructural requirements were assessed. The "Business as Usual plus" measures were all assessed; however, this was confined to quantitative assessment due to lack of specific detail that would allow quantification.

Prior to assessment, the individual supplementary measures were grouped by pressure and categorised broadly as measures that will either:

- a) reduce the inputs of contaminants;
- b) replace or upgrade infrastructure; or
- c) relocate the pressure to an alternative and less sensitive location.

What type of assessment was carried out?

The approach used for assessing the alternatives is termed an 'objectives led assessment'. In this case, each of the alternatives considered were tested against defined SEA Environmental Objectives (as listed in Table 11.1), which are separate to the Plan objectives and cover each of the SEA environmental topic issues from the legislation, e.g. population, biodiversity, material assets, etc. For each environmental topic area an objective was developed which expressed a desired direction of change based on the current state of the environment in Ireland (relevant to water management) and with reference to other relevant national and EU plans, programmes and legislation. The Environmental Objectives also took account of the scoping and consultation feedback and the outcome of a Workshop held between the SEA team and the Steering Group. A matrix format was used for the assessment, which permitted a systematic approach and also permitted comparison of alternatives.

Table 11.1 Environmental Objectives

| | |
|---|--|
| Objective 1 (Biodiversity, Flora and Fauna) | Prevent damage to terrestrial, aquatic and soil biodiversity, particularly EU designated sites and protected species. |
| Objective 2 (Population) | Contribute to sustainable development. |
| Objective 3 (Human Health) | Protect and reduce risk to human health in undertaking water management activities. |
| Objective 4 (Soil) | Avoid damage to the function and quality of the soil resource in the River Basin District. |
| Objective 5 (Water) | Prevent deterioration of the status of water bodies with regard to quality, quantity and improve water body status for rivers, lakes, transitional and coastal waters and groundwaters to at least good status, as appropriate to the WFD. |
| Objective 6 (Air Quality) | Minimise emissions to air as a result of Plan activities. |
| Objective 7 (Climatic Factors) | Minimise contribution to climate change by emission of greenhouse gases associated with Plan implementation. |
| Objective 8 (Material Assets 1) | Maintain level of protection provided by existing morphological infrastructure, e.g. flood defences, coastal barriers, groynes, etc. |
| Objective 9 (Material Assets 2) | Provide new and upgrade existing water management infrastructure to protect human health and ecological status of water bodies. |
| Objective 10 (Material Assets 3) | Support economic activities within the District without conflicting with the objectives of the WFD. |
| Objective 11 (Material Assets 4) | Protect water as an economic resource. |
| Objective 12 (Cultural Heritage) | Avoid damage to cultural heritage resources in the River Basin District. |
| Objective 13 (Landscape) | Avoid damage to designated landscapes in the River Basin District. |

11.3 How have identified impacts been mitigated?

As part of the Environmental Report, an extensive list of mitigation measures was proposed for incorporation in the final Plan and POM. These mitigation measures were based on the findings from both the SEA and the HDA. The Plan team considered these mitigation measures during the consultation period. The relevant mitigation has been identified which pertains to measures being included in the final Plan and POM following changes made after close of the consultation period. Table 11.2 at the end of this chapter outlines the various mitigation measures to be put in place as part of the implementation process and links them with the relevant Basic and Supplementary Measures included in the Plan and POM.

11.4 What are the overall conclusions of the SEA and HDA?

At the broad level, implementation of the Plan is expected to bring environmental improvements, since it tackles specific pressures on water quality. However, there are some cases where negative impacts may arise in the wider environment (Table 11.2). As stated above, the SEA and HDA have identified such areas and recommended mitigation measures to reduce or eliminate the impact. This mitigation has been brought forward into the final Plan and POM in order to ensure that there is a balanced response to environmental impacts.

11.5 How will future impacts be monitored?

Linked with the SEA Environmental Objectives are Targets and Indicators, which will be used to monitor the impact of the Plan on the wider environment going forward. A great deal of consideration was put into choosing the objectives, targets and indicators as they not only form the basis of the assessment (objectives) but also present the opportunity to check that the Plan is not resulting in unforeseen impacts on the environment (monitoring of indicators). If monitoring indicates a problem it is intended that the responsible authorities will review the measure causing the problem and adjust its implementation, if required. It is also envisioned that the information gathered on the progress towards achieving the objectives and targets will be used as a benchmark for the SEA of the Eastern RBMP and POM when it is updated prior to the second cycle (2016 to 2021).

11.6 How were submissions taken into account?

The Plan, SEA and HDA teams have reviewed the submissions and observations received over the 6-month consultation period. Where new measures are proposed for inclusion in the final Plan and POM the SEA team has carried out a screening of the measure to determine if there is potential to impact on the wider environment. These screenings are included in the SEA Statement. Where key issues, such as the remediation of the Avoca River, have been raised in submissions / observations, the Plan team has clarified the reasons for change / non-change in the final Eastern RBMP and POM and this is discussed in the SEA Statement.

What was the influence of submissions on the final Plan and POM?

The SEA Environmental Report and HDA Report were available for public consultation alongside the draft Plan and POM for the ERBD. A review of the submissions on all three documents has been carried out. A total of 66 submissions were received in relation to the Plan and POM including submissions from various interest groups (e.g. EPA, SWAN, IFA, IBEC), anglers, statutory bodies and individual members of the public. The comments made in the submissions received on the three documents were used to refine/amend the contents of the final Plan and POM. The influence of the submissions / observations on the final Plan is discussed in detail in the SEA Statement, which is being published alongside the adopted RBMP and POM for the ERBD. Some of the main issues relevant to the SEA related to the following:

- Suggested amendments to wording in the Plan and / or SEA Environmental Report;
- Impacts of supplementary agricultural measures on farm incomes;
- Suggested potential new measures for inclusion in the final Plan;
- Importance of Dublin and Drogheda Ports;
- Placement of pesticides and plant protection products under the pressure heading of Dangerous Substances;
- Conflicts between aquatic biodiversity and other environmental interests;
- Impacts of the River Liffey Act;
- Remediation of the Avoca River;
- Cumulative impacts of the Plan; and
- Clarification on how mitigation will be brought forward in the Plan.

Have measures been added / removed following close of consultation?

The Plan team has included three new measures in the POM for the ERBD to further assist in achieving Good Ecological Status by improving the riverine habitat for all trophic levels of the aquatic foodchain. These are:

- Take account of, where appropriate, measures from the Delvin Catchment Report;
- Improve river habitats; and
- Investigate and monitor legacy landfills.

The measures referred to in relation to the Delvin Catchment Report include the following:

- Restore channelised sections to natural river course and habitat;
- Install natural revetment along heavily eroded sections of the river, e.g. quarry site near the Naul;
- Review river and tributary maintenance operations;
- Manage and expand riverside tree cover;
- Install/Restore salmonid spawning grounds;
- Install permanent water quality dataloggers;
- Establish wildlife corridor along the Delvin River; and
- Control invasive species Japanese Knotweed, Giant Hogweed and Cherry Laurel.

These new measures have been reviewed and discussed with the Plan team and have been subject to a screening exercise to identify potential impacts on the wider environment. The result of the screening exercise found that it is unlikely that these new measures would result in significant environmental impacts outside of those already identified in the Environmental Report; therefore, additional assessment is not deemed to be required. A discussion of the screening exercise is included in the SEA Statement.

In addition, there are a number of mitigation measures recommended in the Environmental Report that are linked with measures put forward as part of the Plan-making processes in other RBDs on the island. While this mitigation may not link directly with measures included in the Plan and POM for the ERBD, they have been carried forward into the final RBMP and POM for the ERBD as they represent several valuable proposals that should be included in the RBMP and POM. These additional measures are:

- A programme of education and awareness is needed to tackle improper and illegal disposal of waste to support the reduction of pollution from these sources. A campaign to reduce the illegal disposal of waste is recommended, as this would have particular benefit for protected areas, which tend to be remote rural areas, e.g. bogs, used for illegal disposal of unwanted materials (SEA OP2/OP4).
- Though there are agricultural supplementary measures which specifically call for restriction of cattle access and provision of riparian buffers, there is not a measure which specifically calls for reduction in agricultural intensity or set aside of agricultural land. Should the agricultural measures result in a reduction in agricultural intensity, including lower stocking density or land reclamation, or the set aside of agricultural land, then a Habitats Directive Assessment would be required to determine if these activities would result in impacts to protected sites or species. In addition, set aside of lands shall only be implemented in combination with appropriate guidance for agricultural lands within or adjacent to protected areas (spraying of pesticides is the key concern) (SEA AG4/AG6).
- An information and advice campaign targeted at farmers should be implemented on a national scale. This should focus on prevention first followed by Best Management Practices as core themes. It will be important that adequate consideration is given not just to water and biodiversity but also soils and cultural heritage, as a narrowly focussed approach may lead to indirect negative impacts on these areas. It is also recommended that information campaigns highlight best practice in the sector in order to demonstrate that an economically viable farming operation is possible within such schemes. Opportunities for agri-tourism should also be highlighted as a way to supplement farm income while protecting the environment. This guidance shall also include information relating to implementation in areas protected for biodiversity. To ensure that farmers are aware of the issues associated with the use of pesticides, including information on the Nation Action Plan on Sustainable Use of Pesticides, it is recommended that this issue be included in this information and advice campaign. In addition, to ensure that farmers are aware of the different legislation applied to agriculture and the requirements/issues associated with these, it is recommended that this information be included as well (SEA AG8).
- A focussed awareness campaign on water use and the value of water should be implemented to reduce the volumes of water used / wasted, followed by leakage improvement and only then new infrastructure. Any new infrastructure, e.g. storage, should source its fuel from renewable sources (SEA AB ALL).
- It is recommended that the Planning Authority, in directing or restricting development take account not only of the water capacity of an area but its wider capacity in terms of cultural heritage, biodiversity and landscape, etc. In addition, Habitats Directive Assessment should be considered for new abstractions in line with the requirements of the Habitats Directive (SEA AB14).

The Environmental Report also put forward a new measure for consideration for inclusion in the Plan and POM. This is SEA Measure WW6, which includes provision for: Reduction in pollution at source through education campaigns. This campaign should include information on the use and disposal of household chemicals, oils, detergents, paints, solvents, etc as well as information on phosphorus related pollution. Consideration should also be given to targeting specific audiences on issues such as location of septic tanks, discharges to water and the importance of wetland sites to water quality. This measure has also been carried forward into the final Plan and POM and can be found in Section 7.

In addition to the mitigation measures to address the proposed Supplementary Measures, the Environmental Report and HDA Report also included the provision of mitigation measures to address impacts resulting from the implementation of elements included in the Other Basic Measures. These are as follows:

| | |
|---|---|
| Abstraction and impoundment control | Controls on abstraction and impoundment should be screened to determine if potential exists for impacts to a Natura 2000/Ramsar site. |
| Point source and diffuse source discharge controls | When specific details on these are available it is highly recommended that they are screened to determine if potential exists for impacts to a Natura 2000/Ramsar site. Detailed assessment of higher risk works will include environmental considerations (based on EIA guidance). It is also recommended that lower risk work should be compelled to consider environmental issues as part of the registration process. |
| Controls on physical modifications to surface waters | Controls must include consideration of the requirements for Natura 2000/Ramsar sites. It is recommended that future assessment on the impacts on the wider environment is carried out once measures are defined. |
| Prevention or reduction of the impact of accidental pollution incidents | Where controls are to be put in place for emergencies, and these might include the construction of infrastructure, such as flood defences, then these should be screened to determine if potential exists for impacts to a Natura 2000/Ramsar sites. |
| Authorisation of discharges to groundwater | These regulations should take account of the requirements of Natura 2000 sites, as more stringent objectives may be required. |
| Priority Substance Control | Assessment under Article 6 of the Habitats Directive will be required for new processes for treatment or disposal if potential exists for impacts to a Natura 2000/Ramsar site. |

With regard to the Basic Measures, these will result from implementation of the existing 11 Directives listed in Article 10 and part A of Annex VI of the WFD, which are not new measures but for which the Plan gives added impetus. As such, and projects arising from these would be subject to the requirements of existing environmental protection legislation, e.g., the Habitats Directive.

Has the Environmental Report changed since its original publication?

Where possible, clarifications and minor amendments and additions have been made in the Environmental Report, as necessary. An updated Environmental Report has been placed on the www.erbd.ie website.

It should be noted that for the purposes of these **mitigation measures** in all cases the term Appropriate Assessment (AA) refers to the assessment process as specified in Article 6 of the Habitats Directive. This starts with screening to determine whether a likely significant impact from the plan/programme is expected to occur to a Natura 2000/Ramsar site as a result of activities in/adjacent to/in the catchment of a Natura 2000/Ramsar site. If, in accordance with AA guidance (guidance produced by the EU, DEHLG in Ireland), it can be shown that there is no potential for impact at the screening stage, no further assessment may be required. However when the plan/programme being screened lies within or adjacent to a Natura 2000/Ramsar site then such a determination must be made in consultation with NPWS. If the plan/programme is within the catchment (surface and groundwater) of a Natura 2000/Ramsar site, such consultation with NPWS is only necessary for those water dependent Natura 2000 sites which are listed in the WFD Register of Protected Areas.

The codes for each of the measures in the Plan requiring mitigation are given in the second column of the table. The SEA reference number for the applicable mitigation measures is given in the fourth column of the table. Mitigation Measures in **black** are from the SEA Environmental Report, while Mitigation Measures in **blue** are from the Habitats Directive Assessment.

| Measures | RBMP Ref No. | Assessment Summary | SEA Ref No. | SEA and HDA Mitigation Measures |
|---|--|--|------------------------------|--|
| Measures intended to reduce loading to the treatment plant: - Limit or cease the direct importation of polluting matter, e.g. industrial wastewater entering a collecting system and UWW treatment plants shall be pre-treated if necessary to avoid any damage to the process - Investigate fats, oils and grease issues (FOG). - Upgrade and rehabilitate Combined Sewer Overflows (CSOs). - CSOs to comply with GSDS recommendations | 325 159/167 166/168 146 | <ul style="list-style-type: none"> ■ Direct positive impacts for WWTP / WWTW by improving capacity and efficiency. ■ Indirect positive impacts on water, biodiversity, soils and human health by reducing pressure on existing infrastructure. ■ Indirect negative impacts to water and biodiversity, air quality and climate, soils, cultural heritage and landscape due to alternative disposal (e.g. incineration) requirements. ■ Direct negative impacts to operators producing polluting matter as may require additional costs to implement. ■ Medium to long-term impacts, as further investigations will be required to implement specific measures. ■ Appropriate Assessment concluded that reducing nutrient loads may improve water quality and reduce the impacts of eutrophication. | WW1 WW1 | This alternative should be accompanied by an education and awareness campaign for householders and commercial premises dealing with under-sink disintegration and FOG. This alternative will require project level Appropriate Assessment if alternative facilities for treatment of waste are constructed, e.g. incinerator. |
| Impose development controls using a common approach where there is, or is likely to be in the future, insufficient capacity at treatment plants. To be achieved through: - Inclusion of an Environmental Report with Development Plans. - Grant, refuse and review licence for developing land. | 94 117 | <ul style="list-style-type: none"> ■ Direct positive impacts for population by ensuring sustainable development. ■ Indirect positive impacts for water quality, biodiversity, soil and human health through reduced intensity of development in areas with insufficient capacity. ■ Direct negative impacts for economic resources attempting to locate or expand in areas with insufficient capacity. ■ Indirect positive impacts for existing economic activities currently impacted by poor water quality, e.g. tourism. ■ Positive impacts on existing WWTP / WWTW by reducing cumulative pressure from development. ■ Potential indirect negative impacts to cultural heritage if traditional industries are curtailed due to insufficient capacity in particular areas. ■ Potential short-term effects onward if controls are imposed on planning applications from the date of Plan adoption. ■ Appropriate Assessment found an overall positive affect if whole catchment loadings are considered as part of the planning process. | WW2 WW2 | This alternative will need to link to the development planning process, e.g. by including a requirement to address wastewater capacity as part of the scope in any accompanying SEA for a Development Plan. This alternative will need to consider whole catchment loading. |
| Replace or upgrade of existing WWTP, through: | | <ul style="list-style-type: none"> ■ Direct positive impacts on material assets through upgrades to existing | WW10, | Negative impacts on climate associated with GHG emissions |

| Measures | RBMP Ref No. | Assessment Summary | SEA Ref No. | SEA and HDA Mitigation Measures |
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| <p>- Tertiary Treatment.</p> <p>- Upgrade domestic WWTWs to secondary treatment for P.E. >10,000 discharging to coastal waters.</p> <p>- Upgrade domestic WWTWs to secondary treatment for P.E. >2,000 discharging to rivers, lakes, & estuaries.</p> <p>- Upgrade domestic WWTWs to 2 mg/l or 80% TP reduction for P.E. >10,000 discharging to sensitive waters (unless no eutrophication potential).</p> <p>- Upgrade domestic WWTWs to 1 mg/l or 80% TN reduction for P.E. >100,000 discharging to sensitive waters (unless no eutrophication potential).</p> <p>- Upgrade domestic WWTWs to 15 mg/l or 70% TN reduction for P.E. >10,000 and discharging to sensitive waters (unless no eutrophication potential).</p> <p>- Upgrade domestic WWTWs to 10 mg/l or 80% TN reduction for P.E. >100,000 and discharging to sensitive waters (unless no eutrophication potential).</p> <p>- Improve removal of certain parameters at WWTP.</p> | <p>14</p> <p>100</p> <p>101</p> <p>102</p> <p>105</p> <p>106</p> <p>107</p> <p>363</p> | <p>infrastructure.</p> <ul style="list-style-type: none"> ■ Indirect positive impacts on water quality, biodiversity, soils and human health by improving effluent quality. ■ Indirect impacts on biodiversity by altering existing food web dynamics. ■ Contributes to sustainable development by ensuring adequate water and wastewater infrastructure. ■ Indirect positive impacts to water as an economic resource and the sectors dependent on it. ■ Potential negative impacts if additional landtake is required for existing or new infrastructure. ■ Indirect negative impacts on biodiversity, soils, and cultural heritage, if sited inappropriately. ■ Additional costs likely to upgrade systems to secondary and tertiary treatment. ■ Potential negative impact on climate due to additional energy requirement and emission of CO₂. ■ Appropriate Assessment found that reduced nutrient loads may improve water quality and reduce the impacts of eutrophication. Particularly important for protected areas with more stringent objectives, e.g. freshwater pearl mussels or hard water lakes. | <p>WW11, WW12, WW13</p> <p>WW10, WW11, WW12</p> <p>WW10, WW11, WW12</p> | <p>related to additional energy requirements should be offset by use of renewable energy sources or similar.</p> <p>If these alternatives involve the building of a new plant or an extension to an existing plant an Appropriate Assessment will be required. Prior to any proposals for a new plant, further investigation will be required to show that a new plant will have the desired improvements in water quality for which it is being built.</p> <p>If additional landtake is required for these alternatives, environmental studies will be undertaken to assess the impact on the environment.</p> |
| Chose the point of discharge to minimise adverse effects on the environment. | 324 | <ul style="list-style-type: none"> ■ Direct positive impacts on water quality and aquatic biodiversity. ■ Indirect negative impacts if the point of discharge is relocated without consideration of terrestrial habitats and species or cultural heritage. ■ Positive direct impacts on wastewater treatment infrastructure. ■ Indirect positive impacts on economic activities dependant on good water quality. ■ Appropriate Assessment recommended that implementation of this alternative should be prioritised in catchments containing sensitive/protected areas. | WW14 | Appropriate Assessment will be required to demonstrate that the relocation will not negatively impact on protected areas. |
| Implement community digestors for alternative energy. | 366 | <ul style="list-style-type: none"> ■ Direct positive impact to soils and indirect positive impact to water quality, aquatic biodiversity and human health, due to reduced disposal of sludges using methods such as landspreading. ■ Negative impacts to climate, due to production of greenhouse gases by treatment methods, and air quality, from transport of material requiring disposal. ■ Indirect negative impacts to biodiversity and cultural heritage if digestors are sited in sensitive locations. ■ Indirect negative impacts on air quality/climate and potential human health issues if incineration is used inappropriately. | <p>WW16</p> <p>WW16</p> | <p>If additional landtake is required, environmental studies will be undertaken to assess the impact on the environment.</p> <p>Appropriate Assessment will be required to demonstrate that any new infrastructure will not negatively impact on protected areas.</p> |

| Measures | RBMP Ref No. | Assessment Summary | SEA Ref No. | SEA and HDA Mitigation Measures |
|---|-----------------------|---|--------------------------------------|--|
| | | <ul style="list-style-type: none"> Positive direct impacts on wastewater treatment infrastructure. Indirect positive impacts on economic activities dependant on good water quality. | | |
| Upgrade IPPC licensed facilities management structures and practices to best available technology (BAT). Upgrade waste licensed facilities management structures and practices to best available technology. | 120 355 | <ul style="list-style-type: none"> Direct positive impact on material assets, through improvements to the industrial sector. Direct positive impact on water and aquatic biodiversity, including protected sites but only if any discharge relocation options take account of the location of protected sites. Indirect positive impacts on soils and human health and water as an economic resource. Indirect negative impact to material assets as a result of upgrade and/or relocation costs. Potential negative indirect impact to air quality and climate depending on what BAT is considered. Potential negative direct impact to cultural heritage if relocation occurs without consideration of cultural heritage features. | IND6 IND8 IND8 | Once clarified, BAT should be reviewed in the context of impacts to air quality and GHG emissions. A cultural heritage assessment will be required if these improvements includes relocation of discharge points. <i>If these improvements include relation of discharge points, areas containing sensitive habitats and species should be avoided. An Appropriate Assessment will be required to determine impacts on protected areas resulting from relocation.</i> |
| Mitigate impact of quarry activities. Mine discharge to be suitably treated. | 142 126 | <ul style="list-style-type: none"> Direct and indirect positive impacts for biodiversity through habitat rehabilitation, restoration and creation. Direct positive impacts on soils and groundwater. Negative impacts on air quality and climate as a result of transport related emissions from export of contaminated soils for treatment. Indirect positive impacts on air quality, water and human health, from improved water quality and reduced exposure to airborne pollution associated with contamination. Indirect positive impacts on cultural heritage and landscape if remediation considers the whole landscape. Indirect negative impacts on cultural heritage and landscape if specific local measures do not account for the receiving environment. Appropriate Assessment has noted that this alternative should consider protected area requirements/ impact on protected areas as one of the criteria for prioritisation. Speed of implementation of remediation projects will dictate if impacts occur in the short-medium or medium-long term. | OP5 OP5 OP5 OP5 | Remediation of site and containment options will need to be inclusive and linked to risk assessment to look at all pathways for contamination, not just water. Remediation needs to look at the whole receiving environment, not just water. Remediation projects will need to work with Biodiversity Action Plans (national and local). Local projects could work with other similar habitat types in an area to create ecological networks to the benefit of flora and fauna. <i>Project level Appropriate Assessments will be required for activities under this alternative.</i> On-site treatment of contaminated soils should be considered to reduce negative impacts to air quality and climate from transport related emissions. |
| Harbour dredgings to be suitably disposed of (138). | 138 | <ul style="list-style-type: none"> Similar impacts as Measures 142 and 126 (SEA OP5). Direct positive impacts to water and aquatic biodiversity from proper disposal of dredged harbour material. Negative indirect impacts to air quality, climate and material assets if the removal of dredged material requires transport to locations further in distance than previously. Indirect negative impacts to biodiversity, population, cultural heritage, landscape and human health if disposal sites are inappropriately located. | OP6 | <i>Appropriate Assessment will be required for activities under this alternative.</i> |
| Review IPPC licences. Grant and refuse IPPC licences subject to set limits to reduce pollution effects. Review waste licences. | 298 297 357 | <ul style="list-style-type: none"> Negative impacts on economic activity from potential changes to management practices. Positive impacts to water quality and aquatic biodiversity from reduced chemical pollution. | DS3 | Sector specific targeted pollution reduction programmes will need to be developed in the early stages to ensure that maximum medium to long-term gains can be achieved. |

| Measures | RBMP Ref No. | Assessment Summary | SEA Ref No. | SEA and HDA Mitigation Measures |
|---|-------------------|--|---|---|
| Grant and refuse waste licences subject to set limits to reduce pollution effects. Grant, refuse or review licences as appropriate. | 356 306 | <ul style="list-style-type: none"> ■ Indirect positive impacts on climate from lower energy use in water and wastewater treatment. ■ Indirect positive impacts as a result of reduced pollution for terrestrial biodiversity, soil and human health. ■ Appropriate Assessment noted that this alternative must consider protected areas objectives and requirements and prioritise review according to their needs. ■ Existing pollution may cause problems beyond the medium term assessment period (2015); reducing input will have some immediate benefits for environmental receptors. | | |
| Upgrade IPPC licensed facilities management structures and practices to best available technology (BAT). Upgrade waste licensed facilities management structures and practices to best available technology. | 120 355 | <ul style="list-style-type: none"> ■ Direct positive impacts for water quality and aquatic biodiversity in the short-term. ■ Indirect positive impacts for human health and other biodiversity, which may be secondarily affected by the discharge of dangerous substances. ■ Positive impact on material assets as it will directly contribute to provision of new and upgraded wastewater infrastructure. ■ Short-term negative impacts are likely on economic activity as a result of implementation costs. | D55 | Appropriate Assessment will be required if this alternative would involve the building of a new plant or an extension to an existing plant. |
| Develop riparian buffers. Restrict cattle access to rivers – create cattle drinking points. | 4 161 | <ul style="list-style-type: none"> ■ Direct positive impact on water quality and indirect positive impacts on aquatic flora and fauna. ■ Direct positive impact on riverbank vegetation and soil environment. ■ Positive impact due to prevention of soil erosion adjacent to river. ■ Positive impact due to buffer zone contributing to the interception of pathogens and nutrient enrichment from farm sources due to surface water runoff. ■ Positive impact on the economic value of the water resource. ■ Negative impact on bird species if current management practices in buffer zones cease. ■ Indirect economic impacts due to some loss of productive land and/or reduction in access to water for livestock. ■ Removal of productive land may lead to a reduction in capacity, potentially increasing the need for food imports, leading to indirect impacts on air quality and climate due to increased transport emissions. ■ Indirect negative impacts on population if increased imports are required to satisfy demand for foodstuffs. ■ The Appropriate Assessment identified the need for management of these areas to reduce the potential for invasion by alien species. ■ The Appropriate Assessment noted that measures should target nutrient hot spots. | AG1/ AG3 AG1/ AG3 AG3 AG1/ AG3 | It is recommended that compensation be linked to annual upkeep of fences and management of buffers to ensure the ongoing benefit of these alternatives. Appropriate guidance is required for implementation of these alternatives to prevent indirect impacts to biodiversity. A management plan for buffer strips and set aside will be required to ensure there are no detrimental impacts on locally important flora and fauna. These plans should be farm specific to take account of the locally sensitive biodiversity. An Appropriate Assessment will be required. |
| Restrict land where sludge can be used. Restrict the supply of sludge applied to land to 2 tonnes of dry matter per hectare per year. Discontinue use of soiled water for application to or irrigation of land in certain conditions. | 329 331 137 | <ul style="list-style-type: none"> ■ Direct positive impact for soils and indirect positive impacts for water quality. ■ Indirect positive impacts for biodiversity and human health. ■ Indirect negative impact on human and direct negative impact on livestock health due to movement of surplus nutrients. ■ Indirect negative impacts to air quality and climate if surplus nutrients | AG12 | A system of cooperation between farms at the local level would mitigate some of the impacts associated with movement of nutrients, including the need to move material over a large area (mitigation of air quality and climate impacts) and provision of numerous small storage areas (mitigation of land loss). |

| Measures | RBMP Ref No. | Assessment Summary | SEA Ref No. | SEA and HDA Mitigation Measures |
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| | | <p>transport.</p> <ul style="list-style-type: none"> ■ Indirect negative impacts to human health if land spreading of sludges occurs without proper guidance. ■ Education essential for owners of on-site systems to raise awareness of need for ongoing maintenance of on-site treatment systems. | | |
| <p>Treatment Plant Tie-ins.</p> <p>Develop collection systems for P.E. >2000 (unless negligible benefits or excessive costs).</p> <p>Upgrade WWTW <2000 P.E.</p> <p>Upgrade WWTW and Collecting Systems <2000 P.E.</p> | <p>12</p> <p>98</p> <p>152</p> <p>153</p> | <ul style="list-style-type: none"> ■ Direct positive impacts on water and soil quality in the short term. ■ Indirect impacts on aquatic biodiversity, human health and water as an economic resource, timeframe would depend on speed of implementation. ■ Indirect negative impacts on biodiversity are possible due to changes in nutrient composition. ■ Appropriate Assessment notes that the return of surface and groundwaters to a more natural state as existed pre phosphate products would be a positive impact. ■ Direct positive impacts on the provision of water management infrastructure. ■ May be difficult and/or costly to achieve connection to the municipal systems over large areas with scattered development. ■ May require upgrades to the wastewater treatment facilities in over capacity areas. ■ Indirect impacts on air quality and climate from increased fuel usage and increase in the amount of sludge requiring disposal due to increased treatment. ■ Indirect negative impacts to biodiversity, landscape and cultural heritage if new wastewater treatment facilities are not sensitively sited. ■ Indirect negative impacts if allows development in rural areas not served by other links, e.g. public transport. ■ May be beneficial to economic activity if barriers to rural development are removed. | <p>UP11</p> <p>UP11</p> <p>UP11</p> | <p>Upgraded treatment works should be required to introduce BAT, including the use of renewable energy sources, in order to reduce GHG emissions and others resulting from increased demand for treatment.</p> <p>New wastewater treatment infrastructure, including sludge disposal infrastructure, will be subject to environmental assessment at the project level to reduce indirect impacts to biodiversity, landscape, cultural heritage, air quality and climate.</p> <p><i>Appropriate Assessment will be required for new structures.</i></p> |
| <p>Cross reference guidance documents and Forestry Schemes Manual.</p> <p>New guidance on management of forestry planted prior to the introduction of the Forest Service Guidance documents and Codes of Practice to be developed.</p> <p>Implement Forestry and Water Quality Guidelines.</p> <p>Forest Service - Code of Best Forest Practice.</p> <p>Forest Service - Forestry and Archaeology Guidelines.</p> <p>Forest Service - Forest and Biodiversity Guidelines.</p> <p>Forest Service - Forest and Landscape Guidelines.</p> <p>Forest Service - Forest Harvesting and Environment Guidelines.</p> | <p>245</p> <p>246</p> <p>137</p> <p>269</p> <p>270</p> <p>271</p> <p>272</p> <p>273</p> | <ul style="list-style-type: none"> ■ There are a number of guidelines/management controls identified as potential measures, the details of which are not yet available. However, as these are likely to require some changes to forestry practices it is strongly recommended that when the details of these are known they are compared with the suite of mitigation measures recommended for Forestry in the SEA, to determine if any of the required mitigation measures apply, as well as being subject to an environmental assessment and, where required, an Appropriate Assessment to identify potential impacts other than those related to water, e.g. climate, population, etc. ■ Some of the impacts that could potentially occur: ■ Negative impacts for climate and material assets. ■ Negative impact on the economic value of forests through restrictions and limitations. ■ Direct long-term benefits to water and soil quality. ■ Indirect long-term benefits to human health and aquatic biodiversity. | <p>FALL</p> <p>F2 to F8</p> | <p>Future guidelines for forestry should be developed through a steering group represented by bodies such as Coillte, the Forest Service (Northern Ireland), the Forest Service (Ireland), National Parks and Wildlife Service, the Central Fisheries Board (Ireland), the Fisheries Conservancy Board (Northern Ireland) the Northern Ireland Environment Agency, and representatives from the relevant planning authorities to ensure that the final guidelines take a holistic approach to the environment which includes biodiversity, landscape, climate and cultural heritage interests. Consideration should be given to identifying and implementing as a priority those alternatives that can be applied to forests only starting or midway through the growth cycle.</p> <p>It is recommended that prior to any changes in forest size or species mix, a study is carried out to determine the change, if any, in the carbon dioxide sequestering capacity of the forest. Should sequestering capacity be reduced,</p> |

| Measures | RBMP Ref No. | Assessment Summary | SEA Ref No. | SEA and HDA Mitigation Measures |
|---|--------------|---|-----------------|---|
| Forest Service - Forest Protection Guidelines. | 274 | | | compensation measures will be required to offset these. |
| Forest Service - Forestry and Aerial Fertilisation Guidelines. | 275 | | F3 | An Appropriate Assessment will be required for changes in the structure of existing forests to include structural diversity and increased open space. |
| Forest Service - Forestry Schemes Manual. | 276 | | F5 | An Appropriate Assessment will be required if a new plantation is proposed to be developed on peat sites or erodible soils in areas or catchments in areas protected for biodiversity (i.e. an SAC, SPA or Ramsar). |
| Forest Service - Forestry and Freshwater Pearl Mussel Requirements, Site Assessment and Mitigation Measures. | 277 | | F13 | Should it be proposed to mitigate acid impacts symptomatically using basic material, this should be avoided in protected areas, particularly in sensitive freshwater pearl mussel catchments. |
| Forest Service - Protocol on acid sensitive areas. | 278 | | F14 | An Appropriate Assessment will be required if it is proposed to mitigate acid impacts symptomatically using basic material or proposed to manage catchment drainage to increase residence times and soil wetting, including no drainage in some areas. |
| Update protocol on acid sensitive areas based on acid sensitive areas map and research. | 247 | | F19 | Detailed studies should be carried out prior to the introduction of any non-native species to be used as a biological control method. |
| DAFF - Review of Forestry Act, modification of requirement for replanting clear felled sites. | 243 | | F19 | An Appropriate Assessment will be required if it is proposed to introduce non-native species to be used as a biological control method. |
| Update Forest Service Guidance document on new EQS standards, Aerial Fertilisation Regulations, Updated Acidification protocol. | 244 | | F20 | A determination with regard to the requirement for SEA for Forestry practices under the provisions of the SEA Directive and Appropriate Assessment under the Habitats Directive should be made. |
| Implement Coastal Zone Management Schemes, e.g. Bantry Bay Charter. | 263 | <ul style="list-style-type: none"> Direct positive impact to water and biodiversity and indirect positive impacts to population, climate and human health due to wetlands and Coastal Zone Management Schemes. Negative impacts to biodiversity and cultural heritage if schemes are not rolled out in tandem with educational programmes and guidelines for their implementation. The Appropriate Assessment has noted that these types of schemes need to be properly planned and take account of all protected area requirements. | PM2 | An Appropriate Assessment will be required. |
| Introduce soft edges to inferior habitats. | 123 | <ul style="list-style-type: none"> Direct positive impacts for water quality and aquatic biodiversity. | PM6/ PM9 | An archaeology, architecture and cultural heritage assessment will be required before removal of any physical modifications with potential for cultural heritage value. Mitigation measures will be in agreement with the relevant authority. This assessment should include reference to cultural heritage in the context of the existing landscape. |
| Preserve and/or restore banks. | 176 | <ul style="list-style-type: none"> Economic benefit in the improvement of fishery resources through the removal impassable barriers. | | A flood impact assessment should be carried out for all channelisation (i.e. canalisation) and barrier remediation |
| Assess need for barrier removal based on risk and expert judgement. | 252 | <ul style="list-style-type: none"> Negative impacts to architecture, archaeology and cultural heritage due to removal of structural features. | | |
| Facilitate fish migration. | 149 | <ul style="list-style-type: none"> Indirect negative impacts on landscape due to removal of structural features. Negative impacts to existing habitats, which have developed as a result | PM6 | |

| Measures | RBMP Ref No. | Assessment Summary | SEA Ref No. | SEA and HDA Mitigation Measures |
|---|--|---|---|--|
| | | <ul style="list-style-type: none"> of physical modifications. ■ Indirect negative impacts on human health, population and material assets due to the removal of flood defences. ■ Indirect negative impacts on climate if hydroelectric facilities were removed. | <p>PM6/ PM7 PM9</p> <p>PM7</p> | <p>schemes to determine whether an increased risk of flooding would occur as a result.</p> <p>An Appropriate Assessment will be required for remediation schemes.</p> <p>An Appropriate Assessment will be required for impassable barrier remediation schemes.</p> <p>Any voluntary schemes and/or overgrazing remediation schemes should be rolled out in tandem with an education and guidance programme to ensure that the schemes are carried out in a holistic manner.</p> |
| <p>Maintain good hydrological status.</p> <p>Establish minimum instream flow conditions and requirements for compensation releases to allow flow variations.</p> <p>In flow regulated rivers, establish guidance on flow variations to support ecology.</p> <p>Develop Habitat Suitability Curves for coarse fish and other important aquatic organisms.</p> <p>Develop Habitat Suitability Curves for salmonids in Irish rivers.</p> | <p>144</p> <p>379</p> <p>380</p> <p>381</p> <p>382</p> | <ul style="list-style-type: none"> ■ Direct positive impact on water and on aquatic biodiversity due to minimum flow and flow variability. ■ Indirect positive impacts for human health and soils. ■ Indirect positive impacts for population and for material assets including angling and tourism. ■ Positive impact on cultural heritage where minimum flows keep submerged archaeology from exposure. ■ Negative impacts to cultural heritage where compensation flows cause damage to riverine or bank side archaeology. ■ The appropriate assessment has identified this as a desirable alternative, with overall benefits for protected areas. | AB4 | <p>The assessment shall determine whether compensation flow is sufficient to meet the needs of in stream flora and fauna.</p> |
| <p>Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater (368).</p> <p>Develop and employ demand reduction measures.</p> <p>Reduce water demand through improved conservation.</p> <p>Initiate fieldwork to determine groundwater-surface water contributions and develop water budgets.</p> | <p>368</p> <p>372</p> <p>377</p> <p>378</p> | <ul style="list-style-type: none"> ■ Direct positive impact for surface and groundwater and aquatic biodiversity due to reduction in abstraction rates. ■ Indirect positive impacts on climate change as less energy would be required to treat drinking water. ■ Indirect positive impacts for population and the economy due to reduced need to provide water management infrastructure. | <p>AB6/ AB7/ AB8</p> <p>AB8</p> | <p>Although water conservation awareness campaigns have been implemented the message has not hit home for many people. It is therefore recommended that a working group be established to develop tools to promote water awareness (similar to existing waste awareness campaigns) and ensure these tools are included in future water awareness campaigns.</p> <p>An Appropriate Assessment should be undertaken for any new infrastructure.</p> |
| <p>Develop and employ demand reduction measures.</p> | 372 | <ul style="list-style-type: none"> ■ Direct positive impact for surface and groundwater and aquatic biodiversity due to reduction in abstraction rates. ■ Indirect positive impacts on climate change as less energy would be required to treat drinking water. ■ Indirect positive impacts for population and the economy due to reduced need to provide water management infrastructure. ■ Direct negative impact to economic activity. | AB9 | <p>Suitable education and awareness campaigns are recommended to provide residential users with the tools / knowledge to reduce water consumption. It is also strongly recommended that water-metering schemes promote conservation.</p> |
| <p>Investigate increasing availability of supply through conjunctive use of available water supplies.</p> <p>Alter the availability of supply through conjunctive use or integrated water resources</p> | <p>371</p> <p>373</p> | <ul style="list-style-type: none"> ■ Direct positive impact on water quality and aquatic biodiversity due to reduction in abstraction volumes, altered abstraction timing or conjunctive use. ■ Indirect positive or negative effects on biodiversity and soils depending on location of storage and type of storage used. | <p>AB10</p> <p>AB12</p> | <p>An Appropriate Assessment should be carried out if it is proposed to reduce abstraction volumes.</p> <p>An Appropriate Assessment should be carried out for any proposed conjunctive use.</p> |

| Target | Indicator | Data Availability, Source and Frequency |
|--|--|---|
| BFF: Halt spread of Alien Species and their associated impact to the aquatic environment. | Geographical spread of Alien Species in the District. | National Invasive Species Database from Invasive Species Ireland (joint project between NPWS and NIEA). Compilation is ongoing. |
| BFF: Halt deterioration of habitats or their associated species due to water quality related issues by 2015, in line with the Water Framework Directive. | Status of EU Protected Habitats and Species. Condition of Selection Features in sites designated for nature conservation (SACs, SPAs, Ramsar and NHAs). | The Status of EU Protected Habitats and Species in Ireland report. NPWS. Published every 6 years. Not currently compiled |
| P: Provide adequate water and wastewater treatment infrastructure capacity to all urban and suburban areas (cities, towns and villages) within the District by 2015. | Number of Section 140 motions under the Planning and Development Act 2001 tabled and passed for development in urban and suburban areas where adequate water and wastewater treatment infrastructure capacity is not in place. | Summary of Annual Planning Statistics. An Bord Pleanála. Published annually |
| P: Strictly control rural development with the provision of individual wastewater treatment units in accordance with the EPA Guidelines Manual in relation to the provision of wastewater treatment to single houses. | Number of Section 140 motions under the Planning and Development Act 2001 tabled and passed for development in rural areas where individual wastewater treatment are not provided in accordance with the EPA Guidelines Manual in relation to the provision wastewater treatment to single houses. | Summary of Annual Planning Statistics. An Bord Pleanála. Published annually |
| P: Carry out 100% inspection, of all individual septic tanks or any other privately owned treatment unit to identify those not functioning properly. | Number of inspections carried out. | Not currently compiled. Likely would be carried out by Local Authorities. |
| HH: All drinking water areas (including groundwater), as identified on the register of protected areas, to achieve good status, or maintain high status, by the deadlines set in the final Plan. | <u>Interim Indicator:</u> Compliance with Drinking Water Standards. <u>Long Term Indicator:</u> Parameters to be measured in accordance with the environmental quality standards to determine good status. | The Provision and Quality of Drinking Water in Ireland Report. EPA. Published every 1 to 2 years. |
| HH: All bathing waters, as identified on the register of protected areas, to achieve good status, or maintain high status, by the deadlines set in the final Plan. | <u>Interim Indicator:</u> Compliance with Bathing Water Standards. <u>Long Term Indicator:</u> Parameters to be measured in accordance with the environmental quality standards to determine good status. | The Quality of Bathing Water in Ireland. EPA. Published annually |
| HH: All economic shellfish waters, as identified on the register of protected areas, to achieve good status, or maintain high status, by the deadlines set in the final Plan. | <u>Interim Indicator:</u> Compliance with the Quality of Shellfish Water Regulations. <u>Long Term Indicator:</u> Parameters to be measured in accordance with the environmental quality standards to determine good status. | Water Quality in Ireland report. EPA. Published every 1 to 2 years. |
| HH: All water bodies designated for salmonids, as identified on the register of protected areas, to achieve good status, or maintain high status, by the deadlines set in the final Plan. | <u>Interim Indicator:</u> Water quality in designated salmonid waters. <u>Long Term Indicator:</u> Parameters to be measured in accordance with the environmental quality standards to determine good status. | Water Quality in Ireland report. EPA. Published every 1 to 2 years. |
| S: Achieve soil phosphorus levels in line with Teagasc targets for agricultural land. | <u>Interim Indicator:</u> Soil Phosphorus levels. | National Soils Database. Teagasc and EPA. Updated as data becomes available |
| S: Achieve risk reduction targets as detailed in the Soil Directive for areas identified as at risk (not yet established). | <u>Long Term Indicator:</u> Monitoring programme as established under the requirements for the Soil Directive (once established). | Not yet established. |
| W: No deterioration in status of waters currently with high or good status (WFD Objective). | <u>Interim Indicators:</u> Interim Water status. <u>Long Term Indicator:</u> Water status in 2015 report. | Interim Water Status in 2011 Report. EPA Water Status Report to published in 2015 as part of second RBMP cycle. EPA |
| W: Restoration to good status of waters currently at moderate, poor or bad status (WFD Objective). | <u>Interim Indicators:</u> Interim Water status. <u>Long Term Indicator:</u> Water status in 2015 report | Interim Water Status in 2011 Report. EPA Water Status Report to published in 2015 as part of second RBMP cycle. EPA |
| W: Progressively reduce chemical pollution in waters (WFD Objective). | <u>Interim Indicators:</u> Interim Water status. <u>Long Term Indicator:</u> Water status in 2015 report | Interim Water Status in 2011 Report. EPA Water Status Report to published in 2015 as part of second RBMP cycle. EPA |

| Target | Indicator | Data Availability, Source and Frequency |
|--|---|--|
| W: Limit pollution inputs to groundwaters and prevent deterioration (WFD Objective). | <u>Interim Indicators:</u> Interim Water status. <u>Long Term Indicator:</u> Water status in 2015 report | Interim Water Status in 2011 Report. EPA Water Status Report to published in 2015 as part of second RBMP cycle. EPA |
| AQ: Minimise total emissions to air associated with nutrient management. | Distance / number of vehicle trips used to transport nutrients; to be used as a proxy indicator for emissions associated with nutrient management activities, such as removal by tanker of slurry in areas of nutrient surplus. | Not currently compiled – monitoring of this would need to be integrated into the Waste Licences for operators of these activities. This information could be included in the Annual Environmental Report for each licensed facility. |
| AQ: Compliance with odour criteria to prevent deterioration in amenity beyond the site boundary as set out in license for new or upgraded wastewater infrastructure. | Number of complaints received related to odour. | Monitored by the EPA as part of the IPPC license process. This information is usually included in the Annual Environmental Report for each licensed facility. |
| AQ: Compliance with odour criteria to prevent deterioration in amenity beyond the site boundary due to changes in industrial practices due to plan implementation. | Number of complaints received related to odour. | Monitored by the EPA as part of the IPPC license process. This information is usually included in the Annual Environmental Report for each licensed facility. |
| C: Use BAT, including renewable energy, to minimise GHG from new or upgraded wastewater infrastructure in line with Ireland's commitments to reduce GHG emissions under the Kyoto Protocol. | Calculated CO ₂ equivalent in tonnes from new or upgraded water infrastructure, e.g. WWTP / WWTW, including emissions associated with the digestion and / or incineration of sludge. | To be calculated based on changes in water infrastructure at the interim review in 2011 and the second RBMP cycle in 2015. |
| C: Use BAT, including renewable energy, to minimise GHG from changes in industrial practices due to plan implementation in line with Ireland's commitments to reduce GHG emissions under the Kyoto Protocol. | Calculated CO ₂ equivalent in tonnes due to changes in industrial practices. | To be calculated at the interim review in 2011 and the second RBMP cycle in 2015 based on changes in industrial practices, records of which are held as part of the IPPC licence process by the EPA |
| C: No net loss of CO ₂ sequestering vegetation due to changes in forestry practices as a result of Plan activity. | Calculated CO ₂ sequestering potential of forest vegetation based on forest cover. | CO ₂ sequestration potential could be sourced from the National Council for Forest Research and Development or similar source. Land cover information to be sourced from the Ireland's Corine Land Cover 2000 (CLC2000) project |
| MA1: No increase in the amount of infrastructure at risk from flooding as a result of Plan activities. In this case the length of road and rail infrastructure at risk will be used as a proxy indicator for infrastructure in general. | <u>Interim indicator:</u> Number of Flood Risk Management Plans prepared in accordance with the Floods Directive (2007/60/EC). <u>Long Term Indicator:</u> Length of road and rail infrastructure at risk from flooding. | Information on number prepared to be sourced from the OPW. Information flood risk to be sourced from the OPW |
| MA2: Increase investment in water management infrastructure. | Water services investment expenditure per annum. | To be sourced from the Finance Department annual expenditure figures. |
| MA2: Full compliance with the requirements of the Urban Wastewater Treatment Directive and its associated regulations. | Number of exceedances of the standards contained in the Urban Wastewater Treatment Directive and its associated regulations. | Urban Waste Water Discharges In Ireland Reports. EPA. Published every two years. |
| MA3: Minimise impacts to economic activity due to Plan implementation without conflicting with the objectives of the WFD. | Percent change in land cover types due to Plan implementation. | Land cover information to be sourced from Ireland's Corine Land Cover 2000 (CLC2000) project |
| MA4: Achieve sustainable use of water in the context of maintaining its economic benefit. | Change in economic value of water relative to the baseline report: Economic Analysis of Water Use in Ireland. | Economic studies carried out as a part of the plan making process during the second cycle of river basin management planning. |
| CH: No physical damage or alteration of the context of cultural heritage features due to Plan activities. | Changes in the condition of monuments on the RMP (Ireland) due to Plan implementation. Number of listed structures at risk due to Plan implementation. | The Archaeological Survey monitoring programme, Ireland. DoEHLG. Updated on an ongoing basis. Buildings at Risk Register. Heritage Council Ireland. Updated on an ongoing basis. |
| L: No damage to designated landscapes as a result of Plan implementation. | Number of water and wastewater treatment plants sited in landscapes with a high sensitivity to change. Percentage changes in land cover types in areas with a high sensitivity to change. | Data on number of new wastewater treatment plants to be sourced from Local Authorities (not currently compiled centrally) Ireland's Corine Land Cover 2000 (CLC2000) project. |



12 What Happens Next?

A Draft version of this Plan was open for public consultation from December 2008 – June 2009 and the many comments which were received have been reviewed and, where possible, incorporated in this Final version.

The programme for the future is laid out in the legislation (SI 722):

- 2009; the Plan to be submitted to each County Council in the Eastern District for their consideration;
- 2009; ERBD constituent Local Authorities to submit the Final Objectives, Plan and Programme of Measures to the EPA;
- 2009; EPA to submit the Final Plan and their recommendation to the Minister for the Environment, Heritage and Local Government;
- 2009; Minister to submit the Final Plan to the EU;
- 2009/early 2010; re-establishment of Advisory Council
- 2010; Report of Water Pricing Policy
- 2010; EPA to review the monitoring programme and delineation of water boundaries
- 2012; programme of measures to be fully implemented;
- 2012; EPA to issue revised status for all waters; and
- 2015; second river basin management plan to be complete
- 2015; first RBD Flood Protection Plans.

The target dates as set out in the objectives will determine completion and implementation dates for the programme of measures. In addition, the surveillance and operational monitoring programmes described in Section 3 will be continuing throughout the period, supplemented by investigative monitoring as necessary.

Integration of Plans and Programmes: the Need for Coordination

The water objectives can only be achieved if plans and programmes in other relevant policy areas are coordinated and integrated. Sustainable development should also be considered a priority in this process. Key amongst these plans and programmes are:

- County Development Plans and related Local Area Plans;
- Habitat and Species Protection Plans under the Habitats Directive;
- Water Services Investment Programme;
- Nitrates Action Programme;
- Flood Management Plans (as required by the Floods Directive);
- Biodiversity Plans at national and local level;
- National Spatial Plan; and
- Regional Planning Guidelines.

A full list of relevant plans and programmes is presented in Appendix E

New Controls

Achieving objectives of this Plan will require the introduction of a range of new regulatory controls to give legal effect to the actions. Research projects commissioned by the DEHLG recommended a series of new measures; within this Plan they are categorized as “Proposed”. Guidance and guideline measures have also been identified and in some cases these may become law in the future.

It is expected that new regulations will include those addressing shellfish waters, classifications and standards, abstractions and flood prevention measures. It is now government policy to apply Regulatory Impact Assessment (RIA) to regulatory proposals. The role of RIA is to evaluate the potential impacts of any new regulation and establish whether it would have the desired impact. For example, it is useful to identify potential side effects or unforeseen extra costs associated with a new regulation. It



also helps to clarify the cost of enforcement of the regulation. Most future regulations for the implementation of the Directive will be subject to RIA.

Implementing the Plan

The task of implementing this River Basin Management Plan will fall mainly on Local Authorities, although other agencies and stakeholders will also be involved as defined in Section 10 and the Programmes of Measures document. In the case of the Eastern River Basin District, it is envisaged that coordination team funded by DEHLG will be set up within Dublin City Council to coordinate the ongoing work of the twelve participating local authorities and other bodies.

The resources to implement the Plan will come from national and local sources and from both the private and public sectors.

Pilot Implementation

The investigative monitoring and pilot studies by the Mobile Monitoring Unit for specific waters have been outlined in Sections 1 and 10. This work has confirmed the complexity of assessing the reasons for problems in our waters, and the very site specific nature of the problems. A great deal of effort has been, and continues to be, invested in gathering monitoring data on an extensive scale (see Section 3), but even so, there is still a lot of uncertainty and many waters where there is no data at all.

The investment of resources to address poorly defined problems would be inappropriate and so establishing the causes of the problems in each water body and identifying measures to address them cost effectively is essential. All available data has been used in this Plan and this has been supplemented by computer modelling to extend our understanding of the situation. Based on this, measures have been selected which are designed to deal with the key pressures.

Whilst there is a high level of confidence that the measures are appropriate and cost effective it is recommended that they are examined through pilot implementations to:

- Provide detailed data on the pilot area to confirm that the measures are appropriate;
- Implement measures to confirm that the measures are both effective and cost efficient;
- Engage the various stakeholders in the pilot areas to try to overcome sectoral bias;
- Provide detailed post implementation assessment of the performance of the measures.

This approach has already been adopted by DAFF/TEAGASC who are undertaking pilot catchment studies to assess the beneficial impacts of the Good Agricultural Practice regulations.

