

eastern
river basin district

Draft Programme of Measures

Shanganagh WMU

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Appendix 1&2: Programme of Measures



Document Control Sheet

Project	Eastern River Basin District			
Report	Draft - Shanganagh River Programme of Measures - for download			
Date	December 2008			
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Version	Author	Reviewed	Checked	Date
Draft 1	AOC/AC	AGH	AC	DEC 2008



Water Framework Directive

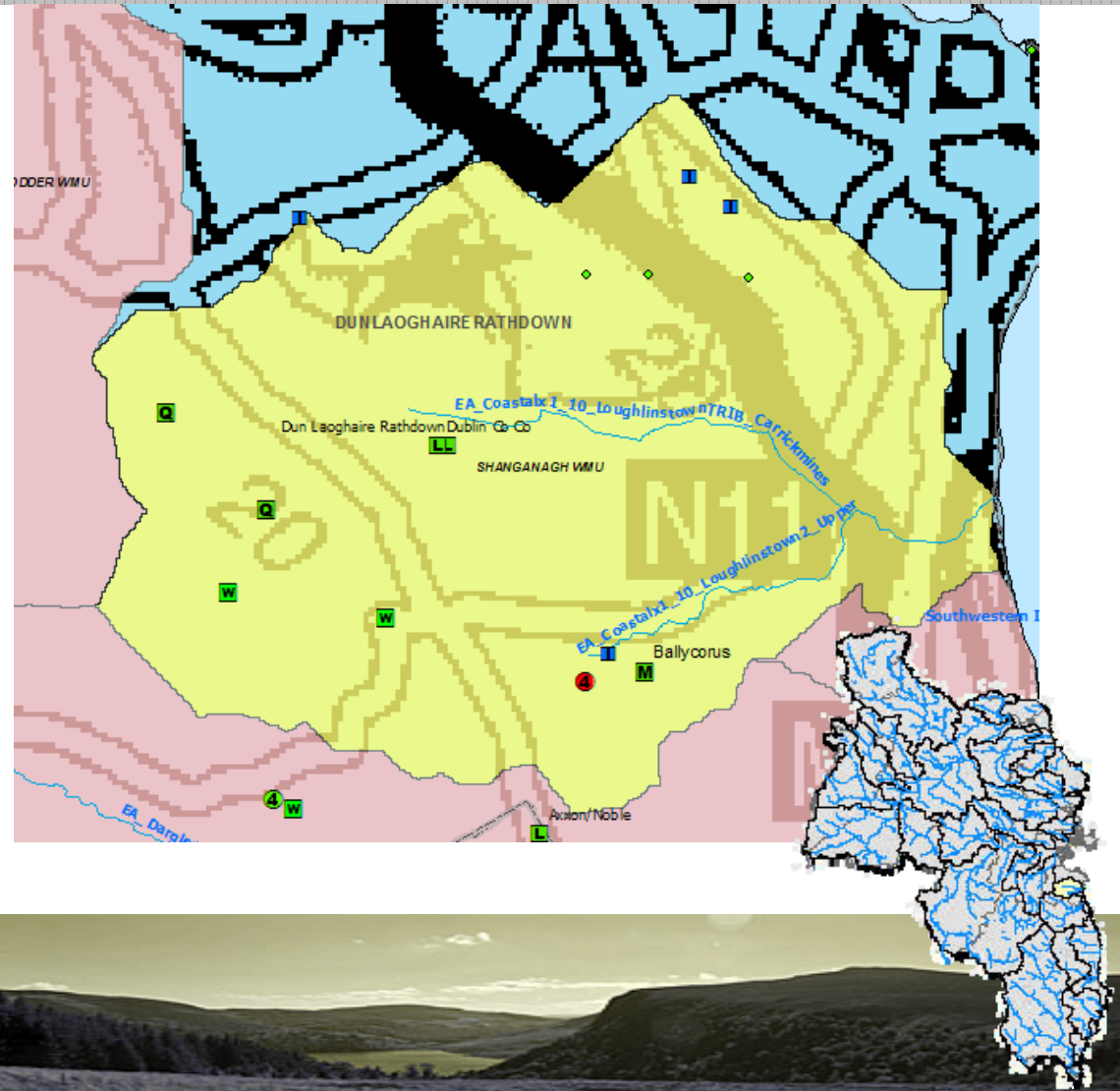
- ❑ The Draft River Basin Management Plan was published on the 22nd December 2008 for Public Consultation.
- ❑ This Programme of Measures accompanies the River Basin Management Plan created for the Eastern River Basin District.
- ❑ The River Basin Management Plan can be downloaded from the website, whilst more detail of the Programme of Measures is contained in the River Basin Management System which can be accessed through your Local Authority.
- ❑ The River Basin Management System is a web-based tool that assists Local Authorities to store information about the condition of their waters and the Programme of Measures for their improvement.
- ❑ For more information please visit www.erbd.ie



Overview of Water Management Unit

































Geography

- ❑ Local Authorities: 100% Dun Laoghaire-Rathdown
- ❑ River Length: 10 km
- ❑ Land use: Predominantly land-use is urban.
 - urban populations cover 45% of the area for example at Killiney and Shankill
 - 25% pasture use
 - 7% arable



Risk Assessment Legend

See www.erbd.ie for more information on Article 5 Risk Assessment

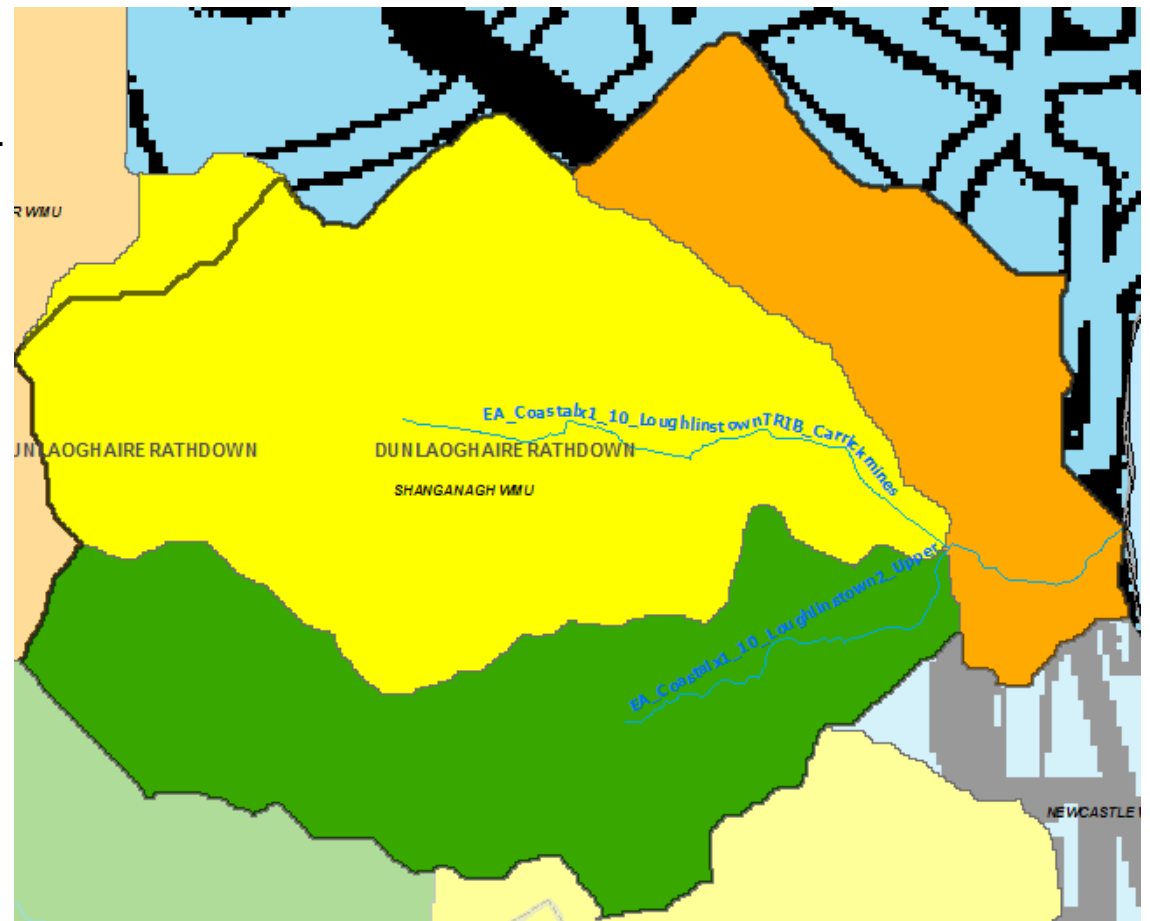
Risk	Symbol with Level of Risk	Risk	Symbol with Level of Risk
Abstraction			
CSO	 1a  1b  2a  2b	WWTPs	 1a  1b  2a  2b
Hydrometric Station	 ACTIVE  INACTIVE  OBSOLETE	WTPs	 2a
IPC Facilities	 1a  1b  2a  2b	Landfills	 1b  2a  2b
IPC Rivers	 1a  1b  2a  2b	Mines	 1a  1b  2a
Section 4	 1a  1b  2a  2b	Quarries	 2a
Based on Article 5 Risk Assessment: 1a : At risk, 1b : Probably at risk, 2a : Probably not at risk, 2b : Not at risk			