It is recommended that the following pilot projects are undertaken during the first planning cycle (their areas of applicability are shown in Maps 12.1 to 12.6:

| | Topic | Location | Key Stakeholders | Key Objective |
|---------|--|---------------------------|--|---|
| Ongoing | Good Agricultural Practice Regulations | DAFF Pilot Catchments | DAFF, LAs, EPA, Farmers, Teagasc. | Assess the beneficial impacts of the GAP regulations |
| 1 | High Status waters | Upper Avoca (2 HS waters) | Wicklow CoCo., LAs, NPWS, EPA | Implement all measures defined for High Status waters and ensure that they successfully protects them |
| 2 | Combined sewer Overflows | Liffey Estuary | DCC, LAs, EPA, DEHLG, Amenity groups | Establish relationships between overflows during heavy rain events and water quality in the specific receiving waters; this would include extensive collection system monitoring and water quality modelling of collections systems and receiving waters. Develop base national data sets as recommended in the 2008 Urban Pressures study (CSO effluent quality tables, EMC for surface run off, background water quality conditions, standardise monitoring and modelling methods for sewer networks, |
| 3 | Coastal algae | South Dublin Bay | DCC, Dun Laoghaire CoCo., LAs, EPA, MI, Amenity groups | Establish the source of nutrients causing algal and ectocarpus growth in South Dublin Bay and develop appropriate measures to address the sources |
| 4 | Urban run off | Drogheda | Meath, Louth, LAs, DEHLG | Establish the contaminant loads in surface water run off from storm water drainage systems serving different land use areas and assess alternative technologies to reduce/eliminate the loadings |
| 5 | Septic systems | Broadmeadow catchment | Meath CoCo., LAs, Householders | Establish the impact of septic tanks in soils of differing drainage characteristics and test reed bed treatment systems |

| | Topic | Location | Key Stakeholders | Key Objective |
|----|-----------------------------|--|--|---|
| 6 | Peat lands | Upper Boyne (Glash River, Kildare. Yellow River, Offaly) | Kildare CoCo., Offaly CoCo., LAs, EPA, Bord Na Mona | Establish the water quality in waters draining from peat lands in upper catchments and their impact on receiving waters in the context of the EQS values required to obtain good status to assess the appropriateness of the EQS values |
| 7 | Diffuse rural nutrients 1 | Upper Boyne | Westmeath CoCo., Offaly CoCo., Kildare CoCo., LAs, Farmers Groups, Anglers Groups, DAFF | Implement and assess supplementary measures for diffuse rural pollution, including riparian buffer strips/ecological corridors and removal of cattle watering points |
| 8 | Diffuse rural nutrients 2 | Vartry | Wicklow CoCo., LAs, Farmers Groups, Anglers Groups, DAFF | Implement and assess supplementary measures for diffuse rural pollution, including riparian buffer strips/ecological corridors and removal of cattle watering points |
| 9 | Small rural point sources 1 | Kildare, Westmeath, Meath | Kildare CoCo., Westmeath CoCo., Meath CoCo., LAs, Farmers Groups, Anglers Groups, DAFF, Householders | Implement and assess measures to address farmyard run off and septic discharges |
| 10 | Small rural point sources 1 | Wicklow | LAs, Farmers Groups, Anglers Groups, DAFF, Householders | Implement and assess measures to address farmyard run off and septic discharges |
| 11 | Estuaries | Rogerstown estuary | Fingal CoCo., LAs, NPWS, EPA, Amenity Groups, Birdwatch Ireland | Develop an approach to improving the speed of recovery of a target estuary by identifying and addressing key pressures within the estuary but also those in the catchment to allow reprioritisation of measures. |
| 12 | Misconnections | Dun Laoghaire, South Dublin | LAs, Householders | Undertake a programme of inspections in urbanised upper catchments, facilitate corrective actions and assess the effectiveness on receiving waters and the impact on the load to the collection system |
| 13 | Water Conservation | Vartry | Wicklow CoCo, LAs, DEHLG, EPA, SWAN | Initiate a programme of water conservation measures in an urban area planned for increased supply from the Vartry River. This will be focussed on small scale domestic measures such as rainwater harvesting |

In addition to these pilots several other key initiatives have been identified which should be undertaken early in the first cycle; these include:

- Cost benefit analysis of the proposed less stringent objective for the Avoca groundwater body;
- Detailed study of the Avoca catchment and groundwater body to evaluate the likely success of potential remediation measures; if viewed to be ineffective than a cost benefit analysis will be required for a less stringent objective.

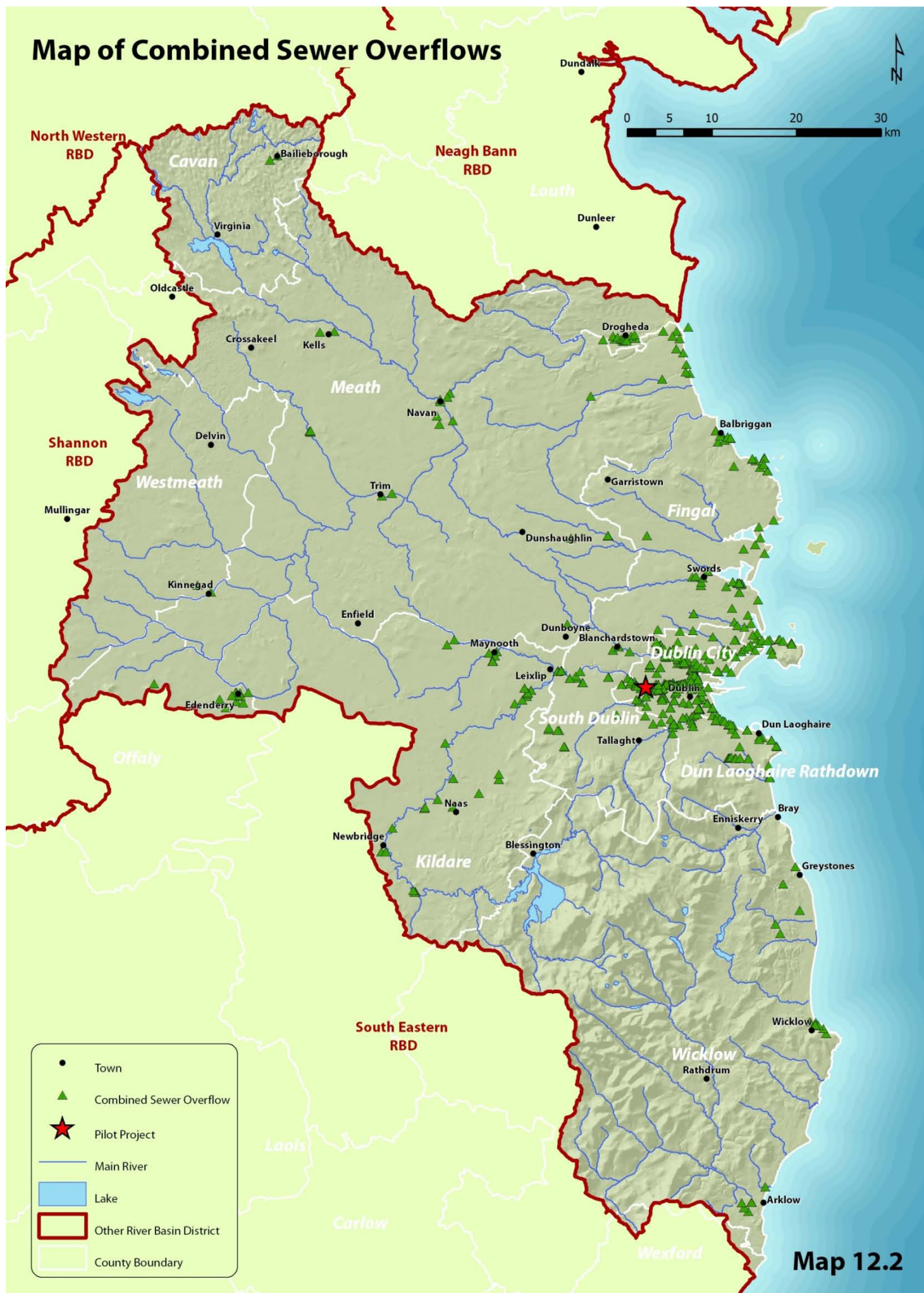
In conjunction with these initiatives it is recommended that a detailed measures implementation programme is developed at river basin district level. This should address the prioritisation issues and process described in Section 10 with particular attention being paid to:

- Initiating field data collection in areas where status is based on extrapolated data and where there is uncertainty about the pressures detrimentally affecting the waters;
- Identifying necessary WwTW improvements and scheduling the planning , design and construction;
- Coordinating farm inspections between local authorities and DAFF to eliminate duplication and focus on priority areas;
- Coordination of inspections and upgrades, where necessary, of unsewered properties.

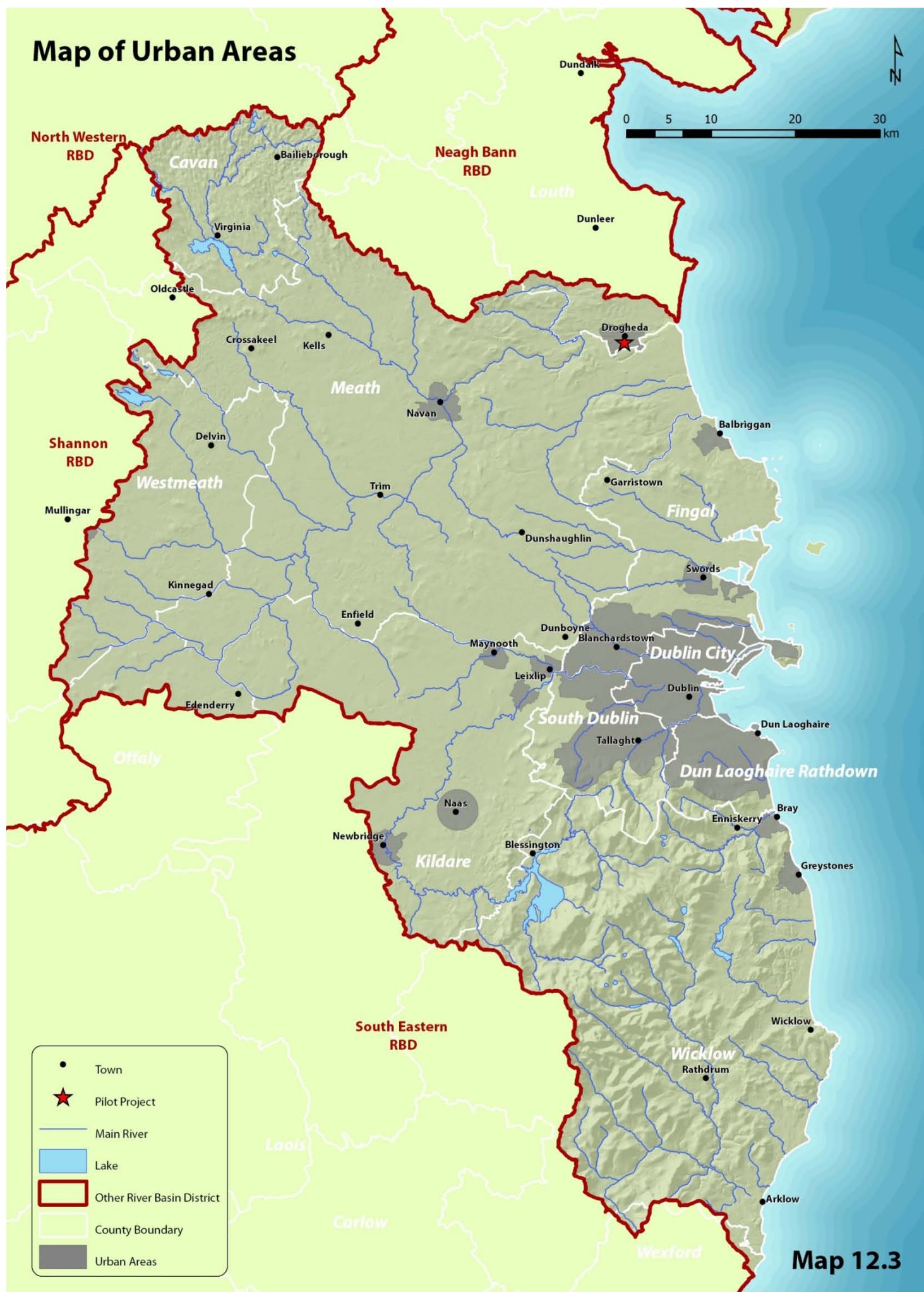
Map of High Status Waters



Map of Combined Sewer Overflows

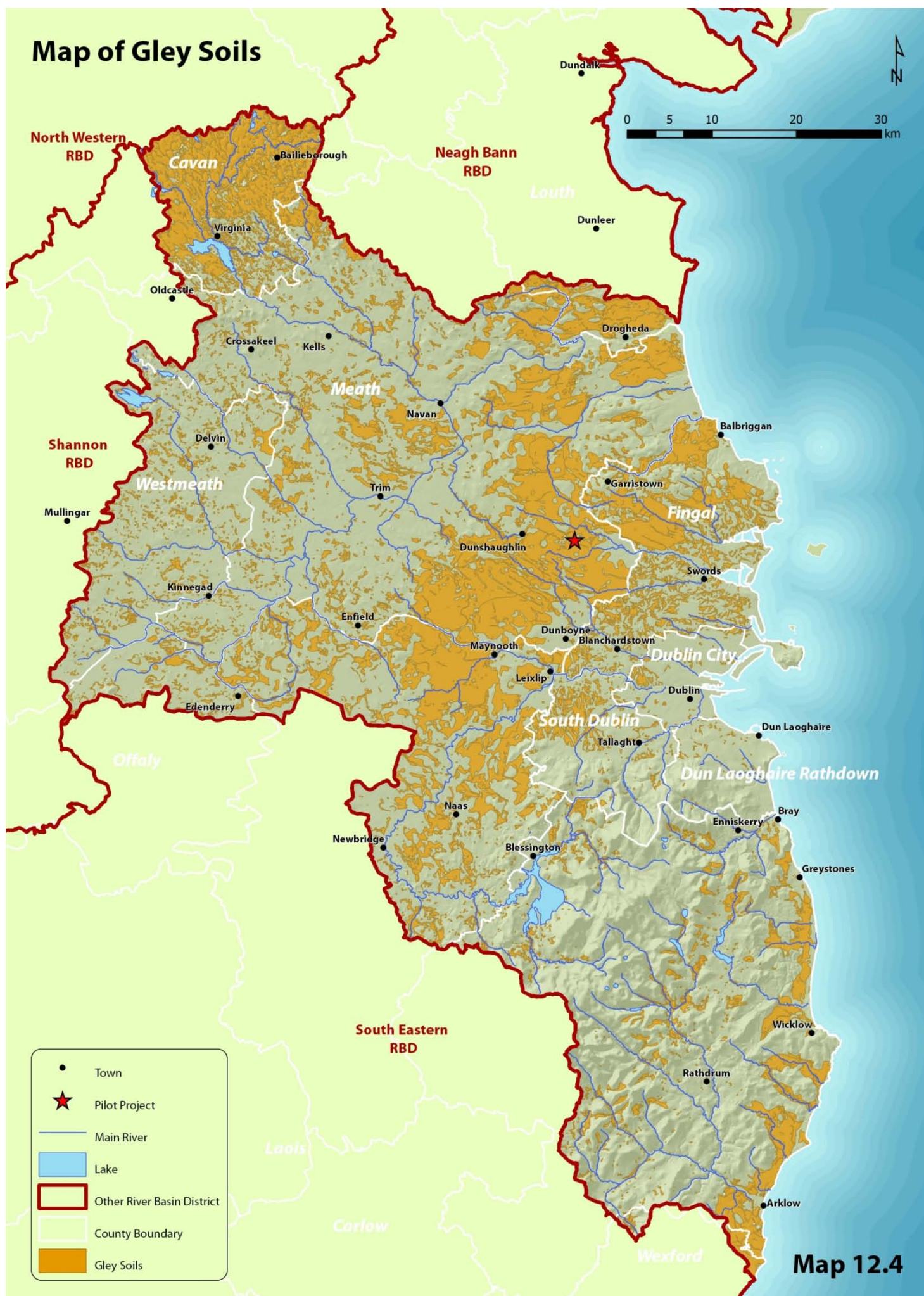


Map of Urban Areas



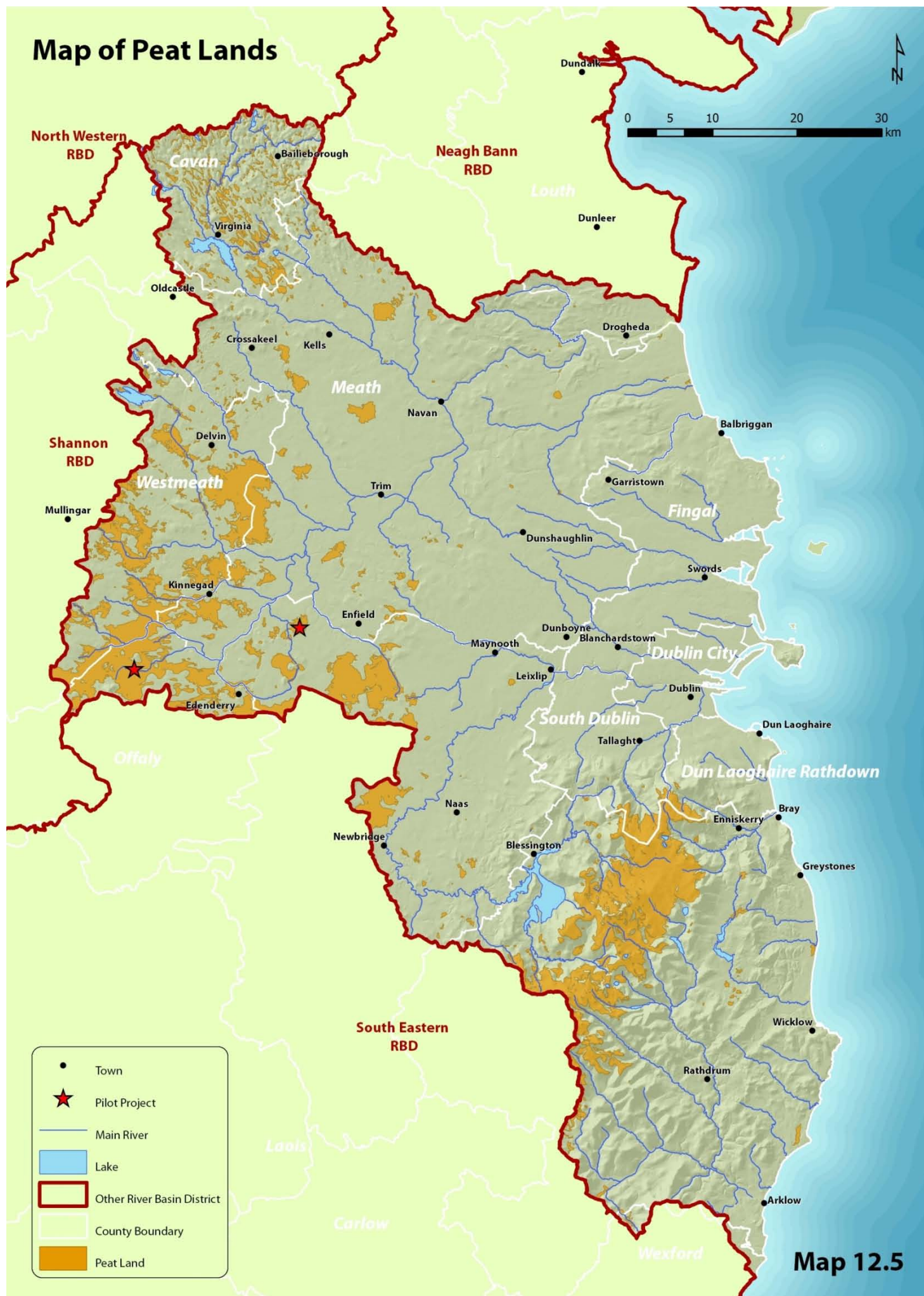
Map 12.3

Map of Gley Soils



Map 12.4

Map of Peat Lands



Map 12.5

13 Implementation of the Plan

The River Basin District is the basic unit of planning, implementation, monitoring and reporting under the Water Framework Directive. The work to date on implementing the Directive has been organised and delivered on this basis, with the coordinating local authorities interacting with other local authorities, EPA and other public authorities and stakeholders. This interaction has posed a challenge and while progress has been made, full coordination has not been achieved. The process of developing the plans has been complex and a significant amount of work has been carried out in monitoring, assessment, classification and setting objectives for water bodies.

Delivery of the River Basin Plans will be challenging with responsibility for implementation of the plans currently assigned across a range of organisations with no single body having ultimate responsibility. The current administrative systems are fragmented along administrative lines and do not facilitate analysis, identification and implementation of the most cost-effective solutions to manage water quality at river basin level. An RBD can cover the areas of responsibility of a large number of bodies e.g. 18 local authorities in the case of the Shannon RBD. Furthermore, the implementation of many of the measures necessary to achieve the objectives of the plans is the responsibility of national rather than local authorities. Furthermore, it is recognised that improved enforcement of existing legislation is key to successful implementation of the RBMPs.

As we move to the implementation stage, there is a need to strengthen and adjust the existing administrative structures to ensure effective delivery of the plans including enforcement of relevant legislation, across local, regional and national levels. Recommendations in relation to revised structures for water management have been put forward over the past two years by the OECD, Forfás and in the report of the Special Group on Public Service Numbers and Expenditure.

In tandem with the finalisation of the River Basin Management Plans, proposals to introduce water charging are being advanced and a major report on the efficiency of local government is being finalised. It is likely that recommendations for structural change will emerge from both processes.

13.1 Review of arrangements

In the short-term, funding will continue to be provided to support the RBD Offices so that these can coordinate the efforts of the various authorities to oversee, manage, enforce and report on the implementation of the plans. The National Advisory Committee will continue to exercise an oversight role. In addition, the annual review provided for under the Water Services Investment Programme will continue to be guided by the information coming through from the river basin management planning process.

There are clear advantages in strengthening the delivery approach at a RBD level for both infrastructure delivery and implementation of the RBMPs. It is considered that this approach has potential to improve efficiencies and co-operation, build and retain appropriate expertise in identified areas and strengthen the capacity to plan and deliver strategically important projects, and give a broader strategic context for locally delivered programmes. It would also facilitate the collation of key data at a regional level, and support more coordinated and synchronised planning and decision making.

Against this background, the Department of the Environment, Heritage and Local Government will review by end 2010 the governance and structures for implementation of the river basin management plans. This review will include, inter alia, consideration of the following priority areas: data management; sampling and monitoring; legislative requirements; inspection and enforcement; reporting; public participation. Since one of the key challenges will be the implementation and enforcement of WFD requirements over a wide range of public bodies, it is important that structures resulting from the review must have a clear RBD remit and be provided with the resources and statutory power to oversee and enforce implementation over all relevant public bodies.

13.2 Implementation process

The implementation of the RBMP at water body / WMU level will be an extremely complex exercise involving the reviewing and coordination of all water management practices and land-use practices that impact on water, to ensure they are in line with the plan, the relevant regulations (e.g. for surface waters and groundwater) and the Directive. To ensure consistent implementation across all RBDs and WMUs, the following principles must be adhered to when implementation plans are being developed and delivered:

1. All relevant information held by all public bodies shall be made fully available.
2. All information gaps shall be clearly identified with a timeline for completing necessary work to fill gaps in time for the review of the Article 5 characterisation analysis.
3. An appropriate standardised management system shall be developed by 2012 to assess all of the activities that impact water status in the catchment.
4. There shall be a whole-system management approach to implementation that takes account of cumulative impacts, to prevent deterioration in the status of any water body unless an Article 4-compliant exemption has been set out.
5. In the selection of supplementary measures and where appropriate and required by the Directive, a better environmental alternative check must be carried out before an Article 4- compliant exemption is applied.
6. Water Framework Directive and Natura 2000 objectives and requirements shall be addressed in an integrated manner, with implementation measures ensuring compliance with any standards and objectives for Natura 2000 sites by 2015.
7. Where the management system indicates that implementation of basic measures will not avoid deterioration of status or will not restore waterbodies to good status by 2015, a transparent cost effectiveness analysis, incorporating environmental and resources costs and benefits shall be conducted to select the most appropriate supplementary measures to achieve this, unless an Article 4 exemption is set out.
8. Public participation must be integrated into the Plan.

Critical to managing this complex implementation process will be effective data management and interpretation, the streamlining of the regulatory systems that control activities that may impact on waters and ensuring that the regulation of activities is consistent across public authorities.

These issues will be considered during review of water governance and structures mentioned above. However, there are several initiatives currently underway which will facilitate improvements in implementation.

The Environmental Protection Agency and local authorities with support from the Local Government Computer Services Board are developing the Environmental Data Exchange Network (EDEN). The aim of EDEN is to eliminate the difficulties encountered in the sharing and reporting of environmental data sourced from a wide range of environmental datasets, applications, and IT systems in place within the many organisations involved in work related to the Water Framework Directive. In time it is intended that EDEN will be a fully distributed data-sharing network allowing all stakeholders to easily share environmental data. The Environmental Protection Agency and local authorities are also currently investigating web-based catchment management systems that will best facilitate the management, visualisation and interpretation of environmental datasets at catchment level.

For the purpose of promoting consistency in environmental regulation and enforcement local authorities, the Environmental Protection Agency and the Department of Environment, Heritage and Local Government are also jointly involved in the preparation of guidance and training for local authority personnel through the Environmental Services Training Group (ESTG). Guidance and training currently being developed include; the authorisation of discharges to water and sewer under Water Pollution Acts and protocols for agricultural inspections and enforcement. Other guidance and training will be prepared as appropriate.

13.3 Public participation

Public participation is a central principle of the Water Framework Directive and a programme for encouraging active involvement and participation of the public in the implementation of the plan will be developed by 2011 and delivered as an integral part of the implementation process for the RBD. One of the mechanisms for ensuring participation from stakeholders has been through the operation of statutory Advisory Councils comprising of representatives of the local authorities (elected members), representative bodies, NGOs and the social partners.

As part of the review referred to above, the Department of the Environment, Heritage and Local Government, following consultation with relevant stakeholders, will bring forward any necessary proposals for reform of existing structures in order to maximise the effective active involvement of stakeholder bodies in implementation of the plans.

In tandem with this and to support public participation, public awareness initiatives will also be implemented,

commencing with a programme of information and awareness-raising to be delivered through The Library Council. The disposal of dangerous household and gardening chemicals will be one of the issues addressed in the awareness campaign. This will include the development of 'ENFOpoints' building on the Minister for the Environment, Heritage and Local Government's plans to enhance the role of libraries in the provision of environmental information services. Access to information relevant to the implementation process will also be made publicly available in readily accessible formats to facilitate fully informed participation of the public.

Amendment made by Minister of the Environment, Heritage and Local Government when adopting Plan on 6 July 2010

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Eastern River Basin District Final Characterisation Report

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Draft Programme of Measures Powerpoints

Integration of Water Quality Data with RBMS- Eastern River Basin District 2009

Consultation Document, Timetable and Work Programme for making a River Basin Management Plan for the Eastern River Basin District

Water Matters 'Have your Say'

Water Matters 'Have your Say!', Digest of submissions and responses to Significant Water Matters Issues Reports – Eastern River Basin District

Mobile Monitoring Unit Summary Report

Mobile Monitoring Unit Report for Meath (Knightbrook, Clady & Nanny)

Mobile Monitoring Unit Report for Meath (Mosney, Devlin & Broadmeadow WMU)

Mobile Monitoring Unit Report for Kildare (Blackwater South, Ryewater & Liffey WMU)

Mobile Monitoring Unit Report for Wicklow County Councilww.

Mobile Monitoring Unit Report for South Dublin

Mobile Monitoring Unit Report for Dun Laoghaire Rathdown County Council

Mobile Monitoring Unit Report for Cavan County Council

Mobile Monitoring Unit Report for Westmeath County Council

Mobile Monitoring Unit Report for Dublin City Council

Mobile Monitoring Unit Report for Louth County Council

Mobile Monitoring Unit Report for Fingal County Council

Mobile Monitoring Unit Farm Survey Report

User Manual for RBMS

Final Background Policy, Legislation and Authorities Report

Eastern River Basin District – List of Technical Council Members

Eastern River Basin District Project/Abstractions – POMS National POM/Standards Study

Revised Risk Assessment Methodology for Surface Water Abstractions from Lakes

Further Characterisation/Programme of Measures/Groundwater Abstractions Pressure Assessment/Final Report

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Draft River Basin Management Plan. Public Notice Information Meeting- Final Report

Economic Analysis of Water Use in Ireland- Final Report

Hydrometric Report for Cavan

Hydrometric Report for Fingal

Hydrometric Report for South Dublin

Hydrometric Report for Kildare

Hydrometric Report for Westmeath

Hydrometric Report for Dublin City Council

Hydrometric Report for Meath County Council

Hydrometric Report for Wicklow County Council

Hydrometric Report for Dun Laoghaire Rathdown

Hydrometric Report for Offaly

List of Advisory Council Members

| | |
|---|--------------------------|
| Chair: Kildare County Council | Cllr. JJ. Power |
| Vice Chair: Dun Laoghaire Rathdown County Council | Cllr. Jane Dillon Byrne |
| Dublin City Council | Cllr. Tom Stafford |
| Dublin City Council | Ms. Lorna Kelly |
| Meath County Council | Cllr. Tom Kelly |
| Meath County Council | Cllr. Nick Killian |
| Kildare County Council | Cllr. Billy Hillis |
| Wicklow County Council | Cllr. Vincent Blake |
| Wicklow County Council | Mr. Dara Kavanagh |
| Cavan County Council | Cllr. Paddy McDonald |
| Cavan County Council | Cllr. Francie McDermott |
| Wexford County Council | Cllr. Oliver Walsh |
| Wexford County Council | Mr. John Power |
| Louth County Council | Cllr. Oliver Tully |
| Louth County Council | Cllr. Jacqui McConville |
| Offaly County Council | Cllr. Michael Fox |
| Offaly County Council | Cllr. Noel Bourke |
| Westmeath County Council | Cllr. Michael Newman |
| Westmeath County Council | Cllr. Michael Dollard |
| South Dublin County Council | Cllr. Guss O'Connell |
| South Dublin County Council | Ms. Connie Kiernan |
| Fingal County Council | Ms. Christine Smart |
| Fingal County Council | Cllr. Robbie Kelly |
| Dun Laoghaire Rathdown County Council | Cllr. Tom O'Higgins |
| Leixlip Town Council | Cllr. Shane Fitzgerald |
| Bray Town Council | Cllr. John McManus |
| Arklow Town Council | Cllr. Vincent McElheron |
| Newbridge Town Council | Cllr. Michael Deely |
| Navan Town Council | Cllr. Tommy Reilly |
| Balbriggan Town Council | Cllr. May McKeon |
| Coastwatch | Linda O'Dwyer |
| Meath Irish Farmers Association | Seamus McGee |
| Wicklow Irish Farmers Association | Declan O'Neill |
| Kildare Irish Farmers Association | Tom Malone |
| Dublin Irish Farmers Association | Joseph O'Donoghue |
| Coillte | Sean M. Quealy |
| Irish Concrete Federation | Liam Smyth |
| IBEC | Robert O'Shea |
| Irish Hotels Federation | Daniel O'Connell |
| ESB | John Hayes |
| Drogheda Port Company | Capt. Martin J. Donnelly |
| Eastern Regional Fisheries Board | Brian Beckett |
| Irish Federation of Sea Anglers | Brian Cooke |
| Bord Iascaigh Mhara | Fabrice Richez |
| Ballymore Eustace Trout & Salmon Anglers Assoc. | Thomas Deegan |
| IDEA | Elizabeth Cullen |
| An Taisce | Anja Murray |
| Irish Peatland Conservation Council | Sarah Malone |

Advisory Council Meetings were held in April 2006, June 2006, October 2006, December 2006, April 2007, May 2007, September 2007, December 2007, February 2008, May 2008, September 2008, December 2008, and April 2009

List of Technical Council Members

| | |
|--|--|
| Dublin City Council, Lead Local Authority - Eastern River Basin District | Tom Leahy (Chair) |
| Dublin City Council, Lead Local Authority - Eastern River Basin District | Ray Earle (Project Coordinator) |
| Dublin City Council, Lead Local Authority - Eastern River Basin District | Hugh Coughlan (Secretary) |
| Dublin City Council, Lead Local Authority - Eastern River Basin District | Des Boyhan (GIS Coordinator) |
| Dublin City Council, Lead Local Authority - Eastern River Basin District | Imelda Averill |
| Dublin City Council, Lead Local Authority - Eastern River Basin District | Don McEntee |
| Cavan County Council | Peter Cork |
| Drogheda Borough Council | Dermot Agnew |
| Dun Laoghaire Rathdown County Council | Ger Looney |
| Fingal County Council | Peter O'Reilly |
| Kildare County Council | Michael Holligan |
| Louth County Council | Pat Finn |
| Meath County Council | Tim O'Leary |
| Offaly County Council | David Hogan |
| South Dublin County Council | Dermot Finch |
| Westmeath County Council | Greg Duggan |
| Wexford County Council | Eamon Hore |
| Wicklow County Council | Michael Geaney (David Harrington, Deputy) |
| Dept. Agriculture, Fisheries & Food | Patricia Torpey |
| Dept. of Communications, Energy & Natural Resources | P.J. Shaw |
| Dept. of the Environment, Heritage & Local Government | Liam Doyle |
| Bord Na Mona | John Hourican |
| Coillte | Andrew Bryan |
| Coillte | Michael Keane |
| Dublin Regional Authority | Patricia Potter |
| Eastern Regional Fisheries Board | Noel McGloin |
| EPA | Catherine Bradley |
| ESB | John Hayes |
| Faite Ireland | Mary Stack |
| Forestry Service | Pat O'Callaghan |
| Geological Survey of Ireland | Taly Hunter-Williams |
| Local Government Computer Services Board | Peter Burke |
| Local Government Computer Services Board | Tara Kerins |
| Met Eireann | Mary Curley |
| Met Eireann | Seamus Walsh |
| Midland Regional Authority | Jim Stone |
| Midlands Regional Authority | Sarah Morgan |
| OPW | Tom Bolger |
| OPW | Nathy Gilligan |
| Radiological Protection Institute of Ireland | Stephanie Long |
| Teagasc | Dr. Noel Culleton |
| Teagasc | Owen Fenton |
| Central Fisheries Board | Trevor Champ + Jimmy King |
| The Heritage Council | Beatrice Kelly |
| The Marine Institute | Evin McGovern + Garvan O'Donnell (alternate) |
| Waterways Ireland | Brian Mullan |
| Waterways Ireland | Paula Treacy |

Technical Council Meetings were held in April 2006, October 2006, December 2006, April 2007, October 2007, December 2007, May 2008, September 2008, December 2008, and February 2009.

Appendix A(i) - Comments on the Water Matters Report 2007

This section of the draft Plan summarises comments made during consultations and the topics discussed in the **Water Matters – Have Your Say!** booklet. Under each topic we highlight what the public and interested parties said during consultations and confirm that these comments have helped to develop our draft management plan by feeding into our proposed action plan. The statutory consultation period was from the 22nd December 2007 to 22nd June 2008. This appendix was provided by the North South Share Project.

Table A(i)1: Water Matters Comments by Pressure

| | | |
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| Wastewater and industrial discharges Participants' concerns Treatment plants that are non-compliant with urban wastewater treatment standards must be upgraded and adequate wastewater treatment infrastructure should be put in place before permitting development. | Background | Urban sewers carry wastewater to treatment plants from homes and industrial or commercial sources, as well as storm water from roads, roofs and recreational areas. Pollutants include nutrients, bacteria, organic materials and dangerous substances from homes and industries, metals and hydrocarbons from vehicle exhausts and pesticides from parks, golf courses and gardens. The wastewater is treated, to remove many pollutants, then discharged to surface waters or, occasionally, to groundwater. |
| | Possible effects | Inadequately treated effluents and spills or leakage from sewerage networks can cause unacceptable levels of pollutants in receiving waters, damaging water quality and downstream uses (for example bathing waters, shellfish waters or waters supporting sensitive species). Urban runoff can be contaminated with pollutants (typically metals and hydrocarbons) which can impact surface and groundwater quality as direct discharges, overflows from sewer networks, leaking from defective underground pipes or seepage from containment areas. |
| | Action plan | Wastewater discharges will be subject to EPA authorisation and will have to comply with the Urban Wastewater Directive. Wastewater facilities will be upgraded on a prioritised basis. Information on where, when and how urban runoff and overflows impact water quality will be gathered and codes of good practice for sewer operation and maintenance developed and implemented. |

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| Landfills, quarries, mines and contaminated lands Participants' concerns Timescales should be set for characterisation and remediation of contaminated land and historic mine sites and the end-of-life phase for mining operations should be planned. | Background | Residues or waste products from previous activities at these sites may have seeped into the ground and continue to threaten groundwater and surface waters. Our knowledge of these sites is incomplete and is being updated to assess the scale of this problem. |
| | Possible effects | Pollutants (mainly metals and fuel) may travel through groundwaters and enter surface waters, affecting their quality, damaging aquatic plants and animals and impairing water uses. At some quarry sites, the water table is lowered; that can affect nearby wetland areas, and the transfer of groundwater to surface waters can change water chemistry. |
| | Action plan | Specific measures will be taken to address contaminated lands, both historic and current mines and extraction sites. |

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| Agriculture Participants' concerns The agricultural sector felt that the Good Agricultural Practice Regulations adequately represented farmers' contribution to the achievement of good water status. However, environmental groups expressed concern that the regulations may not fully address nutrient enrichment in specific areas. Participants also recommended that the use of bio-digestors for the disposal of slurry should be encouraged and funded. | Background | Nutrients (phosphorus and nitrogen) can be carried into waters from farmyards, from manure store leaks or from fields treated with nutrient-rich organic and chemical fertilisers. Animal slurry/manure and silage effluent can cause organic pollution: Ireland's latest drinking water report shows widespread contamination of smaller rural water supplies from agricultural sources. |
| | Possible effects | Nutrients enrich water, accelerating plant growth and thus disturbing the balance of aquatic plants and animals and affecting water quality. This eutrophication is the most widespread threat to our water quality. The breakdown of organic material uses up oxygen that aquatic plants and animals need to survive, and suspended solids and ammonia can cause fish kills (although such kills have reduced in number). Slurry can also contaminate drinking water with bacteria, parasites and viruses. |
| | Action plan | Review and strengthen enforcement actions in support of the Good Agricultural Practice Regulations. Additional supplementary measures may emerge following the review during 2009 of the National Action Programme established under these regulations. These measures could for example include solutions such as the use of bio-digestors. |

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| Wastewater from unsewered properties Participants' concerns Controls are required to ensure that new developments install treatment systems appropriate to geology and soil conditions. There should be a clear responsibility on owners to maintain their systems to an appropriate standard. | Background | Many rural houses and businesses rely on on-site systems (conventional septic tanks or proprietary systems), via soil percolation areas, to treat and dispose of wastewater. To work properly, these treatment facilities must be located in suitable areas and designed, constructed and maintained to appropriate standards. |
| | Possible effects | If these systems are not working properly, nutrients, organic material, chemicals and bacteria may seep from wastewater into groundwater, contaminating nearby drinking water wells or damaging the quality of receiving rivers, lakes or marine waters. |
| | Action plan | Strengthen controls on new development. Identify sensitive areas where inspection, maintenance and remedial action will be taken to address impacts from existing on-site systems. |

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| Forestry Participants' concerns The 1946 Forestry Act's mandatory requirement to replant on deep peat sites should be amended. Clearfelling should be restricted with strict controls on coup sizes in sensitive areas. | Background | Acidification: forest canopies can capture sulphur and nitrogen compounds from the atmosphere; rain becomes more acidic as it passes through the canopies to the ground below. Forestry activities can introduce extra nutrients. Road-making and stream-crossing can cause erosion and sediment loss on susceptible soils. Flow pattern changes: the amount of water reaching the soil surface is reduced by evaporation of water intercepted by the canopy. Pesticides may be applied incorrectly. |
| | Possible effects | Acidification may worsen the chemical balance of receiving waters. In naturally nutrient-poor areas, nutrient enrichment can lead to problems such as algal growth. Mobile sediments may reduce water quality or damage sensitive areas. Clearfelling of forests may change flow patterns. Incorrect application of pesticides may contaminate waters. |
| | Action plan | Strengthen forestry legislation and codes of practice. Identify sensitive areas where remedial action will be taken to address impacts from afforestation. Note that all activities related to forestry (including private forestry) must comply with the Irish Forest Standard, the first principle of which is sustainable forestry management. |

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| Physical modifications Participants' concerns A comprehensive registration and authorisation system is needed to control physical modifications, with a structured programme to rehabilitate previously drained rivers. Building is putting increasing pressure on floodplains. | Background | We have physically modified many of our waters for water supply, recreation, transport, flood protection, hydropower, aquaculture and land drainage. Physical modifications can impact physical form either directly by affecting habitats or indirectly by changing natural processes, altering plant and animal communities by reducing their variety or numbers. |
| | Possible effects | Drained rivers need a mix of pools and shallow riffles and variation of flow patterns, to provide habitats for fish. Migratory fish need to access upstream spawning areas; bridges or weirs can restrict access and reduce spawning success and thus population numbers. Hard structures like ports and harbours can replace or reduce natural habitat. Land drainage, overgrazing, deforestation and cattle access can have an indirect effect, changing how much and how fast water drains off the land, resulting in increased risk of property flooding. |
| | Action plan | A new national control system for physical modifications is required. The programme identifies rivers where enhancement or investigation is needed to address historical modifications. |

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| Abstractions Participants' concerns The cumulative impact of abstractions needs to be addressed. Low flows should be used to determine acceptable abstraction limits. Leakage from existing infrastructure should be addressed. | Background | We use large amounts of water supply each day in homes, in agriculture, in industry and in recreation. All of that water has to be treated to a high standard to remove impurities and make it fit for consumption. The vast majority of our abstractions are currently sustainable, but population growth and climate change may mean that some areas will experience a reduction in the available water resource in the future. |
| | Possible effects | Too much abstraction reduces flow in springs and rivers and causes lower water levels in lakes, wetlands and wells. This can make water supplies unsustainable and adversely affect aquatic plants and animals and wetland areas. In extreme cases river beds may dry up, lake shores can become exposed and, in coastal areas, salt water may seep into groundwater. |
| | Action plan | Set up a modern national abstraction control system for surface and groundwaters, based on sustainable abstraction levels that take full account of the sensitivity of the waters from which water is abstracted. Action on leakage reduction is addressed under measures to ensure sustainable water use; the programme also identifies waters where historical abstractions must be investigated and addressed. |

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| Climate change Participants' concerns River basin management plans should be proof against climate change, with more emphasis given to climate change impacts and adaptation. | Background | The specific impact of climate change is difficult to predict but it is likely that these changes may add to water management challenges that our waters are facing in the future. |
| | Possible effects | Heavier winter rainstorms may cause more flash flooding, causing an increase in diffuse pollution loads to our waters from soil run-off and raising demand for flood controls. Summer droughts are more likely and there may be a 40% reduction in drinking water supplies. Temperature changes might give invasive alien species a competitive advantage in our waters, thus affecting biodiversity. |
| | Action plan | Measures have been assessed for climate change adaptation using European Union recommendations. A Strategic Environmental Assessment has been undertaken to assess the impacts that the action plan could have on the wider environment including climate. |

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| Invasive alien species Participants' concerns The ornamental plant and animal trade should be regulated. The recommendations from the national invasive species study should be implemented and resourced on an all island basis. | Background | The EPA has major concerns about eight aquatic species of non-native animals or plants that have successfully established themselves in our aquatic and fringing habitats and are damaging our natural flora and fauna. |
| | Possible effects | There is growing evidence that invasive alien species pose a major threat to our diversity of native plants and animals: for example by preying on them, out-competing for habitat or food, altering habitat or introducing pathogens or parasites. |
| | Action plan | Prohibit the introduction of species that may be detrimental to native species. Support the ongoing national study of the nature and extent of alien invasive species, their impacts and potential control measures. |

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| Protecting high quality areas Participants' concerns High quality areas have gradually declined since the 1970s when water quality monitoring began and our objective now is to prevent any further deterioration. Protected areas must, without exception, achieve good or High Status to support their designations, with specific targets for protection of priority species. | Background | High quality areas include rivers, lakes and estuarine and coastal areas little affected by human activity; which they are still near natural or pristine conditions, supporting a naturally diverse mix of aquatic wildlife. In addition, there are other designated special areas which are specifically protected under legislation: drinking waters, bathing waters, shellfish waters and areas designated for special habitats and species (Special Areas of Conservation and Special Protection Areas). |
| | Possible effects | The deterioration or loss of high quality and protected areas is often due to their sensitivity to land use changes in surrounding catchments, such as agriculture, forestry, peat harvesting and rural development activities. |
| | Action plan | Prioritise the protection of such areas. Identify nature conservation actions |

Appendix A(ii) - Comments on the Draft River Basin Management Plan (22nd December 2008)

The consultation period on the Draft Eastern River Basin District Management Plan ran from 22nd December 2008 to 22nd June 2009. A Strategic Environmental Assessment and Appropriate Assessment under the EU Habitats Directive were prepared, in draft, to accompany the draft Plan. They were also subject to the same statutory consultation process.

Public Consultation is a critical element of the development of the River Basin Management Plan under the WFD as transposed by S.I. 722 of 2003; Article 14 of the Directive refers to public information and consultation on the plan. In order to finalise the Draft Plan and to facilitate Article 14, a report must be published, outlining in a transparent way, how submissions influenced the final RBMP. The implementation timeline of the Directive emphasises that the final plan must be adopted by December 2009; consequently, the submissions report must be delivered prior to this deadline.

To facilitate the consultation, a series of public information events on the Draft Plan were held throughout the Eastern River Basin District. Notices were published in major newspapers, supplemented by radio interviews given by the Eastern River Basin District (ERBD) coordinator. A copy of the Draft Plan, Strategic Environmental Assessment and Appropriate Assessment were made available on the ERBD (www.erbd.ie) and WFD Ireland (www.wfdireland.ie) websites for public information.

A total of 64 submissions were received by the ERBD office through the comments@erbd.ie email address or received in hard copy and a comprehensive process of analysis followed suit. Each official submission was acknowledged and given a unique registration number. Significant comments found within the submissions were also given a unique identification number. The process involved extracting important points and opinions to be incorporated into the plan.

Comments were collated into a series of tables. In summary the tables consist of the following:

- An executive summary which highlights the organisations that made submissions on the Draft Plan;
- A chapter on the key pressures highlighted by the submissions.

These tables lists the number of organisations that made submissions on the Draft RBMP, SEA and AA, the unique submission identification codes and number of pages per submission.