Status of Water

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

River Status:

Good	33%
Moderate	33%
Poor	33%



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

Objectives

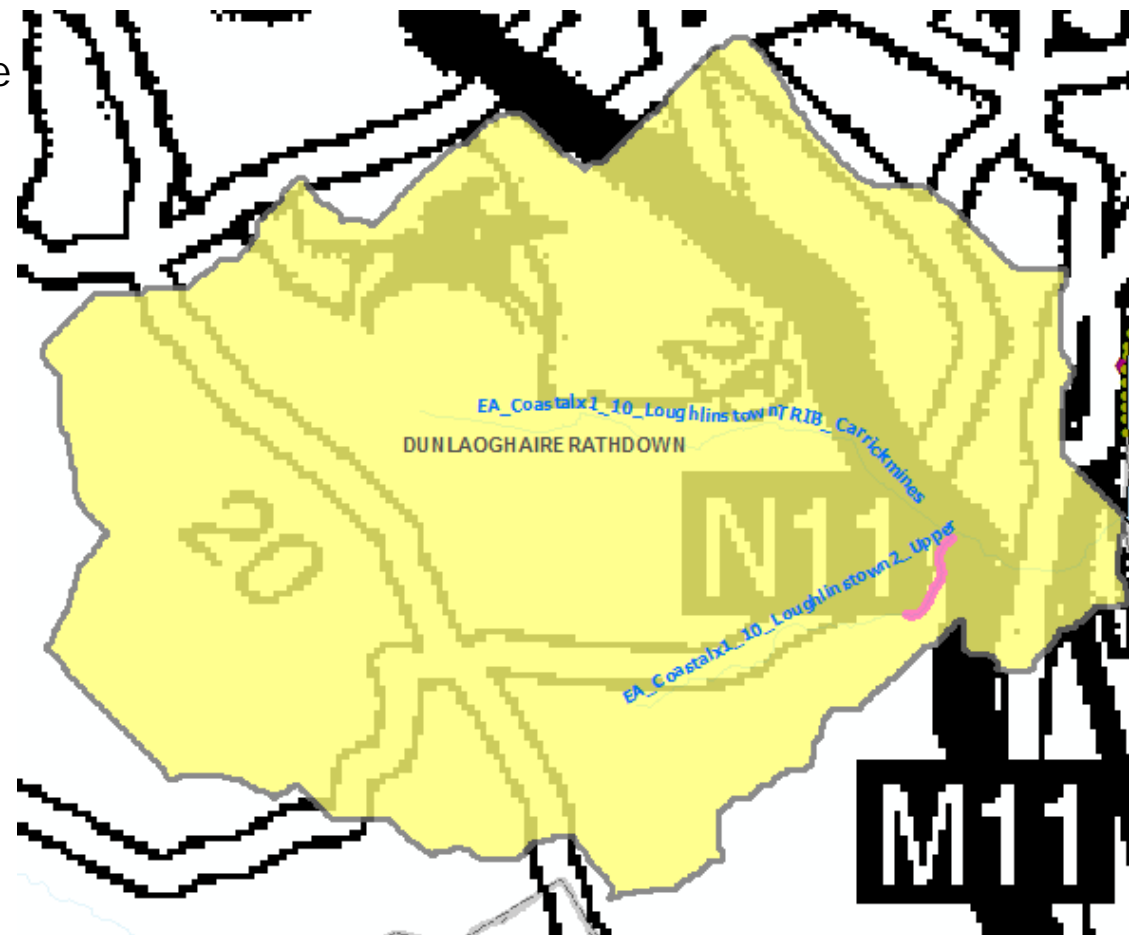
- ❑ Waters must be of satisfactory quality and sufficient quantity to protect the aquatic environment and its beneficial uses.
- ❑ We have four core objectives:
 1. Prevent deterioration and in particular maintain High or Good Status
 2. Improve waters to achieve Good Status where appropriate
 3. Progressively reduce chemical pollution
 4. Achieve our protected area objectives