Further detail on the submissions received and their incorporation into the Plan is available in the Submissions Report.

| Submission | | Target Document | | | |
|----------------|---|-----------------|------|-----|----|
| Reference Code | Organisation | # Page | RBMP | SEA | AA |
| ERBD_RBMP_001 | Meath County Council | 2 | ✓ | | |
| ERBD_RBMP_002 | ERBD Advisory Council | 3 | ✓ | | |
| ERBD_RBMP_003 | DCC | 1 | ✓ | | |
| ERBD_RBMP_004 | DAFF | 2 | ✓ | | |
| ERBD_RBMP_005 | IFA | 1 | ✓ | | |
| ERBD_RBMP_006 | Public | 1 | ✓ | | |
| ERBD_RBMP_007 | Public | 1 | ✓ | | |
| ERBD_RBMP_008 | River Vartry Protection Society | 4 | ✓ | | |
| ERBD_RBMP_009 | North Kildare Trout & Salmon Anglers Assoc. | 1 | ✓ | | |
| ERBD_RBMP_010 | Clane Trout & Salmon Anglers | 3 | ✓ | | |
| ERBD_RBMP_011 | Housing & Residential Services | 1 | ✓ | | |
| ERBD_RBMP_012 | EPA | 2 | ✓ | | |
| ERBD_RBMP_013 | Wicklow Anglers' Association | 2 | ✓ | | |
| ERBD_RBMP_014 | Rathdrum Trout Anglers & Environmental Club | 2 | ✓ | | |
| ERBD_RBMP_015 | Drogheda Port Company | 3 | ✓ | | |
| ERBD_RBMP_016 | Meath County Council | 4 | ✓ | | |
| ERBD_RBMP_017 | Public | 1 | ✓ | | |

| Submission | | Target Document | | | |
|----------------|---|-----------------|------|-----|----|
| Reference Code | Organisation | # Page | RBMP | SEA | AA |
| ERBD_RBMP_018 | Arklow Town Council | 1 | ✓ | | |
| ERBD_RBMP_019 | Bremore Ireland Port | 1 | ✓ | | |
| ERBD_RBMP_020 | Water Supply Project - Dublin Region | 1 | ✓ | | |
| ERBD_RBMP_021 | Dublin Port Company | 56 | ✓ | | |
| ERBD_RBMP_022 | Animal & Plant Health Association | 3 | ✓ | | |
| ERBD_RBMP_023 | Heritage Council | 2 | ✓ | | |
| ERBD_RBMP_024 | Industrial Heritage Association | 1 | ✓ | | |
| ERBD_RBMP_025 | Michael Gunn | 2 | ✓ | | |
| ERBD_RBMP_026 | Laois IFA | 1 | ✓ | | |
| ERBD_RBMP_027 | Aughrim & District Trout Angling | 1 | ✓ | | |
| ERBD_RBMP_028 | DEHLG | 6 | | ✓ | ✓ |
| ERBD_RBMP_029 | Dept. of Agriculture | 17 | ✓ | | |
| ERBD_RBMP_030 | ESB | 2 | ✓ | | |
| ERBD_RBMP_031 | Offaly County Council | 15 | ✓ | | |
| ERBD_RBMP_032 | Teagasc | 22 | ✓ | | |
| ERBD_RBMP_033 | Eastern Regional Fisheries Board | 24 | ✓ | | |
| ERBD_RBMP_034 | Irish Doctors Environmental Association | 1 | ✓ | | |
| ERBD_RBMP_035 | Central Fisheries Board | 6 | ✓ | | |
| ERBD_RBMP_036 | Irish Concrete Federation | 4 | ✓ | | |
| ERBD_RBMP_037 | OPW | 2 | ✓ | | |
| ERBD_RBMP_038 | Shay Murtagh Ltd. | 14 | ✓ | | |
| ERBD_RBMP_039 | National Roads Authority | 2 | | | |
| ERBD_RBMP_040 | Independent Farmers Association | 4 | ✓ | | |
| ERBD_RBMP_041 | Faite Ireland | 6 | ✓ | | |
| ERBD_RBMP_042 | Fingal County Council | 18 | ✓ | ✓ | ✓ |
| ERBD_RBMP_043 | Kildare County Council | 8 | ✓ | | |
| ERBD_RBMP_044 | Waterways Ireland | 3 | ✓ | | |
| ERBD_RBMP_045 | Dodder Anglers Association | 1 | ✓ | | |
| ERBD_RBMP_046 | An Taisce | 16 | ✓ | | |
| ERBD_RBMP_047 | Wicklow County Council | 2 | ✓ | | |
| ERBD_RBMP_048 | Chambers Toxicological Consulting | 3 | ✓ | | |
| ERBD_RBMP_049 | IBEC | 6 | ✓ | | |
| ERBD_RBMP_050 | EPA | 9 | ✓ | ✓ | ✓ |
| ERBD_RBMP_051 | Irish Creamery Milk Suppliers | 1 | ✓ | | |
| ERBD_RBMP_052 | Meath IFA | 2 | ✓ | | |
| ERBD_RBMP_053 | Dublin IFA | 2 | ✓ | | |
| ERBD_RBMP_054 | Bord Na Mona | 12 | ✓ | | |
| ERBD_RBMP_055 | Dublin City Council | 38 | ✓ | | |
| ERBD_RBMP_056 | DCENR | 2 | | ✓ | |
| ERBD_RBMP_057 | IFA | 16 | ✓ | | |
| ERBD_RBMP_058 | GSI | 2 | ✓ | | |
| ERBD_RBMP_059 | SWAN | 34 | ✓ | | |
| ERBD_RBMP_060 | Public | 3 | ✓ | | |
| ERBD_RBMP_061 | Wicklow IFA | 4 | ✓ | | |
| ERBD_RBMP_062 | Meath County Council | 13 | ✓ | | |
| ERBD_RBMP_063 | Westmeath County Council | 9 | ✓ | | |
| ERBD_RBMP_064 | Coillte | 6 | ✓ | | |

Key Issues

| Submission | Pressure | | | | | | | | |
|---|---------------------------------------|-----------------------------|-------------|--------------------------------------|----------|----------------------|--------------|------------|-------|
| Organisation | Wastewater from Industrial Discharges | Quarries, Mines & Landfills | Agriculture | Wastewater from unsewered properties | Forestry | Dangerous Substances | Abstractions | Morphology | Other |
| Meath County Council | 1 | | 1 | | | 1 | 4 | | 8 |
| ERBD Advisory Council | 1 | | | | | | | 3 | 1 |
| DCC | | | | | | | | | 11 |
| DAFF | | | | | | | | 1 | 5 |
| IFA | | | 2 | | | | | | 2 |
| Public | | 1 | | | | | | | |
| Public | | 1 | | | | | | | |
| River Vartry Protection Society | | 1 | | | | | 1 | | 1 |
| North Kildare Trout & Salmon Anglers Assoc. | 1 | | | | | | | 3 | 1 |
| Clane Trout & Salmon Anglers | 1 | | | | | | | 3 | 1 |
| Housing & Residential Services | | | | | | | | | 1 |
| EPA | 1 | | 1 | | | | | | 2 |
| Wicklow Anglers' Association | | 1 | | | | | | | |
| Rathdrum Trout Anglers & Environmental Club | | 1 | | | | | | | |
| Drogheda Port Company | | | | | | | | 1 | |
| Meath County Council | 3 | | 3 | 3 | | | 1 | | 4 |
| Public | | | | | | | | | 1 |
| Arklow Town Council | 1 | 1 | | | | | | | |
| Bremore Ireland Port | | | | | | | | 1 | |
| Water Supply Project - Dublin Region | | | | | | | 1 | | |
| Dublin Port Company | | | | | | | | 4 | |
| Animal & Plant Health Association | | | | | 1 | 9 | | | |
| Heritage Council | | | 1 | | | | 1 | 1 | 4 |
| Industrial Heritage Association | | | | | | | | | 1 |
| Michael Gunn | 2 | | | | | | | | 1 |
| Laois IFA | | | 9 | | | | | | |
| Aughrim & District Trout Angling | | 1 | | | | | | | |
| DEHLG | | | | | | | | | 1 |
| Dept. of Agriculture | | | 4 | | 2 | 1 | | 1 | 4 |
| ESB | | | | | | | | 1 | |
| Offaly County Council | | 1 | 2 | | | | | | 6 |
| Teagasc | | | 1 | | 3 | | | | |
| Eastern Regional Fisheries Board | 2 | 1 | | 1 | 2 | | 4 | 1 | 45 |
| Irish Doctors Environmental Association | 1 | | | | | | | | 1 |
| Central Fisheries Board | | | | | | | | | 2 |

| Submission | Pressure | | | | | | | | |
|-----------------------------------|---------------------------------------|-----------------------------|-------------|--------------------------------------|-----------|----------------------|--------------|------------|------------|
| Organisation | Wastewater from Industrial Discharges | Quarries, Mines & Landfills | Agriculture | Wastewater from unsewered properties | Forestry | Dangerous Substances | Abstractions | Morphology | Other |
| Irish Concrete Federation | | | | | | | 1 | | 2 |
| OPW | | | | | | | | 1 | 1 |
| Shay Murtagh Ltd. | | | | | | | 1 | | |
| National Roads Authority | | | | | | | 1 | | |
| Independent Farmers Association | 1 | | | | | | | | 1 |
| Failte Ireland | | | | | | | | | 2 |
| Fingal County Council | | 1 | 1 | 2 | | | 1 | 4 | 29 |
| Kildare County Council | 2 | | 1 | | | | | | 2 |
| Waterways Ireland | | | | | | | | | 2 |
| Dodder Anglers Association | | | | | | | | 2 | |
| An Taisce | | 1 | 4 | | 2 | 2 | 5 | 2 | 26 |
| Wicklow County Council | | | | | | | | | 7 |
| Chambers Toxicological Consulting | | | | | | | 1 | | 4 |
| IBEC | | | | | | | 1 | | 7 |
| EPA | 2 | | 2 | | | | | | 24 |
| Irish Creamery Milk Suppliers | | | 1 | | | | | | |
| Meath IFA | | | 4 | | 1 | | | | 1 |
| Dublin IFA | | | 4 | | 1 | | | | 1 |
| Bord Na Mona | | | | | | | | | 15 |
| Dublin City Council | | | | | | | | | 21 |
| DCENR | | | | | | | 1 | 2 | 6 |
| IFA | | | 4 | | 3 | | 1 | | 8 |
| GSI | | | | 1 | | | 2 | | 8 |
| SWAN | 4 | 4 | 2 | 5 | 5 | 2 | 15 | 4 | 59 |
| Public | | | 4 | | | | | | |
| Wicklow IFA | | | 1 | | | | | | 11 |
| Meath County Council | 4 | | 5 | 5 | | | 1 | 1 | 14 |
| Westmeath County Council | | | | | | | | | 8 |
| Coillte | | | | | | | | | 1 |
| Totals | 27 | 15 | 57 | 17 | 20 | 15 | 43 | 36 | 363 |

Appendix B - Range of Key Supporting Actions (Per Water Management Unit)

Table B1: Range of Key Supporting Actions (Per Water Management Unit)

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|--------------------------|-------------|---|--------|
| Coastal | Boyne Estuary Plume Zone | Louth | The Quality of Shellfish Waters Regulation Regulations, 2006 (S.I. 268 of 2006): Test Shellfish water compliance to standards defined in regulations | ECO |
| Coastal | Dublin Bay | Dublin City | Implement Upstream Programmes of Measures | CROSS |
| Coastal | Dublin Bay | Dublin City | Survey Banks/Coast | DATA+ |
| Coastal | Dublin Bay | Dublin City | Dumping at Sea Act 1996 - 2004 : Permit required for Dumping at Sea | DS |
| Coastal | Dublin Bay | Dublin City | EC (Control of Major Accident Hazards Involving Dangerous Substances) Regulations (S.I. 74 of 2006) | DS |
| Coastal | Dublin Bay | Dublin City | Harbour dredgings to be suitably disposed of | DS |
| Coastal | Dublin Bay | Dublin City | Monitor Shipping Activities | DS |
| Coastal | Dublin Bay | Dublin City | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Coastal | Dublin Bay | Dublin City | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Coastal | Dublin Bay | Dublin City | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Coastal | Dublin Bay | Dublin City | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Coastal | Dublin Bay | Dublin City | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Coastal | Dublin Bay | Dublin City | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Coastal | Dublin Bay | Dublin City | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Coastal | Dublin Bay | Dublin City | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Coastal | Dublin Bay | Dublin City | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| Coastal | Dublin Bay | Dublin City | Diffuse Runoff (Urban) - Gullies Management | U-DIFF |
| Coastal | Dublin Bay | Dublin City | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| Coastal | Dublin Bay | Dublin City | Diffuse Runoff (Urban) - Storm sewers separation and qualitative improvement | U-DIFF |
| Coastal | Dublin Bay | Dublin City | Diffuse Runoff (Urban) - Street Cleaning Programme | U-DIFF |
| Coastal | Dublin Bay | Dublin City | Collection system - Network management & operations programme | WWTP |
| Coastal | Dublin Bay | Dublin City | Collection System - Upgrades and rehabilitation | WWTP |
| Coastal | Dublin Bay | Dublin City | CSO - Implement FOGG Regulations | WWTP |
| Coastal | Dublin Bay | DLRCC | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| Coastal | Dublin Bay | DLRCC | Bathing Water Quality Regulations (S.I. 79 of 2008): Classify Bathing Waters | CROSS |
| Coastal | Dublin Bay | DLRCC | Bathing Water Quality Regulations (S.I. 79 of 2008): Facilitate public participation and provide public information | CROSS |
| Coastal | Dublin Bay | DLRCC | Bathing Water Quality Regulations (S.I. 79 of 2008): Take measures to improve bathing water quality | CROSS |
| Coastal | Dublin Bay | DLRCC | Bathing Water Quality Regulations (S.I. 79 of 2008): Test bathing water compliance | CROSS |
| Coastal | Dublin Bay | DLRCC | Planning Development Acts 2000 - 2006: Grant, refuse and review licence for developing land | CROSS |
| Coastal | Dublin Bay | DLRCC | Survey Banks/Coast | DATA+ |
| Coastal | Dublin Bay | DLRCC | EC (Control of Major Accident Hazards Involving Dangerous Substances) Regulations (S.I. 74 of 2006) | DS |
| Coastal | Dublin Bay | DLRCC | EC (Port Reception Facilities for Ship Generated Waste and Cargo Residues) Regulations (S.I. 117 of 2003): Improve the availability and use of port reception facilities for ship-generated waste and cargo residues | DS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|--------------------------|------------|---|--------|
| Coastal | Dublin Bay | DLRCC | EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC) | DS |
| Coastal | Dublin Bay | DLRCC | Framework for Major Emergency Management, Office of Emergency Planning, 2006 | DS |
| Coastal | Dublin Bay | DLRCC | Harbour dredgings to be suitably disposed of | DS |
| Coastal | Dublin Bay | DLRCC | Local Government (Water Pollution) Act 1977 (Water Quality Standards for Phosphorus) Regulations, 1998 (S.I. 258 of 1998): Implement Measures in Phosphorus Regulations Reports | DS |
| Coastal | Dublin Bay | DLRCC | Monitor Shipping Activities | DS |
| Coastal | Dublin Bay | DLRCC | Water Quality Dangerous Substances Regulations, 2001: Implement Measures in Dangerous Substances Reports | DS |
| Coastal | Dublin Bay | DLRCC | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Coastal | Dublin Bay | DLRCC | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Coastal | Dublin Bay | DLRCC | EC (Natural Habitats) Regulations 1997- 2005: Assess effects of a proposed development on a protected site before granting planning permission | ECO |
| Coastal | Dublin Bay | DLRCC | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Coastal | Dublin Bay | DLRCC | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Coastal | Dublin Bay | DLRCC | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Coastal | Dublin Bay | DLRCC | The Quality of Shellfish Waters Regulation Regulations, 2006 (S.I. 268 of 2006): Test Shellfish water compliance to standards defined in regulations | ECO |
| Coastal | Dublin Bay | DLRCC | The Quality of Shellfish Waters Regulation Regulations, 2006 (S.I. 268 of 2006):Determine causes of non compliance and corrective actions | ECO |
| Coastal | Dublin Bay | DLRCC | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Coastal | Dublin Bay | DLRCC | LA to adopt a common approach to issuance of Section 4 and 16 licences | S4 |
| Coastal | Dublin Bay | DLRCC | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 12 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| Coastal | Dublin Bay | DLRCC | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| Coastal | Dublin Bay | DLRCC | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| Coastal | Dublin Bay | DLRCC | Diffuse Runoff (Urban) - Gullies Management | U-DIFF |
| Coastal | Dublin Bay | DLRCC | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| Coastal | Dublin Bay | DLRCC | Diffuse Runoff (Urban) - Storm sewers separation and qualitative improvement | U-DIFF |
| Coastal | Dublin Bay | DLRCC | Diffuse Runoff (Urban) - Street Cleaning Programme | U-DIFF |
| Coastal | Dublin Bay | DLRCC | Collection system - Network management & operations programme | WWTP |
| Coastal | Dublin Bay | DLRCC | Collection System - Upgrades and rehabilitation | WWTP |
| Coastal | Dublin Bay | DLRCC | CSO - Implement FOGG Regulations | WWTP |
| Coastal | Dublin Bay | DLRCC | CSOs to comply with GSDS recommendations | WWTP |
| Coastal | Dublin Bay | DLRCC | Water Services Act 2007: Develop and implement Urban Water Services Strategic Plans | WWTP |
| Coastal | Dublin Bay | Fingal | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards) | ECO |
| Coastal | Dublin Bay | Fingal | EC (Natural Habitats) Regulations 1997- 2005 | ECO |
| Coastal | Dublin Bay | Fingal | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| Coastal | Irish Sea Dublin (HA 09) | DLRCC | Bathing Water Quality Regulations (S.I. 79 of 2008) | CROSS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|--------------------------|------------|---|--------|
| Coastal | Irish Sea Dublin (HA 09) | DLRCC | EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards) | CROSS |
| Coastal | Irish Sea Dublin (HA 09) | DLRCC | Planning and Development Regulations 2001 - 2007 | CROSS |
| Coastal | Irish Sea Dublin (HA 09) | DLRCC | Planning Development Acts 2000 - 2006 | CROSS |
| Coastal | Irish Sea Dublin (HA 09) | DLRCC | Further investigation/monitoring required | DATA+ |
| Coastal | Irish Sea Dublin (HA 09) | DLRCC | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards) | ECO |
| Coastal | Irish Sea Dublin (HA 09) | DLRCC | EC (Natural Habitats) Regulations 1997- 2005 | ECO |
| Coastal | Irish Sea Dublin (HA 09) | DLRCC | The Quality of Shellfish Waters Regulation Regulations, 2006 (S.I. 268 of 2006) | ECO |
| Coastal | Irish Sea Dublin (HA 09) | DLRCC | Foreshore Act (1933) | MORP |
| Coastal | Irish Sea Dublin (HA 09) | Fingal | Further investigation/monitoring required | DATA+ |
| Coastal | Malahide Bay | Fingal | Bathing Water Quality Regulations (S.I. 79 of 2008) | CROSS |
| Coastal | Malahide Bay | Fingal | Implement Upstream Programmes of Measures | CROSS |
| Coastal | Malahide Bay | Fingal | Survey Banks/Coast | DATA+ |
| Coastal | Malahide Bay | Fingal | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Coastal | Malahide Bay | Fingal | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Coastal | Malahide Bay | Fingal | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Coastal | Malahide Bay | Fingal | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Coastal | Malahide Bay | Fingal | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Coastal | Malahide Bay | Fingal | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Coastal | Malahide Bay | Fingal | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Coastal | Malahide Bay | Fingal | The Quality of Shellfish Waters Regulation Regulations, 2006 (S.I. 268 of 2006): Determine causes of non compliance and corrective actions | ECO |
| Coastal | Malahide Bay | Fingal | The Quality of Shellfish Waters Regulation Regulations, 2006 (S.I. 268 of 2006): Test Shellfish water compliance to standards defined in regulations | ECO |
| Coastal | Malahide Bay | Fingal | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Coastal | Malahide Bay | Fingal | Diffuse Runoff (Urban) - Gullies Management | U-DIFF |
| Coastal | Malahide Bay | Fingal | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| Coastal | Malahide Bay | Fingal | Diffuse Runoff (Urban) - Storm sewers separation and qualitative improvement | U-DIFF |
| Coastal | Malahide Bay | Fingal | Diffuse Runoff (Urban) - Street Cleaning Programme | U-DIFF |
| Coastal | Malahide Bay | Fingal | Collection system - Network management & operations programme | WWTP |
| Coastal | Malahide Bay | Fingal | Collection System - Upgrades and rehabilitation | WWTP |
| Coastal | Malahide Bay | Fingal | CSO - Implement FOGG Regulations | WWTP |
| Coastal | Malahide Bay | Fingal | Tertiary Treatment | WWTP |
| Coastal | Malahide Bay | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Choose the point of discharge to minimise the adverse effects on the environment | WWTP |
| Coastal | Malahide Bay | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Develop collecting systems for p.e.'s >2,000 (unless negligible benefits or excessive costs) | WWTP |
| Coastal | Malahide Bay | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Industrial waste water entering a collecting system and UWW treatment plants shall be pre-treated if necessary to avoid any damage to the process | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|--------------------------------|------------|---|--------|
| Coastal | Malahide Bay | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Monitor the discharge from urban wastewater treatment plants and check the quality compliance with urban wastewater treatment legislation | WWTP |
| Coastal | Malahide Bay | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Treatment plant to be designed, constructed, operated and maintained to ensure satisfactory performance under all normal local climatic conditions. | WWTP |
| Coastal | Malahide Bay | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Upgrade domestic WWTWs to secondary treatment for p.e.'s >10,000 discharging to coastal waters | WWTP |
| Coastal | Malahide Bay | Fingal | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007) | WWTP |
| Coastal | Malahide Bay | Fingal | Water Services Act 2007 | WWTP |
| Coastal | Northwestern Irish Sea (HA 08) | Fingal | Bathing Water Quality Regulations (S.I. 79 of 2008) | CROSS |
| Coastal | Northwestern Irish Sea (HA 08) | Fingal | Implement Upstream Programmes of Measures | CROSS |
| Coastal | Northwestern Irish Sea (HA 08) | Fingal | Planning Development Acts 2000 - 2006 | CROSS |
| Coastal | Northwestern Irish Sea (HA 08) | Fingal | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Coastal | Northwestern Irish Sea (HA 08) | Fingal | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| Coastal | Northwestern Irish Sea (HA 08) | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Choose the point of discharge to minimise the adverse effects on the environment | WWTP |
| Coastal | Northwestern Irish Sea (HA 08) | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Develop collecting systems for p.e.'s >2,000 (unless negligible benefits or excessive costs) | WWTP |
| Coastal | Northwestern Irish Sea (HA 08) | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Industrial waste water entering a collecting system and UWW treatment plants shall be pre-treated if necessary to avoid any damage to the process | WWTP |
| Coastal | Northwestern Irish Sea (HA 08) | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Monitor the discharge from urban wastewater treatment plants and check the quality compliance with urban wastewater treatment legislation | WWTP |
| Coastal | Northwestern Irish Sea (HA 08) | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Treatment plant to be designed, constructed, operated and maintained to ensure satisfactory performance under all normal local climatic conditions. | WWTP |
| Coastal | Northwestern Irish Sea (HA 08) | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Upgrade domestic WWTWs to secondary treatment for p.e.'s >10,000 discharging to coastal waters | WWTP |
| Coastal | Northwestern Irish Sea (HA 08) | Fingal | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007) | WWTP |
| Coastal | Northwestern Irish Sea (HA 08) | Fingal | Water Services Act 2007 | WWTP |
| Coastal | Northwestern Irish Sea (HA 08) | Meath | Dumping at Sea Act 1996 - 2004 : Permit required for Dumping at Sea | DS |
| Coastal | Northwestern Irish Sea (HA 08) | Meath | Implement Upstream Programmes of Measures | CROSS |
| Coastal | Northwestern Irish Sea (HA 08) | Meath | Planning and Development Regulations 2001 - 2007 | CROSS |
| Coastal | Northwestern Irish Sea (HA 08) | Meath | Planning Development Acts 2000 - 2006 | CROSS |
| Coastal | Northwestern Irish Sea (HA 08) | Meath | The Quality of Shellfish Waters Regulation Regulations, 2006 (S.I. 268 of 2006): Test Shellfish water compliance to standards defined in regulations | ECO |
| Coastal | Northwestern Irish Sea (HA 08) | Meath | EPA Waste (Licensing) Regulations, 2004: Grant and refuse waste licences subject to set-limits to reduce pollution effects | IPPC |
| Coastal | Northwestern Irish Sea (HA 08) | Meath | EPA Waste (Licensing) Regulations, 2004: Review waste licences | IPPC |
| Coastal | Northwestern Irish Sea (HA 08) | Meath | EPA Waste (Licensing) Regulations, 2004: Upgrade waste licensed facilities management structures and practices to best available technology | IPPC |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|--|------------|---|--------|
| Coastal | Northwestern Irish Sea (HA 08) | Meath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| Coastal | Rockabill | Fingal | Further investigation/monitoring required | DATA+ |
| Coastal | Southwestern Irish Sea - Brittas Bay (HA 10) | Wexford | Further investigation/monitoring required | DATA+ |
| Coastal | Southwestern Irish Sea - Brittas Bay (HA 10) | Wicklow | Bathing Water Quality Regulations (S.I. 79 of 2008) | CROSS |
| Coastal | Southwestern Irish Sea - Brittas Bay (HA 10) | Wicklow | EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards): Carry out full Environmental Impact Assessment prior to development in accordance with legislation | CROSS |
| Coastal | Southwestern Irish Sea - Brittas Bay (HA 10) | Wicklow | EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards): Deliver certification for proposed development on completion of satisfactory EIS | CROSS |
| Coastal | Southwestern Irish Sea - Brittas Bay (HA 10) | Wicklow | Implement Upstream Programmes of Measures | CROSS |
| Coastal | Southwestern Irish Sea - Brittas Bay (HA 10) | Wicklow | Further investigation/monitoring required | DATA+ |
| Coastal | Southwestern Irish Sea - Brittas Bay (HA 10) | Wicklow | Survey Banks/Coast | DATA+ |
| Coastal | Southwestern Irish Sea - Brittas Bay (HA 10) | Wicklow | EC (Port Reception Facilities for Ship Generated Waste and Cargo Residues) Regulations (S.I. 117 of 2003): Improve the availability and use of port reception facilities for ship-generated waste and cargo residues | DS |
| Coastal | Southwestern Irish Sea - Brittas Bay (HA 10) | Wicklow | Monitor Shipping Activities | DS |
| Coastal | Southwestern Irish Sea - Brittas Bay (HA 10) | Wicklow | Water Quality Dangerous Substances Regulations, 2001: Implement Measures in Dangerous Substances Reports | DS |
| Coastal | Southwestern Irish Sea - Brittas Bay (HA 10) | Wicklow | EPA Waste (Licensing) Regulations, 2004: Grant and refuse waste licences subject to set-limits to reduce pollution effects | IPPC |
| Coastal | Southwestern Irish Sea - Brittas Bay (HA 10) | Wicklow | EPA Waste (Licensing) Regulations, 2004: Review waste licences | IPPC |
| Coastal | Southwestern Irish Sea - Brittas Bay (HA 10) | Wicklow | EPA Waste (Licensing) Regulations, 2004: Upgrade waste licensed facilities management structures and practices to best available technology | IPPC |
| Coastal | Southwestern Irish Sea - Brittas Bay (HA 10) | Wicklow | Assess need for barrier removal based on risk and expert judgement | MORP |
| Coastal | Southwestern Irish Sea - Brittas Bay (HA 10) | Wicklow | Assess the effects of coastal defences | MORP |
| Coastal | Southwestern Irish Sea - Brittas Bay (HA 10) | Wicklow | Consider morphology within the current development (SEA, EIA, etc) appraisal process | MORP |
| Coastal | Southwestern Irish Sea - Brittas Bay (HA 10) | Wicklow | Foreshore Act (1933): Licence required for any works on the foreshore. | MORP |
| Coastal | Southwestern Irish Sea - Brittas Bay (HA 10) | Wicklow | Implement Coastal Zone Management policies and recommendations | MORP |
| Coastal | Southwestern Irish Sea - Brittas Bay (HA 10) | Wicklow | Review of marine departmental responsibilities and legislative coverage of transitional and coastal water bodies. | MORP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|--|------------|---|--------|
| Coastal | Southwestern Irish Sea - Brittas Bay (HA 10) | Wicklow | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| Coastal | Southwestern Irish Sea - Brittas Bay (HA 10) | Wicklow | Collection System - Upgrades and rehabilitation | WWTP |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | Assess need for barrier removal based on risk and expert judgement | MORP |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | Assess the effects of coastal defences | MORP |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | Bathing Water Quality Regulations (S.I. 79 of 2008): Classify Bathing Waters | CROSS |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | Bathing Water Quality Regulations (S.I. 79 of 2008): Facilitate public participation and provide public information | CROSS |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | Bathing Water Quality Regulations (S.I. 79 of 2008): Take measures to improve bathing water quality | CROSS |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | Bathing Water Quality Regulations (S.I. 79 of 2008): Test bathing water compliance | CROSS |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards) | CROSS |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | Planning and Development Regulations 2001 - 2007: Include an Environmental Report with Development Plans | CROSS |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | Planning Development Acts 2000 - 2006 | CROSS |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | Survey Banks/Coast | DATA+ |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | EC (Control of Major Accident Hazards Involving Dangerous Substances) Regulations (S.I. 74 of 2006) | DS |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | Local Government (Water Pollution) Act 1977 (Water Quality Standards for Phosphorus) Regulations, 1998 (S.I. 258 of 1998): Implement Measures in Phosphorus Regulations Reports | DS |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | Water Quality Dangerous Substances Regulations, 2001: Implement Measures in Dangerous Substances Reports | DS |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|--|------------|---|--------|
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | The Quality of Shellfish Waters Regulation Regulations, 2006 (S.I. 268 of 2006): Determine causes of non compliance and corrective actions | ECO |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | The Quality of Shellfish Waters Regulation Regulations, 2006 (S.I. 268 of 2006): Test Shellfish water compliance to standards defined in regulations | ECO |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | EPA (Licensing) Regulations, 1994 & 2004: Upgrade IPPC licensed facilities waste management structures and practices to best available technology | IPPC |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | Consider morphology within the current development (SEA, EIA, etc) appraisal process | MORP |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | Foreshore Act (1933): Licence required for any works on the foreshore. | MORP |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | Implement Coastal Zone Management policies and recommendations | MORP |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | Review Dredging Practice | MORP |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 12 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | Urban Waste Water Treatment Regulations, 2001 - 2004 | WWTP |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | DLRCC | Water Services Act 2007: Develop and implement Urban Water Services Strategic Plans | WWTP |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | Bathing Water Quality Regulations (S.I. 79 of 2008) | CROSS |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | Planning Development Acts 2000 - 2006: Grant, refuse and review licence for developing land | CROSS |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | Survey Banks/Coast | DATA+ |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | Monitor Shipping Activities | DS |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|--|------------|---|--------|
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | Enforce Regulations on Septic Systems | Septic |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | Diffuse Runoff (Urban) - Gullies Management | U-DIFF |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | Diffuse Runoff (Urban) - Storm sewers separation and qualitative improvement | U-DIFF |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | Diffuse Runoff (Urban) - Street Cleaning Programme | U-DIFF |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | Collection system - Network management & operations programme | WWTP |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | Collection System - Upgrades and rehabilitation | WWTP |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | CSO - Implement FOGG Regulations | WWTP |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | Upgrade WWTW and Collecting Systems <2000 PE | WWTP |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | Urban Waste Water Treatment Regulations, 2001 - 2004: Choose the point of discharge to minimise the adverse effects on the environment | WWTP |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | Urban Waste Water Treatment Regulations, 2001 - 2004: Develop collecting systems for p.e.'s >2,000 (unless negligible benefits or excessive costs) | WWTP |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | Urban Waste Water Treatment Regulations, 2001 - 2004: Industrial waste water entering a collecting system and UWW treatment plants shall be pre-treated if necessary to avoid any damage to the process | WWTP |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | Urban Waste Water Treatment Regulations, 2001 - 2004: Monitor the discharge from urban wastewater treatment plants and check the quality compliance with urban wastewater treatment legislation | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|--|------------|--|--------|
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | Urban Waste Water Treatment Regulations, 2001 - 2004: Treatment plant to be designed, constructed, operated and maintained to ensure satisfactory performance under all normal local climatic conditions. | WWTP |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | Urban Waste Water Treatment Regulations, 2001 - 2004: Upgrade domestic WWTPs to secondary treatment for p.e.'s >10,000 discharging to coastal waters | WWTP |
| Coastal | Southwestern Irish Sea - Killiney Bay (HA10) | Wicklow | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007) | WWTP |
| Groundwater | Aleckafin_CL | Kildare | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Aleckafin_CL | Kildare | EPA (Licensing) Regulations, 1994 & 2004 | IPPC |
| Groundwater | Aleckafin_CL | Kildare | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Arklow_Urban | Wicklow | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Arklow_Urban | Wicklow | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Arklow_Urban | Wicklow | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Arklow_Urban | Wicklow | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Arklow_Urban | Wicklow | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Ashbourne Urban Nth | Fingal | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Ashbourne Urban Nth | Fingal | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Ashbourne Urban Nth | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Ashbourne Urban Nth | Meath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Ashbourne Urban Nth | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Ashbourne Urban Sth | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Ashbourne Urban Sth | Meath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Ashbourne Urban Sth | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Ashbourne Urban Sth | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Ashbourne Urban Sth | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Ashford S&G | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Ashford S&G | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Ashford S&G | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Ashford S&G | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|--------------|------------|--|--------|
| Groundwater | Ashford S&G | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Ashford S&G | Wicklow | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Ashford S&G | Wicklow | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Ashford S&G | Wicklow | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Athboy (001) | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Athboy (001) | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Athboy (001) | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Athboy (001) | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Athboy (001) | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Athboy (001) | Kildare | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Athboy (001) | Kildare | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Athboy (001) | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Athboy (001) | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Athboy (001) | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Athboy (001) | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Athboy (001) | Meath | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Athboy (001) | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Athboy (001) | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Athboy (001) | Meath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Athboy (001) | Meath | Avoid sewer systems in Inner Source Protection Zones | WWTP |
| Groundwater | Athboy (001) | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Athboy (001) | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Athboy (001) | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Athboy (001) | Offaly | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Athboy (001) | Offaly | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|---------------|------------|--|--------|
| Groundwater | Athboy (001) | Offaly | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Athboy (001) | Offaly | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Athboy (001) | Offaly | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Athboy (001) | Offaly | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Athboy (001) | Offaly | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Athboy (001) | Offaly | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Athboy (001) | Offaly | Avoid sewer systems in Inner Source Protection Zones | WWTP |
| Groundwater | Athboy (001) | Offaly | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Athboy (001) | Westmeath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Athboy (001) | Westmeath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Athboy (001) | Westmeath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Athboy (001) | Westmeath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Athboy (001) | Westmeath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Athboy (001) | Westmeath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Athboy (001) | Westmeath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Athboy (001) | Westmeath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Athboy (001) | Westmeath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Athboy (001) | Westmeath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Bailieborough | Cavan | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Bailieborough | Cavan | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Bailieborough | Cavan | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Bailieborough | Cavan | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Bailieborough | Cavan | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Bailieborough | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Bailieborough | Meath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Bailieborough | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Bailieborough | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|------------------|------------|--|--------|
| Groundwater | Bailieborough | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| | | | | |
| Groundwater | Balbriggan | Fingal | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Balbriggan | Fingal | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Balbriggan | Fingal | Avoid sewer systems in Inner Source Protection Zones | WWTP |
| Groundwater | Balbriggan | Fingal | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Balbriggan | Fingal | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Balbriggan | Fingal | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Balbriggan Urban | Fingal | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Balbriggan Urban | Fingal | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Balbriggan Urban | Fingal | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Balbriggan Urban | Fingal | Avoid sewer systems in Inner Source Protection Zones | WWTP |
| Groundwater | Balbriggan Urban | Fingal | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Balbriggan Urban | Fingal | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Balbriggan Urban | Fingal | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Ballany S&G | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Ballany S&G | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Ballany S&G | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Ballany S&G | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Ballany S&G | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Ballany S&G | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Ballany S&G | Meath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Ballany S&G | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| | | | | |
| Groundwater | Ballany S&G | Westmeath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Ballany S&G | Westmeath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Ballany S&G | Westmeath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Ballany S&G | Westmeath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|-----------------------|------------|--|--------|
| Groundwater | Ballany S&G | Westmeath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Ballymore Eustace S&G | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Ballymore Eustace S&G | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Ballymore Eustace S&G | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Ballymore Eustace S&G | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Ballymore Eustace S&G | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Ballymore Eustace S&G | Kildare | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Ballymore Eustace S&G | Kildare | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Ballymore Eustace S&G | Kildare | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Balrothery | Fingal | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Balrothery | Fingal | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Balrothery | Fingal | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Balrothery | Fingal | Avoid sewer systems in Inner Source Protection Zones | WWTP |
| Groundwater | Balrothery | Fingal | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Balrothery | Fingal | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Balrothery | Fingal | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Basketstown_LF | Meath | EPA Waste (Licensing) Regulations, 2004 | IPPC |
| Groundwater | Basketstown_LF | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Basketstown_LF | Meath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Basketstown_LF | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Bettystown | Meath | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Bettystown | Meath | Sewerage Schemes - Establish dedicated groundwater monitoring systems in highest-risk settings | DATA+ |
| Groundwater | Bettystown | Meath | EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments | DS |
| Groundwater | Bettystown | Meath | EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001 | DS |
| Groundwater | Bettystown | Meath | EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments | DS |
| Groundwater | Bettystown | Meath | License and distribute DAF's GIS mapping of cropping patterns to EPA and local authorities | DS |
| Groundwater | Bettystown | Meath | Report and audit sales and usage of pesticides by sector | DS |
| Groundwater | Bettystown | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Bettystown | Meath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|-----------------|------------|---|--------|
| Groundwater | Bettystown | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Bettystown | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Bettystown | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Bettystown | Meath | Well construction practices/requirements | WWTP |
| Groundwater | Blessington S&G | Kildare | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Blessington S&G | Kildare | EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments | DS |
| Groundwater | Blessington S&G | Kildare | EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001 | DS |
| Groundwater | Blessington S&G | Kildare | EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments | DS |
| Groundwater | Blessington S&G | Kildare | EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC) | DS |
| Groundwater | Blessington S&G | Kildare | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Groundwater | Blessington S&G | Kildare | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Blessington S&G | Kildare | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Blessington S&G | Kildare | Avoid sewer systems in Inner Source Protection Zones | WWTP |
| Groundwater | Blessington S&G | Kildare | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Blessington S&G | Wicklow | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Blessington S&G | Wicklow | EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments | DS |
| Groundwater | Blessington S&G | Wicklow | EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001 | DS |
| Groundwater | Blessington S&G | Wicklow | EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments | DS |
| Groundwater | Blessington S&G | Wicklow | EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC) | DS |
| Groundwater | Blessington S&G | Wicklow | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Groundwater | Blessington S&G | Wicklow | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Blessington S&G | Wicklow | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Blessington S&G | Wicklow | Avoid sewer systems in Inner Source Protection Zones | WWTP |
| Groundwater | Blessington S&G | Wicklow | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Boyle_CL | Louth | Further investigation/monitoring required | DATA+ |
| Groundwater | Boyle_CL | Louth | EPA (Licensing) Regulations, 1994 & 2004 | IPPC |
| Groundwater | Boyle_CL | Louth | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Boyle_CL | Louth | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Boyle_CL | Louth | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Bray Urban | DLRCC | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Bray Urban | DLRCC | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Bray Urban | DLRCC | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|------------------|------------|--|--------|
| Groundwater | Bray Urban | Wicklow | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Bray Urban | Wicklow | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Bray Urban | Wicklow | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Bray Urban | Wicklow | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Bray Urban | Wicklow | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Castlekeeran S&G | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Castlekeeran S&G | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Castlekeeran S&G | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Castlekeeran S&G | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Curragh S&G | Kildare | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Curragh S&G | Kildare | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Curragh S&G | Kildare | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Curragh S&G | Kildare | Avoid sewer systems in Inner Source Protection Zones | WWTP |
| Groundwater | Curragh S&G | Kildare | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Curragh S&G | Kildare | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Curragh S&G | Kildare | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Donore | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Donore | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Donore | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Donore | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Drogheda | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Drogheda | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Drogheda | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Drogheda | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Drogheda | Louth | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Drogheda | Louth | Sewerage Schemes - Establish dedicated groundwater monitoring systems in highest-risk settings | DATA+ |
| Groundwater | Drogheda | Louth | EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments | DS |
| Groundwater | Drogheda | Louth | EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001 | DS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|----------|------------|--|--------|
| Groundwater | Drogheda | Louth | EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments | DS |
| Groundwater | Drogheda | Louth | EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC) | DS |
| Groundwater | Drogheda | Louth | License and distribute DAF's GIS mapping of cropping patterns to EPA and local authorities | DS |
| Groundwater | Drogheda | Louth | Report and audit sales and usage of pesticides by sector | DS |
| Groundwater | Drogheda | Louth | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Groundwater | Drogheda | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Drogheda | Louth | EPA - Code of Practice for Wastewater Treatment Systems for Single Houses | Septic |
| Groundwater | Drogheda | Louth | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Drogheda | Louth | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Drogheda | Louth | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Drogheda | Louth | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Drogheda | Louth | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Drogheda | Louth | Well construction practices/requirements | WWTP |
| | | | | |
| Groundwater | Drogheda | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Drogheda | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Drogheda | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Drogheda | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Drogheda | Meath | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Drogheda | Meath | Sewerage Schemes - Establish dedicated groundwater monitoring systems in highest-risk settings | DATA+ |
| Groundwater | Drogheda | Meath | EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments | DS |
| Groundwater | Drogheda | Meath | EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001 | DS |
| Groundwater | Drogheda | Meath | EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments | DS |
| Groundwater | Drogheda | Meath | EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC) | DS |
| Groundwater | Drogheda | Meath | License and distribute DAF's GIS mapping of cropping patterns to EPA and local authorities | DS |
| Groundwater | Drogheda | Meath | Report and audit sales and usage of pesticides by sector | DS |
| Groundwater | Drogheda | Meath | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Groundwater | Drogheda | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Drogheda | Meath | EPA - Code of Practice for Wastewater Treatment Systems for Single Houses | Septic |
| Groundwater | Drogheda | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Drogheda | Meath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|----------------|------------|--|--------|
| Groundwater | Drogheda | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Drogheda | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Drogheda | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Drogheda | Meath | Well construction practices/requirements | WWTP |
| Groundwater | Drogheda Urban | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Drogheda Urban | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Drogheda Urban | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Drogheda Urban | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Drogheda Urban | Louth | Sewerage Schemes - Establish dedicated groundwater monitoring systems in highest-risk settings | DATA+ |
| Groundwater | Drogheda Urban | Louth | EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments | DS |
| Groundwater | Drogheda Urban | Louth | EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001 | DS |
| Groundwater | Drogheda Urban | Louth | EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments | DS |
| Groundwater | Drogheda Urban | Louth | EPA (Licensing) Regulations, 1994 & 2004: Grant and refuse IPPC licences subject to set-limits to reduce pollution effects | IPPC |
| Groundwater | Drogheda Urban | Louth | EPA (Licensing) Regulations, 1994 & 2004: Review IPPC licences | IPPC |
| Groundwater | Drogheda Urban | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Drogheda Urban | Louth | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Drogheda Urban | Louth | Water Services Act 2007: Develop and implement Urban Water Services Strategic Plans | WWTP |
| Groundwater | Drogheda Urban | Louth | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Drogheda Urban | Louth | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Drogheda Urban | Louth | Well construction practices/requirements | WWTP |
| Groundwater | Drogheda Urban | Louth | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Drogheda Urban | Louth | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| | | | | |
| Groundwater | Drogheda Urban | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Drogheda Urban | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Drogheda Urban | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Drogheda Urban | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|----------------|------------|---|--------|
| Groundwater | Drogheda Urban | Meath | Sewerage Schemes - Establish dedicated groundwater monitoring systems in highest-risk settings | DATA+ |
| Groundwater | Drogheda Urban | Meath | EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments | DS |
| Groundwater | Drogheda Urban | Meath | EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001 | DS |
| Groundwater | Drogheda Urban | Meath | EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments | DS |
| Groundwater | Drogheda Urban | Meath | EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC) | DS |
| Groundwater | Drogheda Urban | Meath | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Groundwater | Drogheda Urban | Meath | EPA (Licensing) Regulations, 1994 & 2004 | IPPC |
| Groundwater | Drogheda Urban | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Drogheda Urban | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Drogheda Urban | Meath | Water Services Act 2007: Develop and implement Urban Water Services Strategic Plans | WWTP |
| Groundwater | Drogheda Urban | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Drogheda Urban | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Drogheda Urban | Meath | Well construction practices/requirements | WWTP |
| Groundwater | Drogheda Urban | Meath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Drogheda Urban | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Drogheda_LF | Louth | Further investigation/monitoring required | DATA+ |
| Groundwater | Drogheda_LF | Louth | EPA Waste (Licensing) Regulations, 2004 | IPPC |
| Groundwater | Drogheda_LF | Louth | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Drogheda_LF | Louth | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Drogheda_LF | Louth | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Dublin | Fingal | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Dublin | Fingal | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Dublin | Fingal | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Dublin | Fingal | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Dublin | Fingal | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Dublin | Kildare | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Dublin | Kildare | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Dublin | Kildare | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Dublin | Kildare | Avoid sewer systems in Inner Source Protection Zones | WWTP |
| Groundwater | Dublin | Kildare | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Dublin | Kildare | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Dublin | Kildare | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|--------------|-------------|--|--------|
| Groundwater | Dublin | Meath | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Dublin | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Dublin | Meath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Dublin | Meath | Avoid sewer systems in Inner Source Protection Zones | WWTP |
| Groundwater | Dublin | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Dublin | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Dublin | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Dublin Urban | Dublin City | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Dublin Urban | Dublin City | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Dublin Urban | Dublin City | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Dublin Urban | Dublin City | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Dublin Urban | Dublin City | EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC) | DS |
| Groundwater | Dublin Urban | Dublin City | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Groundwater | Dublin Urban | Dublin City | EC (Natural Habitats) Regulations 1997- 2005 | ECO |
| Groundwater | Dublin Urban | Dublin City | EPA (Licensing) Regulations, 1994 & 2004: Grant and refuse IPPC licences subject to set-limits to reduce pollution effects | IPPC |
| Groundwater | Dublin Urban | Dublin City | EPA (Licensing) Regulations, 1994 & 2004: Review IPPC licences | IPPC |
| Groundwater | Dublin Urban | Dublin City | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Dublin Urban | Dublin City | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Dublin Urban | Dublin City | Water Services Act 2007: Develop and implement Urban Water Services Strategic Plans | WWTP |
| Groundwater | Dublin Urban | Dublin City | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Dublin Urban | Dublin City | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Dublin Urban | Dublin City | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| | | | | |
| Groundwater | Dublin Urban | DLRCC | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Dublin Urban | DLRCC | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Dublin Urban | DLRCC | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Dublin Urban | DLRCC | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Dublin Urban | DLRCC | EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC) | DS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|--------------|------------|--|--------|
| Groundwater | Dublin Urban | DLRCC | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Groundwater | Dublin Urban | DLRCC | EPA (Licensing) Regulations, 1994 & 2004: Grant and refuse IPPC licences subject to set-limits to reduce pollution effects | IPPC |
| Groundwater | Dublin Urban | DLRCC | EPA (Licensing) Regulations, 1994 & 2004: Review IPPC licences | IPPC |
| Groundwater | Dublin Urban | DLRCC | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Dublin Urban | DLRCC | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Dublin Urban | DLRCC | Water Services Act 2007: Develop and implement Urban Water Services Strategic Plans | WWTP |
| Groundwater | Dublin Urban | DLRCC | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Dublin Urban | DLRCC | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Dublin Urban | DLRCC | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Dublin Urban | DLRCC | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| | | | | |
| Groundwater | Dublin Urban | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Dublin Urban | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Dublin Urban | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Dublin Urban | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Dublin Urban | Fingal | EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC) | DS |
| Groundwater | Dublin Urban | Fingal | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Groundwater | Dublin Urban | Fingal | EC (Natural Habitats) Regulations 1997- 2005 | ECO |
| Groundwater | Dublin Urban | Fingal | EPA (Licensing) Regulations, 1994 & 2004: Grant and refuse IPPC licences subject to set-limits to reduce pollution effects | IPPC |
| Groundwater | Dublin Urban | Fingal | EPA (Licensing) Regulations, 1994 & 2004: Review IPPC licences | IPPC |
| Groundwater | Dublin Urban | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Dublin Urban | Fingal | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Dublin Urban | Fingal | Water Services Act 2007: Develop and implement Urban Water Services Strategic Plans | WWTP |
| Groundwater | Dublin Urban | Fingal | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Dublin Urban | Fingal | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Dublin Urban | Fingal | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Dublin Urban | Fingal | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| | | | | |
| Groundwater | Dublin Urban | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Dublin Urban | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|--------------|------------|--|--------|
| Groundwater | Dublin Urban | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Dublin Urban | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Dublin Urban | Kildare | EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC) | DS |
| Groundwater | Dublin Urban | Kildare | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Groundwater | Dublin Urban | Kildare | EPA (Licensing) Regulations, 1994 & 2004: Grant and refuse IPPC licences subject to set-limits to reduce pollution effects | IPPC |
| Groundwater | Dublin Urban | Kildare | EPA (Licensing) Regulations, 1994 & 2004: Review IPPC licences | IPPC |
| Groundwater | Dublin Urban | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Dublin Urban | Kildare | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Dublin Urban | Kildare | Water Services Act 2007: Develop and implement Urban Water Services Strategic Plans | WWTP |
| Groundwater | Dublin Urban | Kildare | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Dublin Urban | Kildare | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Dublin Urban | Kildare | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Dublin Urban | Kildare | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Dublin Urban | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Dublin Urban | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Dublin Urban | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Dublin Urban | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Dublin Urban | Meath | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Dublin Urban | Meath | EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC) | DS |
| Groundwater | Dublin Urban | Meath | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Groundwater | Dublin Urban | Meath | EPA (Licensing) Regulations, 1994 & 2004 | IPPC |
| Groundwater | Dublin Urban | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Dublin Urban | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Dublin Urban | Meath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Dublin Urban | Meath | Avoid sewer systems in Inner Source Protection Zones | WWTP |
| Groundwater | Dublin Urban | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Dublin Urban | Meath | Water Services Act 2007: Develop and implement Urban Water Services Strategic Plans | WWTP |
| Groundwater | Dublin Urban | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Dublin Urban | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|--------------|--------------|--|--------|
| Groundwater | Dublin Urban | South Dublin | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Dublin Urban | South Dublin | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Dublin Urban | South Dublin | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Dublin Urban | South Dublin | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Dublin Urban | South Dublin | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Dublin Urban | South Dublin | License and distribute DAF's GIS mapping of cropping patterns to EPA and local authorities | DS |
| Groundwater | Dublin Urban | South Dublin | Report and audit sales and usage of pesticides by sector | DS |
| Groundwater | Dublin Urban | South Dublin | EPA (Licensing) Regulations, 1994 & 2004: Grant and refuse IPPC licences subject to set-limits to reduce pollution effects | IPPC |
| Groundwater | Dublin Urban | South Dublin | EPA (Licensing) Regulations, 1994 & 2004: Review IPPC licences | IPPC |
| Groundwater | Dublin Urban | South Dublin | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Dublin Urban | South Dublin | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Dublin Urban | South Dublin | Water Services Act 2007: Develop and implement Urban Water Services Strategic Plans | WWTP |
| Groundwater | Dublin Urban | South Dublin | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Dublin Urban | South Dublin | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Dublin Urban | South Dublin | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Dublin Urban | South Dublin | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Duleek | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Duleek | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Duleek | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Duleek | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Duleek | Fingal | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Duleek | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Duleek | Fingal | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Duleek | Fingal | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Duleek | Fingal | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Duleek | Fingal | Avoid sewer systems in Inner Source Protection Zones | WWTP |
| Groundwater | Duleek | Fingal | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|----------------|------------|--|--------|
| Groundwater | Duleek | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Duleek | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Duleek | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Duleek | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Duleek | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Duleek | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Duleek | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Duleek | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Duleek | Meath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Duleek | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Dunshaughlin | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Dunshaughlin | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Dunshaughlin | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Dunshaughlin | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Dunshaughlin | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Dunshaughlin | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Dunshaughlin | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Dunshaughlin | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Dunshaughlin | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Enniskerry S&G | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Enniskerry S&G | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Enniskerry S&G | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Enniskerry S&G | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Enniskerry S&G | Wicklow | Restrict use of pesticides within groundwater Source Protection Zones | Chem |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|------------------|------------|---|--------|
| Groundwater | Enniskerry S&G | Wicklow | EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments | DS |
| Groundwater | Enniskerry S&G | Wicklow | EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001 | DS |
| Groundwater | Enniskerry S&G | Wicklow | EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments | DS |
| Groundwater | Enniskerry S&G | Wicklow | License and distribute DAF's GIS mapping of cropping patterns to EPA and local authorities | DS |
| Groundwater | Enniskerry S&G | Wicklow | Report and audit sales and usage of pesticides by sector | DS |
| Groundwater | Enniskerry S&G | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Enniskerry S&G | Wicklow | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Enniskerry S&G | Wicklow | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Enniskerry S&G | Wicklow | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Fassaroe_LF | Wicklow | EPA Waste (Licensing) Regulations, 2004 | IPPC |
| Groundwater | Fassaroe_LF | Wicklow | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Fassaroe_LF | Wicklow | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Fassaroe_LF | Wicklow | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Gormanstown S&G | Kildare | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Gormanstown S&G | Kildare | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Gormanstown S&G | Wicklow | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Gormanstown S&G | Wicklow | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Gormanstown S&G | Wicklow | Avoid sewer systems in Inner Source Protection Zones | WWTP |
| Groundwater | Gormanstown S&G | Wicklow | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Greystones Urban | Wicklow | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Greystones Urban | Wicklow | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Greystones Urban | Wicklow | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Greystones Urban | Wicklow | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Greystones Urban | Wicklow | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Hill of Tara | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Hill of Tara | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Hill of Tara | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Hill of Tara | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Hynestown | Fingal | Restrict use of pesticides within groundwater Source Protection Zones | Chem |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|--------------|--------------|---|--------|
| Groundwater | Hynestown | Fingal | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Hynestown | Fingal | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Hynestown | Fingal | Avoid sewer systems in Inner Source Protection Zones | WWTP |
| Groundwater | Hynestown | Fingal | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Hynestown | Fingal | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Hynestown | Fingal | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Kilcoole S&G | Wicklow | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Kilcoole S&G | Wicklow | EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments | DS |
| Groundwater | Kilcoole S&G | Wicklow | EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001 | DS |
| Groundwater | Kilcoole S&G | Wicklow | EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments | DS |
| Groundwater | Kilcoole S&G | Wicklow | License and distribute DAF's GIS mapping of cropping patterns to EPA and local authorities | DS |
| Groundwater | Kilcoole S&G | Wicklow | Report and audit sales and usage of pesticides by sector | DS |
| Groundwater | Kilcoole S&G | Wicklow | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Kilcoole S&G | Wicklow | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Kilcoole S&G | Wicklow | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Kilcullen | DLRCC | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Kilcullen | DLRCC | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Kilcullen | DLRCC | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Kilcullen | DLRCC | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Kilcullen | DLRCC | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Kilcullen | Kildare | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Kilcullen | Kildare | EC (Natural Habitats) Regulations 1997- 2005 | ECO |
| Groundwater | Kilcullen | Kildare | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Kilcullen | Kildare | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Kilcullen | Kildare | Avoid sewer systems in Inner Source Protection Zones | WWTP |
| Groundwater | Kilcullen | Kildare | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Kilcullen | Kildare | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Kilcullen | Kildare | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Kilcullen | South Dublin | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Kilcullen | South Dublin | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Kilcullen | South Dublin | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Kilcullen | South | Avoid sewer systems in Inner Source Protection Zones | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|-----------------------------|--------------|---|--------|
| | | Dublin | | |
| Groundwater | Kilcullen | South Dublin | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Kilcullen | South Dublin | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Kilcullen | South Dublin | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Kilcullen | Wicklow | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Kilcullen | Wicklow | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Kilcullen | Wicklow | Avoid sewer systems in Inner Source Protection Zones | WWTP |
| Groundwater | Kilcullen | Wicklow | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Kilcullen | Wicklow | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Kilcullen | Wicklow | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | KILLYCONNY BOG (CLOGHBALLY) | Cavan | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | KILLYCONNY BOG (CLOGHBALLY) | Cavan | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | KILLYCONNY BOG (CLOGHBALLY) | Cavan | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | KILLYCONNY BOG (CLOGHBALLY) | Cavan | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | KILLYCONNY BOG (CLOGHBALLY) | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | KILLYCONNY BOG (CLOGHBALLY) | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Kilrathmurry S&G | Kildare | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Kilrathmurry S&G | Kildare | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Longwood | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Longwood | Meath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Longwood | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Longwood | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Longwood | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| | | | | |
| Groundwater | Lough Lene | Meath | EC (Natural Habitats) Regulations 1997- 2005 | ECO |
| Groundwater | Lough Lene | Meath | Sewerage Schemes - Establish dedicated groundwater monitoring systems in highest-risk settings | DATA+ |
| Groundwater | Lough Lene | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Lough Lene | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Lough Lene | Meath | Well construction practices/requirements | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|----------------------|------------|--|--------|
| Groundwater | Lough Lene | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Lough Lene | Westmeath | Sewerage Schemes - Establish dedicated groundwater monitoring systems in highest-risk settings | DATA+ |
| Groundwater | Lough Lene | Westmeath | EC (Natural Habitats) Regulations 1997- 2005 | ECO |
| Groundwater | Lough Lene | Westmeath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Lough Lene | Westmeath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Lough Lene | Westmeath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Lough Lene | Westmeath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Lough Lene | Westmeath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Lough Lene | Westmeath | Well construction practices/requirements | WWTP |
| Groundwater | Lusk-Bog of the Ring | Fingal | Water Supplies Act 1942: Develop a proposal for extending or providing a supply of water. | ABS |
| Groundwater | Lusk-Bog of the Ring | Fingal | Licensing system for groundwater abstractions | ABS |
| Groundwater | Lusk-Bog of the Ring | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Lusk-Bog of the Ring | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Lusk-Bog of the Ring | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Lusk-Bog of the Ring | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Lusk-Bog of the Ring | Fingal | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Lusk-Bog of the Ring | Fingal | EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments | DS |
| Groundwater | Lusk-Bog of the Ring | Fingal | EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001 | DS |
| Groundwater | Lusk-Bog of the Ring | Fingal | EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments | DS |
| Groundwater | Lusk-Bog of the Ring | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Lusk-Bog of the Ring | Fingal | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Lusk-Bog of the Ring | Fingal | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Lusk-Bog of the Ring | Fingal | Avoid sewer systems in Inner Source Protection Zones | WWTP |
| Groundwater | Lusk-Bog of the Ring | Fingal | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Lusk-Bog of the Ring | Fingal | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Lusk-Bog of the Ring | Fingal | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Lusk-Bog of the Ring | Meath | Water Supplies Act 1942: Develop a proposal for extending or providing a supply of water. | ABS |
| Groundwater | Lusk-Bog of the Ring | Meath | Licensing system for groundwater abstractions | ABS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|----------------------|------------|--|--------|
| Groundwater | Lusk-Bog of the Ring | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Lusk-Bog of the Ring | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Lusk-Bog of the Ring | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Lusk-Bog of the Ring | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Lusk-Bog of the Ring | Meath | EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments | DS |
| Groundwater | Lusk-Bog of the Ring | Meath | EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001 | DS |
| Groundwater | Lusk-Bog of the Ring | Meath | EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments | DS |
| Groundwater | Lusk-Bog of the Ring | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Lusk-Bog of the Ring | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Lusk-Bog of the Ring | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Lusk-Bog of the Ring | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Lusk-Bog of the Ring | Meath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Lusk-Bog of the Ring | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Lusk-East | Fingal | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Lusk-East | Fingal | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Lusk-East | Fingal | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Lusk-East | Fingal | Avoid sewer systems in Inner Source Protection Zones | WWTP |
| Groundwater | Lusk-East | Fingal | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Lusk-East | Fingal | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Lusk-East | Fingal | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Lusk-West | Fingal | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Lusk-West | Fingal | EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments | DS |
| Groundwater | Lusk-West | Fingal | EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001 | DS |
| Groundwater | Lusk-West | Fingal | EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments | DS |
| Groundwater | Lusk-West | Fingal | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Lusk-West | Fingal | Avoid sewer systems in Inner Source Protection Zones | WWTP |
| Groundwater | Lusk-West | Fingal | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Lusk-West | Fingal | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Lusk-West | Fingal | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|-----------------|------------|--|--------|
| Groundwater | Lusk-West | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Lusk-West | Meath | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Lusk-West | Meath | EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments | DS |
| Groundwater | Lusk-West | Meath | EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001 | DS |
| Groundwater | Lusk-West | Meath | EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments | DS |
| Groundwater | Lusk-West | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Lusk-West | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Lusk-West | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Lusk-West | Meath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Lusk-West | Meath | Avoid sewer systems in Inner Source Protection Zones | WWTP |
| Groundwater | MOUNT HEVEY BOG | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | MOUNT HEVEY BOG | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | MOUNT HEVEY BOG | Westmeath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | MOUNT HEVEY BOG | Westmeath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Moynalty | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Moynalty | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Moynalty | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Moynalty | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Moynalty | Meath | EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments | DS |
| Groundwater | Moynalty | Meath | EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001 | DS |
| Groundwater | Moynalty | Meath | EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments | DS |
| Groundwater | Moynalty | Meath | EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC) | DS |
| Groundwater | Moynalty | Meath | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Groundwater | Moynalty | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Moynalty | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Moynalty | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Moynalty | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Moynalty | Meath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|------------------------|------------|--|--------|
| Groundwater | Moynalty | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Moynalvy | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Moynalvy | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Moynalvy | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Moynalvy | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Naas | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Naas | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Naas | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Naas | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Naas | Kildare | EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC) | DS |
| Groundwater | Naas | Kildare | Water Quality Dangerous Substances Regulations, 2001: Implement Measures in Dangerous Substances Reports | DS |
| Groundwater | Naas | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Naas | Kildare | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Naas | Kildare | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Naas | Kildare | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Naas | Kildare | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Naas | Kildare | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Naas Bedrock Nth Urban | Kildare | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Naas Bedrock Nth Urban | Kildare | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Naas Bedrock Nth Urban | Kildare | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Naas Bedrock Sth Urban | Kildare | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Naas Bedrock Sth Urban | Kildare | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Naas Bedrock Sth Urban | Kildare | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Naas Bedrock Sth Urban | Kildare | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Naas Bedrock Sth Urban | Kildare | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Naas_CL | Kildare | EPA (Licensing) Regulations, 1994 & 2004 | IPPC |
| Groundwater | Naas_CL | Kildare | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|-----------------|------------|--|--------|
| Groundwater | Naas_CL | Kildare | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Naas_CL | Kildare | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Naas_SG Urban | Kildare | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Naas_SG Urban | Kildare | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Naas_SG Urban | Kildare | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Navan Nth Urban | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Navan Nth Urban | Meath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Navan Nth Urban | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Navan Nth Urban | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Navan Nth Urban | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Navan Orebody | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Navan Orebody | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Navan Orebody | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Navan Orebody | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Navan Orebody | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Navan Orebody | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Navan Orebody | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Navan Orebody | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Navan Orebody | Meath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Navan Orebody | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Navan Orebody 2 | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Navan Orebody 2 | Meath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Navan Orebody 2 | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Navan Orebody 2 | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Navan Orebody 2 | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Navan Sth Urban | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|-----------------|------------|--|--------|
| Groundwater | Navan Sth Urban | Meath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Navan Sth Urban | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Navan Sth Urban | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Navan Sth Urban | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Navan Tailings | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Navan Tailings | Meath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Navan Tailings | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Newbridge Urban | Kildare | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Newbridge Urban | Kildare | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Newbridge Urban | Kildare | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | NEWTOWN LOUGH | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | NEWTOWN LOUGH | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | NEWTOWN LOUGH | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | NEWTOWN LOUGH | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | NEWTOWN LOUGH | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | NEWTOWN LOUGH | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | NEWTOWN LOUGH | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | NEWTOWN LOUGH | Westmeath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | NEWTOWN LOUGH | Westmeath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | NEWTOWN LOUGH | Westmeath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | NEWTOWN LOUGH | Westmeath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | NEWTOWN LOUGH | Westmeath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | NEWTOWN LOUGH | Westmeath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | NEWTOWN LOUGH | Westmeath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|------------------------|------------|--|--------|
| Groundwater | Old Kilcullen S&G | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Old Kilcullen S&G | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Old Kilcullen S&G | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Old Kilcullen S&G | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Old Kilcullen S&G | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Old Kilcullen S&G | Kildare | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Old Kilcullen S&G | Kildare | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | RAHEENMORE BOG | Offaly | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | RAHEENMORE BOG | Offaly | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Realtage | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Realtage | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Realtage | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Realtage | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Rush Urban | Fingal | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Rush Urban | Fingal | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Rush Urban | Fingal | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Rye Water Valley GWDTE | Kildare | EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments | DS |
| Groundwater | Rye Water Valley GWDTE | Kildare | EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001 | DS |
| Groundwater | Rye Water Valley GWDTE | Kildare | EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments | DS |
| Groundwater | Rye Water Valley GWDTE | Kildare | EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC) | DS |
| Groundwater | Rye Water Valley GWDTE | Kildare | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Groundwater | Rye Water Valley GWDTE | Kildare | EC (Natural Habitats) Regulations 1997- 2005 | ECO |
| Groundwater | Rye Water Valley GWDTE | Kildare | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Rye Water Valley GWDTE | Kildare | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Rye Water Valley GWDTE | Kildare | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Rye Water Valley GWDTE | Kildare | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|------------------------|------------|---|--------|
| Groundwater | Rye Water Valley GWDTE | Kildare | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Rye Water Valley GWDTE | Meath | EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments | DS |
| Groundwater | Rye Water Valley GWDTE | Meath | EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001 | DS |
| Groundwater | Rye Water Valley GWDTE | Meath | EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments | DS |
| Groundwater | Rye Water Valley GWDTE | Meath | EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC) | DS |
| Groundwater | Rye Water Valley GWDTE | Meath | EC (Natural Habitats) Regulations 1997- 2005 | ECO |
| Groundwater | Rye Water Valley GWDTE | Meath | EPA (Licensing) Regulations, 1994 & 2004 | IPPC |
| Groundwater | Rye Water Valley GWDTE | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Rye Water Valley GWDTE | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Rye Water Valley GWDTE | Meath | Water Services Act 2007 | WWTP |
| Groundwater | Skerries Nth Urban | Fingal | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Skerries Nth Urban | Fingal | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Skerries Nth Urban | Fingal | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Skerries Sth Urban | Fingal | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Skerries Sth Urban | Fingal | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Skerries Sth Urban | Fingal | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Skerries Sth Urban | Fingal | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Skerries Sth Urban | Fingal | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Swords | Fingal | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Swords | Fingal | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Swords | Fingal | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Swords | Fingal | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Swords | Fingal | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Swords | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Swords | Meath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Swords | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Swords | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Swords | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|---------------|------------|--|--------|
| Groundwater | Swords Urban | Fingal | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Swords Urban | Fingal | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Swords Urban | Fingal | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Swords Urban | Fingal | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Swords Urban | Fingal | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Swords_CL | Fingal | EPA (Licensing) Regulations, 1994 & 2004 | IPPC |
| Groundwater | Swords_CL | Fingal | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Swords_CL | Fingal | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Swords_CL | Fingal | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Tinnakilly_CL | Wicklow | EPA (Licensing) Regulations, 1994 & 2004 | IPPC |
| Groundwater | Tinnakilly_CL | Wicklow | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Tinnakilly_CL | Wicklow | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Tinnakilly_CL | Wicklow | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Tinnakilly_CL | Wicklow | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Tinnakilly_CL | Wicklow | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Trim | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Trim | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Trim | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Trim | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Trim | Kildare | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Trim | Kildare | EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments | DS |
| Groundwater | Trim | Kildare | EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001 | DS |
| Groundwater | Trim | Kildare | EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments | DS |
| Groundwater | Trim | Kildare | EPA (Licensing) Regulations, 1994 & 2004 | IPPC |
| Groundwater | Trim | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Trim | Kildare | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Trim | Kildare | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Trim | Kildare | Avoid sewer systems in Inner Source Protection Zones | WWTP |
| Groundwater | Trim | Kildare | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|----------|------------|--|--------|
| Groundwater | Trim | Kildare | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Trim | Kildare | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Trim | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Trim | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Trim | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Trim | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Trim | Louth | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Trim | Louth | EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments | DS |
| Groundwater | Trim | Louth | EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001 | DS |
| Groundwater | Trim | Louth | EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments | DS |
| Groundwater | Trim | Louth | EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC) | DS |
| Groundwater | Trim | Louth | License and distribute DAF's GIS mapping of cropping patterns to EPA and local authorities | DS |
| Groundwater | Trim | Louth | Report and audit sales and usage of pesticides by sector | DS |
| Groundwater | Trim | Louth | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Groundwater | Trim | Louth | EPA (Licensing) Regulations, 1994 & 2004 | IPPC |
| Groundwater | Trim | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Trim | Louth | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Trim | Louth | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Trim | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Trim | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Trim | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Trim | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Trim | Meath | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Trim | Meath | EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments | DS |
| Groundwater | Trim | Meath | EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001 | DS |
| Groundwater | Trim | Meath | EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments | DS |
| Groundwater | Trim | Meath | EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC) | DS |
| Groundwater | Trim | Meath | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Groundwater | Trim | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|----------------|--------------|--|--------|
| Groundwater | Trim | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Trim | Meath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Trim | Meath | Avoid sewer systems in Inner Source Protection Zones | WWTP |
| Groundwater | Trim | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Trim | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Trim | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Trim | Offaly | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Trim | Offaly | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Trim | Offaly | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Trim | Offaly | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Trim | Offaly | Restrict use of pesticides within groundwater Source Protection Zones | Chem |
| Groundwater | Trim | Offaly | EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments | DS |
| Groundwater | Trim | Offaly | EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001 | DS |
| Groundwater | Trim | Offaly | EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments | DS |
| Groundwater | Trim | Offaly | EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC) | DS |
| Groundwater | Trim | Offaly | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Groundwater | Trim | Offaly | EPA (Licensing) Regulations, 1994 & 2004 | IPPC |
| Groundwater | Trim | Offaly | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Trim | Offaly | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Trim | Offaly | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Trim | Offaly | Avoid sewer systems in Inner Source Protection Zones | WWTP |
| Groundwater | Trim | Offaly | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Trim Urban | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Trim Urban | Meath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Trim Urban | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSL. | WWTP |
| Groundwater | Trim Urban | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Trim Urban | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Walkinstown_CL | South Dublin | EPA (Licensing) Regulations, 1994 & 2004 | IPPC |
| Groundwater | Walkinstown_CL | South Dublin | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|------------------------------|--------------|--|--------|
| Groundwater | Walkinstown_CL | South Dublin | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Walkinstown_CL | South Dublin | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Wicklow Central (Avoca Mine) | Wicklow | Further investigation/monitoring required | DATA+ |
| Groundwater | Wicklow Central (Avoca Mine) | Wicklow | Mine discharge to be suitably treated | DS |
| Groundwater | Wicklow Central (Avoca Mine) | Wicklow | Protection of Groundwater Regulations (S.I. 41 of 1999): Test the effect of discharge on groundwater; test groundwater compliance | DS |
| Groundwater | Wicklow Central (Avoca Mine) | Wicklow | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Wicklow Central (Avoca Mine) | Wicklow | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Wicklow Central (Avoca Mine) | Wicklow | Avoid sewer systems in Inner Source Protection Zones | WWTP |
| Groundwater | Wicklow Central (Avoca Mine) | Wicklow | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Wicklow Central (Avoca Mine) | Wicklow | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Wicklow Central (Avoca Mine) | Wicklow | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Wicklow East | DLRCC | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Wicklow East | DLRCC | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Wicklow East | DLRCC | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Wicklow East | DLRCC | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Wicklow East | DLRCC | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Wicklow East | Wicklow | Water Supplies Act 1942 | ABS |
| Groundwater | Wicklow East | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Wicklow East | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Wicklow East | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Wicklow East | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Wicklow East | Wicklow | EC (Natural Habitats) Regulations 1997- 2005 | ECO |
| Groundwater | Wicklow East | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Wicklow East | Wicklow | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Wicklow East | Wicklow | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Wicklow East | Wicklow | Avoid sewer systems in Inner Source Protection Zones | WWTP |
| Groundwater | Wicklow East | Wicklow | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Wicklow East | Wicklow | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|---------------|------------|--|--------|
| Groundwater | Wicklow East | Wicklow | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Wicklow South | Wexford | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Wicklow South | Wexford | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Wicklow South | Wicklow | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Wicklow South | Wicklow | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Wicklow South | Wicklow | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Wicklow South | Wicklow | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Wicklow South | Wicklow | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Wilkinstown | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Wilkinstown | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Wilkinstown | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Wilkinstown | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Groundwater | Wilkinstown | Louth | EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments | DS |
| Groundwater | Wilkinstown | Louth | EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001 | DS |
| Groundwater | Wilkinstown | Louth | EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments | DS |
| Groundwater | Wilkinstown | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Wilkinstown | Louth | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Wilkinstown | Louth | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Wilkinstown | Louth | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Wilkinstown | Louth | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Wilkinstown | Louth | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Wilkinstown | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Groundwater | Wilkinstown | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Groundwater | Wilkinstown | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Groundwater | Wilkinstown | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|-------------|-----------------------------|------------|--|--------|
| Groundwater | Wilkinstown | Meath | EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments | DS |
| Groundwater | Wilkinstown | Meath | EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001 | DS |
| Groundwater | Wilkinstown | Meath | EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments | DS |
| Groundwater | Wilkinstown | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Groundwater | Wilkinstown | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| Groundwater | Wilkinstown | Meath | Introduce design and construction codes for areas of extreme groundwater vulnerability | WWTP |
| Groundwater | Wilkinstown | Meath | Assess risk groundwater pollution when designing and constructing SUDS alternatives | WWTP |
| Groundwater | Wilkinstown | Meath | Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | WWTP |
| Groundwater | Wilkinstown | Meath | Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | WWTP |
| Lake | Acurry (Lough) | Cavan | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| Lake | Acurry (Lough) | Cavan | National Water Pricing Policy Framework (1998) | ABS |
| Lake | Acurry (Lough) | Cavan | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| Lake | Acurry (Lough) | Cavan | Record daily abstraction rates | ABS |
| Lake | Acurry (Lough) | Cavan | Record daily water level | ABS |
| Lake | Acurry (Lough) | Cavan | Water Supplies Act 1942 | ABS |
| Lake | Acurry (Lough) | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Enforce National Action Programme | AGR |
| Lake | Acurry (Lough) | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Lake | Acurry (Lough) | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Lake | Acurry (Lough) | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| Lake | Acurry (Lough) | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Appropriate distance from water body to be maintained for application of fertiliser | Chem |
| Lake | Annagh Lough or White Lough | Meath | EC (Aerial Fertilisation) (Forestry) Regulations 2006 and amendment 2007 | FOR |
| Lake | Annagh Lough or White Lough | Meath | National Water Pricing Policy Framework (1998) | ABS |
| Lake | Annagh Lough or White Lough | Meath | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| Lake | Annagh Lough or White Lough | Meath | Water Supplies Act 1942 | ABS |
| Lake | Annagh Lough or White Lough | Meath | Implement Forestry and Water Quality Guidelines | FOR |
| Lake | Annagh Lough or White Lough | Meath | Update Forest Service Guidance document on new EQS standards, Aerial Fertilisation Regulations, Updated Acidification protocol. | FOR |
| Lake | Annagh Lough or White Lough | Meath | Forest Service - Forestry and Aerial Fertilisation Guidelines | Manure |
| Lake | Annagh Lough or White Lough | Meath | Forestry Act 1946 and 1988 | Manure |
| Lake | Annagh Lough or White Lough | Westmeath | Implement Forestry and Water Quality Guidelines | FOR |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|-----------------------------|------------|--|--------|
| Lake | Annagh Lough or White Lough | Westmeath | Update Forest Service Guidance document on new EQS standards, Aerial Fertilisation Regulations, Updated Acidification protocol. | FOR |
| Lake | Annagh Lough or White Lough | Westmeath | EC (Aerial Fertilisation) (Forestry) Regulations 2006 and amendment 2007 | FOR |
| Lake | Annagh Lough or White Lough | Westmeath | Forest Service - Forestry and Aerial Fertilisation Guidelines | Manure |
| Lake | Bane (Lough) | Meath | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| Lake | Bane (Lough) | Meath | National Water Pricing Policy Framework (1998) | ABS |
| Lake | Bane (Lough) | Meath | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| Lake | Bane (Lough) | Meath | Record daily abstraction rates | ABS |
| Lake | Bane (Lough) | Meath | Record daily water level | ABS |
| Lake | Bane (Lough) | Meath | Further investigation/monitoring required | DATA+ |
| Lake | Bane (Lough) | Westmeath | Water Supplies Act 1942: Develop a proposal for extending or providing a supply of water. | ABS |
| Lake | Bane (Lough) | Westmeath | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| Lake | Bane (Lough) | Westmeath | National Water Pricing Policy Framework (1998) | ABS |
| Lake | Bane (Lough) | Westmeath | Record daily abstraction rates | ABS |
| Lake | Bane (Lough) | Westmeath | Record daily water level | ABS |
| Lake | Bane (Lough) | Westmeath | Further investigation/monitoring required | DATA+ |
| Lake | Ben Lough | Westmeath | Further investigation/monitoring required | DATA+ |
| Lake | Bray Lower (Lough) | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Lake | Bray Lower (Lough) | Wicklow | Further investigation/monitoring required | DATA+ |
| Lake | Bray Lower (Lough) | Wicklow | Survey Banks/Coast | DATA+ |
| Lake | Bray Lower (Lough) | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Lake | Bray Lower (Lough) | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Lake | Bray Lower (Lough) | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Lake | Bray Lower (Lough) | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Lake | Bray Lower (Lough) | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Lake | Bray Lower (Lough) | Wicklow | Develop guidance on suites of measures for different habitats | HS |
| Lake | Bray Lower (Lough) | Wicklow | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Lake | Bray Upper (Lough) | Wicklow | Further investigation/monitoring required | DATA+ |
| Lake | Doo (Lough) | Meath | National Water Pricing Policy Framework (1998) | ABS |
| Lake | Doo (Lough) | Meath | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| Lake | Doo (Lough) | Meath | Water Supplies Act 1942 | ABS |
| Lake | Doo (Lough) | Meath | Further investigation/monitoring required | DATA+ |
| Lake | Drumkeery Lough | Cavan | Water Supplies Act 1942: Develop a proposal for extending or providing a supply of water. | ABS |
| Lake | Drumkeery Lough | Cavan | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| Lake | Drumkeery Lough | Cavan | National Water Pricing Policy Framework (1998) | ABS |
| Lake | Drumkeery Lough | Cavan | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| Lake | Drumkeery Lough | Cavan | Record daily abstraction rates | ABS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|-----------------------------|--------------|--|--------|
| Lake | Drumkeery Lough | Cavan | Record daily water level | ABS |
| Lake | Drumkeery Lough | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Lake | Drumkeery Lough | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Enforce National Action Programme | AGR |
| Lake | Drumkeery Lough | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Lake | Drumkeery Lough | Cavan | Further investigation/monitoring required | DATA+ |
| Lake | Drumkeery Lough | Cavan | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Lake | Drumkeery Lough | Cavan | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Lake | Drumkeery Lough | Cavan | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Lake | Drumkeery Lough | Cavan | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Lake | Drumkeery Lough | Cavan | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Lake | Drumkeery Lough | Cavan | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Lake | Drumkeery Lough | Cavan | Develop guidance on suites of measures for different habitats | HS |
| Lake | Drumkeery Lough | Cavan | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Lake | Drumkeery Lough | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Appropriate distance from water body to be maintained for location of manure heaps | Manure |
| Lake | Drumkeery Lough | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Land spreading to be carried out in appropriate manner | Manure |
| Lake | Drumkeery Lough | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Monitor storage capacity and nutrient management (follow the tables) | Manure |
| Lake | Drumkeery Lough | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Lake | Drumkeery Lough | Cavan | Develop septic system management programme | Septic |
| Lake | Drumkeery Lough | Cavan | Enforce Regulations on Septic Systems | Septic |
| Lake | Drumkeery Lough | Cavan | EPA - Code of Practice for Wastewater Treatment Systems for Single Houses | Septic |
| Lake | Glass (Lough) | Meath | National Water Pricing Policy Framework (1998) | ABS |
| Lake | Glass (Lough) | Meath | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| Lake | Glass (Lough) | Meath | Further investigation/monitoring required | DATA+ |
| Lake | Glenasmole Reservoirs (068) | South Dublin | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| Lake | Glenasmole Reservoirs (068) | South Dublin | Maintain good hydrological status | ABS |
| Lake | Glenasmole Reservoirs (068) | South Dublin | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| Lake | Glenasmole Reservoirs (068) | South Dublin | National Water Pricing Policy Framework (1998) | ABS |
| Lake | Glenasmole Reservoirs (068) | South Dublin | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| Lake | Glenasmole Reservoirs (068) | South Dublin | Record daily abstraction rates | ABS |
| Lake | Glenasmole Reservoirs (068) | South Dublin | Record daily water level | ABS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|-----------------------------|--------------|---|--------|
| Lake | Glenasmole Reservoirs (068) | South Dublin | Water Supplies Act 1942 | ABS |
| Lake | Glenasmole Reservoirs (068) | South Dublin | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Enforce National Action Programme | AGR |
| Lake | Glenasmole Reservoirs (068) | South Dublin | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Lake | Glenasmole Reservoirs (068) | South Dublin | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Appropriate distance from water body to be maintained for application of fertiliser | Chem |
| Lake | Glenasmole Reservoirs (068) | South Dublin | EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007) | CROSS |
| Lake | Glenasmole Reservoirs (068) | South Dublin | Survey Banks/Coast | DATA+ |
| Lake | Glenasmole Reservoirs (068) | South Dublin | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Lake | Glenasmole Reservoirs (068) | South Dublin | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Lake | Glenasmole Reservoirs (068) | South Dublin | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Lake | Glenasmole Reservoirs (068) | South Dublin | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Lake | Glenasmole Reservoirs (068) | South Dublin | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Lake | Glenasmole Reservoirs (068) | South Dublin | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Lake | Glenasmole Reservoirs (068) | South Dublin | Develop guidance on suites of measures for different habitats | HS |
| Lake | Glenasmole Reservoirs (068) | South Dublin | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Lake | Glenasmole Reservoirs (068) | South Dublin | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| Lake | Glenasmole Reservoirs (068) | South Dublin | Water Services Act 2007 | WWTP |
| Lake | Glenasmole Reservoirs (070) | South Dublin | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| Lake | Glenasmole Reservoirs (070) | South Dublin | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| Lake | Glenasmole Reservoirs (070) | South Dublin | National Water Pricing Policy Framework (1998) | ABS |
| Lake | Glenasmole Reservoirs (070) | South Dublin | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| Lake | Glenasmole Reservoirs (070) | South Dublin | Record daily abstraction rates | ABS |
| Lake | Glenasmole Reservoirs (070) | South Dublin | Record daily water level | ABS |
| Lake | Glenasmole Reservoirs (070) | South Dublin | Water Supplies Act 1942 | ABS |
| Lake | Glenasmole Reservoirs (070) | South Dublin | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Enforce National Action Programme | AGR |
| Lake | Glenasmole Reservoirs (070) | South Dublin | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| Lake | Glenasmole Reservoirs (070) | South Dublin | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Appropriate distance from water body to be maintained for application of fertiliser | Chem |
| Lake | Glenasmole Reservoirs (070) | South Dublin | EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007) | CROSS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|-----------------------------|--------------|---|--------|
| Lake | Glenasmole Reservoirs (070) | South Dublin | Survey Banks/Coast | DATA+ |
| Lake | Glenasmole Reservoirs (070) | South Dublin | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Lake | Glenasmole Reservoirs (070) | South Dublin | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Lake | Glenasmole Reservoirs (070) | South Dublin | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Lake | Glenasmole Reservoirs (070) | South Dublin | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Lake | Glenasmole Reservoirs (070) | South Dublin | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Lake | Glenasmole Reservoirs (070) | South Dublin | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Lake | Glenasmole Reservoirs (070) | South Dublin | Develop guidance on suites of measures for different habitats | HS |
| Lake | Glenasmole Reservoirs (070) | South Dublin | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Lake | Glenasmole Reservoirs (070) | South Dublin | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| Lake | Glenasmole Reservoirs (070) | South Dublin | Water Services Act 2007 | WWTP |
| Lake | Glendalough Lower Lake | Wicklow | EC (Aerial Fertilisation) (Forestry) Regulations 2006 and amendment 2007 | FOR |
| Lake | Glendalough Lower Lake | Wicklow | Forest Service - Protocol on acid sensitive areas | FOR |
| Lake | Glendalough Lower Lake | Wicklow | Implement Forestry and Water Quality Guidelines | FOR |
| Lake | Glendalough Lower Lake | Wicklow | Update Forest Service Guidance document on new EQS standards, Aerial Fertilisation Regulations, Updated Acidification protocol. | FOR |
| Lake | Glendalough Lower Lake | Wicklow | Update protocol on acid sensitive areas based on acid sensitive areas map and research | FOR |
| Lake | Glendalough Lower Lake | Wicklow | Forest Service - Forestry and Aerial Fertilisation Guidelines | Manure |
| Lake | Glendalough Lower Lake | Wicklow | Forestry Act 1946 and 1988 | Manure |
| Lake | Glendalough Upper Lake | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Lake | Glendalough Upper Lake | Wicklow | Further investigation/monitoring required | DATA+ |
| Lake | Glendalough Upper Lake | Wicklow | Survey Banks/Coast | DATA+ |
| Lake | Glendalough Upper Lake | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Lake | Glendalough Upper Lake | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Lake | Glendalough Upper Lake | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Lake | Glendalough Upper Lake | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Lake | Glendalough Upper Lake | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Reintroduce native species; license introduction of non native species | ECO |
| Lake | Glendalough Upper Lake | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Lake | Glendalough Upper Lake | Wicklow | EC (Aerial Fertilisation) (Forestry) Regulations 2006 and amendment 2007 | FOR |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|--------------------------|------------|--|--------|
| Lake | Glendalough Upper Lake | Wicklow | Forest Service - Protocol on acid sensitive areas | FOR |
| Lake | Glendalough Upper Lake | Wicklow | Implement Forestry and Water Quality Guidelines | FOR |
| Lake | Glendalough Upper Lake | Wicklow | Update Forest Service Guidance document on new EQS standards, Aerial Fertilisation Regulations, Updated Acidification protocol. | FOR |
| Lake | Glendalough Upper Lake | Wicklow | Update protocol on acid sensitive areas based on acid sensitive areas map and research | FOR |
| Lake | Glendalough Upper Lake | Wicklow | Forest Service - Forestry and Aerial Fertilisation Guidelines | Manure |
| Lake | Glendalough Upper Lake | Wicklow | Forestry Act 1946 and 1988 | Manure |
| Lake | Golden Falls Reservoir | Kildare | Collect abstraction rates and compensation flow releases on a continuous bases | ABS |
| Lake | Golden Falls Reservoir | Kildare | Further Research on Abstraction Pressure effects on lake ecology (national) | ABS |
| Lake | Golden Falls Reservoir | Kildare | Record daily abstraction rates | ABS |
| Lake | Golden Falls Reservoir | Kildare | Record daily water level | ABS |
| Lake | Golden Falls Reservoir | Kildare | Develop riparian buffers | AGR |
| Lake | Golden Falls Reservoir | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009) | AGR |
| Lake | Golden Falls Reservoir | Kildare | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| Lake | Golden Falls Reservoir | Kildare | Planning Development Acts 2000 - 2006 | CROSS |
| Lake | Golden Falls Reservoir | Kildare | Further investigation/monitoring required | DATA+ |
| Lake | Golden Falls Reservoir | Kildare | EPA - Code of Practice for Wastewater Treatment Systems for Single Houses | Septic |
| Lake | Golden Falls Reservoir | Kildare | OSWTS risk matrices to be integrated into Development Plans and Local Area Plans | Septic |
| Lake | Leixlip Liffey Reservoir | Kildare | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| Lake | Leixlip Liffey Reservoir | Kildare | EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007) | CROSS |
| Lake | Leixlip Liffey Reservoir | Kildare | Further investigation/monitoring required | DATA+ |
| Lake | Leixlip Liffey Reservoir | Kildare | Survey Banks/Coast | DATA+ |
| Lake | Leixlip Liffey Reservoir | Kildare | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Lake | Leixlip Liffey Reservoir | Kildare | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Lake | Leixlip Liffey Reservoir | Kildare | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Lake | Leixlip Liffey Reservoir | Kildare | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Lake | Leixlip Liffey Reservoir | Kildare | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Lake | Leixlip Liffey Reservoir | Kildare | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Lake | Leixlip Liffey Reservoir | Kildare | Develop guidance on suites of measures for different habitats | HS |
| Lake | Leixlip Liffey Reservoir | Kildare | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Lake | Leixlip Liffey Reservoir | Kildare | Water Services Act 2007 | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|--------------------------|--------------|--|--------|
| Lake | Leixlip Liffey Reservoir | South Dublin | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| Lake | Leixlip Liffey Reservoir | South Dublin | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| Lake | Leixlip Liffey Reservoir | South Dublin | National Water Pricing Policy Framework (1998) | ABS |
| Lake | Leixlip Liffey Reservoir | South Dublin | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| Lake | Leixlip Liffey Reservoir | South Dublin | Record daily abstraction rates | ABS |
| Lake | Leixlip Liffey Reservoir | South Dublin | Record daily water level | ABS |
| Lake | Leixlip Liffey Reservoir | South Dublin | Water Supplies Act 1942 | ABS |
| Lake | Leixlip Liffey Reservoir | South Dublin | EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007) | CROSS |
| Lake | Leixlip Liffey Reservoir | South Dublin | Further investigation/monitoring required | DATA+ |
| Lake | Leixlip Liffey Reservoir | South Dublin | Survey Banks/Coast | DATA+ |
| Lake | Leixlip Liffey Reservoir | South Dublin | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Lake | Leixlip Liffey Reservoir | South Dublin | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Lake | Leixlip Liffey Reservoir | South Dublin | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Lake | Leixlip Liffey Reservoir | South Dublin | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Lake | Leixlip Liffey Reservoir | South Dublin | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Lake | Leixlip Liffey Reservoir | South Dublin | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Lake | Leixlip Liffey Reservoir | South Dublin | Develop guidance on suites of measures for different habitats | HS |
| Lake | Leixlip Liffey Reservoir | South Dublin | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Lake | Leixlip Liffey Reservoir | South Dublin | Water Services Act 2007 | WWTP |
| Lake | Lene (Lough) | Westmeath | Bathing Water Quality Regulations (S.I. 79 of 2008) | CROSS |
| Lake | Lene (Lough) | Westmeath | Water Supplies Act 1942: Develop a proposal for extending or providing a supply of water. | ABS |
| Lake | Lene (Lough) | Westmeath | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| Lake | Lene (Lough) | Westmeath | National Water Pricing Policy Framework (1998) | ABS |
| Lake | Lene (Lough) | Westmeath | Record daily abstraction rates | ABS |
| Lake | Lene (Lough) | Westmeath | Record daily water level | ABS |
| Lake | Lene (Lough) | Westmeath | Further investigation/monitoring required | DATA+ |
| Lake | Nadreegeal Loughs | Cavan | Water Supplies Act 1942: Develop a proposal for extending or providing a supply of water. | ABS |
| Lake | Nadreegeal Loughs | Cavan | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| Lake | Nadreegeal Loughs | Cavan | National Water Pricing Policy Framework (1998) | ABS |
| Lake | Nadreegeal Loughs | Cavan | Record daily abstraction rates | ABS |
| Lake | Nadreegeal Loughs | Cavan | Record daily water level | ABS |
| Lake | Nadreegeal Loughs | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009):Conduct Farm Surveys | AGR |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|----------------------|------------|--|--------|
| Lake | Nadreegeal Loughs | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Enforce National Action Programme | AGR |
| Lake | Nadreegeal Loughs | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Lake | Nadreegeal Loughs | Cavan | Further investigation/monitoring required | DATA+ |
| Lake | Nadreegeal Loughs | Cavan | Survey Banks/Coast | DATA+ |
| Lake | Nadreegeal Loughs | Cavan | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Lake | Nadreegeal Loughs | Cavan | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Lake | Nadreegeal Loughs | Cavan | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Lake | Nadreegeal Loughs | Cavan | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Lake | Nadreegeal Loughs | Cavan | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Lake | Nadreegeal Loughs | Cavan | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Lake | Nadreegeal Loughs | Cavan | Develop guidance on suites of measures for different habitats | HS |
| Lake | Nadreegeal Loughs | Cavan | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Lake | Nadreegeal Loughs | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Appropriate distance from water body to be maintained for location of manure heaps | Manure |
| Lake | Nadreegeal Loughs | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Land spreading to be carried out in appropriate manner | Manure |
| Lake | Nadreegeal Loughs | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Monitor storage capacity and nutrient management (follow the tables) | Manure |
| Lake | Nadreegeal Loughs | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Lake | Nahanagan (Lough) | Wicklow | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| Lake | Nahanagan (Lough) | Wicklow | Survey Banks/Coast | DATA+ |
| Lake | Nahanagan (Lough) | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Lake | Nahanagan (Lough) | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Lake | Nahanagan (Lough) | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Lake | Nahanagan (Lough) | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Lake | Nahanagan (Lough) | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Lake | Nahanagan (Lough) | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Lake | Ouler (Lough) | Wicklow | Further investigation/monitoring required | DATA+ |
| Lake | Pollaphuca Reservoir | Kildare | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| Lake | Pollaphuca Reservoir | Kildare | Survey Banks/Coast | DATA+ |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|----------------------|------------|--|--------|
| Lake | Pollaphuca Reservoir | Kildare | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Lake | Pollaphuca Reservoir | Kildare | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Lake | Pollaphuca Reservoir | Kildare | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Lake | Pollaphuca Reservoir | Kildare | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Lake | Pollaphuca Reservoir | Kildare | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Lake | Pollaphuca Reservoir | Kildare | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Lake | Pollaphuca Reservoir | Kildare | Develop guidance on suites of measures for different habitats | HS |
| Lake | Pollaphuca Reservoir | Kildare | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Lake | Pollaphuca Reservoir | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Lake | Pollaphuca Reservoir | Kildare | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| Lake | Pollaphuca Reservoir | Wicklow | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| Lake | Pollaphuca Reservoir | Wicklow | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| Lake | Pollaphuca Reservoir | Wicklow | Record daily abstraction rates | ABS |
| Lake | Pollaphuca Reservoir | Wicklow | Record daily water level | ABS |
| Lake | Pollaphuca Reservoir | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Lake | Pollaphuca Reservoir | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Lake | Pollaphuca Reservoir | Wicklow | EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007) | CROSS |
| Lake | Pollaphuca Reservoir | Wicklow | Further investigation/monitoring required | DATA+ |
| Lake | Pollaphuca Reservoir | Wicklow | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Lake | Pollaphuca Reservoir | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Lake | Pollaphuca Reservoir | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Lake | Pollaphuca Reservoir | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Lake | Pollaphuca Reservoir | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Lake | Pollaphuca Reservoir | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Lake | Pollaphuca Reservoir | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Lake | Pollaphuca Reservoir | Wicklow | EC (Aerial Fertilisation) (Forestry) Regulations 2006 and amendment 2007 | FOR |
| Lake | Pollaphuca Reservoir | Wicklow | Develop guidance on suites of measures for different habitats | HS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|----------------------|------------|--|--------|
| Lake | Pollaphuca Reservoir | Wicklow | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Lake | Pollaphuca Reservoir | Wicklow | EPA Waste (Licensing) Regulations, 2004 | IPPC |
| Lake | Pollaphuca Reservoir | Wicklow | Forestry Act 1946 and 1988 | Manure |
| Lake | Pollaphuca Reservoir | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Lake | Pollaphuca Reservoir | Wicklow | Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001 | Manure |
| Lake | Pollaphuca Reservoir | Wicklow | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| Lake | Pollaphuca Reservoir | Wicklow | Urban Waste Water Treatment Regulations, 2001 - 2004: Monitor the discharge from urban wastewater treatment plants and check the quality compliance with urban wastewater treatment legislation | WWTP |
| Lake | Pollaphuca Reservoir | Wicklow | Urban Waste Water Treatment Regulations, 2001 - 2004: Treatment plant to be designed, constructed, operated and maintained to ensure satisfactory performance under all normal local climatic conditions. | WWTP |
| Lake | Pollaphuca Reservoir | Wicklow | Urban Waste Water Treatment Regulations, 2001 - 2004: Upgrade domestic WWTWs to 1 mg/l or $\geq 80\%$ TN reduction for p.e's >100,000 discharging to sensitive waters (unless no eutrophication potential) | WWTP |
| Lake | Pollaphuca Reservoir | Wicklow | Urban Waste Water Treatment Regulations, 2001 - 2004: Upgrade domestic WWTWs to 2 mg/l or $\geq 80\%$ TP reduction for p.e's >10,000 discharging to sensitive waters (unless no eutrophication potential) | WWTP |
| Lake | Pollaphuca Reservoir | Wicklow | Urban Waste Water Treatment Regulations, 2001 - 2004: Upgrade domestic WWTWs to secondary treatment for p.e.'s >10,000 discharging to coastal waters | WWTP |
| Lake | Pollaphuca Reservoir | Wicklow | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007) | WWTP |
| Lake | Pollaphuca Reservoir | Wicklow | Water Services Act 2007 | WWTP |
| Lake | Ramor (Lough) | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Lake | Ramor (Lough) | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Enforce National Action Programme | AGR |
| Lake | Ramor (Lough) | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Lake | Ramor (Lough) | Cavan | Further investigation/monitoring required | DATA+ |
| Lake | Ramor (Lough) | Cavan | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Lake | Ramor (Lough) | Cavan | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Lake | Ramor (Lough) | Cavan | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Lake | Ramor (Lough) | Cavan | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Lake | Ramor (Lough) | Cavan | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Lake | Ramor (Lough) | Cavan | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Lake | Ramor (Lough) | Cavan | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Lake | Ramor (Lough) | Cavan | Develop guidance on suites of measures for different habitats | HS |
| Lake | Ramor (Lough) | Cavan | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Lake | Ramor (Lough) | Cavan | EPA (Licensing) Regulations, 1994 & 2004: Grant and refuse IPPC licences subject to set-limits to reduce pollution effects | IPPC |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|-----------------|------------|---|--------|
| Lake | Ramor (Lough) | Cavan | EPA (Licensing) Regulations, 1994 & 2004: Review IPPC licences | IPPC |
| Lake | Ramor (Lough) | Cavan | EPA (Licensing) Regulations, 1994 & 2004: Upgrade IPPC licensed facilities waste management structures and practices to best available technology | IPPC |
| Lake | Ramor (Lough) | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Appropriate distance from water body to be maintained for location of manure heaps | Manure |
| Lake | Ramor (Lough) | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Land spreading to be carried out in appropriate manner | Manure |
| Lake | Ramor (Lough) | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Monitor storage capacity and nutrient management (follow the tables) | Manure |
| Lake | Ramor (Lough) | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Lake | Ramor (Lough) | Cavan | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| Lake | Ramor (Lough) | Cavan | Develop septic system management programme | Septic |
| Lake | Ramor (Lough) | Cavan | Enforce Regulations on Septic Systems | Septic |
| Lake | Ramor (Lough) | Cavan | EPA - Code of Practice for Wastewater Treatment Systems for Single Houses | Septic |
| Lake | Ramor (Lough) | Cavan | Urban Waste Water Treatment Regulations, 2001 - 2004: Monitor the discharge from urban wastewater treatment plants and check the quality compliance with urban wastewater treatment legislation | WWTP |
| Lake | Ramor (Lough) | Cavan | Urban Waste Water Treatment Regulations, 2001 - 2004: Treatment plant to be designed, constructed, operated and maintained to ensure satisfactory performance under all normal local climatic conditions. | WWTP |
| Lake | Ramor (Lough) | Cavan | Urban Waste Water Treatment Regulations, 2001 - 2004: Upgrade domestic WWTWs to 1 mg/l or ≥ 80% TN reduction for p.e's >100,000 discharging to sensitive waters (unless no eutrophication potential) | WWTP |
| Lake | Ramor (Lough) | Cavan | Urban Waste Water Treatment Regulations, 2001 - 2004: Upgrade domestic WWTWs to 2 mg/l or ≥ 80% TP reduction for p.e's >10,000 discharging to sensitive waters (unless no eutrophication potential) | WWTP |
| Lake | Ramor (Lough) | Cavan | Urban Waste Water Treatment Regulations, 2001 - 2004: Upgrade domestic WWTWs to secondary treatment for p.e's >2,000 discharging to rivers, lakes, & estuaries | WWTP |
| Lake | Ramor (Lough) | Cavan | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007) | WWTP |
| Lake | Ramor (Lough) | Cavan | Water Services Act 2007 | WWTP |
| Lake | Redbog | Kildare | Further investigation/monitoring required | DATA+ |
| Lake | Tay (Lough) | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Lake | Tay (Lough) | Wicklow | Survey Banks/Coast | DATA+ |
| Lake | Turlough Hill | Wicklow | Further investigation/monitoring required | DATA+ |
| Lake | Tay (Lough) | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Lake | Tay (Lough) | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Lake | Tay (Lough) | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Lake | Tay (Lough) | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Lake | Tay (Lough) | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Lake | Tay (Lough) | Wicklow | EC (Aerial Fertilisation) (Forestry) Regulations 2006 and amendment 2007 | FOR |
| Lake | Tay (Lough) | Wicklow | Implement Forestry and Water Quality Guidelines | FOR |
| Lake | Tay (Lough) | Wicklow | Update Forest Service Guidance document on new EQS standards, Aerial Fertilisation Regulations, Updated Acidification protocol. | FOR |
| Lake | Tay (Lough) | Wicklow | Forest Service - Forestry and Aerial Fertilisation Guidelines | Manure |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|------------------------|------------|--|--------|
| Lake | Tay (Lough) | Wicklow | Forestry Act 1946 and 1988 | Manure |
| Lake | Upper Lough Skeagh | Cavan | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| Lake | Upper Lough Skeagh | Cavan | National Water Pricing Policy Framework (1998) | ABS |
| Lake | Upper Lough Skeagh | Cavan | Record daily abstraction rates | ABS |
| Lake | Upper Lough Skeagh | Cavan | Record daily water level | ABS |
| Lake | Upper Lough Skeagh | Cavan | Water Supplies Act 1942 | ABS |
| Lake | Upper Lough Skeagh | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| Lake | Upper Lough Skeagh | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Enforce National Action Programme | AGR |
| Lake | Upper Lough Skeagh | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| Lake | Upper Lough Skeagh | Cavan | Further investigation/monitoring required | DATA+ |
| Lake | Upper Lough Skeagh | Cavan | Survey Banks/Coast | DATA+ |
| Lake | Upper Lough Skeagh | Cavan | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Lake | Upper Lough Skeagh | Cavan | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Lake | Upper Lough Skeagh | Cavan | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Lake | Upper Lough Skeagh | Cavan | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Lake | Upper Lough Skeagh | Cavan | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Lake | Upper Lough Skeagh | Cavan | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Lake | Upper Lough Skeagh | Cavan | Develop guidance on suites of measures for different habitats | HS |
| Lake | Upper Lough Skeagh | Cavan | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Lake | Upper Lough Skeagh | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Appropriate distance from water body to be maintained for location of manure heaps | Manure |
| Lake | Upper Lough Skeagh | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Land spreading to be carried out in appropriate manner | Manure |
| Lake | Upper Lough Skeagh | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Monitor storage capacity and nutrient management (follow the tables) | Manure |
| Lake | Upper Lough Skeagh | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| Lake | Upper Lough Skeagh | Cavan | Develop septic system management programme | Septic |
| Lake | Upper Lough Skeagh | Cavan | Enforce Regulations on Septic Systems | Septic |
| Lake | Upper Lough Skeagh | Cavan | EPA - Code of Practice for Wastewater Treatment Systems for Single Houses | Septic |
| Lake | Vartry Reservoir Lower | Wicklow | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| Lake | Vartry Reservoir Lower | Wicklow | Further Research on Abstraction Pressure effects on lake ecology (national) | ABS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|------------------------|------------|--|--------|
| Lake | Vartry Reservoir Lower | Wicklow | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| Lake | Vartry Reservoir Lower | Wicklow | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| Lake | Vartry Reservoir Lower | Wicklow | Record daily abstraction rates | ABS |
| Lake | Vartry Reservoir Lower | Wicklow | Record daily water level | ABS |
| Lake | Vartry Reservoir Lower | Wicklow | EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007) | CROSS |
| Lake | Vartry Reservoir Lower | Wicklow | Planning Development Acts 2000 - 2006 | CROSS |
| Lake | Vartry Reservoir Lower | Wicklow | Survey Banks/Coast | DATA+ |
| Lake | Vartry Reservoir Lower | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Lake | Vartry Reservoir Lower | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Lake | Vartry Reservoir Lower | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Lake | Vartry Reservoir Lower | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Lake | Vartry Reservoir Lower | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Lake | Vartry Reservoir Lower | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Lake | Vartry Reservoir Lower | Wicklow | Develop guidance on suites of measures for different habitats | HS |
| Lake | Vartry Reservoir Lower | Wicklow | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Lake | Vartry Reservoir Lower | Wicklow | Water Services Act 2007 | WWTP |
| Lake | Vartry Reservoir Upper | Wicklow | Further Research on Abstraction Pressure effects on lake ecology (national) | ABS |
| Lake | Vartry Reservoir Upper | Wicklow | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| Lake | Vartry Reservoir Upper | Wicklow | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| Lake | Vartry Reservoir Upper | Wicklow | Record daily abstraction rates | ABS |
| Lake | Vartry Reservoir Upper | Wicklow | Record daily water level | ABS |
| Lake | Vartry Reservoir Upper | Wicklow | EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007) | CROSS |
| Lake | Vartry Reservoir Upper | Wicklow | Planning Development Acts 2000 - 2006 | CROSS |
| Lake | Vartry Reservoir Upper | Wicklow | Survey Banks/Coast | DATA+ |
| Lake | Vartry Reservoir Upper | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards) | ECO |
| Lake | Vartry Reservoir Upper | Wicklow | EC (Natural Habitats) Regulations 1997- 2005 | ECO |
| Lake | Vartry Reservoir Upper | Wicklow | Develop guidance on suites of measures for different habitats | HS |
| Lake | Vartry Reservoir Upper | Wicklow | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Lake | Vartry Reservoir Upper | Wicklow | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| Lake | Vartry Reservoir Upper | Wicklow | Water Services Act 2007 | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|----------|------------|--|--------|
| River | Athboy | Meath | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Athboy | Meath | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Athboy | Meath | National Water Pricing Policy Framework (1998) | ABS |
| River | Athboy | Meath | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Athboy | Meath | Water Supplies Act 1942 | ABS |
| River | Athboy | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Athboy | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Athboy | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Athboy | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Athboy | Meath | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Athboy | Meath | PCS - Principles for Good Plant Protection Practice | Chem |
| River | Athboy | Meath | EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007) | CROSS |
| River | Athboy | Meath | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Athboy | Meath | Further investigation/monitoring required | DATA+ |
| River | Athboy | Meath | DEHLG - Code of Good Practice and Guidelines on the use of Biosolids in Agriculture, 1999 | Manure |
| River | Athboy | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Athboy | Meath | Ensure compliance with OPW Environmental Drainage Maintenance Guidance Notes | MORP |
| River | Athboy | Meath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Athboy | Meath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Athboy | Meath | Enforce Regulations on Septic Systems | Septic |
| River | Athboy | Meath | LAs to adopt a common Register of approved Site Assessors and common Code of Practice for maintaining register | Septic |
| River | Athboy | Meath | Urban Waste Water Treatment Regulations, 2001 - 2004: Develop collecting systems for p.e.'s >2,000 (unless negligible benefits or excessive costs) | WWTP |
| River | Athboy | Meath | Implement Community Digestors for Alternative Energy | WWTP |
| River | Athboy | Meath | Tertiary Treatment | WWTP |
| River | Athboy | Meath | Upgrade WWTW <2000 PE | WWTP |
| River | Athboy | Meath | Upgrade WWTW and Collecting Systems <2000 PE | WWTP |
| River | Athboy | Westmeath | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Athboy | Westmeath | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Athboy | Westmeath | National Water Pricing Policy Framework (1998) | ABS |
| River | Athboy | Westmeath | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Athboy | Westmeath | Water Supplies Act 1942 | ABS |
| River | Athboy | Westmeath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Athboy | Westmeath | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|----------|------------|---|--------|
| River | Athboy | Westmeath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 12 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Athboy | Westmeath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Athboy | Westmeath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Athboy | Westmeath | Implement Community Digestors for Alternative Energy | WWTP |
| River | Athboy | Westmeath | Urban Waste Water Treatment Regulations, 2001 - 2004: Treatment plant to be designed, constructed, operated and maintained to ensure satisfactory performance under all normal local climatic conditions. | WWTP |
| River | Athboy | Westmeath | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007) | WWTP |
| River | Avoca | Wexford | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Avoca | Wexford | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Avoca | Wexford | National Water Pricing Policy Framework (1998) | ABS |
| River | Avoca | Wexford | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Avoca | Wexford | Water Supplies Act 1942 | ABS |
| River | Avoca | Wexford | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009) | AGR |
| River | Avoca | Wexford | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Avoca | Wexford | Planning Development Acts 2000 - 2006 | CROSS |
| River | Avoca | Wexford | Further investigation/monitoring required | DATA+ |
| River | Avoca | Wexford | EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments | DS |
| River | Avoca | Wexford | EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001 | DS |
| River | Avoca | Wexford | Local Government (Water Pollution) Act 1977 (Water Quality Standards for Phosphorus) Regulations, 1998 (S.I. 258 of 1998) | DS |
| River | Avoca | Wexford | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards) | ECO |
| River | Avoca | Wexford | EC (Natural Habitats) Regulations 1997- 2005 | ECO |
| River | Avoca | Wexford | Fisheries Act 1959 - 1981 | ECO |
| River | Avoca | Wexford | EPA (Licensing) Regulations, 1994 & 2004 | IPPC |
| River | Avoca | Wexford | Forestry Act 1946 and 1988 | Manure |
| River | Avoca | Wexford | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007) | WWTP |
| River | Avoca | Wexford | Water Services Act 2007 | WWTP |
| River | Avoca | Wicklow | Alter the availability of supply through conjunctive use or integrated water resources management, water reuse, implementing SUDS in developed areas, implementation of abstraction controls, use of additional storage or alternative water source | ABS |
| River | Avoca | Wicklow | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Avoca | Wicklow | Develop and employ demand reduction measures | ABS |
| River | Avoca | Wicklow | Develop Habitat Suitability Curves for coarse fish and other important aquatic organisms | ABS |
| River | Avoca | Wicklow | Develop Habitat Suitability Curves for salmonids in Irish Rivers | ABS |
| River | Avoca | Wicklow | In flow regulated rivers, establish guidance on flow variations to support ecology | ABS |
| River | Avoca | Wicklow | Investigate implementation of smaller water schemes to reduce demand on other resources | ABS |
| River | Avoca | Wicklow | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Avoca | Wicklow | National Water Pricing Policy Framework (1998) | ABS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|-------------|------------|--|--------|