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)	✓	River Loughlinstown
National Heritage Areas (5)	✓	Dalkey Coastal Zone, Killiney Hill, Loughlinstown Woods, Dingle Glen, Ballybetagh Bog



Protected Areas Legend

Type of Protected area	Symbol
Drinking water – Monitoring point	
Drinking Water – Rivers	
Drinking Water - Groundwater	
Drinking Water – Surface water	
Nutrient Sensitive rivers	
Nutrient Sensitive Areas	
National Heritage Areas	

Type of Protected area	Symbol
Special Protected Areas	
Special Areas of Conservation	
Beaches	
Recreational lakes	
Salmonid Waters	
Register protected Areas – Water Dependant Habitats	
Shellfish	

What are the problems to address?

In the Eastern River Basin District an online management system allows local authorities to store, assess and make Programmes of Measures on all the information emerging relating to the Water Framework Directive.

The first step is to identify any issues that might prevent us from reaching the ultimate target of 'Good Status' (please see plan for a full definition of 'Good Status').

In Shanganagh the problems are:

- Low Ecological Rating
- Inferior Habitats (Banks)
- Risk of over abstraction

What could be causing these problems?

Pressure	County	% Contribution
Agriculture	DLRCC	3
Usage and Discharge of Dangerous Substances	DLRCC	3
Forestry	DLRCC	3
Landfills, Quarries, Mines and Contaminated Lands	DLRCC	15
Wastewater and Industrial Discharges	DLRCC	72
Wastewater from Unsewered Properties	DLRCC	4
Morphology	DLRCC	At Risk
Abstraction	DLRCC	At Risk

- ❑ In the Shanganagh sub-catchment the principal pressures identified are misconnected foul sewers in houses and businesses and combined sewer overflows (wastewater discharges). A number of other factors may also be contributing including a decommissioned waste site.
- ❑ Further investigation is required to clarify the exact pressures.
- ❑ The percentages are approximate estimates of relative pressures and will assist in prioritising measures.

All percentages are estimated based on available data, analysis and expert judgement.

Programme of Measures

- Having assessed the current condition of our waters, the extent of areas to protect, and the risks and pressures affecting our waters, we can now determine the measures needed to bring them all back to good status.
- We must aim to achieve full implementation of all basic measures before 2015. If the implementation of all Basic Measures before 2015 will not get us to Good Status then we must select necessary Supplementary Measures.

<i>Basic Measures</i>	Measures required by law
<i>Supplementary Measures</i>	Non-statutory measures deemed necessary

- The following pages detail the proposed Programme of Measures. We have also proposed an Alternative Programme of Measures that, in light of the large number of measures to be taken, prioritises certain measures for the first cycle of the plan (2010 – 2015).
- ***Please see the Appendix for the full list of basic and supplementary measures selected in both the Proposed and Alternative Programme of Measures.***

Proposed Programme of Measures

This proposed Programme of Measures aims to achieve the 4 core objectives as described earlier by fully implementing all basic measures and also implementing supplementary measures where deemed necessary.

Basic Measures:

A full list of basic measures is listed in the Draft River Basin Management Plan. It includes the regulations enacted from the following 11 European Directives and also requires member states to create measures for 11 other issues:

11 European Directives

1. Bathing Water Directive
2. Habitats Directive
3. Birds Directive
4. Drinking Water Directive
5. Major Accidents (Seveso) Directive
6. Environmental Impact Assessment Directive
7. Sewage Sludge Directive
8. Urban Waste Water Treatment Directive
9. Plant Protection Products Directive
10. Nitrates Directive
11. Integrated Pollution Prevention Control Directive

11 Other Basic Measures

1. Cost recovery for water use
2. Measures to promote efficient and sustainable use
3. Protection of drinking water sources
4. Control of abstraction and impoundment
5. Authorisation of discharges to groundwater
6. Control of point source discharges
7. Control of diffuse source pollution
8. Control of priority substances
9. Control of physical modifications of surface waters
10. Controls on other activities impacting water status
11. Prevention or reduction of the impact of accidental pollution incidents