| River | Avoca | Wicklow | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Avoca | Wicklow | Record daily abstraction rates | ABS |
| River | Avoca | Wicklow | Water Supplies Act 1942 | ABS |
| River | Avoca | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Avoca | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Avoca | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Avoca | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Avoca | Wicklow | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Avoca | Wicklow | EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007) | CROSS |
| River | Avoca | Wicklow | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Avoca | Wicklow | Further investigation/monitoring required | DATA+ |
| River | Avoca | Wicklow | Survey Banks/Coast | DATA+ |
| River | Avoca | Wicklow | Mine discharge to be suitably treated | DS |
| River | Avoca | Wicklow | Implement Forestry and Water Quality Guidelines | FOR |
| River | Avoca | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Avoca | Wicklow | Facilitate Fish Migration | MORP |
| River | Avoca | Wicklow | Introduce Soft Edges to Inferior Habitats | MORP |
| River | Avoca | Wicklow | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Avoca | Wicklow | Carry out septic system inspections and upgrades | Septic |
| River | Avoca | Wicklow | Diffuse Runoff (Urban) - Street Cleaning Programme | U-DIFF |
| River | Avoca | Wicklow | Collection System - Upgrades and rehabilitation | WWTP |
| River | Avoca | Wicklow | Implement Community Digestors for Alternative Energy | WWTP |
| River | Avoca | Wicklow | Upgrade WWTW <2000 PE | WWTP |
| River | Ballyboghil | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Appropriate distance from water body to be maintained for location of manure heaps | Manure |
| River | Ballyboghil | Fingal | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007): Certify all waste water discharges less than 500 PE. | WWTP |
| River | Ballyboghil | Fingal | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Ballyboghil | Fingal | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Ballyboghil | Fingal | National Water Pricing Policy Framework (1998) | ABS |
| River | Ballyboghil | Fingal | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Ballyboghil | Fingal | Water Supplies Act 1942 | ABS |
| River | Ballyboghil | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Ballyboghil | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Ballyboghil | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|-------------|------------|--|--------|
| River | Ballyboghil | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Ballyboghil | Fingal | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Ballyboghil | Fingal | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Ballyboghil | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Ballyboghil | Fingal | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Ballyboghil | Fingal | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Ballyboghil | Fingal | Develop septic system management programme | Septic |
| River | Ballyboghil | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Treatment plant to be designed, constructed, operated and maintained to ensure satisfactory performance under all normal local climatic conditions. | WWTP |
| River | Ballyboghil | Fingal | Upgrade WWTW and Collecting Systems <2000 PE | WWTP |
| River | Baltray | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Appropriate distance from water body to be maintained for application of fertiliser | Chem |
| River | Baltray | Louth | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Baltray | Louth | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Baltray | Louth | National Water Pricing Policy Framework (1998) | ABS |
| River | Baltray | Louth | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Baltray | Louth | Water Supplies Act 1942 | ABS |
| River | Baltray | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Baltray | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Discontinue use of soiled water for application to or irrigation of land in certain conditions | AGR |
| River | Baltray | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Baltray | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Baltray | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Prohibit application of fertiliser during specific periods | Chem |
| River | Baltray | Louth | EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007) | CROSS |
| River | Baltray | Louth | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Baltray | Louth | Further investigation/monitoring required | DATA+ |
| River | Baltray | Louth | Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001: Analyse sludge (e.g., heavy metal, pH, etc.) | Manure |
| River | Baltray | Louth | Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001: Consider impact of sludge on plants, soil, surface water and groundwater quality | Manure |
| River | Baltray | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Land spreading to be carried out in appropriate manner | Manure |
| River | Baltray | Louth | Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001: Local Authorities will maintain a sludge register | Manure |
| River | Baltray | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Monitor storage capacity and nutrient management (follow the tables) | Manure |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|------------------|------------|---|--------|
| River | Baltray | Louth | Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001: Restrict land where sludge can be used | Manure |
| River | Baltray | Louth | Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001: Restrict the amount of sludge applied to land to 2 tonnes of dry matter per hectare per year | Manure |
| River | Baltray | Louth | Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001: Supervise the supply and use of sludge in agriculture | Manure |
| River | Baltray | Louth | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 12 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Baltray | Louth | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Baltray | Louth | Carry out septic system inspections and upgrades | Septic |
| River | Baltray | Louth | Implement Community Digestors for Alternative Energy | WWTP |
| River | Balytunny | Wicklow | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Balytunny | Wicklow | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Balytunny | Wicklow | National Water Pricing Policy Framework (1998) | ABS |
| River | Balytunny | Wicklow | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Balytunny | Wicklow | Water Supplies Act 1942 | ABS |
| River | Balytunny | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Balytunny | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Balytunny | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Balytunny | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Balytunny | Wicklow | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Balytunny | Wicklow | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Balytunny | Wicklow | Further investigation/monitoring required | DATA+ |
| River | Balytunny | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Balytunny | Wicklow | Carry out septic system inspections and upgrades | Septic |
| River | Balytunny | Wicklow | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Balytunny | Wicklow | Implement Community Digestors for Alternative Energy | WWTP |
| River | Blackwater North | Cavan | Alter the availability of supply through conjunctive use or integrated water resources management, water reuse, implementing SUDS in developed areas, implementation of abstraction controls, use of additional storage or alternative water source | ABS |
| River | Blackwater North | Cavan | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Blackwater North | Cavan | Develop and employ demand reduction measures | ABS |
| River | Blackwater North | Cavan | Develop Habitat Suitability Curves for coarse fish and other important aquatic organisms | ABS |
| River | Blackwater North | Cavan | Develop Habitat Suitability Curves for salmonids in Irish Rivers | ABS |
| River | Blackwater North | Cavan | In flow regulated rivers, establish guidance on flow variations to support ecology | ABS |
| River | Blackwater North | Cavan | Investigate implementation of smaller water schemes to reduce demand on other resources | ABS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|------------------|------------|--|--------|
| River | Blackwater North | Cavan | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Blackwater North | Cavan | National Water Pricing Policy Framework (1998) | ABS |
| River | Blackwater North | Cavan | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Blackwater North | Cavan | Record daily abstraction rates | ABS |
| River | Blackwater North | Cavan | Water Supplies Act 1942 | ABS |
| River | Blackwater North | Cavan | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009) | AGR |
| River | Blackwater North | Cavan | EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007) | CROSS |
| River | Blackwater North | Cavan | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Blackwater North | Cavan | Further investigation/monitoring required | DATA+ |
| River | Blackwater North | Cavan | Survey Banks/Coast | DATA+ |
| River | Blackwater North | Cavan | Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001 | Manure |
| River | Blackwater North | Cavan | Local Government (Water Pollution) Act 1 of 1977 and amendments | S4 |
| River | Blackwater North | Cavan | Enforce Regulations on Septic Systems | Septic |
| River | Blackwater North | Cavan | Implement Community Digestors for Alternative Energy | WWTP |
| River | Blackwater North | Cavan | Urban Waste Water Treatment Regulations, 2001 - 2004 | WWTP |
| River | Blackwater North | Cavan | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007) | WWTP |
| River | Blackwater North | Meath | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Blackwater North | Meath | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Blackwater North | Meath | National Water Pricing Policy Framework (1998) | ABS |
| River | Blackwater North | Meath | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Blackwater North | Meath | Water Supplies Act 1942 | ABS |
| River | Blackwater North | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Blackwater North | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Blackwater North | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Blackwater North | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Blackwater North | Meath | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Blackwater North | Meath | PCS - Principles for Good Plant Protection Practice | Chem |
| River | Blackwater North | Meath | EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007) | CROSS |
| River | Blackwater North | Meath | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Blackwater North | Meath | Implement Upstream Programmes of Measures | CROSS |
| River | Blackwater North | Meath | Further investigation/monitoring required | DATA+ |
| River | Blackwater North | Meath | DEHLG - Code of Good Practice and Guidelines on the use of Biosolids in Agriculture, 1999 | Manure |
| River | Blackwater North | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Land spreading to be carried out in appropriate manner | Manure |
| River | Blackwater North | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Blackwater North | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Appropriate distance from water body to be maintained for location of manure heaps | Manure |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|------------------|------------|---|--------|
| River | Blackwater North | Meath | Ensure compliance with OPW Environmental Drainage Maintenance Guidance Notes | MORP |
| River | Blackwater North | Meath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Blackwater North | Meath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Blackwater North | Meath | Enforce Regulations on Septic Systems | Septic |
| River | Blackwater North | Meath | Diffuse Runoff (Urban) - Gullies Management | U-DIFF |
| River | Blackwater North | Meath | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| River | Blackwater North | Meath | Diffuse Runoff (Urban) - Street Cleaning Programme | U-DIFF |
| River | Blackwater North | Meath | Assess CSO and Water Quality Impact from Urban Pressures | WWTP |
| River | Blackwater North | Meath | Urban Waste Water Treatment Regulations, 2001 - 2004: Develop collecting systems for p.e.'s >2,000 (unless negligible benefits or excessive costs) | WWTP |
| River | Blackwater North | Meath | Implement Community Digestors for Alternative Energy | WWTP |
| River | Blackwater North | Meath | Tertiary Treatment | WWTP |
| River | Blackwater North | Meath | Upgrade WWTW <2000 PE | WWTP |
| River | Blackwater North | Meath | Upgrade WWTW and Collecting Systems <2000 PE | WWTP |
| River | Blackwater South | Kildare | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Blackwater South | Kildare | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Blackwater South | Kildare | National Water Pricing Policy Framework (1998) | ABS |
| River | Blackwater South | Kildare | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Blackwater South | Kildare | Water Supplies Act 1942 | ABS |
| River | Blackwater South | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009) | AGR |
| River | Blackwater South | Kildare | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Blackwater South | Kildare | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Blackwater South | Kildare | Implement Upstream Programmes of Measures | CROSS |
| River | Blackwater South | Kildare | Planning Development Acts 2000 - 2006 | CROSS |
| River | Blackwater South | Kildare | Further investigation/monitoring required | DATA+ |
| River | Blackwater South | Kildare | Evaluate impact of waters discharging from bog and peat lands | Manure |
| River | Blackwater South | Kildare | Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001 | Manure |
| River | Blackwater South | Kildare | Ensure compliance with OPW Environmental Drainage Maintenance Guidance Notes | MORP |
| River | Blackwater South | Kildare | Local Government (Water Pollution) Act 1 of 1977 and amendments | S4 |
| River | Blackwater South | Kildare | Enforce Regulations on Septic Systems | Septic |
| River | Blackwater South | Kildare | Increase public awareness | Septic |
| River | Blackwater South | Kildare | Urban Waste Water Treatment Regulations, 2001 - 2004 | WWTP |
| River | Blackwater South | Kildare | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007) | WWTP |
| | | | | |
| River | Blackwater South | Meath | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Blackwater South | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Blackwater South | Meath | DEHLG - Code of Good Practice and Guidelines on the use of Biosolids in Agriculture, 1999 | Manure |
| River | Blackwater South | Meath | Urban Waste Water Treatment Regulations, 2001 - 2004: Develop collecting systems for p.e.'s >2,000 (unless negligible benefits or excessive costs) | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|------------------|------------|--|--------|
| River | Blackwater South | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Blackwater South | Meath | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Blackwater South | Meath | Enforce Regulations on Septic Systems | Septic |
| River | Blackwater South | Meath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Blackwater South | Meath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Blackwater South | Meath | Ensure compliance with OPW Environmental Drainage Maintenance Guidance Notes | MORP |
| River | Blackwater South | Meath | Further investigation/monitoring required | DATA+ |
| River | Blackwater South | Meath | Implement Community Digestors for Alternative Energy | WWTP |
| River | Blackwater South | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Blackwater South | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Blackwater South | Meath | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Blackwater South | Meath | National Water Pricing Policy Framework (1998) | ABS |
| River | Blackwater South | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Blackwater South | Meath | PCS - Principles for Good Plant Protection Practice | Chem |
| River | Blackwater South | Meath | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Blackwater South | Meath | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Blackwater South | Meath | Tertiary Treatment | WWTP |
| River | Blackwater South | Meath | Water Supplies Act 1942 | ABS |
| River | Boyne Lower | Meath | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Boyne Lower | Meath | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Boyne Lower | Meath | National Water Pricing Policy Framework (1998) | ABS |
| River | Boyne Lower | Meath | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Boyne Lower | Meath | Water Supplies Act 1942 | ABS |
| River | Boyne Lower | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Boyne Lower | Meath | Develop riparian buffers | AGR |
| River | Boyne Lower | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Boyne Lower | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Boyne Lower | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Boyne Lower | Meath | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Boyne Lower | Meath | PCS - Principles for Good Plant Protection Practice | Chem |
| River | Boyne Lower | Meath | EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007) | CROSS |
| River | Boyne Lower | Meath | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|-------------|------------|---|--------|
| River | Boyne Lower | Meath | Further investigation/monitoring required | DATA+ |
| River | Boyne Lower | Meath | DEH LG - Code of Good Practice and Guidelines on the use of Biosolids in Agriculture, 1999 | Manure |
| River | Boyne Lower | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Boyne Lower | Meath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Boyne Lower | Meath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Boyne Lower | Meath | Enforce Regulations on Septic Systems | Septic |
| River | Boyne Lower | Meath | LAs to adopt a common Register of approved Site Assessors and common Code of Practice for maintaining register | Septic |
| River | Boyne Lower | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| River | Boyne Lower | Meath | OSWTS risk matrices to be integrated into Development Plans and Local Area Plans | Septic |
| River | Boyne Lower | Meath | Urban Waste Water Treatment Regulations, 2001 - 2004: Develop collecting systems for p.e.'s >2,000 (unless negligible benefits or excessive costs) | WWTP |
| River | Boyne Lower | Meath | Implement Community Digestors for Alternative Energy | WWTP |
| River | Boyne Lower | Meath | Urban Waste Water Treatment Regulations, 2001 - 2004: Upgrade domestic WWTWs to secondary treatment for p.e.'s >2,000 discharging to rivers, lakes, & estuaries | WWTP |
| River | Boyne Lower | Meath | Upgrade WWTW <2000 PE | WWTP |
| River | Boyne Lower | Meath | Upgrade WWTW and Collecting Systems <2000 PE | WWTP |
| River | Boyne Upper | Kildare | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Boyne Upper | Kildare | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Boyne Upper | Kildare | National Water Pricing Policy Framework (1998) | ABS |
| River | Boyne Upper | Kildare | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Boyne Upper | Kildare | Water Supplies Act 1942 | ABS |
| River | Boyne Upper | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009) | AGR |
| River | Boyne Upper | Kildare | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Boyne Upper | Kildare | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Boyne Upper | Kildare | Implement Upstream Programmes of Measures | CROSS |
| River | Boyne Upper | Kildare | Planning Development Acts 2000 - 2006 | CROSS |
| River | Boyne Upper | Kildare | Further investigation/monitoring required | DATA+ |
| River | Boyne Upper | Kildare | Mitigate impact of quarry activities | DS |
| River | Boyne Upper | Kildare | Ensure compliance with OPW Environmental Drainage Maintenance Guidance Notes | MORP |
| River | Boyne Upper | Kildare | OPW - Environmental River Enhancement Programme 2008 -2012 | MORP |
| River | Boyne Upper | Kildare | Local Government (Water Pollution) Act 1 of 1977 and amendments | S4 |
| River | Boyne Upper | Kildare | Enforce Regulations on Septic Systems | Septic |
| River | Boyne Upper | Kildare | Increase public awareness | Septic |
| River | Boyne Upper | Kildare | Urban Waste Water Treatment Regulations, 2001 - 2004 | WWTP |
| River | Boyne Upper | Kildare | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007) | WWTP |
| River | Boyne Upper | Meath | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Boyne Upper | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Boyne Upper | Meath | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Boyne Upper | Meath | National Water Pricing Policy Framework (1998) | ABS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|-------------|------------|--|--------|
| River | Boyne Upper | Meath | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Boyne Upper | Meath | Water Supplies Act 1942 | ABS |
| River | Boyne Upper | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Boyne Upper | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Boyne Upper | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Boyne Upper | Meath | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Boyne Upper | Meath | PCS - Principles for Good Plant Protection Practice | Chem |
| River | Boyne Upper | Meath | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Boyne Upper | Meath | DEHLG - Code of Good Practice and Guidelines on the use of Biosolids in Agriculture, 1999 | Manure |
| River | Boyne Upper | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Boyne Upper | Meath | Ensure compliance with OPW Environmental Drainage Maintenance Guidance Notes | MORP |
| River | Boyne Upper | Meath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Boyne Upper | Meath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Boyne Upper | Meath | Enforce Regulations on Septic Systems | Septic |
| River | Boyne Upper | Meath | Implement Community Digestors for Alternative Energy | WWTP |
| River | Boyne Upper | Meath | Upgrade WWTW and Collecting Systems <2000 PE | WWTP |
| River | Boyne Upper | Offaly | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Boyne Upper | Offaly | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Boyne Upper | Offaly | National Water Pricing Policy Framework (1998) | ABS |
| River | Boyne Upper | Offaly | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Boyne Upper | Offaly | Water Supplies Act 1942 | ABS |
| River | Boyne Upper | Offaly | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009) | AGR |
| River | Boyne Upper | Offaly | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Boyne Upper | Offaly | Further investigation/monitoring required | DATA+ |
| River | Boyne Upper | Offaly | OPW - Environmental River Enhancement Programme 2008 -2012 | MORP |
| River | Boyne Upper | Offaly | Local Government (Water Pollution) Act 1 of 1977 and amendments | S4 |
| River | Boyne Upper | Offaly | Implement Community Digestors for Alternative Energy | WWTP |
| River | Boyne Upper | Offaly | Urban Waste Water Treatment Regulations, 2001 - 2004 | WWTP |
| River | Boyne Upper | Offaly | Water Services Act 2007 | WWTP |
| River | Boyne Upper | Westmeath | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Boyne Upper | Westmeath | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Boyne Upper | Westmeath | National Water Pricing Policy Framework (1998) | ABS |
| River | Boyne Upper | Westmeath | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Boyne Upper | Westmeath | Water Supplies Act 1942 | ABS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|-------------|------------|--|--------|
| River | Boyne Upper | Westmeath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Boyne Upper | Westmeath | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Boyne Upper | Westmeath | Planning and Development Regulations 2001 - 2007: Include an Environmental Report with Development Plans | CROSS |
| River | Boyne Upper | Westmeath | Further investigation/monitoring required | DATA+ |
| River | Boyne Upper | Westmeath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 12 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Boyne Upper | Westmeath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Boyne Upper | Westmeath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Boyne Upper | Westmeath | Implement Community Digestors for Alternative Energy | WWTP |
| River | Broadmeadow | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Appropriate distance from water body to be maintained for location of manure heaps | Manure |
| River | Broadmeadow | Fingal | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007): Certify all waste water discharges less than 500 PE. | WWTP |
| River | Broadmeadow | Fingal | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Broadmeadow | Fingal | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Broadmeadow | Fingal | National Water Pricing Policy Framework (1998) | ABS |
| River | Broadmeadow | Fingal | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Broadmeadow | Fingal | Water Supplies Act 1942 | ABS |
| River | Broadmeadow | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Broadmeadow | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Broadmeadow | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Broadmeadow | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Broadmeadow | Fingal | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Broadmeadow | Fingal | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Broadmeadow | Fingal | Further investigation/monitoring required | DATA+ |
| River | Broadmeadow | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Broadmeadow | Fingal | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Broadmeadow | Fingal | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Broadmeadow | Fingal | Develop septic system management programme | Septic |
| River | Broadmeadow | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Develop collecting systems for p.e.'s >2,000 (unless negligible benefits or excessive costs) | WWTP |
| River | Broadmeadow | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Treatment plant to be designed, constructed, operated and maintained to ensure satisfactory performance under all normal local climatic conditions. | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|-------------|-------------|--|--------|
| River | Broadmeadow | Meath | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Broadmeadow | Meath | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Broadmeadow | Meath | National Water Pricing Policy Framework (1998) | ABS |
| River | Broadmeadow | Meath | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Broadmeadow | Meath | Water Supplies Act 1942 | ABS |
| River | Broadmeadow | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Broadmeadow | Meath | Develop riparian buffers | AGR |
| River | Broadmeadow | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Broadmeadow | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Broadmeadow | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Broadmeadow | Meath | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Broadmeadow | Meath | PCS - Principles for Good Plant Protection Practice | Chem |
| River | Broadmeadow | Meath | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Broadmeadow | Meath | Further investigation/monitoring required | DATA+ |
| River | Broadmeadow | Meath | DEHLG - Code of Good Practice and Guidelines on the use of Biosolids in Agriculture, 1999 | Manure |
| River | Broadmeadow | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Broadmeadow | Meath | Ensure compliance with OPW Environmental Drainage Maintenance Guidance Notes | MORP |
| River | Broadmeadow | Meath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Broadmeadow | Meath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Broadmeadow | Meath | Enforce Regulations on Septic Systems | Septic |
| River | Broadmeadow | Meath | LAs to adopt a common Register of approved Site Assessors and common Code of Practice for maintaining register | Septic |
| River | Broadmeadow | Meath | OSWTS risk matrices to be integrated into Development Plans and Local Area Plans | Septic |
| River | Broadmeadow | Meath | Urban Waste Water Treatment Regulations, 2001 - 2004: Develop collecting systems for p.e.'s >2,000 (unless negligible benefits or excessive costs) | WWTP |
| River | Broadmeadow | Meath | Implement Community Digestors for Alternative Energy | WWTP |
| River | Cammock | Dublin City | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Cammock | Dublin City | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Cammock | Dublin City | Implement Measures in other Pressure Categories | CROSS |
| River | Cammock | Dublin City | Implement Upstream Programmes of Measures | CROSS |
| River | Cammock | Dublin City | Planning and Development Regulations 2001 - 2007 | CROSS |
| River | Cammock | Dublin City | Further investigation/monitoring required | DATA+ |
| River | Cammock | Dublin City | Survey Banks/Coast | DATA+ |
| River | Cammock | Dublin City | EPA (Licensing) Regulations, 1994 & 2004 | IPPC |
| River | Cammock | Dublin City | Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001 | Manure |
| River | Cammock | Dublin City | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|----------|--------------|--|--------|
| River | Cammock | Dublin City | Local Government (Water Pollution) Act 1 of 1977 and amendments | S4 |
| River | Cammock | Dublin City | Diffuse Runoff (Urban) - Gullies Management | U-DIFF |
| River | Cammock | Dublin City | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| River | Cammock | Dublin City | Diffuse Runoff (Urban) - Storm sewers separation and qualitative improvement | U-DIFF |
| River | Cammock | Dublin City | Assess CSO and Water Quality Impact from Urban Pressures | WWTP |
| River | Cammock | Dublin City | Collection system - Network management & operations programme | WWTP |
| River | Cammock | Dublin City | Collection System - Upgrades and rehabilitation | WWTP |
| River | Cammock | Dublin City | Implement Fats, Oils and Grease Programme | WWTP |
| River | Cammock | Dublin City | Investigate and eliminate misconnections | WWTP |
| River | Cammock | Dublin City | Urban Waste Water Treatment Regulations, 2001 - 2004 | WWTP |
| River | Cammock | Dublin City | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007) | WWTP |
| River | Cammock | South Dublin | EC (Control of Major Accident Hazards Involving Dangerous Substances) Regulations (S.I. 74 of 2006): After an accident, operator should take all necessary measures to clear up any pollution caused. | DS |
| River | Cammock | South Dublin | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Cammock | South Dublin | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Cammock | South Dublin | National Water Pricing Policy Framework (1998) | ABS |
| River | Cammock | South Dublin | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Cammock | South Dublin | Water Supplies Act 1942 | ABS |
| River | Cammock | South Dublin | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Cammock | South Dublin | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Cammock | South Dublin | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Cammock | South Dublin | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Cammock | South Dublin | Further investigation/monitoring required | DATA+ |
| River | Cammock | South Dublin | EPA (Licensing) Regulations, 1994 & 2004: Grant and refuse IPPC licences subject to set-limits to reduce pollution effects | IPPC |
| River | Cammock | South Dublin | EPA (Licensing) Regulations, 1994 & 2004: Upgrade IPPC licensed facilities waste management structures and practices to best available technology | IPPC |
| River | Cammock | South Dublin | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| River | Cammock | South Dublin | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 12 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Cammock | South Dublin | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Cammock | South Dublin | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Cammock | South Dublin | Diffuse Runoff (Urban) - Street Cleaning Programme | U-DIFF |
| River | Cammock | South Dublin | Collection System - Upgrades and rehabilitation | WWTP |
| River | Cammock | South Dublin | Investigate and eliminate misconnections | WWTP |
| River | Dargle | DLRCC | Address diffuse silt pollution from green field site development | MORP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|----------|------------|--|--------|
| River | Dargle | DLRCC | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Dargle | DLRCC | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Dargle | DLRCC | National Water Pricing Policy Framework (1998) | ABS |
| River | Dargle | DLRCC | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Dargle | DLRCC | Water Supplies Act 1942 | ABS |
| River | Dargle | DLRCC | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Dargle | DLRCC | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Dargle | DLRCC | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Dargle | DLRCC | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Dargle | DLRCC | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Dargle | DLRCC | EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards) | CROSS |
| River | Dargle | DLRCC | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Dargle | DLRCC | Planning and Development Regulations 2001 - 2007 | CROSS |
| River | Dargle | DLRCC | River Polishing - Reed Bed | CROSS |
| River | Dargle | DLRCC | Further investigation/monitoring required | DATA+ |
| River | Dargle | DLRCC | Survey Banks/Coast | DATA+ |
| River | Dargle | DLRCC | EC (Control of Major Accident Hazards Involving Dangerous Substances) Regulations (S.I. 74 of 2006) | DS |
| River | Dargle | DLRCC | Local Government (Water Pollution) Act 1977 (Water Quality Standards for Phosphorus) Regulations, 1998 (S.I. 258 of 1998) | DS |
| River | Dargle | DLRCC | Mitigate impact of quarry activities | DS |
| River | Dargle | DLRCC | EC (Natural Habitats) Regulations 1997- 2005: Assess effects of a proposed development on a protected site before granting planning permission | ECO |
| River | Dargle | DLRCC | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| River | Dargle | DLRCC | EC (Natural Habitats) Regulations 1997- 2005: Determine priority species (flora and fauna) for protection | ECO |
| River | Dargle | DLRCC | Fisheries Act 1959 - 1981 | ECO |
| River | Dargle | DLRCC | Fresh Water Pearl Mussel Regulations | ECO |
| River | Dargle | DLRCC | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| River | Dargle | DLRCC | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| River | Dargle | DLRCC | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| River | Dargle | DLRCC | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| River | Dargle | DLRCC | EC (Natural Habitats) Regulations 1997- 2005: Reintroduce native species; license introduction of non native species | ECO |
| River | Dargle | DLRCC | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| River | Dargle | DLRCC | Implement Forestry and Water Quality Guidelines | FOR |
| River | Dargle | DLRCC | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|----------|------------|--|--------|
| River | Dargle | DLRCC | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Dargle | DLRCC | Facilitate Fish Migration | MORP |
| River | Dargle | DLRCC | Freshwater Pearl Mussel Management Plans | MORP |
| River | Dargle | DLRCC | Introduce Soft Edges to Inferior Habitats | MORP |
| River | Dargle | DLRCC | OPW - Environmental River Enhancement Programme 2008 -2012 | MORP |
| River | Dargle | DLRCC | Preserve and/or restore banks | MORP |
| River | Dargle | DLRCC | Restoration works on intensive land use for Freshwater Morphology | MORP |
| River | Dargle | DLRCC | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Dargle | DLRCC | Carry out septic system inspections and upgrades | Septic |
| River | Dargle | DLRCC | Enforce Regulations on Septic Systems | Septic |
| River | Dargle | DLRCC | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| River | Dargle | DLRCC | Collection System - Upgrades and rehabilitation | WWTP |
| River | Dargle | DLRCC | CSOs to comply with GSDS recommendations | WWTP |
| River | Dargle | DLRCC | Investigate and eliminate misconnections | WWTP |
| River | Dargle | DLRCC | Urban Waste Water Treatment Regulations, 2001 - 2004: Upgrade domestic WWTWs to secondary treatment for p.e's >2,000 discharging to rivers, lakes, & estuaries | WWTP |
| River | Dargle | Wicklow | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Dargle | Wicklow | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Dargle | Wicklow | National Water Pricing Policy Framework (1998) | ABS |
| River | Dargle | Wicklow | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Dargle | Wicklow | Water Supplies Act 1942 | ABS |
| River | Dargle | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Dargle | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Dargle | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Dargle | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Dargle | Wicklow | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Dargle | Wicklow | EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007) | CROSS |
| River | Dargle | Wicklow | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Dargle | Wicklow | Further investigation/monitoring required | DATA+ |
| River | Dargle | Wicklow | Mitigate impact of quarry activities | DS |
| River | Dargle | Wicklow | Forestry Act 1946 and 1988 | Manure |
| River | Dargle | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Dargle | Wicklow | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Dargle | Wicklow | Carry out septic system inspections and upgrades | Septic |
| River | Dargle | Wicklow | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| River | Dargle | Wicklow | Collection System - Upgrades and rehabilitation | WWTP |
| River | Dargle | Wicklow | Implement Community Digestors for Alternative Energy | WWTP |
| River | Dargle | Wicklow | Investigate and eliminate misconnections | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|----------|------------|---|--------|
| River | Dargle | Wicklow | Upgrade WWTW and Collecting Systems <2000 PE | WWTP |
| River | Deel | Meath | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Deel | Meath | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Deel | Meath | National Water Pricing Policy Framework (1998) | ABS |
| River | Deel | Meath | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Deel | Meath | Water Supplies Act 1942 | ABS |
| River | Deel | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Deel | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Deel | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Deel | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Deel | Meath | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Deel | Meath | EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007) | CROSS |
| River | Deel | Meath | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Deel | Meath | DEHLG - Code of Good Practice and Guidelines on the use of Biosolids in Agriculture, 1999 | Manure |
| River | Deel | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Deel | Meath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Deel | Meath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Deel | Meath | Enforce Regulations on Septic Systems | Septic |
| River | Deel | Meath | Implement Community Digestors for Alternative Energy | WWTP |
| River | Deel | Westmeath | Alter the availability of supply through conjunctive use or integrated water resources management, water reuse, implementing SUDS in developed areas, implementation of abstraction controls, use of additional storage or alternative water source | ABS |
| River | Deel | Westmeath | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Deel | Westmeath | Develop and employ demand reduction measures | ABS |
| River | Deel | Westmeath | Develop Habitat Suitability Curves for coarse fish and other important aquatic organisms | ABS |
| River | Deel | Westmeath | Develop Habitat Suitability Curves for salmonids in Irish Rivers | ABS |
| River | Deel | Westmeath | In flow regulated rivers, establish guidance on flow variations to support ecology | ABS |
| River | Deel | Westmeath | Investigate implementation of smaller water schemes to reduce demand on other resources | ABS |
| River | Deel | Westmeath | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Deel | Westmeath | National Water Pricing Policy Framework (1998) | ABS |
| River | Deel | Westmeath | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Deel | Westmeath | Record daily abstraction rates | ABS |
| River | Deel | Westmeath | Water Supplies Act 1942 | ABS |
| River | Deel | Westmeath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|----------|------------|--|--------|
| River | Deel | Westmeath | Bathing Water Quality Regulations (S.I. 79 of 2008): Classify Bathing Waters | CROSS |
| River | Deel | Westmeath | EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007) | CROSS |
| River | Deel | Westmeath | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Deel | Westmeath | Bathing Water Quality Regulations (S.I. 79 of 2008): Facilitate public participation and provide public information | CROSS |
| River | Deel | Westmeath | Bathing Water Quality Regulations (S.I. 79 of 2008): Test bathing water compliance | CROSS |
| River | Deel | Westmeath | Further investigation/monitoring required | DATA+ |
| River | Deel | Westmeath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 12 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Deel | Westmeath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Deel | Westmeath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Deel | Westmeath | Implement Community Digestors for Alternative Energy | WWTP |
| River | Deel | Westmeath | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007): License all waste water discharges of greater than 500 PE | WWTP |
| River | Deel | Westmeath | Urban Waste Water Treatment Regulations, 2001 - 2004: Treatment plant to be designed, constructed, operated and maintained to ensure satisfactory performance under all normal local climatic conditions. | WWTP |
| River | Delvin | Fingal | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Delvin | Fingal | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Delvin | Fingal | National Water Pricing Policy Framework (1998) | ABS |
| River | Delvin | Fingal | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Delvin | Fingal | Water Supplies Act 1942 | ABS |
| River | Delvin | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Delvin | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Delvin | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Delvin | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Delvin | Fingal | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Delvin | Fingal | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Delvin | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Delvin | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Appropriate distance from water body to be maintained for location of manure heaps | Manure |
| River | Delvin | Fingal | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Delvin | Fingal | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|------------------|------------|--|--------|
| River | Delvin | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Develop collecting systems for p.e.'s >2,000 (unless negligible benefits or excessive costs) | WWTP |
| River | Delvin | Fingal | Implement Community Digestors for Alternative Energy | WWTP |
| River | Delvin | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Treatment plant to be designed, constructed, operated and maintained to ensure satisfactory performance under all normal local climatic conditions. | WWTP |
| River | Delvin | Fingal | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007): Certify all waste water discharges less than 500 PE. | WWTP |
| River | Delvin | Fingal | Upgrade WWTW <2000 PE | WWTP |
| River | Delvin | Meath | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Delvin | Meath | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Delvin | Meath | National Water Pricing Policy Framework (1998) | ABS |
| River | Delvin | Meath | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Delvin | Meath | Water Supplies Act 1942 | ABS |
| River | Delvin | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Delvin | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Delvin | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Delvin | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Delvin | Meath | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Delvin | Meath | PCS - Principles for Good Plant Protection Practice | Chem |
| River | Delvin | Meath | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Delvin | Meath | Further investigation/monitoring required | DATA+ |
| River | Delvin | Meath | DEHLG - Code of Good Practice and Guidelines on the use of Biosolids in Agriculture, 1999 | Manure |
| River | Delvin | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Delvin | Meath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Delvin | Meath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Delvin | Meath | Enforce Regulations on Septic Systems | Septic |
| River | Delvin | Meath | Implement Community Digestors for Alternative Energy | WWTP |
| River | Delvin | Meath | Tertiary Treatment | WWTP |
| River | Delvin | Meath | Upgrade WWTW and Collecting Systems <2000 PE | WWTP |
| River | Devlin (Mattock) | Louth | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Devlin (Mattock) | Louth | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Devlin (Mattock) | Louth | National Water Pricing Policy Framework (1998) | ABS |
| River | Devlin (Mattock) | Louth | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Devlin (Mattock) | Louth | Record daily abstraction rates | ABS |
| River | Devlin (Mattock) | Louth | Record daily water level | ABS |
| River | Devlin (Mattock) | Louth | Water Supplies Act 1942 | ABS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|------------------|------------|--|--------|
| River | Devlin (Mattock) | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Devlin (Mattock) | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Discontinue use of soiled water for application to or irrigation of land in certain conditions | AGR |
| River | Devlin (Mattock) | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Enforce National Action Programme | AGR |
| River | Devlin (Mattock) | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Devlin (Mattock) | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Devlin (Mattock) | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Appropriate distance from water body to be maintained for application of fertiliser | Chem |
| River | Devlin (Mattock) | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Prohibit application of fertiliser during specific periods | Chem |
| River | Devlin (Mattock) | Louth | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Devlin (Mattock) | Louth | Further investigation/monitoring required | DATA+ |
| River | Devlin (Mattock) | Louth | Water Quality Dangerous Substances Regulations, 2001: Implement Measures in Dangerous Substances Reports | DS |
| River | Devlin (Mattock) | Louth | Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001: Analyse sludge (e.g., heavy metal, pH, etc.) | Manure |
| River | Devlin (Mattock) | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Appropriate distance from water body to be maintained for location of manure heaps | Manure |
| River | Devlin (Mattock) | Louth | Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001: Consider impact of sludge on plants, soil, surface water and groundwater quality | Manure |
| River | Devlin (Mattock) | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Land spreading to be carried out in appropriate manner | Manure |
| River | Devlin (Mattock) | Louth | Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001: Local Authorities will maintain a sludge register | Manure |
| River | Devlin (Mattock) | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Monitor storage capacity and nutrient management (follow the tables) | Manure |
| River | Devlin (Mattock) | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Devlin (Mattock) | Louth | Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001: Restrict land where sludge can be used | Manure |
| River | Devlin (Mattock) | Louth | Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001: Restrict the amount of sludge applied to land to 2 tonnes of dry matter per hectare per year | Manure |
| River | Devlin (Mattock) | Louth | Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001: Supervise the supply and use of sludge in agriculture | Manure |
| River | Devlin (Mattock) | Louth | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Devlin (Mattock) | Louth | Carry out septic system inspections and upgrades | Septic |
| River | Devlin (Mattock) | Louth | Implement Community Digestors for Alternative Energy | WWTP |
| River | Devlin (Mattock) | Louth | Upgrade WWTW and Collecting Systems <2000 PE | WWTP |
| River | Devlin (Mattock) | Meath | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Devlin (Mattock) | Meath | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Devlin (Mattock) | Meath | National Water Pricing Policy Framework (1998) | ABS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|------------------|------------|--|--------|
| River | Devlin (Mattock) | Meath | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Devlin (Mattock) | Meath | Water Supplies Act 1942 | ABS |
| River | Devlin (Mattock) | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Devlin (Mattock) | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Devlin (Mattock) | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Devlin (Mattock) | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Devlin (Mattock) | Meath | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Devlin (Mattock) | Meath | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Devlin (Mattock) | Meath | DEHLG - Code of Good Practice and Guidelines on the use of Biosolids in Agriculture, 1999 | Manure |
| River | Devlin (Mattock) | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Devlin (Mattock) | Meath | Ensure compliance with OPW Environmental Drainage Maintenance Guidance Notes | MORP |
| River | Devlin (Mattock) | Meath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Devlin (Mattock) | Meath | Enforce Regulations on Septic Systems | Septic |
| River | Devlin (Mattock) | Meath | Implement Community Digestors for Alternative Energy | WWTP |
| River | Dodder | DLRCC | Address diffuse silt pollution from green field site development | MORP |
| River | Dodder | DLRCC | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Dodder | DLRCC | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Dodder | DLRCC | National Water Pricing Policy Framework (1998) | ABS |
| River | Dodder | DLRCC | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Dodder | DLRCC | Water Supplies Act 1942 | ABS |
| River | Dodder | DLRCC | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009) | AGR |
| River | Dodder | DLRCC | EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards) | CROSS |
| River | Dodder | DLRCC | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Dodder | DLRCC | Planning and Development Regulations 2001 - 2007 | CROSS |
| River | Dodder | DLRCC | River Polishing - Reed Bed | CROSS |
| River | Dodder | DLRCC | Survey Banks/Coast | DATA+ |
| River | Dodder | DLRCC | EC (Control of Major Accident Hazards Involving Dangerous Substances) Regulations (S.I. 74 of 2006) | DS |
| River | Dodder | DLRCC | EC (Natural Habitats) Regulations 1997- 2005: Assess effects of a proposed development on a protected site before granting planning permission | ECO |
| River | Dodder | DLRCC | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| River | Dodder | DLRCC | EC (Natural Habitats) Regulations 1997- 2005: Determine priority species (flora and fauna) for protection | ECO |
| River | Dodder | DLRCC | Fresh Water Pearl Mussel Regulations | ECO |
| River | Dodder | DLRCC | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| River | Dodder | DLRCC | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|----------|--------------|---|--------|
| River | Dodder | DLRCC | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| River | Dodder | DLRCC | Fisheries Act 1959 - 1981: Prohibit works in river channels during fisheries close season. | ECO |
| River | Dodder | DLRCC | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| River | Dodder | DLRCC | EC (Natural Habitats) Regulations 1997- 2005: Reintroduce native species; license introduction of non native species | ECO |
| River | Dodder | DLRCC | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| River | Dodder | DLRCC | Develop guidance on suites of measures for different habitats | HS |
| River | Dodder | DLRCC | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| River | Dodder | DLRCC | NPWS to develop and maintain a Webserver based register of designated sites accessible to LA, State Agencies, Stakeholders | HS |
| River | Dodder | DLRCC | NPWS to develop Guidance documents for Article 6 Assessments | HS |
| River | Dodder | DLRCC | Facilitate Fish Migration | MORP |
| River | Dodder | DLRCC | Introduce Soft Edges to Inferior Habitats | MORP |
| River | Dodder | DLRCC | Morphology - Physical Modifications Campaign | MORP |
| River | Dodder | DLRCC | Preserve and/or restore banks | MORP |
| River | Dodder | DLRCC | CSOs to comply with GSDSDS recommendations | WWTP |
| River | Dodder | DLRCC | Implement Fats, Oils and Grease Programme | WWTP |
| River | Dodder | DLRCC | Investigate and eliminate misconnections | WWTP |
| River | Dodder | Dublin City | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Dodder | Dublin City | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Dodder | Dublin City | Implement Measures in other Pressure Categories | CROSS |
| River | Dodder | Dublin City | Implement Upstream Programmes of Measures | CROSS |
| River | Dodder | Dublin City | Planning and Development Regulations 2001 - 2007 | CROSS |
| River | Dodder | Dublin City | Further investigation/monitoring required | DATA+ |
| River | Dodder | Dublin City | Survey Banks/Coast | DATA+ |
| River | Dodder | Dublin City | EPA (Licensing) Regulations, 1994 & 2004 | IPPC |
| River | Dodder | Dublin City | Introduce Soft Edges to Inferior Habitats | MORP |
| River | Dodder | Dublin City | Preserve and/or restore banks | MORP |
| River | Dodder | Dublin City | Local Government (Water Pollution) Act 1 of 1977 and amendments | S4 |
| River | Dodder | Dublin City | Diffuse Runoff (Urban) - Gullies Management | U-DIFF |
| River | Dodder | Dublin City | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| River | Dodder | Dublin City | Diffuse Runoff (Urban) - Storm sewers separation and qualitative improvement | U-DIFF |
| River | Dodder | Dublin City | Assess CSO and Water Quality Impact from Urban Pressures | WWTP |
| River | Dodder | Dublin City | Collection system - Network management & operations programme | WWTP |
| River | Dodder | Dublin City | Collection System - Upgrades and rehabilitation | WWTP |
| River | Dodder | Dublin City | Implement Fats, Oils and Grease Programme | WWTP |
| River | Dodder | Dublin City | Investigate and eliminate misconnections | WWTP |
| River | Dodder | Dublin City | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007) | WWTP |
| River | Dodder | South Dublin | Alter the availability of supply through conjunctive use or integrated water resources management, water reuse, implementing SUDS in developed areas, implementation of abstraction controls, use of additional storage or alternative water source | ABS |
| River | Dodder | South Dublin | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Dodder | South Dublin | Develop and employ demand reduction measures | ABS |
| River | Dodder | South Dublin | Develop Habitat Suitability Curves for coarse fish and other important aquatic organisms | ABS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|----------|--------------|--|--------|
| River | Dodder | South Dublin | Develop Habitat Suitability Curves for salmonids in Irish Rivers | ABS |
| River | Dodder | South Dublin | In flow regulated rivers, establish guidance on flow variations to support ecology | ABS |
| River | Dodder | South Dublin | Investigate implementation of smaller water schemes to reduce demand on other resources | ABS |
| River | Dodder | South Dublin | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Dodder | South Dublin | National Water Pricing Policy Framework (1998) | ABS |
| River | Dodder | South Dublin | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Dodder | South Dublin | Record daily abstraction rates | ABS |
| River | Dodder | South Dublin | Water Supplies Act 1942 | ABS |
| River | Dodder | South Dublin | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Dodder | South Dublin | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Dodder | South Dublin | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Dodder | South Dublin | EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007) | CROSS |
| River | Dodder | South Dublin | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Dodder | South Dublin | Further investigation/monitoring required | DATA+ |
| River | Dodder | South Dublin | EC (Control of Major Accident Hazards Involving Dangerous Substances) Regulations (S.I. 74 of 2006): After an accident, operator should take all necessary measures to clear up any pollution caused. | DS |
| River | Dodder | South Dublin | EPA (Licensing) Regulations, 1994 & 2004: Grant and refuse IPPC licences subject to set-limits to reduce pollution effects | IPPC |
| River | Dodder | South Dublin | EPA (Licensing) Regulations, 1994 & 2004: Upgrade IPPC licensed facilities waste management structures and practices to best available technology | IPPC |
| River | Dodder | South Dublin | Facilitate Fish Migration | MORP |
| River | Dodder | South Dublin | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 12 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Dodder | South Dublin | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Dodder | South Dublin | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Dodder | South Dublin | Diffuse Runoff (Urban) - Street Cleaning Programme | U-DIFF |
| River | Dodder | South Dublin | Collection System - Upgrades and rehabilitation | WWTP |
| River | Dodder | South Dublin | Investigate and eliminate misconnections | WWTP |
| River | Dodder | Wicklow | Further investigation/monitoring required | DATA+ |
| River | Dodder | Wicklow | Survey Banks/Coast | DATA+ |
| River | Donabate | Fingal | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007): Certify all waste water discharges less than 500 PE. | WWTP |
| River | Donabate | Fingal | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Donabate | Fingal | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Donabate | Fingal | National Water Pricing Policy Framework (1998) | ABS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|-----------|------------|--|--------|
| River | Donabate | Fingal | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Donabate | Fingal | Water Supplies Act 1942 | ABS |
| River | Donabate | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Donabate | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Donabate | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Donabate | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Donabate | Fingal | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Donabate | Fingal | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Donabate | Fingal | Further investigation/monitoring required | DATA+ |
| River | Donabate | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Donabate | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Appropriate distance from water body to be maintained for location of manure heaps | Manure |
| River | Donabate | Fingal | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Donabate | Fingal | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Donabate | Fingal | Develop septic system management programme | Septic |
| River | Donabate | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Develop collecting systems for p.e.'s >2,000 (unless negligible benefits or excessive costs) | WWTP |
| River | Donabate | Fingal | Improve Removal of certain parameters at WWTP | WWTP |
| River | Donabate | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Treatment plant to be designed, constructed, operated and maintained to ensure satisfactory performance under all normal local climatic conditions. | WWTP |
| River | Kilmurphy | Wexford | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Kilmurphy | Wexford | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Kilmurphy | Wexford | National Water Pricing Policy Framework (1998) | ABS |
| River | Kilmurphy | Wexford | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Kilmurphy | Wexford | Water Supplies Act 1942 | ABS |
| River | Kilmurphy | Wexford | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009) | AGR |
| River | Kilmurphy | Wexford | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Kilmurphy | Wexford | Planning and Development Regulations 2001 - 2007 | CROSS |
| River | Kilmurphy | Wexford | Further investigation/monitoring required | DATA+ |
| River | Kilmurphy | Wexford | EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments | DS |
| River | Kilmurphy | Wexford | EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001 | DS |
| River | Kilmurphy | Wexford | Local Government (Water Pollution) Act 1977 (Water Quality Standards for Phosphorus) Regulations, 1998 (S.I. 258 of 1998) | DS |
| River | Kilmurphy | Wexford | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards) | ECO |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|----------|-------------|--|--------|
| River | Kilmurry | Wexford | EC (Natural Habitats) Regulations 1997- 2005 | ECO |
| River | Kilmurry | Wexford | Fisheries Act 1959 - 1981 | ECO |
| River | Kilmurry | Wexford | EPA (Licensing) Regulations, 1994 & 2004 | IPPC |
| River | Kilmurry | Wexford | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007) | WWTP |
| River | Kilmurry | Wexford | Water Services Act 2007 | WWTP |
| River | Kilmurry | Wicklow | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Kilmurry | Wicklow | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Kilmurry | Wicklow | National Water Pricing Policy Framework (1998) | ABS |
| River | Kilmurry | Wicklow | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Kilmurry | Wicklow | Water Supplies Act 1942 | ABS |
| River | Kilmurry | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Kilmurry | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Kilmurry | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Kilmurry | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Kilmurry | Wicklow | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Kilmurry | Wicklow | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Kilmurry | Wicklow | Further investigation/monitoring required | DATA+ |
| River | Kilmurry | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Kilmurry | Wicklow | Carry out septic system inspections and upgrades | Septic |
| River | Kilmurry | Wicklow | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Kilmurry | Wicklow | Implement Community Digestors for Alternative Energy | WWTP |
| River | Liffey | Dublin City | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Liffey | Dublin City | Develop Habitat Suitability Curves for coarse fish and other important aquatic organisms | ABS |
| River | Liffey | Dublin City | In flow regulated rivers, establish guidance on flow variations to support ecology | ABS |
| River | Liffey | Dublin City | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Liffey | Dublin City | National Water Pricing Policy Framework (1998) | ABS |
| River | Liffey | Dublin City | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Liffey | Dublin City | Implement Measures in other Pressure Categories | CROSS |
| River | Liffey | Dublin City | Implement Upstream Programmes of Measures | CROSS |
| River | Liffey | Dublin City | Planning and Development Regulations 2001 - 2007 | CROSS |
| River | Liffey | Dublin City | Further investigation/monitoring required | DATA+ |
| River | Liffey | Dublin City | Survey Banks/Coast | DATA+ |
| River | Liffey | Dublin City | EPA (Licensing) Regulations, 1994 & 2004 | IPPC |
| River | Liffey | Dublin City | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| River | Liffey | Dublin City | Local Government (Water Pollution) Act 1 of 1977 and amendments | S4 |
| River | Liffey | Dublin City | Diffuse Runoff (Urban) - Gullies Management | U-DIFF |
| River | Liffey | Dublin City | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|----------|-------------|---|--------|
| River | Liffey | Dublin City | Diffuse Runoff (Urban) - Storm sewers separation and qualitative improvement | U-DIFF |
| River | Liffey | Dublin City | Assess CSO and Water Quality Impact from Urban Pressures | WWTP |
| River | Liffey | Dublin City | Collection system - Network management & operations programme | WWTP |
| River | Liffey | Dublin City | Collection System - Upgrades and rehabilitation | WWTP |
| River | Liffey | Dublin City | Implement Fats, Oils and Grease Programme | WWTP |
| River | Liffey | Dublin City | Investigate and eliminate misconnections | WWTP |
| River | Liffey | Dublin City | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007) | WWTP |
| River | Liffey | Fingal | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Liffey | Fingal | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Liffey | Fingal | National Water Pricing Policy Framework (1998) | ABS |
| River | Liffey | Fingal | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Liffey | Fingal | Water Supplies Act 1942 | ABS |
| River | Liffey | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Liffey | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Liffey | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Liffey | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Liffey | Fingal | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Liffey | Fingal | Further investigation/monitoring required | DATA+ |
| River | Liffey | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Liffey | Fingal | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| River | Liffey | Fingal | Develop septic system management programme | Septic |
| River | Liffey | Kildare | Alter the availability of supply through conjunctive use or integrated water resources management, water reuse, implementing SUDS in developed areas, implementation of abstraction controls, use of additional storage or alternative water source | ABS |
| River | Liffey | Kildare | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Liffey | Kildare | Develop and employ demand reduction measures | ABS |
| River | Liffey | Kildare | Develop Habitat Suitability Curves for coarse fish and other important aquatic organisms | ABS |
| River | Liffey | Kildare | Develop Habitat Suitability Curves for salmonids in Irish Rivers | ABS |
| River | Liffey | Kildare | In flow regulated rivers, establish guidance on flow variations to support ecology | ABS |
| River | Liffey | Kildare | Investigate implementation of smaller water schemes to reduce demand on other resources | ABS |
| River | Liffey | Kildare | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Liffey | Kildare | National Water Pricing Policy Framework (1998) | ABS |
| River | Liffey | Kildare | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Liffey | Kildare | Record daily abstraction rates | ABS |
| River | Liffey | Kildare | Water Supplies Act 1942 | ABS |
| River | Liffey | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009) | AGR |
| River | Liffey | Kildare | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|----------|--------------|--|--------|
| River | Liffey | Kildare | EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007) | CROSS |
| River | Liffey | Kildare | EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards) | CROSS |
| River | Liffey | Kildare | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Liffey | Kildare | Implement Upstream Programmes of Measures | CROSS |
| River | Liffey | Kildare | Planning Development Acts 2000 - 2006 | CROSS |
| River | Liffey | Kildare | Further investigation/monitoring required | DATA+ |
| River | Liffey | Kildare | Mitigate impact of quarry activities | DS |
| River | Liffey | Kildare | Water Quality Dangerous Substances Regulations, 2001 | DS |
| River | Liffey | Kildare | Develop guidance on suites of measures for different habitats | HS |
| River | Liffey | Kildare | Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001 | Manure |
| River | Liffey | Kildare | Local Government (Water Pollution) Act 1 of 1977 and amendments | S4 |
| River | Liffey | Kildare | Enforce Regulations on Septic Systems | Septic |
| River | Liffey | Kildare | Increase public awareness | Septic |
| River | Liffey | Kildare | Implement Fats, Oils and Grease Programme | WWTP |
| River | Liffey | Kildare | Investigate and eliminate misconnections | WWTP |
| River | Liffey | Kildare | Urban Waste Water Treatment Regulations, 2001 - 2004 | WWTP |
| River | Liffey | Kildare | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007) | WWTP |
| River | Liffey | South Dublin | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Liffey | South Dublin | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Liffey | South Dublin | National Water Pricing Policy Framework (1998) | ABS |
| River | Liffey | South Dublin | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Liffey | South Dublin | Water Supplies Act 1942 | ABS |
| River | Liffey | South Dublin | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Liffey | South Dublin | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Liffey | South Dublin | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Liffey | South Dublin | EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007) | CROSS |
| River | Liffey | South Dublin | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Liffey | South Dublin | EC (Control of Major Accident Hazards Involving Dangerous Substances) Regulations (S.I. 74 of 2006): After an accident, operator should take all necessary measures to clear up any pollution caused. | DS |
| River | Liffey | South Dublin | Further investigation/monitoring required | DATA+ |
| River | Liffey | South Dublin | EPA (Licensing) Regulations, 1994 & 2004: Grant and refuse IPPC licences subject to set-limits to reduce pollution effects | IPPC |
| River | Liffey | South Dublin | EPA (Licensing) Regulations, 1994 & 2004: Upgrade IPPC licensed facilities waste management structures and practices to best available technology | IPPC |
| River | Liffey | South Dublin | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| River | Liffey | South Dublin | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 12 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Liffey | South Dublin | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|----------|--------------|---|--------|
| River | Liffey | South Dublin | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Liffey | South Dublin | Diffuse Runoff (Urban) - Street Cleaning Programme | U-DIFF |
| River | Liffey | South Dublin | Collection System - Upgrades and rehabilitation | WWTP |
| River | Liffey | South Dublin | Investigate and eliminate misconnections | WWTP |
| River | Liffey | Wicklow | Alter the availability of supply through conjunctive use or integrated water resources management, water reuse, implementing SUDS in developed areas, implementation of abstraction controls, use of additional storage or alternative water source | ABS |
| River | Liffey | Wicklow | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Liffey | Wicklow | Develop and employ demand reduction measures | ABS |
| River | Liffey | Wicklow | Develop Habitat Suitability Curves for coarse fish and other important aquatic organisms | ABS |
| River | Liffey | Wicklow | Develop Habitat Suitability Curves for salmonids in Irish Rivers | ABS |
| River | Liffey | Wicklow | In flow regulated rivers, establish guidance on flow variations to support ecology | ABS |
| River | Liffey | Wicklow | Investigate implementation of smaller water schemes to reduce demand on other resources | ABS |
| River | Liffey | Wicklow | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Liffey | Wicklow | National Water Pricing Policy Framework (1998) | ABS |
| River | Liffey | Wicklow | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Liffey | Wicklow | Record daily abstraction rates | ABS |
| River | Liffey | Wicklow | Water Supplies Act 1942 | ABS |
| River | Liffey | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Liffey | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Liffey | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Liffey | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Liffey | Wicklow | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Liffey | Wicklow | EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007) | CROSS |
| River | Liffey | Wicklow | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Liffey | Wicklow | Further investigation/monitoring required | DATA+ |
| River | Liffey | Wicklow | Mitigate impact of quarry activities | DS |
| River | Liffey | Wicklow | Implement Forestry and Water Quality Guidelines | FOR |
| River | Liffey | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Liffey | Wicklow | Facilitate Fish Migration | MORP |
| River | Liffey | Wicklow | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Liffey | Wicklow | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| River | Liffey | Wicklow | Implement Community Digestors for Alternative Energy | WWTP |
| River | Liffey | Wicklow | Urban Waste Water Treatment Regulations, 2001 - 2004: Upgrade domestic WWTPs to secondary treatment for p.e's >2,000 discharging to rivers, lakes, & estuaries | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|----------|------------|--|--------|
| River | Lusk | Fingal | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Lusk | Fingal | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Lusk | Fingal | National Water Pricing Policy Framework (1998) | ABS |
| River | Lusk | Fingal | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Lusk | Fingal | Water Supplies Act 1942 | ABS |
| River | Lusk | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Lusk | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Lusk | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Lusk | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Lusk | Fingal | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Lusk | Fingal | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Lusk | Fingal | Further investigation/monitoring required | DATA+ |
| River | Lusk | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Lusk | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Appropriate distance from water body to be maintained for location of manure heaps | Manure |
| River | Lusk | Fingal | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Lusk | Fingal | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Lusk | Fingal | Develop septic system management programme | Septic |
| River | Lusk | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Develop collecting systems for p.e.'s >2,000 (unless negligible benefits or excessive costs) | WWTP |
| River | Lusk | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Treatment plant to be designed, constructed, operated and maintained to ensure satisfactory performance under all normal local climatic conditions. | WWTP |
| River | Lusk | Fingal | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007): Certify all waste water discharges less than 500 PE. | WWTP |
| River | Mosney | Meath | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Mosney | Meath | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Mosney | Meath | National Water Pricing Policy Framework (1998) | ABS |
| River | Mosney | Meath | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Mosney | Meath | Water Supplies Act 1942 | ABS |
| River | Mosney | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Mosney | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Mosney | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|----------|------------|--|--------|
| River | Mosney | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Mosney | Meath | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Mosney | Meath | PCS - Principles for Good Plant Protection Practice | Chem |
| River | Mosney | Meath | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Mosney | Meath | DEHLG - Code of Good Practice and Guidelines on the use of Biosolids in Agriculture, 1999 | Manure |
| River | Mosney | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Mosney | Meath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Mosney | Meath | Enforce Regulations on Septic Systems | Septic |
| River | Mosney | Meath | Implement Community Digestors for Alternative Energy | WWTP |
| River | Nanny | Fingal | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Nanny | Fingal | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Nanny | Fingal | National Water Pricing Policy Framework (1998) | ABS |
| River | Nanny | Fingal | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Nanny | Fingal | Water Supplies Act 1942 | ABS |
| River | Nanny | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Nanny | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Nanny | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Nanny | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Nanny | Fingal | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Nanny | Fingal | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Nanny | Fingal | Further investigation/monitoring required | DATA+ |
| River | Nanny | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Nanny | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Appropriate distance from water body to be maintained for location of manure heaps | Manure |
| River | Nanny | Fingal | Develop septic system management programme | Septic |
| River | Nanny | Fingal | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007): Certify all waste water discharges less than 500 PE. | WWTP |
| River | Nanny | Meath | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Nanny | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Nanny | Meath | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Nanny | Meath | National Water Pricing Policy Framework (1998) | ABS |
| River | Nanny | Meath | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Nanny | Meath | Water Supplies Act 1942 | ABS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|-----------|------------|--|--------|
| River | Nanny | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Nanny | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Nanny | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Nanny | Meath | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Nanny | Meath | PCS - Principles for Good Plant Protection Practice | Chem |
| River | Nanny | Meath | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Nanny | Meath | Further investigation/monitoring required | DATA+ |
| River | Nanny | Meath | DEHLG - Code of Good Practice and Guidelines on the use of Biosolids in Agriculture, 1999 | Manure |
| River | Nanny | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Nanny | Meath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Nanny | Meath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Nanny | Meath | Enforce Regulations on Septic Systems | Septic |
| River | Nanny | Meath | LAs to adopt a common Register of approved Site Assessors and common Code of Practice for maintaining register | Septic |
| River | Nanny | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| River | Nanny | Meath | OSWTS risk matrices to be integrated into Development Plans and Local Area Plans | Septic |
| River | Nanny | Meath | Urban Waste Water Treatment Regulations, 2001 - 2004: Develop collecting systems for p.e.'s >2,000 (unless negligible benefits or excessive costs) | WWTP |
| River | Nanny | Meath | Implement Community Digestors for Alternative Energy | WWTP |
| River | Nanny | Meath | Tertiary Treatment | WWTP |
| River | Nanny | Meath | Upgrade WWTW and Collecting Systems <2000 PE | WWTP |
| River | Newcastle | Wicklow | Assess CSO and Water Quality Impact from Urban Pressures | WWTP |
| River | Newcastle | Wicklow | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Newcastle | Wicklow | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Newcastle | Wicklow | National Water Pricing Policy Framework (1998) | ABS |
| River | Newcastle | Wicklow | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Newcastle | Wicklow | Water Supplies Act 1942 | ABS |
| River | Newcastle | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Newcastle | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Newcastle | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Newcastle | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Newcastle | Wicklow | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|-----------|------------|--|--------|
| River | Newcastle | Wicklow | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Newcastle | Wicklow | Further investigation/monitoring required | DATA+ |
| River | Newcastle | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Newcastle | Wicklow | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Newcastle | Wicklow | Carry out septic system inspections and upgrades | Septic |
| River | Newcastle | Wicklow | Diffuse Runoff (Urban) - Gullies Management | U-DIFF |
| River | Newcastle | Wicklow | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| River | Newcastle | Wicklow | Diffuse Runoff (Urban) - Street Cleaning Programme | U-DIFF |
| River | Newcastle | Wicklow | Collection System - Upgrades and rehabilitation | WWTP |
| River | Newcastle | Wicklow | Implement Community Digestors for Alternative Energy | WWTP |
| River | Newcastle | Wicklow | Investigate and eliminate misconnections | WWTP |
| River | Newcastle | Wicklow | Upgrade WWTW and Collecting Systems <2000 PE | WWTP |
| River | Potters | Wicklow | Carry out septic system inspections and upgrades | Septic |
| River | Potters | Wicklow | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Potters | Wicklow | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Potters | Wicklow | National Water Pricing Policy Framework (1998) | ABS |
| River | Potters | Wicklow | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Potters | Wicklow | Water Supplies Act 1942 | ABS |
| River | Potters | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Potters | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Potters | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Potters | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Potters | Wicklow | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Potters | Wicklow | EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007) | CROSS |
| River | Potters | Wicklow | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Potters | Wicklow | Further investigation/monitoring required | DATA+ |
| River | Potters | Wicklow | Mitigate impact of quarry activities | DS |
| River | Potters | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Potters | Wicklow | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Potters | Wicklow | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| River | Potters | Wicklow | Implement Community Digestors for Alternative Energy | WWTP |
| River | Potters | Wicklow | Upgrade WWTW and Collecting Systems <2000 PE | WWTP |
| River | Rathnew | Wicklow | Carry out septic system inspections and upgrades | Septic |
| River | Rathnew | Wicklow | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Rathnew | Wicklow | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Rathnew | Wicklow | National Water Pricing Policy Framework (1998) | ABS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|----------|------------|--|--------|
| River | Rathnew | Wicklow | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Rathnew | Wicklow | Water Supplies Act 1942 | ABS |
| River | Rathnew | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Rathnew | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Rathnew | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Rathnew | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Rathnew | Wicklow | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Rathnew | Wicklow | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Rathnew | Wicklow | Further investigation/monitoring required | DATA+ |
| River | Rathnew | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Rathnew | Wicklow | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Rathnew | Wicklow | Implement Community Digestors for Alternative Energy | WWTP |
| River | Rathnew | Wicklow | Implement SUDS | WWTP |
| River | Rathnew | Wicklow | Upgrade WWTW and Collecting Systems <2000 PE | WWTP |
| River | Ryewater | Kildare | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Ryewater | Kildare | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Ryewater | Kildare | National Water Pricing Policy Framework (1998) | ABS |
| River | Ryewater | Kildare | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Ryewater | Kildare | Water Supplies Act 1942 | ABS |
| River | Ryewater | Kildare | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009) | AGR |
| River | Ryewater | Kildare | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Ryewater | Kildare | EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards) | CROSS |
| River | Ryewater | Kildare | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Ryewater | Kildare | Planning Development Acts 2000 - 2006 | CROSS |
| River | Ryewater | Kildare | Further investigation/monitoring required | DATA+ |
| River | Ryewater | Kildare | Ensure compliance with OPW Environmental Drainage Maintenance Guidance Notes | MORP |
| River | Ryewater | Kildare | Local Government (Water Pollution) Act 1 of 1977 and amendments | S4 |
| River | Ryewater | Kildare | Enforce Regulations on Septic Systems | Septic |
| River | Ryewater | Kildare | Increase public awareness | Septic |
| River | Ryewater | Kildare | Implement Fats, Oils and Grease Programme | WWTP |
| River | Ryewater | Kildare | Urban Waste Water Treatment Regulations, 2001 - 2004 | WWTP |
| River | Ryewater | Kildare | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007) | WWTP |
| River | Ryewater | Meath | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Ryewater | Meath | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Ryewater | Meath | National Water Pricing Policy Framework (1998) | ABS |
| River | Ryewater | Meath | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|---------------------|-------------|--|--------|
| River | Ryewater | Meath | Water Supplies Act 1942 | ABS |
| River | Ryewater | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Ryewater | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Ryewater | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Ryewater | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Ryewater | Meath | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Ryewater | Meath | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Ryewater | Meath | Further investigation/monitoring required | DATA+ |
| River | Ryewater | Meath | DEHLG - Code of Good Practice and Guidelines on the use of Biosolids in Agriculture, 1999 | Manure |
| River | Ryewater | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Ryewater | Meath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Ryewater | Meath | Enforce Regulations on Septic Systems | Septic |
| River | Ryewater | Meath | LAs to adopt a common Register of approved Site Assessors and common Code of Practice for maintaining register | Septic |
| River | Ryewater | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| River | Ryewater | Meath | OSWTS risk matrices to be integrated into Development Plans and Local Area Plans | Septic |
| River | Ryewater | Meath | Urban Waste Water Treatment Regulations, 2001 - 2004: Develop collecting systems for p.e.'s >2,000 (unless negligible benefits or excessive costs) | WWTP |
| River | Ryewater | Meath | Implement Community Digestors for Alternative Energy | WWTP |
| River | Santry_Mayne_Sluice | Dublin City | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Santry_Mayne_Sluice | Dublin City | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Santry_Mayne_Sluice | Dublin City | Implement Measures in other Pressure Categories | CROSS |
| River | Santry_Mayne_Sluice | Dublin City | Implement Upstream Programmes of Measures | CROSS |
| River | Santry_Mayne_Sluice | Dublin City | Planning and Development Regulations 2001 - 2007 | CROSS |
| River | Santry_Mayne_Sluice | Dublin City | Further investigation/monitoring required | DATA+ |
| River | Santry_Mayne_Sluice | Dublin City | Further investigation/monitoring required | DATA+ |
| River | Santry_Mayne_Sluice | Dublin City | Survey Banks/Coast | DATA+ |
| River | Santry_Mayne_Sluice | Dublin City | EPA (Licensing) Regulations, 1994 & 2004 | IPPC |
| River | Santry_Mayne_Sluice | Dublin City | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| River | Santry_Mayne_Sluice | Dublin City | Local Government (Water Pollution) Act 1 of 1977 and amendments | S4 |
| River | Santry_Mayne_Sluice | Dublin City | Diffuse Runoff (Urban) - Gullies Management | U-DIFF |
| River | Santry_Mayne_Sluice | Dublin City | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|---------------------|-------------|--|--------|
| River | Santry_Mayne_Sluice | Dublin City | Diffuse Runoff (Urban) - Storm sewers separation and qualitative improvement | U-DIFF |
| River | Santry_Mayne_Sluice | Dublin City | Assess CSO and Water Quality Impact from Urban Pressures | WWTP |
| River | Santry_Mayne_Sluice | Dublin City | Collection system - Network management & operations programme | WWTP |
| River | Santry_Mayne_Sluice | Dublin City | Collection System - Upgrades and rehabilitation | WWTP |
| River | Santry_Mayne_Sluice | Dublin City | Implement Fats, Oils and Grease Programme | WWTP |
| River | Santry_Mayne_Sluice | Dublin City | Investigate and eliminate misconnections | WWTP |
| River | Santry_Mayne_Sluice | Dublin City | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007) | WWTP |
| River | Santry_Mayne_Sluice | Fingal | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Santry_Mayne_Sluice | Fingal | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Santry_Mayne_Sluice | Fingal | National Water Pricing Policy Framework (1998) | ABS |
| River | Santry_Mayne_Sluice | Fingal | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Santry_Mayne_Sluice | Fingal | Water Supplies Act 1942 | ABS |
| River | Santry_Mayne_Sluice | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Santry_Mayne_Sluice | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Santry_Mayne_Sluice | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Santry_Mayne_Sluice | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Santry_Mayne_Sluice | Fingal | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Santry_Mayne_Sluice | Fingal | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Santry_Mayne_Sluice | Fingal | Further investigation/monitoring required | DATA+ |
| River | Santry_Mayne_Sluice | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Appropriate distance from water body to be maintained for location of manure heaps | Manure |
| River | Santry_Mayne_Sluice | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Santry_Mayne_Sluice | Fingal | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| River | Santry_Mayne_Sluice | Fingal | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Santry_Mayne_Sluice | Fingal | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Santry_Mayne_Sluice | Fingal | Carry out septic system inspections and upgrades | Septic |
| River | Santry_Mayne_Sluice | Fingal | Develop septic system management programme | Septic |
| River | Santry_Mayne_Sluice | Fingal | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007): Certify all waste water discharges less than 500 PE. | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|---------------------|------------|---|--------|
| River | Santry_Mayne_Sluice | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Develop collecting systems for p.e.'s >2,000 (unless negligible benefits or excessive costs) | WWTP |
| River | Shanganagh | DLRCC | Alter the availability of supply through conjunctive use or integrated water resources management, water reuse, implementing SUDS in developed areas, implementation of abstraction controls, use of additional storage or alternative water source | ABS |
| River | Shanganagh | DLRCC | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Shanganagh | DLRCC | Develop and employ demand reduction measures | ABS |
| River | Shanganagh | DLRCC | Develop Habitat Suitability Curves for coarse fish and other important aquatic organisms | ABS |
| River | Shanganagh | DLRCC | Develop Habitat Suitability Curves for salmonids in Irish Rivers | ABS |
| River | Shanganagh | DLRCC | In flow regulated rivers, establish guidance on flow variations to support ecology | ABS |
| River | Shanganagh | DLRCC | Investigate implementation of smaller water schemes to reduce demand on other resources | ABS |
| River | Shanganagh | DLRCC | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Shanganagh | DLRCC | National Water Pricing Policy Framework (1998) | ABS |
| River | Shanganagh | DLRCC | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Shanganagh | DLRCC | Record daily abstraction rates | ABS |
| River | Shanganagh | DLRCC | Water Supplies Act 1942 | ABS |
| River | Shanganagh | DLRCC | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009) | AGR |
| River | Shanganagh | DLRCC | EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards): Carry out full Environmental Impact Assessment prior to development in accordance with legislation | CROSS |
| River | Shanganagh | DLRCC | EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007) | CROSS |
| River | Shanganagh | DLRCC | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Shanganagh | DLRCC | Planning and Development Regulations 2001 - 2007 | CROSS |
| River | Shanganagh | DLRCC | River Polishing - Reed Bed | CROSS |
| River | Shanganagh | DLRCC | Survey Banks/Coast | DATA+ |
| River | Shanganagh | DLRCC | EC (Control of Major Accident Hazards Involving Dangerous Substances) Regulations (S.I. 74 of 2006) | DS |
| River | Shanganagh | DLRCC | EC (Natural Habitats) Regulations 1997- 2005 | ECO |
| River | Shanganagh | DLRCC | Fisheries Act 1959 - 1981 | ECO |
| River | Shanganagh | DLRCC | EPA (Licensing) Regulations, 1994 & 2004 | IPPC |
| River | Shanganagh | DLRCC | Facilitate Fish Migration | MORP |
| River | Shanganagh | DLRCC | Introduce Soft Edges to Inferior Habitats | MORP |
| River | Shanganagh | DLRCC | Preserve and/or restore banks | MORP |
| River | Shanganagh | DLRCC | Address diffuse silt pollution from green field site development | MORP |
| River | Shanganagh | DLRCC | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Shanganagh | DLRCC | CSOs to comply with GDSDS recommendations | WWTP |
| River | Shanganagh | DLRCC | Implement Fats, Oils and Grease Programme | WWTP |
| River | Shanganagh | DLRCC | Investigate and eliminate misconnections | WWTP |
| River | Stonyford | Meath | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Stonyford | Meath | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Stonyford | Meath | National Water Pricing Policy Framework (1998) | ABS |
| River | Stonyford | Meath | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Stonyford | Meath | Water Supplies Act 1942 | ABS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|-------------|------------|--|--------|
| River | Stonyford | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Stonyford | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Stonyford | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Stonyford | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Stonyford | Meath | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Stonyford | Meath | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Stonyford | Meath | DEHLG - Code of Good Practice and Guidelines on the use of Biosolids in Agriculture, 1999 | Manure |
| River | Stonyford | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Stonyford | Meath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Stonyford | Meath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Stonyford | Meath | Enforce Regulations on Septic Systems | Septic |
| River | Stonyford | Meath | Implement Community Digestors for Alternative Energy | WWTP |
| River | Stonyford | Westmeath | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Stonyford | Westmeath | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Stonyford | Westmeath | National Water Pricing Policy Framework (1998) | ABS |
| River | Stonyford | Westmeath | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Stonyford | Westmeath | Water Supplies Act 1942 | ABS |
| River | Stonyford | Westmeath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Stonyford | Westmeath | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Stonyford | Westmeath | Further investigation/monitoring required | DATA+ |
| River | Stonyford | Westmeath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 12 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Stonyford | Westmeath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Stonyford | Westmeath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Stonyford | Westmeath | Implement Community Digestors for Alternative Energy | WWTP |
| River | Stonyford | Westmeath | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007): License all waste water discharges of greater than 500 PE | WWTP |
| River | Stonyford | Westmeath | Urban Waste Water Treatment Regulations, 2001 - 2004: Treatment plant to be designed, constructed, operated and maintained to ensure satisfactory performance under all normal local climatic conditions. | WWTP |
| River | Tempelrainy | Wicklow | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Tempelrainy | Wicklow | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Tempelrainy | Wicklow | National Water Pricing Policy Framework (1998) | ABS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|-------------|-------------|--|--------|
| River | Tempelrainy | Wicklow | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Tempelrainy | Wicklow | Water Supplies Act 1942 | ABS |
| River | Tempelrainy | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Tempelrainy | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Tempelrainy | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Tempelrainy | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Tempelrainy | Wicklow | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Tempelrainy | Wicklow | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Tempelrainy | Wicklow | Further investigation/monitoring required | DATA+ |
| River | Tempelrainy | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Tempelrainy | Wicklow | Carry out septic system inspections and upgrades | Septic |
| River | Tempelrainy | Wicklow | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| River | Tempelrainy | Wicklow | Collection System - Upgrades and rehabilitation | WWTP |
| River | Tempelrainy | Wicklow | Implement Community Digestors for Alternative Energy | WWTP |
| River | Tolka | Dublin City | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Tolka | Dublin City | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Tolka | Dublin City | Implement Measures in other Pressure Categories | CROSS |
| River | Tolka | Dublin City | Implement Upstream Programmes of Measures | CROSS |
| River | Tolka | Dublin City | Planning and Development Regulations 2001 - 2007 | CROSS |
| River | Tolka | Dublin City | Further investigation/monitoring required | DATA+ |
| River | Tolka | Dublin City | Survey Banks/Coast | DATA+ |
| River | Tolka | Dublin City | EPA (Licensing) Regulations, 1994 & 2004 | IPPC |
| River | Tolka | Dublin City | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| River | Tolka | Dublin City | Local Government (Water Pollution) Act 1 of 1977 and amendments | S4 |
| River | Tolka | Dublin City | Diffuse Runoff (Urban) - Gullies Management | U-DIFF |
| River | Tolka | Dublin City | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| River | Tolka | Dublin City | Diffuse Runoff (Urban) - Storm sewers separation and qualitative improvement | U-DIFF |
| River | Tolka | Dublin City | Assess CSO and Water Quality Impact from Urban Pressures | WWTP |
| River | Tolka | Dublin City | Collection system - Network management & operations programme | WWTP |
| River | Tolka | Dublin City | Collection System - Upgrades and rehabilitation | WWTP |
| River | Tolka | Dublin City | Implement Fats, Oils and Grease Programme | WWTP |
| River | Tolka | Dublin City | Investigate and eliminate misconnections | WWTP |
| River | Tolka | Dublin City | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007) | WWTP |
| River | Tolka | Fingal | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Tolka | Fingal | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Tolka | Fingal | National Water Pricing Policy Framework (1998) | ABS |
| River | Tolka | Fingal | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Tolka | Fingal | Water Supplies Act 1942 | ABS |
| River | Tolka | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|----------|------------|--|--------|
| River | Tolka | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Tolka | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Tolka | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Tolka | Fingal | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Tolka | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Tolka | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Appropriate distance from water body to be maintained for location of manure heaps | Manure |
| River | Tolka | Fingal | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Tolka | Fingal | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Tolka | Fingal | Develop septic system management programme | Septic |
| River | Tolka | Fingal | Carry out septic system inspections and upgrades | Septic |
| River | Tolka | Fingal | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007): Certify all waste water discharges less than 500 PE. | WWTP |
| River | Tolka | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Develop collecting systems for p.e.'s >2,000 (unless negligible benefits or excessive costs) | WWTP |
| River | Tolka | Meath | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Tolka | Meath | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Tolka | Meath | National Water Pricing Policy Framework (1998) | ABS |
| River | Tolka | Meath | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Tolka | Meath | Water Supplies Act 1942 | ABS |
| River | Tolka | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Tolka | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Tolka | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Tolka | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Tolka | Meath | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Tolka | Meath | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Tolka | Meath | Further investigation/monitoring required | DATA+ |
| River | Tolka | Meath | DEHLG - Code of Good Practice and Guidelines on the use of Biosolids in Agriculture, 1999 | Manure |
| River | Tolka | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Tolka | Meath | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|---------|----------|------------|---|--------|
| River | Tolka | Meath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | S4 |
| River | Tolka | Meath | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Tolka | Meath | Enforce Regulations on Septic Systems | Septic |
| River | Tolka | Meath | LAs to adopt a common Register of approved Site Assessors and common Code of Practice for maintaining register | Septic |
| River | Tolka | Meath | LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Septic |
| River | Tolka | Meath | OSWTS risk matrices to be integrated into Development Plans and Local Area Plans | Septic |
| River | Tolka | Meath | Urban Waste Water Treatment Regulations, 2001 - 2004: Develop collecting systems for p.e.'s >2,000 (unless negligible benefits or excessive costs) | WWTP |
| River | Tolka | Meath | Implement Community Digestors for Alternative Energy | WWTP |
| River | Tolka | Meath | Upgrade WWTW and Collecting Systems <2000 PE | WWTP |
| | | | | |
| River | Vartry | Wicklow | Alter the availability of supply through conjunctive use or integrated water resources management, water reuse, implementing SUDS in developed areas, implementation of abstraction controls, use of additional storage or alternative water source | ABS |
| River | Vartry | Wicklow | Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | ABS |
| River | Vartry | Wicklow | Develop and employ demand reduction measures | ABS |
| River | Vartry | Wicklow | Develop Habitat Suitability Curves for coarse fish and other important aquatic organisms | ABS |
| River | Vartry | Wicklow | Develop Habitat Suitability Curves for salmonids in Irish Rivers | ABS |
| River | Vartry | Wicklow | Establish Minimum Instream Flow Conditions and requirements for compensation releases to allow flow variations | ABS |
| River | Vartry | Wicklow | In flow regulated rivers, establish guidance on flow variations to support ecology | ABS |
| River | Vartry | Wicklow | Investigate implementation of smaller water schemes to reduce demand on other resources | ABS |
| River | Vartry | Wicklow | Modernise Abstraction Legislation, including a system for licensing surface water abstractions | ABS |
| River | Vartry | Wicklow | National Water Pricing Policy Framework (1998) | ABS |
| River | Vartry | Wicklow | Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | ABS |
| River | Vartry | Wicklow | Record daily abstraction rates | ABS |
| River | Vartry | Wicklow | Water Supplies Act 1942 | ABS |
| River | Vartry | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | AGR |
| River | Vartry | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | AGR-PS |
| River | Vartry | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | AGR-PS |
| River | Vartry | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | AGR-PS |
| River | Vartry | Wicklow | Restrict Cattle Access to rivers - Create Cattle Drinking points | AGR-PS |
| River | Vartry | Wicklow | EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007) | CROSS |
| River | Vartry | Wicklow | Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | CROSS |
| River | Vartry | Wicklow | Further investigation/monitoring required | DATA+ |
| River | Vartry | Wicklow | Mitigate impact of quarry activities | DS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|--------------|---------------|------------|---|--------|
| River | Vartry | Wicklow | Implement Forestry and Water Quality Guidelines | FOR |
| River | Vartry | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure |
| River | Vartry | Wicklow | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| River | Vartry | Wicklow | Carry out septic system inspections and upgrades | Septic |
| River | Vartry | Wicklow | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| River | Vartry | Wicklow | Implement Community Digestors for Alternative Energy | WWTP |
| River | Vartry | Wicklow | Upgrade WWTW and Collecting Systems <2000 PE | WWTP |
| Transitional | Avoca Estuary | Wicklow | EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards) | CROSS |
| Transitional | Avoca Estuary | Wicklow | Implement Upstream Programmes of Measures | CROSS |
| Transitional | Avoca Estuary | Wicklow | Planning and Development Regulations 2001 - 2007 | CROSS |
| Transitional | Avoca Estuary | Wicklow | Survey Banks/Coast | DATA+ |
| Transitional | Avoca Estuary | Wicklow | EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC) | DS |
| Transitional | Avoca Estuary | Wicklow | Framework for Major Emergency Management, Office of Emergency Planning, 2006 | DS |
| Transitional | Avoca Estuary | Wicklow | EC (Port Reception Facilities for Ship Generated Waste and Cargo Residues) Regulations (S.I. 117 of 2003): Improve the availability and use of port reception facilities for ship-generated waste and cargo residues | DS |
| Transitional | Avoca Estuary | Wicklow | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Transitional | Avoca Estuary | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Transitional | Avoca Estuary | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Transitional | Avoca Estuary | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Transitional | Avoca Estuary | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Transitional | Avoca Estuary | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Transitional | Avoca Estuary | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Transitional | Avoca Estuary | Wicklow | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Transitional | Avoca Estuary | Wicklow | ICZM - Using the RBMP process, continue to include departmental co-operation for TraC water body management. | MORP |
| Transitional | Avoca Estuary | Wicklow | Introduce Soft Edges to Inferior Habitats | MORP |
| Transitional | Avoca Estuary | Wicklow | Foreshore Act (1933): Licence required for any works on the foreshore. | MORP |
| Transitional | Avoca Estuary | Wicklow | Preserve and/or restore banks | MORP |
| Transitional | Avoca Estuary | Wicklow | Review Dredging Practice | MORP |
| Transitional | Avoca Estuary | Wicklow | Use MlMAS as a risk assessment tool to assess water body status deterioration related to developments affecting transitional and coastal water bodies | MORP |
| Transitional | Avoca Estuary | Wicklow | Assess channelisation & flood embankments using MlMAS | MORP |
| Transitional | Avoca Estuary | Wicklow | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| Transitional | Avoca Estuary | Wicklow | Treatment Plant Tie-ins | Septic |
| Transitional | Avoca Estuary | Wicklow | Diffuse Runoff (Urban) - Gullies Management | U-DIFF |
| Transitional | Avoca Estuary | Wicklow | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| Transitional | Avoca Estuary | Wicklow | Diffuse Runoff (Urban) - Storm sewers separation and qualitative improvement | U-DIFF |
| Transitional | Avoca Estuary | Wicklow | Diffuse Runoff (Urban) - Street Cleaning Programme | U-DIFF |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|--------------|---------------|------------|---|--------|
| Transitional | Avoca Estuary | Wicklow | Urban Waste Water Treatment Regulations, 2001 - 2004: Choose the point of discharge to minimise the adverse effects on the environment | WWTP |
| Transitional | Avoca Estuary | Wicklow | Urban Waste Water Treatment Regulations, 2001 - 2004: Develop collecting systems for p.e.'s >2,000 (unless negligible benefits or excessive costs) | WWTP |
| Transitional | Avoca Estuary | Wicklow | Urban Waste Water Treatment Regulations, 2001 - 2004: Industrial waste water entering a collecting system and UWW treatment plants shall be pre-treated if necessary to avoid any damage to the process | WWTP |
| Transitional | Avoca Estuary | Wicklow | Urban Waste Water Treatment Regulations, 2001 - 2004: Monitor the discharge from urban wastewater treatment plants and check the quality compliance with urban wastewater treatment legislation | WWTP |
| Transitional | Avoca Estuary | Wicklow | Urban Waste Water Treatment Regulations, 2001 - 2004: Treatment plant to be designed, constructed, operated and maintained to ensure satisfactory performance under all normal local climatic conditions. | WWTP |
| Transitional | Avoca Estuary | Wicklow | Urban Waste Water Treatment Regulations, 2001 - 2004: Upgrade domestic WWTWs to secondary treatment for p.e.'s >2,000 discharging to rivers, lakes, & estuaries | WWTP |
| Transitional | Avoca Estuary | Wicklow | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007) | WWTP |
| Transitional | Avoca Estuary | Wicklow | Water Services Act 2007 | WWTP |
| Transitional | Boyne Estuary | Louth | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009) | AGR |
| Transitional | Boyne Estuary | Louth | Implement Upstream Programmes of Measures | CROSS |
| Transitional | Boyne Estuary | Louth | Survey Banks/Coast | DATA+ |
| Transitional | Boyne Estuary | Louth | EC (Control of Major Accident Hazards Involving Dangerous Substances) Regulations (S.I. 74 of 2006) | DS |
| Transitional | Boyne Estuary | Louth | EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC) | DS |
| Transitional | Boyne Estuary | Louth | Harbour dredgings to be suitably disposed of | DS |
| Transitional | Boyne Estuary | Louth | Monitor Shipping Activities | DS |
| Transitional | Boyne Estuary | Louth | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Transitional | Boyne Estuary | Louth | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Transitional | Boyne Estuary | Louth | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Transitional | Boyne Estuary | Louth | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Transitional | Boyne Estuary | Louth | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Transitional | Boyne Estuary | Louth | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Transitional | Boyne Estuary | Louth | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Transitional | Boyne Estuary | Louth | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Transitional | Boyne Estuary | Louth | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| Transitional | Boyne Estuary | Louth | Diffuse Runoff (Urban) - Gullies Management | U-DIFF |
| Transitional | Boyne Estuary | Louth | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| Transitional | Boyne Estuary | Louth | Diffuse Runoff (Urban) - Street Cleaning Programme | U-DIFF |
| Transitional | Boyne Estuary | Louth | Urban Waste Water Treatment Regulations, 2001 - 2004: Monitor the discharge from urban wastewater treatment plants and check the quality compliance with urban wastewater treatment legislation | WWTP |
| Transitional | Boyne Estuary | Louth | Urban Waste Water Treatment Regulations, 2001 - 2004: Treatment plant to be designed, constructed, operated and maintained to ensure satisfactory performance under all normal local climatic conditions. | WWTP |
| Transitional | Boyne Estuary | Louth | Assess CSO and Water Quality Impact from Urban Pressures | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|--------------|-------------------|------------|--|--------|
| Transitional | Boyne Estuary | Louth | Urban Waste Water Treatment Regulations, 2001 - 2004: Upgrade domestic WWTWs to secondary treatment for p.e's >2,000 discharging to rivers, lakes, & estuaries | WWTP |
| Transitional | Boyne Estuary | Meath | Implement Upstream Programmes of Measures | CROSS |
| Transitional | Boyne Estuary | Meath | Survey Banks/Coast | DATA+ |
| Transitional | Boyne Estuary | Meath | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Transitional | Boyne Estuary | Meath | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Transitional | Boyne Estuary | Meath | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Transitional | Boyne Estuary | Meath | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Transitional | Boyne Estuary | Meath | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Transitional | Boyne Estuary | Meath | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Transitional | Boyne Estuary | Meath | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Transitional | Boyne Estuary | Meath | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| Transitional | Boyne Estuary | Meath | Diffuse Runoff (Urban) - Gullies Management | U-DIFF |
| Transitional | Boyne Estuary | Meath | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| Transitional | Boyne Estuary | Meath | Diffuse Runoff (Urban) - Street Cleaning Programme | U-DIFF |
| Transitional | Boyne Estuary | Meath | Urban Waste Water Treatment Regulations, 2001 - 2004: Upgrade domestic WWTWs to secondary treatment for p.e's >2,000 discharging to rivers, lakes, & estuaries | WWTP |
| Transitional | Boyne Estuary | Meath | Assess CSO and Water Quality Impact from Urban Pressures | WWTP |
| Transitional | Broad Lough | Wicklow | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009) | AGR |
| Transitional | Broad Lough | Wicklow | Survey Banks/Coast | DATA+ |
| Transitional | Broad Lough | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Transitional | Broad Lough | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Transitional | Broad Lough | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Transitional | Broad Lough | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Transitional | Broad Lough | Wicklow | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Transitional | Broad Lough | Wicklow | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Transitional | Broad Lough | Wicklow | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Transitional | Broad Lough | Wicklow | Diffuse Runoff (Urban) - Gullies Management | U-DIFF |
| Transitional | Broad Lough | Wicklow | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| Transitional | Broad Lough | Wicklow | Diffuse Runoff (Urban) - Storm sewers separation and qualitative improvement | U-DIFF |
| Transitional | Broad Lough | Wicklow | Diffuse Runoff (Urban) - Street Cleaning Programme | U-DIFF |
| Transitional | Broad Lough | Wicklow | Collection system - Network management & operations programme | WWTP |
| Transitional | Broad Lough | Wicklow | Collection System - Upgrades and rehabilitation | WWTP |
| Transitional | Broad Lough | Wicklow | CSO - Implement FOGG Regulations | WWTP |
| Transitional | Broadmeadow Water | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009) | AGR |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|--------------|-------------------|------------|---|--------|
| Transitional | Broadmeadow Water | Fingal | Implement Upstream Programmes of Measures | CROSS |
| Transitional | Broadmeadow Water | Fingal | Planning Development Acts 2000 - 2006 | CROSS |
| Transitional | Broadmeadow Water | Fingal | Survey Banks/Coast | DATA+ |
| Transitional | Broadmeadow Water | Fingal | Local Government (Water Pollution) Act 1977 (Water Quality Standards for Phosphorus) Regulations, 1998 (S.I. 258 of 1998) | DS |
| Transitional | Broadmeadow Water | Fingal | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Transitional | Broadmeadow Water | Fingal | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Transitional | Broadmeadow Water | Fingal | The Quality of Shellfish Waters Regulation Regulations, 2006 (S.I. 268 of 2006): Determine causes of non compliance and corrective actions | ECO |
| Transitional | Broadmeadow Water | Fingal | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Transitional | Broadmeadow Water | Fingal | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Transitional | Broadmeadow Water | Fingal | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Transitional | Broadmeadow Water | Fingal | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Transitional | Broadmeadow Water | Fingal | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Transitional | Broadmeadow Water | Fingal | The Quality of Shellfish Waters Regulation Regulations, 2006 (S.I. 268 of 2006): Test Shellfish water compliance to standards defined in regulations | ECO |
| Transitional | Broadmeadow Water | Fingal | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Transitional | Broadmeadow Water | Fingal | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| Transitional | Broadmeadow Water | Fingal | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| Transitional | Broadmeadow Water | Fingal | Diffuse Runoff (Urban) - Gullies Management | U-DIFF |
| Transitional | Broadmeadow Water | Fingal | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| Transitional | Broadmeadow Water | Fingal | Diffuse Runoff (Urban) - Storm sewers separation and qualitative improvement | U-DIFF |
| Transitional | Broadmeadow Water | Fingal | Diffuse Runoff (Urban) - Street Cleaning Programme | U-DIFF |
| Transitional | Broadmeadow Water | Fingal | Collection system - Network management & operations programme | WWTP |
| Transitional | Broadmeadow Water | Fingal | Collection System - Upgrades and rehabilitation | WWTP |
| Transitional | Broadmeadow Water | Fingal | CSO - Implement FOGG Regulations | WWTP |
| Transitional | Broadmeadow Water | Fingal | CSOs to comply with GDSDS recommendations | WWTP |
| Transitional | Broadmeadow Water | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Monitor the discharge from urban wastewater treatment plants and check the quality compliance with urban wastewater treatment legislation | WWTP |
| Transitional | Broadmeadow Water | Fingal | Tertiary Treatment | WWTP |
| Transitional | Broadmeadow Water | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Treatment plant to be designed, constructed, operated and maintained to ensure satisfactory performance under all normal local climatic conditions. | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|--------------|----------------------|-------------|---|--------|
| Transitional | Broadmeadow Water | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Upgrade domestic WWTWs to secondary treatment for p.e's >2,000 discharging to rivers, lakes, & estuaries | WWTP |
| Transitional | Broadmeadow Water | Fingal | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007) | WWTP |
| Transitional | Broadmeadow Water | Fingal | Water Services Act 2007 | WWTP |
| Transitional | Dargle Estuary | Wicklow | Implement Upstream Programmes of Measures | CROSS |
| Transitional | Dargle Estuary | Wicklow | Further investigation/monitoring required | DATA+ |
| Transitional | Dargle Estuary | Wicklow | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| Transitional | Kilcoole Marsh | Wicklow | Further investigation/monitoring required | DATA+ |
| Transitional | Liffey Estuary Lower | Dublin City | Survey Banks/Coast | DATA+ |
| Transitional | Liffey Estuary Lower | Dublin City | EC (Control of Major Accident Hazards Involving Dangerous Substances) Regulations (S.I. 74 of 2006) | DS |
| Transitional | Liffey Estuary Lower | Dublin City | EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC) | DS |
| Transitional | Liffey Estuary Lower | Dublin City | Framework for Major Emergency Management, Office of Emergency Planning, 2006 | DS |
| Transitional | Liffey Estuary Lower | Dublin City | Local Government (Water Pollution) Act 1977 (Water Quality Standards for Phosphorus) Regulations, 1998 (S.I. 258 of 1998) | DS |
| Transitional | Liffey Estuary Lower | Dublin City | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Transitional | Liffey Estuary Lower | Dublin City | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Transitional | Liffey Estuary Lower | Dublin City | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Transitional | Liffey Estuary Lower | Dublin City | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Transitional | Liffey Estuary Lower | Dublin City | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Transitional | Liffey Estuary Lower | Dublin City | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Transitional | Liffey Estuary Lower | Dublin City | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Transitional | Liffey Estuary Lower | Dublin City | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Transitional | Liffey Estuary Lower | Dublin City | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| Transitional | Liffey Estuary Lower | Dublin City | LA to adopt a common approach to issuance of Section 4 and 16 licences | S4 |
| Transitional | Liffey Estuary Lower | Dublin City | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| Transitional | Liffey Estuary Lower | Dublin City | Diffuse Runoff (Urban) - Gullies Management | U-DIFF |
| Transitional | Liffey Estuary Lower | Dublin City | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| Transitional | Liffey Estuary Lower | Dublin City | Diffuse Runoff (Urban) - Street Cleaning Programme | U-DIFF |
| Transitional | Liffey Estuary Lower | Dublin City | Urban Waste Water Treatment Regulations, 2001 - 2004: Choose the point of discharge to minimise the adverse effects on the environment | WWTP |
| Transitional | Liffey Estuary Lower | Dublin City | Collection System - Upgrades and rehabilitation | WWTP |
| Transitional | Liffey Estuary Lower | Dublin City | LA to adopt common approach for analysis and reporting of water/effluent samples at WWTP | WWTP |
| Transitional | Liffey Estuary Lower | Dublin City | Urban Waste Water Treatment Regulations, 2001 - 2004: Monitor the discharge from urban wastewater treatment plants and check the quality compliance with urban wastewater treatment legislation | WWTP |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|--------------|----------------------|-------------|---|--------|
| Transitional | Liffey Estuary Lower | Dublin City | PMS should be implemented and audited at all WWTPs | WWTP |
| Transitional | Liffey Estuary Lower | Dublin City | Tertiary Treatment | WWTP |
| Transitional | Liffey Estuary Lower | Dublin City | Urban Waste Water Treatment Regulations, 2001 - 2004: Treatment plant to be designed, constructed, operated and maintained to ensure satisfactory performance under all normal local climatic conditions. | WWTP |
| Transitional | Liffey Estuary Lower | Dublin City | Urban Waste Water Treatment Regulations, 2001 - 2004: Upgrade domestic WWTPs to 15 mg/l or $\geq 70\%$ TN reduction for p.e.'s >10,000 and discharging to sensitive waters (unless no eutrophication potential) | WWTP |
| Transitional | Liffey Estuary Lower | Dublin City | Urban Waste Water Treatment Regulations, 2001 - 2004: Upgrade domestic WWTPs to 2 mg/l or $\geq 80\%$ TP reduction for p.e.'s >10,000 discharging to sensitive waters (unless no eutrophication potential) | WWTP |
| Transitional | Liffey Estuary Lower | Dublin City | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007) | WWTP |
| Transitional | Liffey Estuary Lower | Dublin City | Water Services Act 2007 | WWTP |
| Transitional | Liffey Estuary Lower | Dublin City | Assess CSO and Water Quality Impact from Urban Pressures | WWTP |
| Transitional | Liffey Estuary Upper | Dublin City | Implement Upstream Programmes of Measures | CROSS |
| Transitional | Liffey Estuary Upper | Dublin City | Survey Banks/Coast | DATA+ |
| Transitional | Liffey Estuary Upper | Dublin City | EC (Control of Major Accident Hazards Involving Dangerous Substances) Regulations (S.I. 74 of 2006) | DS |
| Transitional | Liffey Estuary Upper | Dublin City | Framework for Major Emergency Management, Office of Emergency Planning, 2006 | DS |
| Transitional | Liffey Estuary Upper | Dublin City | Local Government (Water Pollution) Act 1977 (Water Quality Standards for Phosphorus) Regulations, 1998 (S.I. 258 of 1998) | DS |
| Transitional | Liffey Estuary Upper | Dublin City | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Transitional | Liffey Estuary Upper | Dublin City | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Transitional | Liffey Estuary Upper | Dublin City | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Transitional | Liffey Estuary Upper | Dublin City | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Transitional | Liffey Estuary Upper | Dublin City | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Transitional | Liffey Estuary Upper | Dublin City | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Transitional | Liffey Estuary Upper | Dublin City | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Transitional | Liffey Estuary Upper | Dublin City | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Transitional | Liffey Estuary Upper | Dublin City | EPA (Licensing) Regulations, 1994 & 2004 | IPPC |
| Transitional | Liffey Estuary Upper | Dublin City | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| Transitional | Liffey Estuary Upper | Dublin City | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| Transitional | Liffey Estuary Upper | Dublin City | LA to adopt a common approach to issuance of Section 4 and 16 licences | S4 |
| Transitional | Liffey Estuary Upper | Dublin City | Diffuse Runoff (Urban) - Gullies Management | U-DIFF |
| Transitional | Liffey Estuary Upper | Dublin City | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| Transitional | Liffey Estuary Upper | Dublin City | Diffuse Runoff (Urban) - Street Cleaning Programme | U-DIFF |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|--------------|----------------------|-------------|--|--------|
| Transitional | Liffey Estuary Upper | Dublin City | Assess CSO and Water Quality Impact from Urban Pressures | WWTP |
| Transitional | Liffey Estuary Upper | Dublin City | Collection System - Upgrades and rehabilitation | WWTP |
| Transitional | Mayne Estuary | Fingal | EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards) | CROSS |
| Transitional | Mayne Estuary | Fingal | Implement Upstream Programmes of Measures | CROSS |
| Transitional | Mayne Estuary | Fingal | Planning and Development Regulations 2001 - 2007 | CROSS |
| Transitional | Mayne Estuary | Fingal | Further investigation/monitoring required | DATA+ |
| Transitional | Mayne Estuary | Fingal | Survey Banks/Coast | DATA+ |
| Transitional | Mayne Estuary | Fingal | Local Government (Water Pollution) Act 1977 (Water Quality Standards for Phosphorus) Regulations, 1998 (S.I. 258 of 1998) | DS |
| Transitional | Mayne Estuary | Fingal | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Transitional | Mayne Estuary | Fingal | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Transitional | Mayne Estuary | Fingal | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Transitional | Mayne Estuary | Fingal | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Transitional | Mayne Estuary | Fingal | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Transitional | Mayne Estuary | Fingal | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Transitional | Mayne Estuary | Fingal | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Transitional | Mayne Estuary | Fingal | Assess channelisation & flood embankments using MImAS | MORP |
| Transitional | Mayne Estuary | Fingal | Consider morphology within the current development (SEA, EIA, etc) appraisal process | MORP |
| Transitional | Mayne Estuary | Fingal | Foreshore Act (1933) | MORP |
| Transitional | Mayne Estuary | Fingal | ICZM - Using the RBMP process, continue to include departmental co-operation for TraC water body management. | MORP |
| Transitional | Mayne Estuary | Fingal | Introduce Soft Edges to Inferior Habitats | MORP |
| Transitional | Mayne Estuary | Fingal | Use MImAS as a risk assessment tool to assess water body status deterioration related to developments affecting transitional and coastal water bodies | MORP |
| Transitional | Mayne Estuary | Fingal | Diffuse Runoff (Urban) - Gullies Management | U-DIFF |
| Transitional | Mayne Estuary | Fingal | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| Transitional | Mayne Estuary | Fingal | Diffuse Runoff (Urban) - Storm sewers separation and qualitative improvement | U-DIFF |
| Transitional | Mayne Estuary | Fingal | Diffuse Runoff (Urban) - Street Cleaning Programme | U-DIFF |
| Transitional | Mayne Estuary | Fingal | Collection system - Network management & operations programme | WWTP |
| Transitional | Mayne Estuary | Fingal | Collection System - Upgrades and rehabilitation | WWTP |
| Transitional | Mayne Estuary | Fingal | CSO - Implement FOGG Regulations | WWTP |
| Transitional | Nanny Estuary | Meath | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009) | AGR |
| Transitional | Nanny Estuary | Meath | Implement Upstream Programmes of Measures | CROSS |
| Transitional | Nanny Estuary | Meath | Further investigation/monitoring required | DATA+ |
| Transitional | Nanny Estuary | Meath | Local Government (Water Pollution) Act 1977 (Water Quality Standards for Phosphorus) Regulations, 1998 (S.I. 258 of 1998) | DS |
| Transitional | Nanny Estuary | Meath | EPA Waste (Licensing) Regulations, 2004 | IPPC |
| Transitional | Nanny Estuary | Meath | Collection system - Network management & operations programme | WWTP |
| Transitional | Nanny Estuary | Meath | Collection System - Upgrades and rehabilitation | WWTP |
| Transitional | Nanny Estuary | Meath | CSO - Implement FOGG Regulations | WWTP |
| Transitional | North Bull Island | Dublin City | Implement Upstream Programmes of Measures | CROSS |
| Transitional | North Bull Island | Dublin City | Further investigation/monitoring required | DATA+ |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|--------------|--------------------|-------------|--|--------|
| Transitional | North Bull Island | Dublin City | Survey Banks/Coast | DATA+ |
| Transitional | North Bull Island | Dublin City | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Transitional | North Bull Island | Dublin City | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Transitional | North Bull Island | Dublin City | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Transitional | North Bull Island | Dublin City | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Transitional | North Bull Island | Dublin City | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Transitional | North Bull Island | Dublin City | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Transitional | North Bull Island | Dublin City | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| Transitional | North Bull Island | Dublin City | Assess the effects of coastal defences | MORP |
| Transitional | North Bull Island | Dublin City | Diffuse Runoff (Urban) - Gullies Management | U-DIFF |
| Transitional | North Bull Island | Dublin City | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| Transitional | North Bull Island | Dublin City | Diffuse Runoff (Urban) - Storm sewers separation and qualitative improvement | U-DIFF |
| Transitional | North Bull Island | Dublin City | Diffuse Runoff (Urban) - Street Cleaning Programme | U-DIFF |
| Transitional | North Bull Island | Dublin City | Collection system - Network management & operations programme | WWTP |
| Transitional | North Bull Island | Dublin City | Collection System - Upgrades and rehabilitation | WWTP |
| Transitional | North Bull Island | Dublin City | CSO - Implement FOGG Regulations | WWTP |
| Transitional | North Bull Island | Fingal | Implement Upstream Programmes of Measures | CROSS |
| Transitional | North Bull Island | Fingal | Further investigation/monitoring required | DATA+ |
| Transitional | North Bull Island | Fingal | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards) | ECO |
| Transitional | North Bull Island | Fingal | EC (Natural Habitats) Regulations 1997- 2005 | ECO |
| Transitional | North Bull Island | Fingal | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| Transitional | North Bull Island | Fingal | Diffuse Runoff (Urban) - Gullies Management | U-DIFF |
| Transitional | North Bull Island | Fingal | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| Transitional | North Bull Island | Fingal | Diffuse Runoff (Urban) - Storm sewers separation and qualitative improvement | U-DIFF |
| Transitional | North Bull Island | Fingal | Diffuse Runoff (Urban) - Street Cleaning Programme | U-DIFF |
| Transitional | North Bull Island | Fingal | Collection system - Network management & operations programme | WWTP |
| Transitional | North Bull Island | Fingal | Collection System - Upgrades and rehabilitation | WWTP |
| Transitional | North Bull Island | Fingal | CSO - Implement FOGG Regulations | WWTP |
| Transitional | Rogerstown Estuary | Fingal | EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009) | AGR |
| Transitional | Rogerstown Estuary | Fingal | EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards) | CROSS |
| Transitional | Rogerstown Estuary | Fingal | Implement Upstream Programmes of Measures | CROSS |
| Transitional | Rogerstown Estuary | Fingal | Planning and Development Regulations 2001 - 2007 | CROSS |
| Transitional | Rogerstown Estuary | Fingal | Planning Development Acts 2000 - 2006 | CROSS |
| Transitional | Rogerstown Estuary | Fingal | Survey Banks/Coast | DATA+ |
| Transitional | Rogerstown Estuary | Fingal | EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC) | DS |
| Transitional | Rogerstown Estuary | Fingal | Framework for Major Emergency Management, Office of Emergency Planning, 2006 | DS |
| Transitional | Rogerstown Estuary | Fingal | Local Government (Water Pollution) Act 1977 (Water Quality Standards for Phosphorus) Regulations, 1998 (S.I. 258 of 1998) | DS |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|--------------|--------------------|-------------|--|--------|
| Transitional | Rogerstown Estuary | Fingal | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Transitional | Rogerstown Estuary | Fingal | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Transitional | Rogerstown Estuary | Fingal | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Transitional | Rogerstown Estuary | Fingal | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |
| Transitional | Rogerstown Estuary | Fingal | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Transitional | Rogerstown Estuary | Fingal | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Transitional | Rogerstown Estuary | Fingal | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Transitional | Rogerstown Estuary | Fingal | EPA Waste (Licensing) Regulations, 2004 | IPPC |
| Transitional | Rogerstown Estuary | Fingal | Assess impacts of causeway | MORP |
| Transitional | Rogerstown Estuary | Fingal | Foreshore Act (1933) | MORP |
| Transitional | Rogerstown Estuary | Fingal | Preserve and/or restore banks | MORP |
| Transitional | Rogerstown Estuary | Fingal | Treatment Plant Tie-ins | Septic |
| Transitional | Rogerstown Estuary | Fingal | Diffuse Runoff (Urban) - Gullies Management | U-DIFF |
| Transitional | Rogerstown Estuary | Fingal | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| Transitional | Rogerstown Estuary | Fingal | Diffuse Runoff (Urban) - Storm sewers separation and qualitative improvement | U-DIFF |
| Transitional | Rogerstown Estuary | Fingal | Diffuse Runoff (Urban) - Street Cleaning Programme | U-DIFF |
| Transitional | Rogerstown Estuary | Fingal | Collection system - Network management & operations programme | WWTP |
| Transitional | Rogerstown Estuary | Fingal | Collection System - Upgrades and rehabilitation | WWTP |
| Transitional | Rogerstown Estuary | Fingal | CSO - Implement FOGG Regulations | WWTP |
| Transitional | Rogerstown Estuary | Fingal | Urban Waste Water Treatment Regulations, 2001 - 2004: Upgrade domestic WWTPs to secondary treatment for p.e's >2,000 discharging to rivers, lakes, & estuaries | WWTP |
| Transitional | Rogerstown Estuary | Fingal | Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007) | WWTP |
| Transitional | Rogerstown Estuary | Fingal | Water Services Act 2007 | WWTP |
| Transitional | Tolka Estuary | Dublin City | Survey Banks/Coast | DATA+ |
| Transitional | Tolka Estuary | Dublin City | EC (Control of Major Accident Hazards Involving Dangerous Substances) Regulations (S.I. 74 of 2006) | DS |
| Transitional | Tolka Estuary | Dublin City | Framework for Major Emergency Management, Office of Emergency Planning, 2006 | DS |
| Transitional | Tolka Estuary | Dublin City | Local Government (Water Pollution) Act 1977 (Water Quality Standards for Phosphorus) Regulations, 1998 (S.I. 258 of 1998) | DS |
| Transitional | Tolka Estuary | Dublin City | Water Quality Dangerous Substances Regulations, 2001 | DS |
| Transitional | Tolka Estuary | Dublin City | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | ECO |
| Transitional | Tolka Estuary | Dublin City | EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | ECO |
| Transitional | Tolka Estuary | Dublin City | EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | ECO |

| WB Type | WMU Name | Auth. Code | Measure | Source |
|--------------|---------------|-------------|---|--------|
| Transitional | Tolka Estuary | Dublin City | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | ECO |
| Transitional | Tolka Estuary | Dublin City | EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | ECO |
| Transitional | Tolka Estuary | Dublin City | EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | ECO |
| Transitional | Tolka Estuary | Dublin City | For sites not at Favourable conservation Status Set targets and timeframe for achieving status | HS |
| Transitional | Tolka Estuary | Dublin City | Apply Heavily Modified Waterbody Measures (See External Document) | MORP |
| Transitional | Tolka Estuary | Dublin City | Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | S4 |
| Transitional | Tolka Estuary | Dublin City | Diffuse Runoff (Urban) - Gullies Management | U-DIFF |
| Transitional | Tolka Estuary | Dublin City | Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | U-DIFF |
| Transitional | Tolka Estuary | Dublin City | Diffuse Runoff (Urban) - Street Cleaning Programme | U-DIFF |
| Transitional | Tolka Estuary | Dublin City | Assess CSO and Water Quality Impact from Urban Pressures | WWTP |
| Transitional | Tolka Estuary | Dublin City | Collection system - Network management & operations programme | WWTP |
| Transitional | Tolka Estuary | Dublin City | Collection System - Upgrades and rehabilitation | WWTP |