Proposed Programme of Measures - Rivers

□ Supplementary Measures (In descending order of cost):

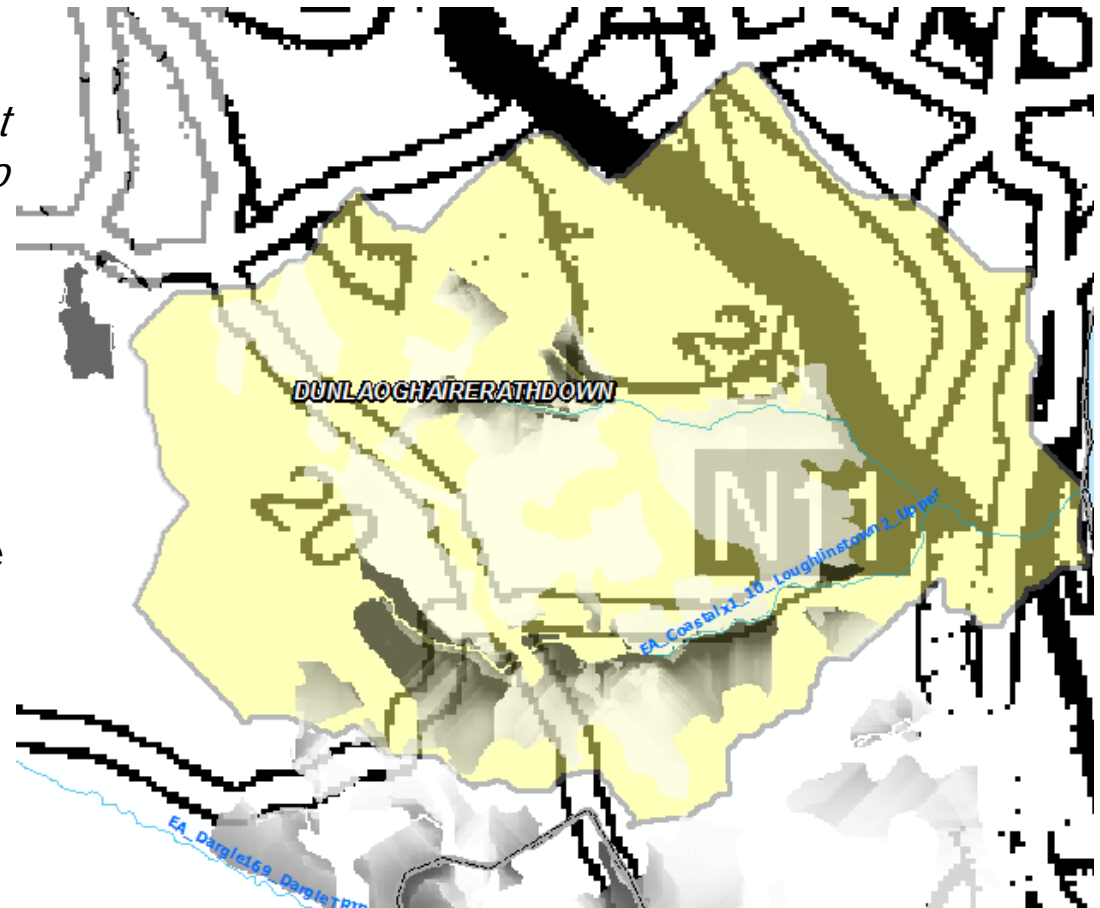
Top Ten Supplementary Measures - River Sub-catchment
GSDS Compliance - CSOs
Investigate and eliminate misconnections
Preservation and/or restoration of the bank
Introduce Soft Edges to Inferior Habitats
Alter the availability of supply through conjunctive use or integrated water resources management, water reuse, implementing S.U.D schemes in developed areas, implementation of abstraction controls, use of additional storage or alternative water source
Facilitate Fish Migration
Reduce water demand through improved conservation, plumbing code changes, reduce unaccounted for water, rainwater harvesting, domestic water metering, universal water charging, or restricting development where water resources are over-subscribed
Investigate Fats, Oils and Grease Issues
Survey Banks/Coast
River Polishing - Reed Bed

Alternative Programme of Measures – Basic Measures

We have prepared an Alternative Programme of Measures for comparison. This Programme of Measures selects the measures to prioritise for implementation during the first 6 year plan that are thought to be most effective, but still aims to achieve Good Status as early as possible

By prioritising the measures to be implemented in the first cycle, the Alternative Scenario aims to save time and money by focussing on the most effective measures first.

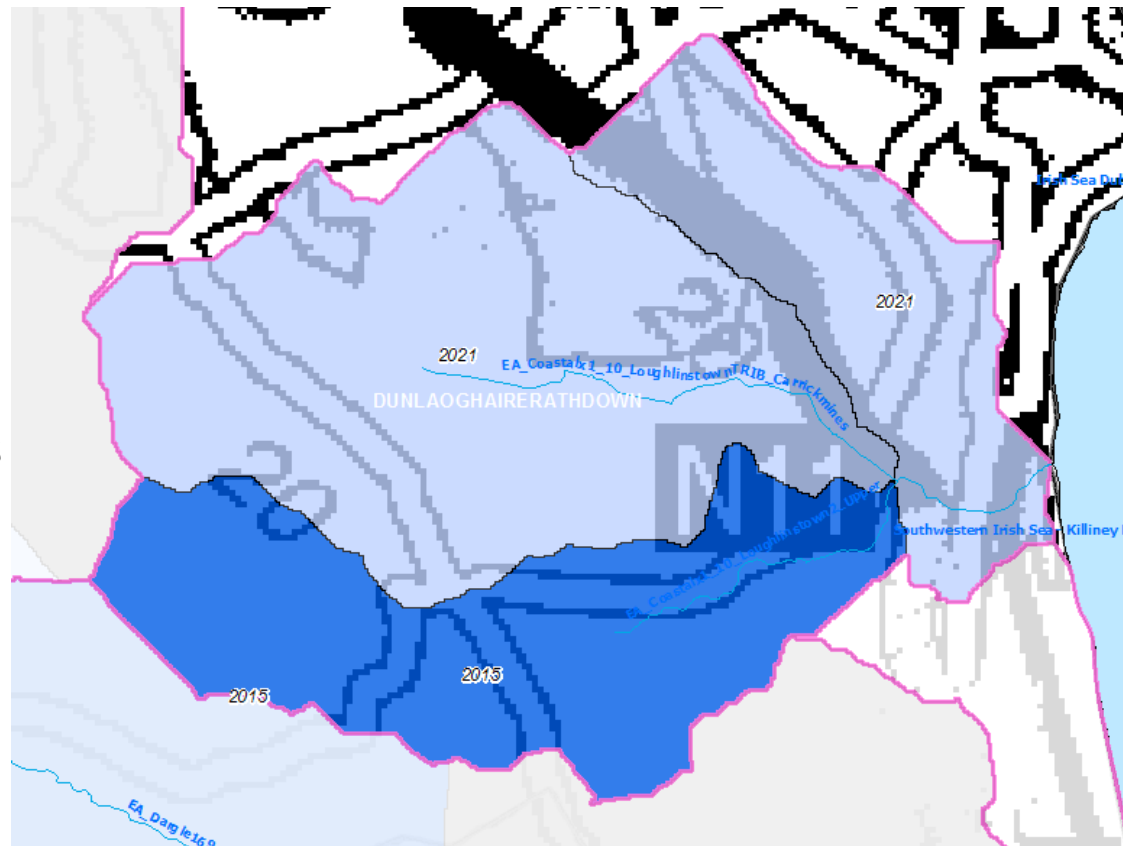
Phosphorus modelling by the ERBD project team shows that of the entire catchment only 16% of the Dun Laoghaire Rathdown Land area is of high risk of causing direct runoff into the river.



Alternative Objectives – Extended Timescale

- ❑ In some cases due to technical infeasibility, disproportionate cost or the natural condition of the waterbody it may not be possible to achieve all core objectives by 2015.
- ❑ The main pressure preventing achievement of Good Status is thought to be Urban point and diffuse pollution. Full implementation of the measures is expected to correct this, however recovery time will mean that the larger rivers will not achieve Good Status before 2015.

2015	33%
2021	100%
2027	100%



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

What can you do?

You have your say!

- Now is your chance to have a say on the Programme of Measures:
 - Have all issues been addressed?
 - Do you have any measures to add to the proposed Programme of Measures?
 - What do you think about the Alternative Programme of Measures?
 - Would you spend more to achieve our goals faster?