Appendix C - Range of Supplementary Measures (National)

Table C1: Point and Diffuse Sources- Wastewater

| Code | Supplementary Measure | National Number |
|------------------|---|-----------------|
| Reduce | | |
| S1 | Measure intended to reduce loading to the treatment plant: Limit or cease the direct importation of polluting matter (for example liquid wastes, landfill leachate, sludges) Investigate the extent of use and impact of under-sink food waste disintegrators and take appropriate actions Investigate fats/oils/grease influent concentrations and take actions reduce FOG entering the collection system | 264 |
| | ERBD measures likened to national measures | |
| | Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water EPA- Code of Practice for Wastewater Treatment Systems for Single Houses Investigate Fats, Oils and Grease programme | |
| S2 | Impose development controls where there is, or is likely to be in the future, insufficient capacity at treatment plants | 420 |
| | ERBD measures likened to national measures | |
| | Include an Environmental Report with Development Plans | |
| S3 | Initiate investigations into characteristics of treated wastewater for parameters not presently required to be monitored under the urban wastewater treatment directive | 270 |
| | ERBD measures likened to national measures | |
| | Improve removal of certain parameters at WWTP | |
| S4 | Initiate research to verify risk assessment results and determine the impact of the discharge | 443 |
| | ERBD measures likened to national measures | |
| | Further investigation/monitoring required | |
| S5 | Use decision making tools in point source discharge management | |
| | ERBD measures likened to national measures | |
| | PMS should be implemented and audited at all WWTPs Choose the point of discharge to minimise the adverse effects on the environment | |
| Remediate | | |
| S6 | Install secondary treatment at plants where this level of treatment is not required under the urban wastewater treatment directive | 5 |
| | ERBD measures likened to national measures | |
| | Upgrade domestic WWTPs to secondary treatment for p.e.'s >2,000 discharging to rivers lakes and estuaries | |
| S7 | Apply a higher standard of treatment (stricter emission controls) where necessary | 275 |
| | ERBD measures likened to national measures | |
| | Monitor the discharge from urban wastewater plants and check the quality compliance with urban wastewater treatment legislation | |
| S8 | Upgrade the plant to remove specific substances known to impact on water quality status | 275 |
| | ERBD measures likened to national measures | |
| | Tertiary Treatment Improve removal of certain parameters at WWTP | |
| S9 | Install ultraviolet or similar type treatment | 5 |
| | ERBD measures likened to national measures | |
| | Tertiary Treatment | |
| S10 | Relocate the point of discharge | 275 |
| | ERBD measures likened to national measures | |
| | Choose the point of discharge to minimise the adverse effects on the environment | |

Table C2: Point and Diffuse Sources- Wastewater from unsewered properties

| Code | Supplementary Measure | National Number |
|------------------|--|-----------------|
| Reduce | | |
| S1 | Amend building regulations <ul style="list-style-type: none"> ■ Code of practice for single houses ■ Code of practice for large systems ■ Certification of unsewered and percolation areas | all |
| | ERBD measures likened to national measures | |
| | Link EPA Code of Practice for Wastewater Treatment Systems to building regulations EPA – Code of Practice for Wastewater Treatment Systems for Single Houses EPA – Code of Practice Wastewater Treatment Systems for Small businesses, Hotels and Communities Enforce regulations on septic systems | |
| S2 | Establish expert panels for site investigation and certification of installed systems | all |
| | ERBD measures likened to national measures | |
| | LAs to adopt a common register of approved site assessors and common code of practice | |
| S3 | Assess applications for new un sewered systems by applying risk mapping/decision support systems and codes of practice | all |
| | ERBD measures likened to national measures | |
| | Develop septic system management programme | |
| Remediate | | |
| S4 | Carry out an inspection programme in prioritised locations for existing systems and record results in an action tracking system | |
| | ERBD measures likened to national measures | |
| | LAs to utilise risk of maps of OSWTS to inform decision making and target areas for inspections | |
| S5 | Enforce requirements for percolation and de-sludging | |
| | ERBD measures likened to national measures | |
| | Enforce regulations on septic systems Develop septic system management programme | |
| | Carry out septic system inspections and upgrades | |
| S6 | Consider connection to municipal systems | |
| | ERBD measures likened to national measures | |
| | Treatment Plant Tie-ins | |

Table C3: Point and Diffuse Sources- Forestry

| Code | Supplementary Measure | National Number |
|---------------|---|-----------------|
| Reduce | | |
| S1 | Management Instruments- Ensure regulations and guidance are cross referenced and revised to incorporate proposed measures | |
| | ERBD measures likened to national measures | |
| | Implement Forestry and Water Quality Guidelines | |
| S2 | Acidification- Avoid or limit (to below critical thresholds) afforestation on 1 st and 2 nd order stream catchments in acid sensitive catchments | |
| | ERBD measures likened to national measures | |
| | Forest Service- Protocol on acid sensitive areas | |
| S3 | Acidification – Restructure existing forests to include open space and structural diversity through age classes and species mix | |
| | ERBD measures likened to national measures | |
| | Forest Service-Code of best forest practice | |
| S4 | Acidification- revise the acidification Protocol to ensure actual minimum alkalinities are detected (that is ensure sampling under high flow conditions) and revise boundary conditions for afforestation in acid sensitive areas | |
| | ERBD measures likened to national measures | |
| | Update protocol on acid sensitive areas based on acid sensitive areas map and research | |
| S5 | Eutrophication and Sedimentation – Avoid or limit forest cover on peat sites | |
| | ERBD measures likened to national measures | |
| | Forest Service-Protocol on acid sensitive areas | |
| S6 | Eutrophication and Sedimentation- Change the tree species mix (for example broadleaves) on replanting | |
| | ERBD measures likened to national measures | |
| | Forest Service- Code of Best Forest Practice | |
| S7 | Eutrophication and Sedimentation-Limiting felling coup size | |
| | ERBD measures likened to national measures | |
| | Forest Service- Forest Harvesting and Environmental Guidelines | |
| S8 | Eutrophication and Sedimentation- Establish new forest structures on older plantations (including riparian zones drainage layouts, species mix, open areas | |
| | ERBD measures likened to national measures | |
| | New guidance on management of forestry planted prior to the introduction of the Forest Service Guidance documents and Codes of practices | |

| | | |
|------------------|---|--|
| S9 | Hydromorphology- Audit existing drainage networks in forest catchments | |
| | ERBD measures likened to national measures | |
| | Forest Service- Code of Best Forest Practice | |
| S10 | Pesticide Use- Reduce pesticide usage | |
| | ERBD measures likened to national measures | |
| | Forest Service-Forest Protection Guidelines | |
| S11 | Pesticide Use –Pre-dip trees in nurseries prior to planting out | |
| | ERBD measures likened to national measures | |
| | Forest Service- Forestry and Aerial fertilisation Guidelines Update Forest Service Guidance document on new EQS standards, Aerial Fertilisation Regulations, Updated Acidification | |
| S12 | Pesticide Use- Maintain registers of pesticide use | |
| Remediate | | |
| S13 | Acidification- Mitigate acid impacts symptomatically using basic material (e.g. limestone or sand liming) | |
| | ERBD measures likened to national measures | |
| | Forest Service- Protocol on acid sensitive areas | |
| S14 | Acidification- Manage Catchment drainage to increase residence times and soil wetting, including no drainage installation in some areas | |
| | ERBD measures likened to national measures | |
| | Forest Service- Code of Best Forest Practice | |
| S15 | Acidification- Implement measures to increase residence times and soil wetting, including no drainage installation in some areas | |
| | ERBD measures likened to national measures | |
| | Forest Service-Protocol on acid sensitive areas | |
| S16 | Eutrophication and Sedimentation- Establish riparian zone management prior to clearfelling | |
| | ERBD measures likened to national measures | |
| | Forest Service- Harvesting and Environmental Guidelines | |
| S17 | Eutrophication and Sedimentation- Enhance sediment Control | |
| | ERBD measures likened to national measures | |
| | Forest Service- Harvesting and Environmental Guidelines | |
| S18 | Eutrophication and Sedimentation-Manage catchment to increase residence times and soil wetting, including no drainage in some locations | |
| | ERBD measures likened to national measures | |
| | Forest Service- Harvesting and Environmental Guidelines | |
| S19 | Hydromorphology- Enhance drainage network management- minimise drainage in peat soils | |
| | ERBD measures likened to national measures | |
| | Forest Service- Code of Best Forest Practice | |
| S20 | Pesticide Use- Develop biological control methods | |
| | ERBD measures likened to national measures | |
| | Forest Service- Code of Best Forest Practice | |

Table C4: Physical Modifications

| Code | Supplementary Measure | National Number |
|------------------|---|-----------------|
| Reduce | | |
| S1 | Code of Practice | |
| | ERBD measures likened to national measures | |
| | Ensure compliance with OPW Environmental Drainage Maintenance Guidance Notes | |
| S2 | Support voluntary initiatives | |
| | ERBD measures likened to national measures | |
| | Morphology- Physical Modifications Campaign | |
| Remediate | | |
| S3 | Chanelisation impact remediation schemes | |
| | ERBD measures likened to national measures | |
| | Assess channelization & flood embankments using MImAS | |
| S4 | Channelisation investigation | |
| | ERBD measures likened to national measures | |
| | Assess channelization & flood embankments using MImAS | |
| S5 | Over-grazing remediation | |
| | ERBD measures likened to national measures | |
| | Restrict cattle access to rivers- Create cattle access drinking points | |
| S6 | Impassable barriers remediation schemes. | |
| | ERBD measures likened to national measures | |
| | Assess need for barrier removal based on risk and expert judgement Facilitate fish migration | |
| S7 | Impassable barriers investigation | |
| | ERBD measures likened to national measures | |
| | Assess need for barrier removal based on risk and expert judgement | |

Appendix D - Frequency of Measures

Table D1: Frequency of Use of each Measure

| Measure Name | Source Name | Frequency of Use |
|---|---|------------------|
| Alter the availability of supply through conjunctive use or integrated water resources management, water reuse, implementing SUDS in developed areas, implementation of abstraction controls, use of additional storage or alternative water source | Abstractions | 8 |
| Collect abstraction rates and compensation flow releases on a continuous bases | Abstractions | 1 |
| Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater | Abstractions | 58 |
| Develop and employ demand reduction measures | Abstractions | 8 |
| Develop Habitat Suitability Curves for coarse fish and other important aquatic organisms | Abstractions | 9 |
| Develop Habitat Suitability Curves for salmonids in Irish Rivers | Abstractions | 8 |
| Establish Minimum Instream Flow Conditions and requirements for compensation releases to allow flow variations | Abstractions | 1 |
| Further Research on Abstraction Pressure effects on lake ecology (national) | Abstractions | 3 |
| In flow regulated rivers, establish guidance on flow variations to support ecology | Abstractions | 9 |
| Investigate implementation of smaller water schemes to reduce demand on other resources | Abstractions | 8 |
| Licensing system for groundwater abstractions | Abstractions | 2 |
| Maintain good hydrological status | Abstractions | 1 |
| Modernise Abstraction Legislation, including a system for licensing surface water abstractions | Abstractions | 67 |
| National Water Pricing Policy Framework (1998) | Abstractions | 67 |
| Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989) | Abstractions | 64 |
| Record daily abstraction rates | Abstractions | 23 |
| Record daily water level | Abstractions | 15 |
| Water Supplies Act 1942 | Abstractions | 61 |
| Water Supplies Act 1942: Develop a proposal for extending or providing a supply of water. | Abstractions | 6 |
| Develop riparian buffers | Agricultural Point and Diffuse Sources | 3 |
| EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009) | Agricultural Point and Diffuse Sources | 16 |
| EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Conduct Farm Surveys | Agricultural Point and Diffuse Sources | 85 |
| EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water | Agricultural Point and Diffuse Sources | 83 |
| EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Discontinue use of soiled water for application to or irrigation of land in certain conditions | Agricultural Point and Diffuse Sources | 2 |
| EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Enforce National Action Programme | Agricultural Point and Diffuse Sources | 8 |
| EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Implement soiled water generation minimisation practices | Agricultural Point and Diffuse Sources | 74 |
| EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Improve farmyard structure/operations to divert rainwater runoff | Agricultural Point and Diffuse Sources | 77 |
| Restrict Cattle Access to rivers - Create Cattle Drinking points | Agricultural Point and Diffuse Sources | 37 |
| EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Appropriate distance from water body to be maintained for application of fertiliser | Chemical Fertiliser | 5 |
| EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Prohibit application of fertiliser during specific periods | Chemical Fertiliser | 2 |
| PCS - Principles for Good Plant Protection Practice | Chemical Fertiliser | 9 |
| Restrict use of pesticides within groundwater Source Protection Zones | Chemical Fertiliser | 30 |
| Bathing Water Quality Regulations (S.I. 79 of 2008) | Planning, Development and other sources | 6 |

| Measure Name | Source Name | Frequency of Use |
|---|---|------------------|
| Bathing Water Quality Regulations (S.I. 79 of 2008): Classify Bathing Waters | Planning, Development and other sources | 3 |
| Bathing Water Quality Regulations (S.I. 79 of 2008): Facilitate public participation and provide public information | Planning, Development and other sources | 3 |
| Bathing Water Quality Regulations (S.I. 79 of 2008): Take measures to improve bathing water quality | Planning, Development and other sources | 2 |
| Bathing Water Quality Regulations (S.I. 79 of 2008): Test bathing water compliance | Planning, Development and other sources | 3 |
| EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007) | Planning, Development and other sources | 23 |
| EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards) | Planning, Development and other sources | 9 |
| EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards): Carry out full Environmental Impact Assessment prior to development in accordance with legislation | Planning, Development and other sources | 2 |
| EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards): Deliver certification for proposed development on completion of satisfactory EIS | Planning, Development and other sources | 1 |
| Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes | Planning, Development and other sources | 58 |
| Implement Measures in other Pressure Categories | Planning, Development and other sources | 5 |
| Implement Upstream Programmes of Measures | Planning, Development and other sources | 25 |
| Planning and Development Regulations 2001 - 2007 | Planning, Development and other sources | 14 |
| Planning and Development Regulations 2001 - 2007: Include an Environmental Report with Development Plans | Planning, Development and other sources | 2 |
| Planning Development Acts 2000 - 2006 | Planning, Development and other sources | 14 |
| Planning Development Acts 2000 - 2006: Grant, refuse and review licence for developing land | Planning, Development and other sources | 2 |
| River Polishing - Reed Bed | Planning, Development and other sources | 3 |
| Further investigation/monitoring required | An Absence of sufficient data | 113 |
| Sewerage Schemes - Establish dedicated groundwater monitoring systems in highest-risk settings | An Absence of sufficient data | 7 |
| Survey Banks/Coast | An Absence of sufficient data | 48 |
| Dumping at Sea Act 1996 - 2004 : Permit required for Dumping at Sea | Dangerous Substances | 2 |
| EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments | Dangerous Substances | 24 |
| EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001 | Dangerous Substances | 24 |
| EC (Control of Major Accident Hazards Involving Dangerous Substances) Regulations (S.I. 74 of 2006) | Dangerous Substances | 10 |
| EC (Control of Major Accident Hazards Involving Dangerous Substances) Regulations (S.I. 74 of 2006): After an accident, operator should take all necessary measures to clear up any pollution caused. | Dangerous Substances | 3 |
| EC (Port Reception Facilities for Ship Generated Waste and Cargo Residues) Regulations (S.I. 117 of 2003): Improve the availability and use of port reception facilities for ship-generated waste and cargo residues | Dangerous Substances | 3 |
| EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments | Dangerous Substances | 22 |
| EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC) | Dangerous Substances | 22 |
| Framework for Major Emergency Management, Office of Emergency Planning, 2006 | Dangerous Substances | 6 |
| Harbour dredgings to be suitably disposed of | Dangerous Substances | 3 |
| License and distribute DAF's GIS mapping of cropping patterns to EPA and local authorities | Dangerous Substances | 7 |
| Local Government (Water Pollution) Act 1977 (Water Quality Standards for Phosphorus) Regulations, 1998 (S.I. 258 of 1998) | Dangerous Substances | 10 |

| Measure Name | Source Name | Frequency of Use |
|---|-------------------------------|------------------|
| Local Government (Water Pollution) Act 1977 (Water Quality Standards for Phosphorus) Regulations, 1998 (S.I. 258 of 1998): Implement Measures in Phosphorus Regulations Reports | Dangerous Substances | 2 |
| Mine discharge to be suitably treated | Dangerous Substances | 2 |
| Mitigate impact of quarry activities | Dangerous Substances | 7 |
| Monitor Shipping Activities | Dangerous Substances | 5 |
| Protection of Groundwater Regulations (S.I. 41 of 1999): Test the effect of discharge on groundwater; test groundwater compliance | Dangerous Substances | 1 |
| Report and audit sales and usage of pesticides by sector | Dangerous Substances | 7 |
| Water Quality Dangerous Substances Regulations, 2001 | Dangerous Substances | 28 |
| Water Quality Dangerous Substances Regulations, 2001: Implement Measures in Dangerous Substances Reports | Dangerous Substances | 5 |
| EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards) | Poor Ecology | 6 |
| EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Designate protected areas | Poor Ecology | 32 |
| EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Preserve protected areas against pollution deterioration and disturbance | Poor Ecology | 33 |
| EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards): Prosecute those who do not protect wild birds, their nests or eggs | Poor Ecology | 33 |
| EC (Natural Habitats) Regulations 1997- 2005 | Poor Ecology | 15 |
| EC (Natural Habitats) Regulations 1997- 2005: Assess effects of a proposed development on a protected site before granting planning permission | Poor Ecology | 3 |
| EC (Natural Habitats) Regulations 1997- 2005: Determine priority species (flora and fauna) for protection | Poor Ecology | 2 |
| EC (Natural Habitats) Regulations 1997- 2005: Identify sites of community importance | Poor Ecology | 33 |
| EC (Natural Habitats) Regulations 1997- 2005: Manage, conserve, restore or protect sites | Poor Ecology | 33 |
| EC (Natural Habitats) Regulations 1997- 2005: Reintroduce native species; license introduction of non native species | Poor Ecology | 3 |
| EC (Natural Habitats) Regulations 1997- 2005: Survey conservation status of the natural habitats and species | Poor Ecology | 33 |
| Fisheries Act 1959 - 1981 | Poor Ecology | 4 |
| Fisheries Act 1959 - 1981: Prohibit works in river channels during fisheries close season. | Poor Ecology | 1 |
| Fresh Water Pearl Mussel Regulations | Poor Ecology | 2 |
| The Quality of Shellfish Waters Regulation Regulations, 2006 (S.I. 268 of 2006) | Poor Ecology | 1 |
| The Quality of Shellfish Waters Regulation Regulations, 2006 (S.I. 268 of 2006): Determine causes of non compliance and corrective actions | Poor Ecology | 4 |
| The Quality of Shellfish Waters Regulation Regulations, 2006 (S.I. 268 of 2006): Test Shellfish water compliance to standards defined in regulations | Poor Ecology | 6 |
| EC (Aerial Fertilisation) (Forestry) Regulations 2006 and amendment 2007 | Forestry | 6 |
| Forest Service - Protocol on acid sensitive areas | Forestry | 2 |
| Implement Forestry and Water Quality Guidelines | Forestry | 9 |
| Update Forest Service Guidance document on new EQS standards, Aerial Fertilisation Regulations, Updated Acidification protocol. | Forestry | 5 |
| Update protocol on acid sensitive areas based on acid sensitive areas map and research | Forestry | 2 |
| Develop guidance on suites of measures for different habitats | To Protect High Status Waters | 15 |
| For sites not at Favourable conservation Status Set targets and timeframe for achieving status | To Protect High Status Waters | 29 |
| NPWS to develop and maintain a Webserver based register of designated sites accessible to LA, State Agencies, Stakeholders | To Protect High Status Waters | 1 |
| NPWS to develop Guidance documents for Article 6 Assessments | To Protect High Status Waters | 1 |
| EPA (Licensing) Regulations, 1994 & 2004 | Industrial Sources | 21 |
| EPA (Licensing) Regulations, 1994 & 2004: Grant and refuse IPPC licences subject to set-limits to reduce pollution effects | Industrial Sources | 10 |
| EPA (Licensing) Regulations, 1994 & 2004: Review IPPC licences | Industrial Sources | 7 |

| Measure Name | Source Name | Frequency of Use |
|--|--------------------|------------------|
| EPA (Licensing) Regulations, 1994 & 2004: Upgrade IPPC licensed facilities waste management structures and practices to best available technology | Industrial Sources | 5 |
| EPA Waste (Licensing) Regulations, 2004 | Industrial Sources | 6 |
| EPA Waste (Licensing) Regulations, 2004: Grant and refuse waste licences subject to set-limits to reduce pollution effects | Industrial Sources | 2 |
| EPA Waste (Licensing) Regulations, 2004: Review waste licences | Industrial Sources | 2 |
| EPA Waste (Licensing) Regulations, 2004: Upgrade waste licensed facilities management structures and practices to best available technology | Industrial Sources | 2 |
| DEHLG - Code of Good Practice and Guidelines on the use of Biosolids in Agriculture, 1999 | Manure Fertilisers | 14 |
| EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Appropriate distance from water body to be maintained for location of manure heaps | Manure Fertilisers | 14 |
| EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Land spreading to be carried out in appropriate manner | Manure Fertilisers | 7 |
| EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Monitor storage capacity and nutrient management (follow the tables) | Manure Fertilisers | 6 |
| EC (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. 101 of 2009): Nutrient management | Manure Fertilisers | 78 |
| Evaluate impact of waters discharging from bog and peat lands | Manure Fertilisers | 1 |
| Forest Service - Forestry and Aerial Fertilisation Guidelines | Manure Fertilisers | 5 |
| Forestry Act 1946 and 1988 | Manure Fertilisers | 7 |
| Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001 | Manure Fertilisers | 5 |
| Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001: Analyse sludge (e.g., heavy metal, pH, etc.) | Manure Fertilisers | 2 |
| Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001: Consider impact of sludge on plants, soil, surface water and groundwater quality | Manure Fertilisers | 2 |
| Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001: Local Authorities will maintain a sludge register | Manure Fertilisers | 2 |
| Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001: Restrict land where sludge can be used | Manure Fertilisers | 2 |
| Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001: Restrict the amount of sludge applied to land to 2 tonnes of dry matter per hectare per year | Manure Fertilisers | 2 |
| Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001: Supervise the supply and use of sludge in agriculture | Manure Fertilisers | 2 |
| Address diffuse silt pollution from green field site development | Intensive Land use | 3 |
| Apply Heavily Modified Waterbody Measures (See External Document) | Intensive Land use | 30 |
| Assess channelisation & flood embankments using MImAS | Intensive Land use | 2 |
| Assess impacts of causeway | Intensive Land use | 1 |
| Assess need for barrier removal based on risk and expert judgement | Intensive Land use | 2 |
| Assess the effects of coastal defences | Intensive Land use | 3 |
| Consider morphology within the current development (SEA, EIA, etc) appraisal process | Intensive Land use | 3 |
| Ensure compliance with OPW Environmental Drainage Maintenance Guidance Notes | Intensive Land use | 9 |
| Facilitate Fish Migration | Intensive Land use | 6 |
| Foreshore Act (1933) | Intensive Land use | 3 |
| Foreshore Act (1933): Licence required for any works on the foreshore. | Intensive Land use | 3 |
| Freshwater Pearl Mussel Management Plans | Intensive Land use | 1 |
| ICZM - Using the RBMP process, continue to include departmental co-operation for TraC water body management. | Intensive Land use | 2 |
| Implement Coastal Zone Management policies and recommendations | Intensive Land use | 2 |
| Introduce Soft Edges to Inferior Habitats | Intensive Land use | 7 |
| Morphology - Physical Modifications Campaign | Intensive Land use | 1 |
| OPW - Environmental River Enhancement Programme 2008 -2012 | Intensive Land use | 3 |
| Preserve and/or restore banks | Intensive Land use | 6 |
| Restoration works on intensive land use for Freshwater Morphology | Intensive Land use | 1 |
| Review Dredging Practice | Intensive Land use | 2 |
| Review of marine departmental responsibilities and legislative coverage of transitional and coastal water bodies. | Intensive Land use | 1 |

| Measure Name | Source Name | Frequency of Use |
|---|-------------------------------------|------------------|
| Use MImAS as a risk assessment tool to assess water body status deterioration related to developments affecting transitional and coastal water bodies | Intensive Land use | 2 |
| LA to adopt a common approach to issuance of Section 4 and 16 licences | Local Authority Licenced Discharges | 3 |
| Local Government (Water Pollution) Act 1 of 1977 and amendments | Local Authority Licenced Discharges | 11 |
| Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 12 of the Local Government (Water Pollution) Acts, 1977 & 1990 | Local Authority Licenced Discharges | 10 |
| Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 16 of the Local Government (Water Pollution) Acts, 1977 & 1990 | Local Authority Licenced Discharges | 28 |
| Local Government (Water Pollution) Act 1 of 1977 and amendments: Enforce Section 4 of the Local Government (Water Pollution) Acts, 1977 & 1990 (discharges to water bodies) | Local Authority Licenced Discharges | 56 |
| Carry out septic system inspections and upgrades | Onsite Wastewater Treatment Systems | 14 |
| Develop septic system management programme | Onsite Wastewater Treatment Systems | 11 |
| Enforce Regulations on Septic Systems | Onsite Wastewater Treatment Systems | 24 |
| EPA - Code of Practice for Wastewater Treatment Systems for Single Houses | Onsite Wastewater Treatment Systems | 6 |
| Increase public awareness | Onsite Wastewater Treatment Systems | 4 |
| LAs to adopt a common Register of approved Site Assessors and common Code of Practice for maintaining register | Onsite Wastewater Treatment Systems | 6 |
| LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections | Onsite Wastewater Treatment Systems | 114 |
| OSWTS risk matrices to be integrated into Development Plans and Local Area Plans | Onsite Wastewater Treatment Systems | 6 |
| Treatment Plant Tie-ins | Onsite Wastewater Treatment Systems | 2 |
| Diffuse Runoff (Urban) - Gullies Management | Urban Diffuse Pollution | 23 |
| Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance) | Urban Diffuse Pollution | 30 |
| Diffuse Runoff (Urban) - Storm sewers separation and qualitative improvement | Urban Diffuse Pollution | 16 |
| Diffuse Runoff (Urban) - Street Cleaning Programme | Urban Diffuse Pollution | 22 |
| Assess CSO and Water Quality Impact from Urban Pressures | Wastewater Treatment Plants | 12 |
| Assess risk groundwater pollution when designing and constructing SUDS alternatives | Wastewater Treatment Plants | 83 |
| Avoid sewer systems in Inner Source Protection Zones | Wastewater Treatment Plants | 26 |
| Carry out groundwater vulnerability mapping during geotechnical investigations of new infrastructure, including sewer pipeline routes; submit information to local authorities and GSI. | Wastewater Treatment Plants | 109 |
| Collection system - Network management & operations programme | Wastewater Treatment Plants | 17 |
| Collection System - Upgrades and rehabilitation | Wastewater Treatment Plants | 28 |
| CSO - Implement FOGG Regulations | Wastewater Treatment Plants | 11 |
| CSOs to comply with GDSDS recommendations | Wastewater Treatment Plants | 5 |
| Implement Community Digestors for Alternative Energy | Wastewater Treatment Plants | 33 |
| Implement Fats, Oils and Grease Programme | Wastewater Treatment Plants | 9 |
| Implement SUDS | Wastewater Treatment Plants | 1 |
| Improve Removal of certain parameters at WWTP | Wastewater Treatment Plants | 1 |
| Introduce design and construction codes for areas of extreme groundwater vulnerability | Wastewater Treatment Plants | 69 |
| Investigate and eliminate misconnections | Wastewater Treatment Plants | 14 |
| LA to adopt common approach for analysis and reporting of water/effluent samples at WWTP | Wastewater Treatment Plants | 1 |
| PMS should be implemented and audited at all WWTPs | Wastewater Treatment Plants | 1 |
| Sewerage Schemes - Prioritise construction supervision for areas of extreme groundwater vulnerability | Wastewater Treatment Plants | 69 |
| Tertiary Treatment | Wastewater Treatment Plants | 8 |
| Upgrade WWTW <2000 PE | Wastewater Treatment Plants | 5 |
| Upgrade WWTW and Collecting Systems <2000 PE | Wastewater Treatment Plants | 15 |
| Urban Waste Water Treatment Regulations, 2001 - 2004 | Wastewater Treatment Plants | 8 |

| Measure Name | Source Name | Frequency of Use |
|--|-----------------------------|------------------|
| Urban Waste Water Treatment Regulations, 2001 - 2004: Choose the point of discharge to minimise the adverse effects on the environment | Wastewater Treatment Plants | 5 |
| Urban Waste Water Treatment Regulations, 2001 - 2004: Develop collecting systems for p.e.'s >2,000 (unless negligible benefits or excessive costs) | Wastewater Treatment Plants | 18 |
| Urban Waste Water Treatment Regulations, 2001 - 2004: Industrial waste water entering a collecting system and UWW treatment plants shall be pre-treated if necessary to avoid any damage to the process | Wastewater Treatment Plants | 4 |
| Urban Waste Water Treatment Regulations, 2001 - 2004: Monitor the discharge from urban wastewater treatment plants and check the quality compliance with urban wastewater treatment legislation | Wastewater Treatment Plants | 9 |
| Urban Waste Water Treatment Regulations, 2001 - 2004: Treatment plant to be designed, constructed, operated and maintained to ensure satisfactory performance under all normal local climatic conditions. | Wastewater Treatment Plants | 17 |
| Urban Waste Water Treatment Regulations, 2001 - 2004: Upgrade domestic WWTWs to 1 mg/l or \geq 80% TN reduction for p.e.'s >100,000 discharging to sensitive waters (unless no eutrophication potential) | Wastewater Treatment Plants | 2 |
| Urban Waste Water Treatment Regulations, 2001 - 2004: Upgrade domestic WWTWs to 15 mg/l or \geq 70% TN reduction for p.e.'s >10,000 and discharging to sensitive waters (unless no eutrophication potential) | Wastewater Treatment Plants | 1 |
| Urban Waste Water Treatment Regulations, 2001 - 2004: Upgrade domestic WWTWs to 2 mg/l or \geq 80% TP reduction for p.e.'s >10,000 discharging to sensitive waters (unless no eutrophication potential) | Wastewater Treatment Plants | 3 |
| Urban Waste Water Treatment Regulations, 2001 - 2004: Upgrade domestic WWTWs to secondary treatment for p.e.'s >10,000 discharging to coastal waters | Wastewater Treatment Plants | 4 |
| Urban Waste Water Treatment Regulations, 2001 - 2004: Upgrade domestic WWTWs to secondary treatment for p.e.'s >2,000 discharging to rivers, lakes, & estuaries | Wastewater Treatment Plants | 9 |
| Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007) | Wastewater Treatment Plants | 22 |
| Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007): Certify all waste water discharges less than 500 PE. | Wastewater Treatment Plants | 8 |
| Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007): License all waste water discharges of greater than 500 PE | Wastewater Treatment Plants | 2 |
| Water Services Act 2007 | Wastewater Treatment Plants | 18 |
| Water Services Act 2007: Develop and implement Urban Water Services Strategic Plans | Wastewater Treatment Plants | 10 |
| Well construction practices/requirements | Wastewater Treatment Plants | 7 |

Appendix E - Plans and Programmes

Article 13(4) of the Water Framework Directive requests a register of any more detailed programmes and management plans for the river basin district dealing with particular sub-basins, sectors, issues or water types, together with a summary of their content. Up to 300 plans and programmes were identified as listed in the table below. This Appendix has been provided by the Shannon River Basin District Project.

Table E1: Eastern River Basin District – Land Use and Spatial Planning Plans

| Plan Name | Date for Review | Enabling Legislation | Responsible Authorities | Plan Duration and Summary of Contents |
|--|-----------------|--|--|--|
| National | | | | |
| National Spatial Strategy for Ireland, 2002 to 2020 | 2020 | The Planning and Development Act, 2000 (S.I. No. 30 of 2000) – not sure about this | DEHLG – lead Regional & Local Authorities - support | 20 year strategy Strategy to achieve a better balance of social, economic and physical development across Ireland |
| National Development Plan, 2007 to 2013 | 2010 | EC Structural Funds Regulation, 1994 (3193 of 1994) | Department of Finance, other government departments and agencies | 6 year plan Plan to improve the quality of life for everybody by investing in infrastructure, people, industry and enterprise and regional development |
| Regional | | | | |
| Greater Dublin Regional Planning Guidelines, 2004 to 2016 | 2010 | The Planning and Development Act, 2000 (S.I. No. 30 of 2000) | West Regional Planning Authority | 12 years with review every 6 years Strategic planning framework for the development of the region and for inter-regional cooperation. Implements the NSS. |
| Border Regional Planning Guidelines, 2004 to 2020 | 2010 | The Planning and Development Act, 2000 (S.I. No. 30 of 2000) | Border Regional Planning Authority | 16 years with review every 6 years Strategic planning framework for the development of the region and for inter-regional cooperation. Implements the NSS. |
| Midlands Regional Planning Guidelines, 2004 to 2020 | 2010 | The Planning and Development Act, 2000 (S.I. No. 30 of 2000) | Midlands Regional Authority | 16 years with review every 6 years Strategic planning framework for the development of the region and for inter-regional cooperation. Implements the NSS. |
| Local | | | | |
| Cavan County Development Plan, 2003 to 2009 | 2007 | The Planning and Development Acts, 1963 to 2000 (S.I. No. 30 of 2000) | Cavan County Council | All Local Development Plans are 6 years with review after 4 years Overall strategy for the proper planning and sustainable development of the area |
| Dun Laoghaire/Rathdown County Development Plan, 2004 to 2010 | 2008 | | Dun Laoghaire/Rathdown County Council | |
| Fingal County Development Plan, 2005 to 2011 | 2009 | | Fingal County Council | |
| Kildare County Development Plan, 2005 to 2011 | 2009 | | Kildare County Council | |
| Louth County Development Plan, 2003 to 2009 | 2007 | | Louth County Council | |
| Meath County Development Plan, 2007 to 2013 | 2011 | | Meath County Council | |
| Offaly County Development Plan, 2003 to 2009 | 2007 | | Offaly County Council | |
| South Dublin County Development Plan, 2004 to 2010 | 2008 | | South Dublin County Council | |
| Westmeath County Development Plan, 2002 to 2008 | 2006 | | Westmeath County Council | |
| Wexford County Development Plan, 2007 to 2013 | 2011 | | Wexford County Council | |
| Wicklow County Development Plan, 2004 to 2010 | 2008 | | Wicklow County Council | |

| Plan Name | Date for Review | Enabling Legislation | Responsible Authorities | Plan Duration and Summary of Contents |
|---|-----------------|----------------------|--------------------------------------|---------------------------------------|
| Dublin City Development Plan, 2005 to 2011 | 2009 | | Dublin City Council | |
| Drogheda Development Plan, 2005 to 2011 | 2009 | | Louth County Council | |
| Arklow Environs Local Area Plan, 2005 to 2011 | 2009 | | Wicklow County Council | |
| Bray Development Plan, 2005 to 2011 | 2009 | | Wicklow County Council | |
| Kells Local Area Plan, 2007 to 2013 | 2011 | | Meath County Council | |
| Naas Town Development Plan, 2005 to 2011 | 2009 | | Kildare County Council | |
| Navan Local Area Plan, 2004 to 2010 | 2008 | | Meath County Council | |
| Trim Development Plan, 2002 to 2008 | 2008 | | Meath County Council | |
| Wicklow Town Development Plan, 2007 to 2013 | 2011 | | Wicklow County Council | |
| Mullagh Local Area Plan, 2006 to 2009 | 2011 | | Cavan County Council | |
| Woodbrook/Shanganagh Local Area Plan, 2006 to 2010 | 2008 | | Dunlaoghaire Rathdown County Council | |
| Kiltiernan/Glenamuck Local Area Plan, 2007 to 2010 | 2008 | | Dunlaoghaire Rathdown County Council | |
| Stillorgan Local Area Plan, 2007 to 2010 | 2008 | | Dunlaoghaire Rathdown County Council | |
| Dublin Airport Local Area Plan, 2006 to 2012 | 2010 | | Fingal County Council | |
| North West Balbriggan Local Area Plan, 2005 to 2011 | 2009 | | Fingal County Council | |
| South East Balbriggan Local Area Plan, 2006 to 2012 | 2010 | | Fingal County Council | |
| North Ballymun Local Area Plan, 2005 to 2011 | 2009 | | Fingal County Council | |
| Cappagh Road Local Area Plan, 2005 to 2011 | 2009 | | Fingal County Council | |
| Donabate Local Area Plan, 2006 to 2012 | 2010 | | Fingal County Council | |
| Hacketstown Local Area Plan, 2002 to 2010 | 2008 | | Fingal County Council | |
| Hollywoodrath Local Area Plan, 2006 to 2012 | 2010 | | Fingal County Council | |
| Kinsealy Local Area Plan, 2006 to 2012 | 2010 | | Fingal County Council | |
| Portmarnock Local Area Plan, 2006 to 2012 | 2010 | | Fingal County Council | |
| Stephenstown, Clogheder & Clonard Local Area Plan, 2007 to 2013 | 2011 | | Fingal County Council | |
| Athgarvan Local Area Plan, 2007 to 2013 | 2011 | | Kildare County Council | |
| Newbridge Local Area Plan, 2003 to 2009 | 2007 | | Kildare County Council | |
| Celbridge Local Area Plan, 2002 to 2008 | 2006 | | Kildare County Council | |
| Kilcullen Local Area Plan, 2001 to 2007 | 2005 | | Kildare County Council | |
| Leixlip Local Area Plan, 2002 to 2008 | 2006 | | Kildare County Council | |
| Sallins Local Area plan, 2001 to 2007 | 2005 | | Kildare County Council | |
| Straffan Local Area Plan, 2002 to 2008 | 2006 | | Kildare County Council | |
| Clane Local Area Plan, 2002 to 2008 | 2006 | | Kildare County Council | |

| Plan Name | Date for Review | Enabling Legislation | Responsible Authorities | Plan Duration and Summary of Contents |
|---|-----------------|----------------------|--|---------------------------------------|
| Kilcock Local Area Plan, 2002 to 2008 | 2009 | | Kildare County Council | |
| Kill Development Plan 2002 to 2008 | 2006 | | Kildare County Council | |
| Maynooth Development Plan, 2002 to 2008 | 2006 | | Kildare County Council | |
| Drogheda Docklands Area Plan, 2007 to 2011 | 2009 | | Louth County Council | |
| Collon Local Area Plan, 2002 to 2008 | 2006 | | Louth County Council | |
| Tullyallen Local Area Plan, 2003 to 2009 | 2007 | | Louth County Council | |
| North Drogheda Environs Local Area Plan, 2004 to 2010 | 2008 | | Louth County Council | |
| Effernock Local Area Plan, 2003 to 2009 | 2007 | | Meath County Council | |
| Trim Town Centre Local Area Plan, Local Area Plan, 2004 to 2008 | 2006 | | Meath County Council | |
| East Meath Local Area Plan, 2005 to 2013 | 2011 | | Meath County Council | |
| Kells Backlands Local Area Plan, 2006 to 2013 | 2011 | | Meath County Council | |
| Navan Local Area Plan 3, 2006 to 2011 | 2009 | | Meath County Council | |
| Navan Local Area Plan 4, 2007 to 2017 | 2015 | | Meath County Council | |
| Edenderry Town Development Plan 2003 to 2009 | 2007 | | Offaly County Council | |
| Rathcoole Local Area Plan, 2002 to 2008 | 2006 | | South Dublin County Council | |
| Newcastle – Lyons Local Area Plan, 2003 to 2009 | 2007 | | South Dublin County Council | |
| Tallaght Town Centre Local Area Plan, 2006 to 2012 | 2010 | | South Dublin County Council | |
| Liffey Valley Town Centre Local Area Plan, 2008 to 2014 | 2012 | | South Dublin County Council | |
| Clonburris Local Area Plan, 2008 to 2014 | 2012 | | South Dublin County Council | |
| Clonmellon Village Local Area Plan, 2005 to 2010 | 2008 | | Westmeath County Council | |
| Delvin Village Local Area Plan, 2002 to 2008 | 2008 | | Westmeath County Council | |
| Killucan/Rathwire Village Local Area Plan, 2004 to 2010 | 2008 | | Westmeath County Council | |
| Kinnegad Village Local Area Plan, 2002 to 2008 | 2006 | | Westmeath County Council | |
| Rochfortbridge Village Local Area Plan, 2002 to 2008 | 2006 | | Westmeath County Council | |
| Arklow Environs Local Area Plan, 2006 to 2012 | 2010 | | Wicklow County Council | |
| Ashford Town Local Area Plan, 2001 to 2007 | 2005 | | Wicklow County Council | |
| Enniskerry Local Area Plan, 2002 to 2008 | 2006 | | Wicklow County Council | |
| Greystones/Delgany Local Area Plan, 2006 to 2012 | 2010 | | Wicklow County Council | |
| Newtownmountkennedy Local Area Plan, 2002 to 2008 | 2006 | | Wicklow County Council | |
| Kilcoole Local Area Plan, 2002 to 2008 | 2006 | | Wicklow County Council | |
| Rathdrum Local Area Plan, 2006 to 2012 | 2006 | | Wicklow County Council | |
| Wicklow Environs Local Area Plan, 2001 to 2007 | 2006 | | Wicklow County Council | |
| Dublin Docklands Area Master Plan, 2003 to 2008 | 2008 | | Dublin Docklands Development Authority | |

Table E2: Eastern River Basin District – Conservation Measures Plans

| Plan Name | Date for Review | Enabling Legislation | Responsible Authorities | Plan Duration and Summary of Contents |
|---|-----------------|--|---|---|
| National | | | | |
| 2 nd National Biodiversity Plan, 2008 to 2012 | 2012 | Obligation under the Convention on Biological Diversity, which Ireland ratified in 1996. | NPWS (DEHLG) | 4 year plan Considers the work programmes of the Convention on Biological Diversity and the European Union Action Plan and develops a national work programme to achieve their implementation. |
| Forest Service Biodiversity Strategy | Not Specified | None | Forest Service | Open-ended strategy Strategy for conserving and enhancing biodiversity in forests using various good practice instruments. |
| Rural Environment Protection Scheme | Not Specified | None | Department of Agriculture, Fisheries & Food | Open-ended strategy Scheme designed to reward Farmers for carrying out their farming activities in an environmentally friendly manner and to bring about environmental improvement on existing farms |
| Local | | | | |
| Wicklow Mountains National Park Management Plan, 2005 to 2009 | 2009 | European Communities (Natural Habitats) Regulations 1997 (S.I. No. 94 of 1997) & Amendments Regulations in 1998 and 2005 | DEHLG - NPWS | 4 year plan Includes descriptive information about a site and a management framework section which outlines objectives and strategies. |
| Magherabeg Dunes cSAC 1766 Conservation Plan, 2005 to 2010 | 2010 | European Communities (Natural Habitats) Regulations 1997 (S.I. No. 94 of 1997) & Amendments Regulations in 1998 and 2005 | DEHLG - NPWS | 5 year plan Includes descriptive information about a site and a management framework section which outlines objectives and strategies. |
| Dublin City Council Biodiversity Action Plan, 2008 to 2012 | 2012 | National Biodiversity Plan | Dublin City Council | 4 year plan Includes descriptive information about a site and a management framework section which outlines objectives and strategies. |
| Louth Biodiversity Action Plan, 2008 to 2013 Draft | 2013 | National Biodiversity Plan | Louth County Council | 4 year plan Aims to contribute to the conservation and enhancement of natural heritage in Waterford. Identifies existing actions and proposes new actions. |

Table E3: Eastern River Basin District – Water Services Strategic Plans

| Plan Name | Date for Review | Enabling Legislation | Responsible Authorities | Plan Duration and Summary of Contents |
|-------------------------------|----------------------------------|--|----------------------------|---|
| Local | | | | |
| Water Services Strategic Plan | as soon as regulations published | Water Services Act, 2007 (S.I. No. 30 of 2007) Enabling Regulations, early 2009 | Water Services Authorities | 6 year plan, under development Relates to the provision of sufficient water services for domestic and non-domestic requirements while protecting human health and the environment and supporting proper planning and sustainable development |

Table E4: Eastern River Basin District – Pollution Reduction Plans

| Plan Name | Date for Review | Enabling Legislation | Responsible Authorities | Plan Duration and Summary of Contents |
|--|-----------------|--|--|---|
| National | | | | |
| IPPC licensing regime | Not specified | Environmental Protection Agency Act, 1992 Protection of the Environment Act, 2003 EPA Acts 1992 to 2007 | EPA | Open-ended The EPA license certain large-scale industrial and agriculture activities through IPPC licenses. IPPC licences aim to prevent or reduce emissions to air, water and land, reduce waste and use energy/resources efficiently. |
| Local Authority Licensing | Not specified | Local Government (Water Pollution) Act, 1977 | Local Authorities | Open-ended Local Authorities license small-scale commercial and industrial discharges to sewer systems and waters under the Water Pollution Acts through the Local Authority Licensensing system. |
| The National Control Plan | Not specified | S.I. No. 882 of 2004 | DAFF Food Safety Authority of Ireland | 5 year plan Plan to ensure that feed and food is safe and wholesome, includes control of plant protection products. |
| Agri-Vision Action Plan 2015 | Not specified | None | DAFF | Open-ended strategy Plan to develop new agri-environmental scheme that pro-actively enhances environment and biodiversity |
| Towards 2016 | Not specified | None | DAFF DEHLG | Open-ended strategy Sets out agricultural objectives and way forward for the coming years and how agricultural sector will enhance the environment |
| CAP Rural Development Programme 2007-2013 | Not specified | EC Council Regulation 1698/2005 | DAFF DEHLG | 7 year plan Plan to improve the competitiveness of the agriculture sector, the environment and the countryside and the quality of life in rural areas and encouraging diversification of economic activity. |
| Nitrates Action Plan 2006-2010 | 2009 | Nitrates Directive (91/676/EEC) S.I. No. 378 of 2006 | DAFF DEHLG | 4 year plan Sets out the practices for the protection of waters against pollution caused by nitrates from agricultural sources. |
| Groundwater Protection Scheme | Not specified | Local Government (Water Pollution) Act, 1977 and 1990 | DEHLG EPA GSI | Open-ended Provides guidelines for the planning and licensing authorities in carrying out their functions, and a framework to assist in decision-making on the location, nature and control of developments and activities in order to protect groundwater |
| Regional | | | | |
| Bord na Móna Cutaway Bog Rehabilitation, 2002 | Not specified | Environmental Protection Agency Act, 1992 Protection of the Environment Act, 2003 EPA Acts 1992 to 2007 | EPA Bord na Móna | Duration not specified Management guidelines for the planning and implementation of cutaway bog rehabilitation in accordance with condition 10 of IPC Licences Nos. 500-507 |
| Local | | | | |
| Cavan County Council Water Pollution (Agricultural) Bye-Laws, 2000. | Not specified | Local Government (Water Pollution) (Amendment) Act, 1990. Local Government Act, 1994 (Bye-Laws) Regulations, 1999. | Cavan County Council | Duration not specified Bye-laws to address key aspects of agricultural practice in affected areas. |
| Westmeath County Council Water Pollution (Agricultural) Bye Laws, 2000 | Not specified | Local Government (Water Pollution) (Amendment) Act, 1990. Local Government Act, 1994 (Bye-Laws) Regulations, 1999. | Westmeath County Council | Duration not specified Bye-laws to address key aspects of agricultural practice in affected areas. |

| Plan Name | Date for Review | Enabling Legislation | Responsible Authorities | Plan Duration and Summary of Contents |
|--|-------------------------|--|---|---|
| Cavan County Council Water Pollution (Wastewater Treatment Systems for Single Houses) Bye-Laws, 2004 | Not specified | Local Government (Water Pollution) (Amendment) Act, 1990. Local Government Act, 1994 (Bye-Laws) Regulations, 1999. | Cavan County Council | Duration not specified Bye-laws to control the design, operation and maintenance of wastewater treatment systems for single houses. |
| Carlingford Lough, Co. Louth Regulation 6 (Shellfish) Action Programme | Reviewed every 6 months | European Communities (Quality of Shellfish Waters) Regulations, 2006 (S.I. No. 268 of 2006). | Minister for Communications, Marine and Natural Resources, Bord lascaigh Mhara and the Marine Institute | Duration not specified The action programme describes the shellfish area catchment, ther pressures and risks in the area and sets out the actions proposed to alleviate the risks. |
| Louth Action Programme for the Ardee, 2005 | Not specified | European Communities (Drinking Water) Regulations, 2000 | Louth County Council | Duration not specified Sets out the actions to protect the drinking water from the Ardee water treatment plant |
| Louth Action Programme for the Omeath, 2006 | Not specified | European Communities (Drinking Water) Regulations, 2000 | Louth County Council | Duration not specified Sets out the actions to protect the drinking water from the Omeath water treatment plant |
| Louth Action Programme for the Staleen, 2006 | Not specified | European Communities (Drinking Water) Regulations, 2000 | Louth County Council | Duration not specified Sets out the actions to protect the drinking water from the Staleen water treatment plant |

Table E5: Eastern River Basin District – Sludge Management Plans

| Plan Name | Date for Review | Enabling Legislation | Responsible Authorities | Plan Duration and Summary of Contents |
|--|-------------------------|----------------------------|---------------------------------------|---|
| National | | | | |
| Sludge Management Plans: A Guide To Their Preparation and Implementation, 1998 | Not Specified | Waste Management Act, 1996 | DEHLG | Open-ended strategy Sets out the protocol for Local Authoriteis preparation of sludge management plans |
| Strategy Study on Options for the Treatment and Disposal of Sewage Sludge In Ireland, 1993 | Not Specified | Waste Management Act, 1996 | DEHLG | Open-ended strategy Sets out options for treatment for sludge arising from municipal wastewater. |
| Local | | | | |
| County Cavan Sludge Management Plan | Not specified | Waste Management Act, 1996 | Cavan County Council | Duration not specified Strategy for the management of non-hazardous sludges generated in the area. |
| Dun Laoghaire/Rathdown Sludge Management Plan | Not specified | | Cork County Council | |
| Fingal Sludge Management Plan, 2002 | Not specified | | Dun Laoghaire/Rathdown County Council | |
| County Kildare Sludge Management Plan, 2000 | Reviewe d every 5 years | | Kildare County Council | |
| County Louth Sludge Management Plan | Not specified | | Cork County Council | |
| County Meath Sludge Management Plan | Not specified | | Louth County Council | |
| County Offaly Sludge Management Plan, 2001 to 2021 | Not specified | | Offaly County Council | |

| Plan Name | Date for Review | Enabling Legislation | Responsible Authorities | Plan Duration and Summary of Contents |
|---|-----------------|----------------------|-----------------------------|---------------------------------------|
| South Dublin Sludge Management Plan | Not specified | | South Dublin County Council | |
| County Westmeath Sludge Management Plan | Not specified | | Westmeath County Council | |
| County Wexford Sludge Management Plan | Not specified | | Wexford County Council | |
| County Wicklow Sludge Management Plan | Not specified | | Wicklow County Council | |

Table E6: Eastern River Basin District – Major Accident and Emergency Plans

| Plan Name | Date for Review | Enabling Legislation | Responsible Authorities | Plan Duration and Summary of Contents |
|---|--------------------------|--|--|--|
| National | | | | |
| A Framework for Major Emergency Management | Review Annually | None | DEHLG | Duration not specified. A Framework enabling An Garda Síochána, the Health Service Executive and Local Authorities to prepare for and make a co-ordinated response to major emergencies resulting from events such as fires, transport accidents, hazardous substance incidents and severe weather. |
| Preparing for Major Emergencies Handbook | Not specified | None | Office of Emergency Planning | Duration not specified. Handbook provides an introduction to comprehensive information on the Government's emergency planning. |
| National Emergency Plan for Nuclear Accidents, 2005 | Not specified | SI 125 of 2000, Radiological Protection Act, 1991 (Ionising Radiation) | Department of Environment, Heritage and Local Government. | Duration not specified Provides a framework for dealing with a nuclear emergency and to ensure that all State resources are distributed to good effect and that gaps in the response arrangements are not allowed to Develop. |
| Public Health Emergency Plan | Not specified | None | CEO of the Health Service Executive | Duration not specified Prepared as a generic plan to facilitate all health service providers in developing and reviewing their plans for public health emergencies. |
| Regional | | | | |
| Midland Region Major Emergency Plan, 1996 | Reviewed Annually (Sept) | None | Midland Region Major Emergency Planning Group Local Authorities An Garda Síochána HSE | Duration not specified .Appraised & updated annually. Guidance for personnel and organisations who may be involved in a major emergency situation, with the aim of providing a basis for standard procedures and coordinated effort. |
| Local | | | | |
| Offaly County Council Major Emergency Plan * | Annually | None | Offaly County Council, An Garda Síochána, Health Service Executive | Duration not specified To outline and co-ordinate procedures to be followed and functions to be undertaken by the council and emergency services responding to an emergency. |
| Cavan County Council Major Emergency Plan * | Annually | | Cavan County Council, An Garda Síochána, Health Service Executive | |

| Plan Name | Date for Review | Enabling Legislation | Responsible Authorities | Plan Duration and Summary of Contents |
|---|-----------------|---|---|--|
| Dublin City Council Major Emergency Plan* | Annually | | Dublin City Council, An Garda Síochana, Health Service Executive | |
| Dun Laoghaire/ Rathdown County Council Major Emergency Plan* | Annually | | Dun Laoghaire/ Rathdown County Council, An Garda Síochana, Health Service Executive | |
| Fingal County Council Major Emergency Plan* | Annually | None | Fingal County Council, An Garda Síochana, Health Service Executive | Duration not specified To outline and co-ordinate procedures to be followed and functions to be undertaken by the council and emergency services responding to an emergency. |
| Kildare County Council Major Emergency Plan* | Annually | | Kildare County Council, An Garda Síochana, Health Service Executive | |
| Louth County Council Major Emergency Plan* | Annually | | Louth County Council, An Garda Síochana, Health Service Executive | |
| Westmeath County Council Major Emergency Plan* | Annually | | Laois, Longford, Offaly, Westmeath County Councils, An Garda Síochana, Health Service Executive | |
| Wexford County Council Major Emergency Plan* | Annually | European Communities (Control of Major Accident Hazards involving Dangerous Substances) Regulations 2000. | Wexford County Council, An Garda Síochana, Health Service Executive | December 2005 – until updated To outline and co-ordinate procedures to be followed and functions to be undertaken by the council and emergency services responding to an emergency. |
| Wicklow County Council Major Emergency Plan* | Annually | None | Wicklow County Council, An Garda Síochana, Health Service Executive | 2006 until revised To outline and co-ordinate procedures to be followed and functions to be undertaken by the council and emergency services responding to an emergency. |
| Dublin Port Major Marine Incident Emergency Plan & Dublin Port Emergency Procedures, 2002 | Not specified | Sea Pollution (Amendment) Act, 1999 | Dublin Port Harbour Master | Duration not specified Sets out an emergency control organisation structure which will enable Dublin Port to respond rapidly and efficiently to any emergency |
| Dublin Port Emergency Response Plan, 2008 | Not specified | | Dublin Port Harbour Master | |
| Louth Draft Coastal Pollution Response Plan, 2007 | Not specified | | Louth County Council | Duration not specified The plan is designed to initiate an appropriate oil spill response in the event of an incident. |
| * all Local Authority Major Emergency Plans were put in place on the 30th September 2008. Major Emergency Plans are updated annually. | | | | |
| Upper Tier Seveso Sites – all with Internal Emergency Plans | | | | |
| Albion (Univar Ireland Ltd c/o Harry Crosbie Ltd) Tolka Quay Rd. Dublin Port. | Not requested | European Communities (Control of Major Accident Hazards Involving Dangerous Substances) Regulations (S.I. 74 of 2006) | Local competent authority and emergency services | Not requested |
| Calor Gas Teo. Tolka Quay, Alexander Rd., Dublin | | | | |
| Chemco (Irl) Ltd., T/A Chemsorce Unit 2, Stadium Business Park, Ballycoolin Rd., Cappagh, Dublin 11. | | | | |

| Plan Name | Date for Review | Enabling Legislation | Responsible Authorities | Plan Duration and Summary of Contents |
|--|-----------------|---|--|---------------------------------------|
| Contract and General Warehousing Ltd. Westpoint Business Park, Navan Rd. Mulhuddart Esso Ireland Ltd., Dublin Joint Fuels Terminal, Alexandra Rd. D 1 | | | | |
| Flogas Irl. Ltd Marsh Rd. Drogheda, Co. Louth | | | | |
| Irish Flavours and Fragrances Ltd Industrial Estate, Drogheda, Co. Louth | | | | |
| Irish Industrial Explosives Ltd Clonagh, Enfield, Co Meath | | | | |
| Indaver Ireland Tolka Quay Road, Dublin | | | | |
| Schering-Plough (Avondale) Co. Rathdrum, Co. Wicklow. | | | | |
| Tedcastles Oil Products (Yard 2) Promenade Rd, Dublin 3 | | | | |
| Mallinckrodt Medical Imaging - Ireland T/A Tyco Healthcare Dublin Damastown, Mulhuddart, D15 | Not requested | European Communities (Control of Major Accident Hazards Involving Dangerous Substances) Regulations (S.I. 74 of 2006) | Local competent authority and emergency services | Not requested |
| Lower Tier Seveso Sites – all with internal emergency plans. | | | | |
| Arch Chemicals B.V Watery Lane, Sword, Dublin | Not requested | European Communities (Control of Major Accident Hazards Involving Dangerous Substances) Regulations (S.I. 74 of 2006) | The operator & the HSA | Not requested |
| BOC Gases Ireland Ltd. Bluebell Ind. Est. Dublin 12 | | | | |
| Dublin Bay Power Pigeon House Road, Ringsend, Dublin 4 | | | | |
| ESB Poolbeg Power Station Pigeon House Road, Ringsend, Dublin 4 | | | | |
| ESB North Wall Generating Station Alexander Rd, Dublin 1 | | | | |
| ESB - Rhode Generating Station Rhode, Co. Offaly | | | | |
| Esso Ireland Ltd. Dublin Airport Joint Storage Facility, Corballis Park, Dublin Airport. | | | | |
| Helsinn Chemicals Damastown, Mulhuddart, D15 | | | | |
| Iarnrod Eireann Inchicore Inchicore, Dublin 8 | Not requested | European Communities (Control of Major Accident Hazards Involving Dangerous Substances) Regulations (S.I. 74 of 2006) | The operator & the HSA | Not requested |
| Iarnrod Eireann Dublin Port Alexander Rd, DublinPort | | | | |
| Intel Ireland Ltd. Collinstown Industrial Park, Leixlip, Co. Kildare | | | | |
| Irish Distillers Ltd. Robinhood Road, Clondalkin, D22 | | | | |
| Topaz Energy Ltd. (Irish Shell) Site 1, Alexandra Road, Dublin 1 | | | | |

| Plan Name | Date for Review | Enabling Legislation | Responsible Authorities | Plan Duration and Summary of Contents |
|---|-----------------|----------------------|-------------------------|---------------------------------------|
| Topaz Energy Ltd. (Irish Shell) Site 2, Alexandra Road, Dublin 1 | | | | |
| Topaz Energy Ltd. (Irish Shell) Site 3, Alexandra Road, Dublin 1 | | | | |
| Sigma Aldrich Fine Chemicals Pharma Arklow Vale road, Arklow, Co. Wicklow | | | | |
| Marsh Oil Products Ltd Marsh Road, Drogheda, Co. Louth | | | | |
| Statoil Ireland Ltd Yard 1 Leaside Oil Terminal, Promenade Road, Dublin Port Dublin 3 | | | | |
| Statoil Ireland Ltd Yard 2 Leaside Oil Terminal, Promenade Road, Dublin Port Dublin 3 | | | | |
| Bristol Myers Squibb Cruiserath Cruiserath Rd. Mulhuddart, D15 | | | | |
| Swords Laboratories Watery Lane, Swords, Dublin | | | | |
| Tedcastles Oil Products (Yard 1) Promenade Rd, Dublin 3 | | | | |
| Tibbett & Britten Group (Ireland) Ltd Robinhood Road, Clondalkin, D22 | | | | |
| Astellas Ireland Co. Ltd Damastown, Mulhuddart, D 15 | | | | |
| Gensys Power Ltd. T/A Huntstown Power Station Huntstown Quarry, Finglas, Dublin 11 | | | | |
| Grassland Fertilizers Limited The Pound Road, Slane, Co. Meath | | | | |

Table E7: Eastern River Basin District – Forest Management Plans

| Plan Name | Date for Review | Enabling Legislation | Responsible Authorities | Plan Duration and Summary of Contents |
|--|-----------------|--|-------------------------|--|
| National | | | | |
| Growing for the Future – A Strategic Plan for the Forest Sector in Ireland | 2015 | Forestry Act 1946 Sustainable Forest Management | Forest Service | Open-ended strategy Strategic plan for the development of the forestry sector in Ireland |
| Irish National Forest Standard | Not specified | Forestry Act, 1946, 1956, 1988 Sustainable Forest Management | Forest Service | Open-ended strategy Sets out the framework within which the development and evaluation of sustainable forest management will take place in Ireland. |
| Code of Best Forest Practice | | Forestry Act, 1946, 1956, 1988 Sustainable Forest Management | | Open-ended strategy A Code Of Best Forest Practice designed to ensure that forest operations in Ireland are carried out in a way which meets high environmental, social and economic standards. |
| Native Woodland Scheme | To be determin | Forestry Act, 1946 Sustainable Forest | Forest Service | Open-ended strategy A financial incentives scheme for |

| Plan Name | Date for Review | Enabling Legislation | Responsible Authorities | Plan Duration and Summary of Contents |
|---|-----------------|---|-------------------------|---|
| | ed by the DAFF | Management | | conservation and establishment of Native Woodlands. |
| Forestry and Water Quality Guidelines | Not specified | Forestry Act, 1946 Sustainable Forest Management | Forest Service | Open-ended strategy Sets out guidelines for forest practices to ensure conservation and enhancement of water quality. |
| Forestry and the Landscape Guidelines | | | | Open-ended strategy Sets out guidelines with the objective of ensuring a positive relationship between the forest and the character of a given landscape, to optimise the aesthetic effect and to minimise the visual effect conflict. |
| Forest Harvesting and the Environment Guidelines | | | | Open-ended strategy Includes issues relating to: soil conservation; the protection of water quality, archaeological sites, biodiversity and the visual landscape; the maintenance of forest health and productivity. |
| Forest Biodiversity Guidelines | Not specified | Forestry Act, 1946 Sustainable Forest Management | Forest Service | Open-ended strategy The Forest Biodiversity Guidelines Focus on how best to conserve and enhance biodiversity in Irish forests, through appropriate planning, conservation and management. |
| Forest and Aerial Fertilisation Guidelines | Not specified | S.I. No. 592 of 2006 and S.I. No. 790 of 2007, European Communities (Aerial Fertilisation) (Forestry)(Amendment) Regulations 2007 | Forest Service | Open-ended strategy Sets put the requirements needed for an aerial fertilisation licence to be granted by the Forest Service. |
| Forestry and the Freshwater Pearl Mussel Requirements Site Assessment And Mitigation Measures | Not specified | Habitats Directive (92/43/EEC) and the Wildlife Acts (1976, amended 2000). | Forest Service | Open-ended strategy Sets out the requirements for forest operations potentially impacting within the catchments of Freshwater Pearl Mussel populations. The Requirements describe a range of measures intended to reduce potential negative impacts on the species arising from forest operations and supplement all other Forest Service Guidelines and regulations in order to assist in the protection and conservation of the Freshwater Pearl Mussel (FPM) and its habitat. |
| Regional | | | | |
| Coillte District Strategic Plan - Dublin/Wicklow E1, 2006 to 2010 | 2010 | Sustainable Forest Management | Coillte | 5 year plan Longterm vision for 20 years. Describes Coillte’s forests in the Dublin/Wicklow District and sets out the long term vision for the management of these forests, sets out the policies and practices and specifies the short-term objectives for the district. |
| Coillte District Strategic Plan - South East Counties E2, 2006 to 2010 | | | | |
| Coillte District Strategic Plan - Lakelands N3, 2006 to 2010 | | | | |
| Local | | | | |
| Glendalough Forest Management Plan, 2006 to 2010 (County Wicklow) | Not specified | Sustainable Forest Management | Coillte | 5 year plan Describes the forest, catchment, management focus, long-term goals and details the forest operations |

| Plan Name | Date for Review | Enabling Legislation | Responsible Authorities | Plan Duration and Summary of Contents |
|---|-----------------|----------------------|-------------------------|---------------------------------------|
| Glenmalure Forest Management Plan, 2006 to 2010 (County Wicklow) | | | | planned for a 5 year period. |
| Hollywood Forest Management Plan, 2006 to 2010 (County Wicklow) | | | | |
| Avonmore Forest Management Plan, 2006 to 2010 (County Wicklow) | | | | |
| Shillelagh Forest Management Plan, 2006 to 2010 (County Wicklow) | | | | |
| Avondale Forest Management Plan, 2006 to 2010 (County Wicklow) | | | | |
| Glencree Forest Management Plan, 2006 to 2010 (County Wicklow) | | | | |
| Roundwood Forest Management Plan, 2006 to 2010 (County Wicklow) | | | | |
| Glen of Imaal Forest Management Plan, 2006 to 2010 (County Wicklow) | | | | |
| Glenealy Forest Management Plan, 2006 to 2010 (County Wicklow) | | | | |
| Aughrim Forest Management Plan, 2006 to 2010 (County Wicklow) | | | | |
| Blessington Forest Management Plan, 2006 to 2010 (County Wicklow) | | | | |
| Clonmoyle Forest Management Plan, 2006 to 2010 (County Kildare) | | | | |
| Rahin Forest Management Plan, 2006 to 2010 (County Kildare) | | | | |
| Lullymore Forest Management Plan, 2006 to 2010 (County Kildare) | | | | |
| Brackney Forest Management Plan, 2006 to 2010 (County Kildare) | | | | |
| Donedea Forest Management Plan, 2006 to 2010 (County Kildare) | | | | |
| Hortland Forest Management Plan, 2006 to 2010 (County Kildare) | | | | |

| Plan Name | Date for Review | Enabling Legislation | Responsible Authorities | Plan Duration and Summary of Contents |
|--|-----------------|-------------------------------|-------------------------|--|
| Monasterevin Forest Management Plan, 2006 to 2010 (County Kildare) | | | | |
| Nobber Forest Management Plan, 2006 to 2010 (County Meath) | | | | |
| Kells Forest Management Plan, 2006 to 2010 (County Meath) | | | | |
| Navan Forest Management Plan, 2006 to 2010 (County Meath) | | | | |
| Summerhill Forest Management Plan, 2006 to 2010 (County Meath) | | | | |
| Dublin South Forest Management Plan, 2006 to 2010 (County Dublin) | | | | |
| Dundalk Forest Management Plan, 2006 to 2010 (County Louth) | | | | |
| Drogheda Forest Management Plan, 2006 to 2010 (County Louth) | Not specified | Sustainable Forest Management | Coillte | 5 year plan Describes the forest, catchment, management focus, long-term goals and details the forest operations planned for a 5 year period. |
| Knockbarra Forest Management Plan, 2006 to 2010 (County Offaly) | | | | |
| Glenafelly Forest Management Plan, 2006 to 2010 (County Offaly) | | | | |
| Ballydaly Forest Management Plan, 2006 to 2010 (County Offaly) | | | | |
| Derrycoffey Forest Management Plan, 2006 to 2010 (County Offaly) | | | | |
| Garyhinch Forest Management Plan, 2006 to 2010 (County Offaly) | | | | |
| Killeagh Forest Management Plan, 2006 to 2010 (County Offaly) | | | | |
| Birr Forest Management Plan, 2006 to 2010 (County Offaly) | | | | |
| Shinrone Forest Management Plan, 2006 to 2010 (County Offaly) | | | | |
| Castlpollard Forest Management Plan, 2006 to 2010 (County Westmeath) | | | | |
| Ballynafid Forest Management Plan, 2006 to 2010 (County Westmeath) | | | | |
| Downs Forest Management Plan, 2006 to 2010 (County Westmeath) | | | | |

| Plan Name | Date for Review | Enabling Legislation | Responsible Authorities | Plan Duration and Summary of Contents |
|--|-----------------|----------------------|-------------------------|---------------------------------------|
| Lough Ennell Forest Management Plan, 2006 to 2010 (County Westmeath) | | | | |
| Ballymore Forest Management Plan, 2006 to 2010 (County Westmeath) | | | | |
| Macnean East Forest Management Plan, 2006 to 2010 (County Cavan) | | | | |
| Glangevlin Forest Management Plan, 2006 to 2010 (County Cavan) | | | | |
| Bawnboy Forest Management Plan, 2006 to 2010 (County Cavan) | | | | |
| Cavan Forest Management Plan, 2006 to 2010 (County Cavan) | | | | |
| Cootehill Forest Management Plan, 2006 to 2010 (County Cavan) | | | | |
| Baillieboro Forest Management Plan, 2006 to 2010 (County Cavan) | | | | |
| Dunari Forest Management Plan, 2006 to 2010 (County Cavan) | | | | |
| Virginia Forest Management Plan, 2006 to 2010 (County Cavan) | | | | |
| Foxfield Forest Management Plan, 2006 to 2010 (County Cavan) | | | | |
| Nobber Forest Management Plan, 2006 to 2010 (County Meath) | | | | |
| Kells Forest Management Plan, 2006 to 2010 (County Meath) | | | | |
| Navan Forest Management Plan, 2006 to 2010 (County Meath) | | | | |

Table E8: Eastern River Basin District – Arterial Drainage and Flood Relief Schemes

| Scheme Name | Arterial Drainage / Flood Relief | RBD |
|---|--|---------|
| Boyne | Arterial Drainage Scheme | Eastern |
| Broadmeadow and Ward | Arterial Drainage Scheme | Eastern |
| Matt | Arterial Drainage Scheme | Eastern |
| Ryewater | Arterial Drainage Scheme | Eastern |
| Avoca, Aughrim & Baltinglass, Co Wicklow | Flood Relief Scheme - Completed | Eastern |
| Duleek (Nanny) | Flood Relief Scheme – Completed | Eastern |
| Hazelhatch | Flood Relief Scheme – Completed | Eastern |
| Lyreen-Meadowbrook Rivers, Co. Kildare | Flood Relief Scheme – Completed | Eastern |
| Morrell River, Co Kildare | Flood Relief Scheme – Completed | Eastern |
| River Tolka, Dublin City area | Flood Relief Scheme – Completed | Eastern |
| River Tolka, Meath | Flood Relief Scheme – Completed | Eastern |
| Arklow, Co. Wicklow | Flood Relief Scheme - In Design / Progress | Eastern |
| Bray, Co. Wicklow | Flood Relief Scheme - In Design / Progress | Eastern |
| Mornington, Co. Meath | Flood Relief Scheme - In Design / Progress | Eastern |
| River Dodder, Dublin | Flood Relief Scheme - In Design / Progress | Eastern |
| River Tolka, Fingal | Flood Relief Scheme - In Design / Progress | Eastern |
| Rye Water, Leixlip, Co Kildare | Flood Relief Scheme - In Design / Progress | Eastern |
| South Docklands, Dublin City | Flood Relief Scheme - In Design / Progress | Eastern |
| Dublin Flooding Initiative (including SAFER and Flood Resilient Cities Project) | In Design / Progress | Eastern |
| River Liffey Flood Scheme | In Design / Progress | Eastern |
| Project 2030/2050 | In Design / Progress | Eastern |

Appendix F– Ministerial Review



Comhshaol, Oidhreacht agus Rialtas Áitiúil
Environment, Heritage and Local Government



Oifig an Aire
Office of the Minister

6 July 2010

John Tierney
Dublin City Council,
Civic Offices,
Wood Quay,
Dublin 8.

Dear Manager,

I am in receipt of the final River Basin Management Plan for the Eastern River Basin District as adopted by the local authorities in that district and submitted by Dublin City Council as the coordinating local authority.

Having considered the Plan, the comments submitted by the relevant public authorities and others and the report prepared by the Environmental Protection Agency, I, John Gormley T.D., Minister for the Environment, Heritage and Local Government, in accordance with the powers conferred on me by Regulations 12(5) and 13(6) of the European Communities (Water Policy) Regulations 2003 (S.I. No. 722 of 2003, as amended) hereby serve notice of my amendments to the River Basin Management Plan for the Eastern River Basin District, as set out in the Appendices to this letter.

In accordance with Regulations 12(5) and 13(6) Dublin City Council should send a copy of this notice to the relevant public authorities and should publish the plan incorporating the amendments set out in the appendices to this letter.

Yours sincerely,

John Gormley T.D.
Minister for the Environment, Heritage and Local Government

APPENDIX 1

- In Section 3.4 of the Plan (titled Current Water Status) insert the following paragraphs after the final paragraph under the heading 'Current Status of Surface Waters', i.e. after the paragraph commencing: 'Coastal waters are generally in good condition':

'A fully compliant WFD monitoring programme for transitional and coastal waters will be initiated as a matter of priority and made operational at the latest by December 2011. The classification of all transitional and coastal waters will be completed as soon as EPA deems sufficient monitoring data is available.'

To complete an interim classification of transitional and coastal waters, a project, led by the Marine Institute and scheduled for completion in September 2010, is underway. The project aims to identify and process existing data in respect of these waters that can be used to assign status for the reference period 2007-2009, where such information is currently unavailable.'

- Insert a new section, as follows, after Section 7.4 of the Plan (titled Supplementary Measures) and renumber subsequent sections.

Recent legislation supporting the implementation of the programme of measures

Significant progress has been made in recent years in putting the necessary legislation in place to support the implementation of river basin plans and programmes of measures in Ireland. The core requirements of the Water Framework Directive (2000/60/EC) were transposed under the Water Policy Regulations (SI 722 of 2003 as amended). In addition, the Surface Waters Environmental Objectives Regulations (SI 272 of 2009) and the Groundwater Environmental Objectives Regulations (SI 9 of 2010) were made to give effect to the measures needed to achieve surface water and groundwater environmental objectives established in river basin management plans. The Regulations place a legal obligation on public authorities to aim to achieve those objectives in the context of their statutory functions. For example, both sets of Regulations require the relevant authorities to review all pollutant discharge authorisations to take account of the objectives established in river basin plans. These include, inter alia

- licences issued under the Water Pollution Acts
- IPPC licences
- licences issued under the Waster Water Discharge (Authorisation) Regulations 2007
- Certificates of Authorisation under the Waste Management Regulations 2008.

Other legislation introduced in recent years, gives effect to various measures required by the Water Framework Directive. These include:

- The Waste Water Discharge (Authorisation) Regulations (SI 684 of 2007) which establish an authorisation system of local authority wastewater discharges operated by the Environmental Protection Agency.
- The Water Services Act (No. 30 of 2007) which introduces strategic planning in relation to water services provision, strengthening the administrative arrangements for planning the delivery of water services at national and local level. Water Services Strategic Plans prepared by water services authorities in accordance with Section 36 of this Act must take full account of the proper planning and sustainable development of their functional areas including, amongst other things, the provisions of river basin management plans prepared for the relevant area.
- The Bathing Water Quality Regulations (SI 79 of 2008) which transposed the new Bathing Waters Directive (2006/7/EC) establishes a new classification system for bathing water quality and require monitoring and management plans to preserve, protect and improve the quality of bathing waters.
- The European Communities Environmental Objectives (Freshwater Pearl Mussel) Regulations (SI 296 of 2009) which set legally binding objectives for water quality in rivers, or parts of rivers, inhabited by freshwater pearl mussels (*Margaritifera*) and designated as a Special Area of Conservation to protect those species. The Regulations also require authorities to take the steps necessary to attain those objectives. They also require the Minister for Environment, Heritage and Local Government, subject to consultations, to prepare a programme of measures for the attainment of the ecological objectives in rivers containing protected populations; and to publish a sub-basin management plan for each relevant river.

- The Quality of Shellfish Waters Regulations 2006 (SI 268 of 2006) which set water quality requirements, provide for the designation of shellfish growing areas and also for the establishment of pollution reduction programmes for the designated waters in order to support shellfish life and growth. The Regulations were amended in 2009 (SI 55 of 2009 and SI 464 of 2009) to designate an additional fifty shellfish waters. There are now a total of sixty-four shellfish waters, nationally.
- The Good Agricultural Practice for Protection of Waters Regulations (SI 101 of 2009), which provide statutory support for good agricultural practice to protect waters against pollution from agricultural sources and include measures aimed at achieving that objective. These regulations revised and replaced previous regulations made in 2006 and 2007 and provided for strengthened enforcement provisions and for better farmyard management.
- Amendments to the Urban Waste Water Treatment Regulations 2001 (SI 48 of 2010) which designate an additional 10 sites as Sensitive Areas. This brings the total number of sites designated nationally to 43
- The European Communities (Control Of Dangerous Substances From Offshore Installations) Regulations 2009 (SI 358 of 2009) which provide for the permitting of discharges of certain dangerous substances from offshore installations into the Irish territorial sea by the Minister for Communications, Energy and Natural Resources. The Regulations also provide for the preparation of a pollution reduction programme by the Minister.

The Planning and Development Bill 2010, due to be enacted in the middle of this year, includes important new provisions in support of the Water Framework Directive. Firstly, the Bill includes a new mandatory objective requiring local authorities to integrate water management with planning policies and objectives in the preparation of their development plan. It specifically requires local authorities to ensure that the development plan supports the promotion of compliance with environmental standards and objectives established under both the Surface Waters and Groundwater Regulations. In order to ensure that both development planning and management are fully compliant with Water Framework Directive objectives, the Department of the Environment, Heritage and Local Government will issue Section 28 guidance to planning authorities on the new Planning Bill and its relationship with the implementation of the RBMPs, after enactment and not later than 2011. This will be supported by regional seminars.

Secondly, significant new provisions are included in the Bill in relation to the regulation of quarries. The Bill requires each planning authority to identify quarries in its administrative area which, having regard to the dates of implementation of the EIA Directive and the Habitats Directive, respectively, would have required environmental impact assessment or appropriate assessment and which have not had either or both of these assessments, as appropriate. Where the quarries identified commenced operations before the establishment of the planning code in 1964, or since obtained permission and are registered, they will be required to apply for a new consent, known as a "substitute consent" with a remedial EIA. However where the quarry commenced after October 1964 and never obtained planning permission, or failed to register in 2004-2005 under Section 261 of the Act, if required to do so, it will be subject to enforcement action.

Thirdly, the Bill removes the exemption status for infill of wetlands carried out under the Land Reclamation Act. Other forms of planning exemption for wetland infill will be restricted or removed in forthcoming amendments to the Planning Regulations.

The legislative framework will be further enhanced to protect and improve water quality through the introduction of strengthened controls on abstractions of water and physical modifications of water bodies. A scoping study on the legislative requirements in this area is underway and work on the drafting of new WFD-compliant regulations to include a modernised system of registration and prior authorisation will commence later in 2010. These regulations will be in place at the latest by end 2012.

New legislation will be proposed to provide for prior consideration of the nature, location and cumulative effects of certain agri-development projects to ensure that the obligations under the Environmental Impact Assessment (EIA) Directive are fully met. This is in response to the November 2008 ECJ ruling that Ireland was over reliant on size thresholds to determine whether an EIA is required in relation to certain agri-developments.

The categories of agri-development include:

- projects for the restructuring of rural land holdings;
- projects for the use of uncultivated land or semi-natural areas for intensive agricultural purposes; and
- water management projects for agriculture, including irrigation and land drainage projects.

The combined result of the above legislative changes will strengthen controls on physical development activities and bring greater coherence between the planning code and the objectives of the river basin management plans.

- In Section 7.5 of the Plan (titled Planned and Potential Measures) insert the following paragraphs after the first paragraph under the heading 'Forestry', i.e. after the paragraph commencing: 'Existing Forestry Activities':

"The Forest Service will review the Forestry and Water Quality Guidelines (published, July 2000) during the first cycle of the river basin management plans to ensure that they reflect the new water quality objectives and standards.

New regulations, to update the European Communities (Environmental Impact Assessment) (Amendment) Regulations, 2001 (S.I. No. 538 of 2001) will be finalised this year. The new regulations will provide for statutory EIA screening for all sub-threshold afforestation and forest road development (but excluding access to public roads which will require planning permission and EIA, if necessary). It will also transpose the Public Participation Directive insofar as it concerns forestry and will introduce penalties for unauthorised development."

- In Section 7.5 of the Plan (titled Planned and Potential Measures) insert the following paragraphs after the first paragraph under the heading 'Agriculture', i.e. after the paragraph commencing: 'The Existing Measures in':

The Nitrates Regulations represent a major step forward in protecting waters from agricultural sources of pollution and are expected to deliver significant improvement in water quality when fully effective. Evidence suggests, however, that they will not be sufficient to fully deliver the requirements of the Water Framework Directive in some areas of the country, e.g.:

- The National monitoring programme has indicated a number of patterns of concern. Elevated nitrate concentrations have been consistently observed in the east and southeast of the country in both groundwater and surface waters (EPA, 2008 and 2009). The presence of intensive agricultural practices on free draining soils in the southeast suggests that diffuse agricultural sources are the cause of the elevated nitrate concentrations. Also, the estuaries of the south-east and south of the country, such as the Slaney, Blackwater and Bandon were found to be the most seriously eutrophic. It is suspected that the nitrogen loads from upstream catchments is a significant contributing factor as nitrogen is the main growth-limiting nutrient in seawater.
- The vulnerable nature of the karst limestone aquifers in the west (Galway, Mayo and Roscommon) may explain the elevated phosphate concentrations in groundwater. The groundwater may be contributing to eutrophication in rivers and lakes in these areas. Phosphorus deposited as organic or chemical fertiliser on shallow soils over fissured karst limestone may enter groundwater readily and may then discharge to rivers through springs. Approximately 20% of the area of Ireland consists of karstified limestone.
- Elevated phosphorus levels have also been observed in areas covered by heavy gley soils with high phosphorus content (Index 4) including parts of counties Cavan and Monaghan in the North Western IRBD, and
- In some of the High Status Sites.

The three scenarios described above pose particular difficulties for water quality management and the agricultural sector in the areas mentioned. Even with the full implementation of the Nitrates Regulations and the National Action Programme it is unlikely that the objective of good status for groundwater and/or surface waters will be met by the 2015 deadline in those areas and the need for supplementary measures will arise. The nature and extent of such measures will be considered when the findings of the Agricultural Catchments Programme start to become available in 2012. Challenges include slow natural rates of water quality recovery, which may extend up to 20 years, and certain ground conditions (hydrogeological and soil characteristics), which cause groundwater bodies to be vulnerable to pollution from nutrient inputs from agricultural activities. Time extensions for achieving water quality objectives have been applied to waters in such areas in order to provide adequate time to investigate the extent of impacts, to identify and implement appropriate management measures and to allow time for water quality to recover.

- In Section 7.5 of the Plan (titled Planned and Potential Measures) insert the following paragraph after the final paragraph under the heading 'Landfills, Mines and Quarries' i.e. after the paragraph commencing: 'Further information including details of the pressures':

The waste management (certification of historic unlicensed waste disposal and recovery activity) Regulations 2008 (SI 524 of 2008) introduced a statutory requirement for local authorities to register all closed landfills, as defined under on the regulations, by the 30th June 2009. 321 sites have been registered throughout the State.

Almost all initial Tier 1 risk assessments (desk study and site walk over) have been completed for each site. More in-depth Tier 2 risk assessments (on-site monitoring) were applied to 18 sites under a pilot project initiated in October 2009, funded by the Department of Environment, Heritage and Local Government. A second pilot project to support the application of Tier 3 risk assessments (more detailed site investigations) was announced in March 2010.

All sites must be authorised by the EPA. The authorisation, called a Certificate of Authorisation (COA), will specify the appropriate management measures to be applied at each site on a case-by-case basis. The EPA will be required to have regard to the environmental quality standards established by the 2009 Surface Waters regulations and the 2010 Groundwater regulations when undertaking its investigations and specifying the appropriate management measures for the purposes of these regulations.

With regard to historic mines an inventory and risk assessment was completed in March 2010 in response to the extractive industries waste Directive (2006/21/EC). The Historic Mine Sites - Inventory and Risk Classification (HMS-IRC) Project was a joint project of the Environmental Protection Agency (EPA) and the Department of Communications, Energy and Natural Resources (DCENR).

The objectives of project were:

- to identify any significant risks to the environment, including human and animal health risks, at these historic mine sites so that these risks ultimately can be managed and the sites made safe.
- to plan for the forthcoming EU Directive 2006/21/EC on the Management of Wastes from the Extractive Industries.

This Directive requires the preparation of an inventory of closed waste facilities in the State by 1st May 2012. The inventory does not include closed stone, sand and gravel quarries, which also require management under the Directive.

A total of 32 mine sites and districts were investigated. Of these 27 mine sites/districts (encompassing 82 individual sites) were scored relative to each other for the purpose of future actions.

The project has resulted in the most comprehensive inventory of historic mines in Ireland that includes a detailed geochemical analysis. It gathers together all the existing information on historic mine sites in Ireland along with significant new information derived from site investigations that will point the way towards future rehabilitation work on mines in Ireland. Rehabilitation works will have regard to the environmental quality standards established by the 2009 Surface Waters regulations and the 2010 Groundwater regulations. "

- In Section 7.5 of the Plan (titled Planned and Potential Measures) insert the following sections before the existing final section ('Ecological Measures').

"National Action Plan for sustainable use of pesticides

The Minister for Agriculture, Fisheries and Food is currently developing a National Action Plan for the sustainable use of pesticides in consultation with other stakeholders. The National Action Plan is a requirement of Directive 2009/128/EC (establishing a framework for Community action to achieve the sustainable use of pesticides) and must be communicated to the Commission and to other Member States by 14 December 2012. The Directive is aimed at ensuring more sustainable use of pesticides, thereby reducing the impact of pesticides on human health and on the environment (including the aquatic environment).

The National Action Plan will include quantitative targets for reducing risks and impacts of pesticide use on the environment. The plan will address areas such as training and certification of pesticide users, distributors and advisors, calibration and certification of pesticide application equipment, and integrated pest management techniques. The plan will have a particular focus on the protection of the aquatic environment and drinking water supplies from potential impacts of pesticide use, and will specifically address the issue of safeguard zones around water abstraction points."

The list of Water Framework Directive Priority Substances is due to be reviewed by 13 January 2011. It has been proposed that sixteen substances including the pesticide cypermethrin will be taken forward for environmental quality standard derivation.

Aquaculture

"Finfish aquaculture is licensed by the Department of Agriculture, Fisheries and Food under the Fisheries (Amendment) Act, 1997. Licences issued under the Act set limits on the amount of fish that may be grown as well the use of chemicals and medicines at the facility. Licences lay down requirements for monitoring, which include benthic monitoring, water quality monitoring and sea lice monitoring. Benthic monitoring is undertaken each year and includes visual examination of the seabed beneath the cages, as well as analysis for organic carbon and redox.

The European Communities (Control of Dangerous Substances in Aquaculture) Regulations 2008) S.I. No. 466 of 2008) give effect to Directive 2006/11/EC of the European Parliament and of the Council on pollution caused by certain dangerous substances into the aquatic environment in so far as the Directive relates to the protection of waters in the marine environment from aquaculture activities.

The Regulations inter alia require that the level of discharge of an emission set by a licensing authority must be based on the relevant environmental quality standards or objectives set by the Minister for the Environment, Heritage and Local Government in accordance with the Water Framework Directive.

All licences will be reviewed to ensure compliance with the WFD objectives (as laid down in the 2009 Surface Water Regulations) for the receiving waterbody, taking into account the assimilative capacity of receiving waters."

Measures to address the pressures on coastal waters

There are many pressures on the coastal zone ranging from certain fishing practices through to recreational pressures, coastal development, dredging activities and dumping at sea, the extraction of marine aggregates and marine waste and litter. The impact of nutrient enrichment and the process of eutrophication is a major concern in the marine environment; assessment is mainly based on data collected by EPA. National Regulations to implement the EU directives on urban waste water treatment and nitrates from agricultural sources are among the most important measures in place to combat eutrophication. Ireland has applied the EU nitrates directive across its whole territory and has designated the relevant estuarine waters as 'sensitive' where required to do so under the Urban Waste Water Directive. Nutrient reduction is required at the larger urban agglomerations discharging into sensitive waters.

Work undertaken for the purpose of the WFD Article 5 risk assessments concluded that 35% of transitional water bodies and 18% of coastal water bodies were 'at risk' or 'probably at risk' of failing to meet the WFD objective of good status due to physical alteration. Morphological pressures on the marine environment include coastal defence, built structures (urbanisation and ports and harbours) and dredging.

The proposed amendment to the legislative framework, to regulate physical modifications having an adverse impact on the water environment (Section 5.1), will, inter alia, provide a formal legal mechanism to address these pressures in the marine environment, including providing for the exemption provisions of Article 4(7) of the WFD where this is justified within the rules of the Directive. The proposed regulations will be subject to prior public consultation and will be in place at the latest by end 2012.

Additional measures will be developed to address other pressures in the context of integrated coastal zone management.

Invasive Alien Species

Regulations will be introduced in 2010 to restrict the trade in invasive alien species, including the banning of certain proscribed species. The proposed regulations are intended to ban the possession of listed species for 'the purpose of sale or dispersal or to transfer the species from one place to another within the country'. Where a problem already exists in relation to an invasive alien species, the regulations will provide for Ministerial powers to make a threat response plan and for the power to compel the relevant public authorities to address the threat. The regulations will be put out for public consultation shortly.

The Department of the Environment, Heritage and Local Government and the Northern Ireland Environment Agency have funded a series of invasive species projects and are implementing the recommendations of the original report. Risk assessments have been undertaken of high risk invasive species and rapid mechanisms, increased stakeholder involvement and best practice guidelines are being developed."

Peat extraction

Peat excavation can impact on water quality through release of nutrients (particularly phosphorus) contributing to eutrophication and through peat silt entering river systems and impacting on aquatic life. Peat harvesting is one of the pressures contributing to the loss of high quality and protected areas.

All excavation of peat in areas above 50 hectares must be licensed under the IPPC regime and private peat producers falling into this category, that are not already licensed, will be brought into the IPPC system by the EPA.

Below this threshold, planning legislation applies and the Local Government (Planning and Development) (Amendment) Regulations, 2001 reduced the planning threshold for peat extraction from 50 to 10 hectares. The 2001 EIA Regulations reduced the threshold for mandatory EIA from 50 to 30 hectares and this provision will be enforced.

It is proposed to amend the Planning and Development Act to ensure effective enforcement against ongoing unauthorised peat extraction irrespective of when the extraction may have commenced. The Department of the Environment, Heritage and Local Government has funded research into the use of remote sensing to identify and gather evidence in relation to unauthorised peat extraction.

It should be noted that, in respect of discharges from smaller private enterprises, local authorities have the option to licence activity under the Water Pollution Acts and this option should be exercised on a risk-assessment basis, in pursuit of WFD water quality objectives.

- In Section 7.6 of the Plan (titled Plans and Programmes) insert the following paragraph after the final paragraph, i.e. after the paragraph commencing 'At a technical level':

"Sustainable flood management measures such as floodplain reclamation and restoration, have ancillary benefits for climate change, biodiversity and nutrient attenuation and have an important role to play in flood risk management planning."

- Insert new Section as follows after existing Section 7.6 and renumber subsequent sections

7.7 Targeted research to support the Plan

The development of the plan has identified a number of priority areas where research is needed to improve knowledge and to help identify appropriate measures to further protect and improve water quality.

The Agricultural Catchments Programme (ACP), a major research project, is intended to provide a scientific evaluation of the effectiveness of the measures in the National Action Programme under the Good Agricultural Practice Regulations and where necessary to underpin the basis for any modifications of the measures that might be required to achieve Water Framework Directive water quality objectives. The ACP is an agri-environmental and socio-economic research programme at the catchment scale supported by a team of scientists, advisors and technicians and managed by Teagasc. It will initially run for a four-year period (2008 –2011). Six agricultural catchments are being intensively managed and monitored nationally. The catchments were selected to represent various typical agricultural enterprise types and typical environmental risks to groundwater and surface water. Two of these catchments contain a high proportion of tillage. One of these is located on free draining soils where the greatest risk is of nitrogen loss through leaching and the other is located on heavier soils where phosphorus loss through surface run-off is more likely. There are four grassland-dominated catchments. One of these involves high risk of nitrogen loss, while the other three relate predominantly to risk of phosphorus loss (with varying levels of risk of nitrogen loss).

The ACP is intended to identify challenges in implementation of the National Action Programme. The ACP is intended to identify challenges in implementation of the National Action Programme and will provide a basis for modifications to the programme and/or recommendations for new agricultural measures for the protection of water, where necessary.

As regards other sectors and issues identified, the following projects are either underway or will be commissioned in 2010:

- The 2009 Indicators Report from the EPA noted the serious decline in the number of high quality sites over the past 20 years (see Section 2.2.1 above). A research project to identify the reasons behind this loss and to propose management strategies to address the matter will commence in 2010 with a timeline for delivery early in 2011.

- SIMBIOSYS, a major 4 year project aimed at assessing the impacts of aquaculture on marine biodiversity, commenced in April 2008 and is due for completion in 2012. The project includes the development of innovative approaches to reduce impacts.
- A scoping desk study aimed at assessing and managing exceedances of specific pollutants, priority & hazardous substances in surface waters and preventing and limiting inputs of hazardous and non-hazardous substances into groundwaters, will be included in a call for proposals in 2010.
- A study to assess disposal options for treated wastewater from single houses in low permeability soil/subsoil settings will be included in a call for proposals in 2010."
- In Section 7.7 of the Plan (titled National Initiatives) insert the following paragraphs after the first paragraph, i.e. after the paragraph commencing 'The Water Framework Directive's approach to water management':

Projected climate impacts have been summarised in a number of recent publications including "A Summary of the State of Knowledge on Climate Change Impacts for Ireland" (EPA), and "Climate Change: Meeting the Challenge of Adaptation", (Irish Academy of Engineering). These provide expert reviews of impacts and recommendations that are relevant to the management of the river basin district.

Flood and drought management both of which will assume greater importance under climate change scenarios, will need to take a sustainable, catchment-based approach. Measures to reconnect wetlands and riparian ecosystems to the river channels may have an important role to play, e.g. in terms of water storage, nutrient attenuation and can also contribute towards providing habitat for native species.

Studies such as those referred to above have highlighted the likely impacts of climate change. As part of the process of developing a national response to the impacts of climate change the EPA will shortly be commencing a project which will bring together all the available information on vulnerabilities on a sector by sector basis. It is anticipated that this material will be available by the end of 2010; this will assist in assessing the risk of climate change and in prioritising adaptive actions.

On foot of a commitment contained in the National Climate Change Strategy, the Department of Environment, Heritage and Local Government is currently in the process of developing a National Climate Change Adaptation Framework. This work is proceeding in parallel with development of the Climate Change Bill which will contain specific provisions in relation to adaptation at national, sectoral and local levels.

The purpose of the Bill is to provide a statutory basis for key national policies and measures on climate change, including national emission reduction targets for 2020 and 2050 and a Climate Change Committee to advise Government. The Bill will provide the statutory framework within which national policy on transition to a low-carbon, climate resilient and environmentally sustainable society can be pursued as a national priority.

The Heads of Bill and the Adaptation Framework will be published as soon as possible."

- In Section 10.3 of the Plan (titled Alternative Objectives – New Modifications or Developments) add the following text to the end of the penultimate sentence in the first paragraph, i.e. the sentence commencing 'Options have to be examined':

"as required by Regulation 33 of the European Communities Environmental Objectives (Surface Waters) Regulations, S.I. No. 272 of 2009."

o APPENDIX 2

Insert New Chapter - Chapter 13 Implementation of the Plan, and renumber the existing chapters 13 and 14.

13 Implementation of the Plan

The River Basin District is the basic unit of planning, implementation, monitoring and reporting under the Water Framework Directive. The work to date on implementing the Directive has been organised and delivered on this basis, with the coordinating local authorities interacting with other local authorities, EPA and other public authorities and stakeholders. This interaction has posed a challenge and while progress has been made, full coordination has not been achieved. The process of developing the plans has been complex and a significant amount of work has been carried out in monitoring, assessment, classification and setting objectives for water bodies.

Delivery of the River Basin Plans will be challenging with responsibility for implementation of the plans currently assigned across a range of organisations with no single body having ultimate responsibility. The current administrative systems are fragmented along administrative lines and do not facilitate analysis, identification and implementation of the most cost-effective solutions to manage water quality at river basin level. An RBD can cover the areas of responsibility of a large number of bodies e.g. 18 local authorities in the case of the Shannon RBD. Furthermore, the implementation of many of the measures necessary to achieve the objectives of the plans is the responsibility of national rather than local authorities. Furthermore, it is recognised that improved enforcement of existing legislation is key to successful implementation of the RBMPs.

As we move to the implementation stage, there is a need to strengthen and adjust the existing administrative structures to ensure effective delivery of the plans including enforcement of relevant legislation, across local, regional and national levels. Recommendations in relation to revised structures for water management have been put forward over the past two years by the OECD, Forfás and in the report of the Special Group on Public Service Numbers and Expenditure.

In tandem with the finalisation of the River Basin Management Plans, proposals to introduce water charging are being advanced and a major report on the efficiency of local government is being finalised. It is likely that recommendations for structural change will emerge from both processes.

13.1 Review of arrangements

In the short-term, funding will continue to be provided to support the RBD Offices so that these can coordinate the efforts of the various authorities to oversee, manage, enforce and report on the implementation of the plans. The National Advisory Committee will continue to exercise an oversight role. In addition, the annual review provided for under the Water Services Investment Programme will continue to be guided by the information coming through from the river basin management planning process.

There are clear advantages in strengthening the delivery approach at a RBD level for both infrastructure delivery and implementation of the RBMPs. It is considered that this approach has potential to improve efficiencies and co-operation, build and retain appropriate expertise in identified areas and strengthen the capacity to plan and deliver strategically important projects, and give a broader strategic context for locally delivered programmes. It would also facilitate the collation of key data at a regional level, and support more coordinated and synchronised planning and decision making.

Against this background, the Department of the Environment, Heritage and Local Government will review by end 2010 the governance and structures for implementation of the river basin management plans. This review will include, inter alia, consideration of the following priority areas: data management; sampling and monitoring; legislative requirements; inspection and enforcement; reporting; public participation. Since one of the key challenges will be the implementation and enforcement of WFD requirements over a wide range of public bodies, it is important that structures resulting from the review must have a clear RBD remit and be provided with the resources and statutory power to oversee and enforce implementation over all relevant public bodies.

13.2 Implementation process

The implementation of the RBMP at waterbody / WMU level will be an extremely complex exercise involving the reviewing and coordination of all water management practices and land-use practices that impact on water, to ensure they are in line with the plan, the relevant regulations (e.g. for surface waters and groundwater) and the Directive. To ensure consistent implementation across all RBDs and WMUs, the following principles must be adhered to when implementation plans are being developed and delivered:

1. All relevant information held by all public bodies shall be made fully available.
2. All information gaps shall be clearly identified with a timeline for completing necessary work to fill gaps in time for the review of the Article 5 characterisation analysis.
3. An appropriate standardised management system shall be developed by 2012 to assess all of the activities that impact water status in the catchment.
4. There shall be a whole-system management approach to implementation that takes account of cumulative impacts, to prevent deterioration in the status of any waterbody unless an Article 4-compliant exemption has been set out.

5. In the selection of supplementary measures and where appropriate and required by the Directive, a better environmental alternative check must be carried out before an Article 4- compliant exemption is applied.
6. Water Framework Directive and Natura 2000 objectives and requirements shall be addressed in an integrated manner, with implementation measures ensuring compliance with any standards and objectives for Natura 2000 sites by 2015.
7. Where the management system indicates that implementation of basic measures will not avoid deterioration of status or will not restore waterbodies to good status by 2015, a transparent cost effectiveness analysis, incorporating environmental and resources costs and benefits shall be conducted to select the most appropriate supplementary measures to achieve this, unless an Article 4 exemption is set out.
8. Public participation must be integrated into the Plan.

Critical to managing this complex implementation process will be effective data management and interpretation, the streamlining of the regulatory systems that control activities that may impact on waters and ensuring that the regulation of activities is consistent across public authorities.

These issues will be considered during review of water governance and structures mentioned above. However, there are several initiatives currently underway which will facilitate improvements in implementation.

The Environmental Protection Agency and local authorities with support from the Local Government Computer Services Board are developing the Environmental Data Exchange Network (EDEN). The aim of EDEN is to eliminate the difficulties encountered in the sharing and reporting of environmental data sourced from a wide range of environmental datasets, applications, and IT systems in place within the many organisations involved in work related to the Water Framework Directive. In time it is intended that EDEN will be a fully distributed data-sharing network allowing all stakeholders to easily share environmental data. The Environmental Protection Agency and local authorities are also currently investigating web-based catchment management systems that will best facilitate the management, visualisation and interpretation of environmental datasets at catchment level.

For the purpose of promoting consistency in environmental regulation and enforcement local authorities, the Environmental Protection Agency and the Department of Environment, Heritage and Local Government are also jointly involved in the preparation of guidance and training for local authority personnel through the Environmental Services Training Group (ESTG). Guidance and training currently being developed include; the authorisation of discharges to water and sewer under Water Pollution Acts and protocols for agricultural inspections and enforcement. Other guidance and training will be prepared as appropriate.

13.3 Public participation

Public participation is a central principle of the Water Framework Directive and a programme for encouraging active involvement and participation of the public in the implementation of the plan will be developed by 2011 and delivered as an integral part of the implementation process for the RBD. One of the mechanisms for ensuring participation from stakeholders has been through the operation of statutory Advisory Councils comprising of representatives of the local authorities (elected members) , representative bodies, NGOs and the social partners.

As part of the review referred to above, the Department of the Environment, Heritage and Local Government, following consultation with relevant stakeholders, will bring forward any necessary proposals for reform of existing structures in order to maximise the effective active involvement of stakeholder bodies in implementation of the plans.

In tandem with this and to support public participation, public awareness initiatives will also be implemented, commencing with a programme of information and awareness-raising to be delivered through The Library Council. The disposal of dangerous household and gardening chemicals will be one of the issues addressed in the awareness campaign. This will include the development of 'ENFOpoinTs' building on the Minister for the Environment, Heritage and Local Government's plans to enhance the role of libraries in the provision of environmental information services. Access to information relevant to the implementation process will also be made publicly available in readily accessible formats to facilitate fully informed participation of the public."

- References in the Plan to regional and central fisheries board should be amended to 'Inland Fisheries Ireland'.

Appendix 3

Amend the plan with updates as advised by the Coordinating Local Authority. The submission from the Coordinating Authority indicating amendments is attached.



Comhshaol, Oidhreacht agus Rialtas Áitiúil
Environment, Heritage and Local Government



eastern
river basin district



Dublin City Council
Comhairle Cathrach Bhaile Átha Cliath



comhairle chontae na mí
meath county council



Dublin City Council | Kildare County Council | Wicklow County Council | Meath County Council
Cavan County Council | Dun Laoghaire Rathdown County Council | Fingal County Council
Louth County Council | Offaly County Council | South Dublin County Council
Westmeath County Council | Wexford County Council