- We can all help to implement this important legislation by thinking about our impact on the water environment in our everyday lives.



How to comment

Please *have your say* in any of the following ways:

1. Email your comments to comments@erbd.ie and include River Basin Management Plan Comments in the subject line

2. Write to:

River Basin Management Plan Comments

Project Co-ordinator

Eastern River Basin District Project Office

Dublin City Council

68-70 Marrowbone Lane, 4th Floor

Dublin 8



Appendix 1:

Proposed Programme of Measures



Programme of Measures Key

ABS	Abstractions
AGR	Agricultural Point and Diffuse Sources
AGR-PS	Unlicensed Agricultural Point Sources
Chem	Chemical Fertiliser
CROSS	Planning, Development and other sources
DLRCC	Dun Laoghaire Rathdown County Council
DS	Dangerous Substances
ECO	Poor Ecology
FOR	Forestry
IPPC	Industrial Sources
Manure	Manure Fertilisers
MORP	Intensive Land use
S4	Local Authority Licensed Discharges
WWTP	Wastewater Treatment Plants
DATA+	An Absence of sufficient data
HS	To Protect High Status Waters
Septic	Onsite Wastewater Treatment Systems
U-DIFF	Urban Diffuse Pollution

Proposed Programme of Measures

– Basic Measures for Rivers

Local Authority	Parent ID Name	MeasureName	Source
DLRCC	Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989)	Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989)	ABS
DLRCC	National Water Pricing Policy Framework (1998)	National Water Pricing Policy Framework (1998)	ABS
DLRCC	Water Supplies Act 1942	Water Supplies Act 1942	ABS
DLRCC	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	AGR
DLRCC	Bathing Water Quality Regulations (S.I. 79 of 2008)	Bathing Water Quality Regulations (S.I. 79 of 2008)	CROSS
DLRCC	EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007)	EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007)	CROSS
DLRCC	EC (Quality of Salmonid Water) Regulations (S.I. 293 of 1988)	EC (Quality of Salmonid Water) Regulations (S.I. 293 of 1988)	CROSS
DLRCC	Planning Development Acts 2000 - 2006	Planning Development Acts 2000 - 2006	CROSS
DLRCC	Planning and Development Regulations 2001 - 2007	Planning and Development Regulations 2001 - 2007	CROSS
DLRCC	EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards)	Create an EIS prior to any development as specified in legislation	CROSS
DLRCC	EC (Control of Major Accident Hazards Involving Dangerous Substances) Regulations (S.I. 74 of 2006)	EC (Control of Major Accident Hazards Involving Dangerous Substances) Regulations (S.I. 74 of 2006)	DS
DLRCC	EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments	EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments	DS
DLRCC	EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001	EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001	DS
DLRCC	EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments	EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments	DS
DLRCC	Water Quality Dangerous Substances Regulations, 2001	Water Quality Dangerous Substances Regulations, 2001	DS
DLRCC	Local Government (Water Pollution) Act 1977 (Water Quality Standards for Phosphorus) Regulations, 1998 (S.I. 258 of 1998)	Local Government (Water Pollution) Act 1977 (Water Quality Standards for Phosphorus) Regulations, 1998 (S.I. 258 of 1998)	DS

Proposed Programme of Measures

– Basic Measures for Rivers (cont.)

Local Authority	Parent ID Name	MeasureName	Source
DLRCC	EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC)	EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC)	DS
DLRCC	Framework for Major Emergency Management, Office of Emergency Planning, 2006	Framework for Major Emergency Management, Office of Emergency Planning, 2006	DS
DLRCC	EC (Natural Habitats) Regulations 1997- 2005	EC (Natural Habitats) Regulations 1997- 2005	ECO
DLRCC	Fisheries Act 1959 - 1981	Fisheries Act 1959 - 1981	ECO
DLRCC	EC (Aerial Fertilisation) (Forestry) Regulations 2006 and amendment 2007	EC (Aerial Fertilisation) (Forestry) Regulations 2006 and amendment 2007	FOR
DLRCC	EPA (Licensing) Regulations, 1994 & 2004	EPA (Licensing) Regulations, 1994 & 2004	IPPC
DLRCC	Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001	Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001	Manure
DLRCC	Forestry Act 1946 and 1988	Forestry Act 1946 and 1988	Manure
DLRCC	Local Government (Water Pollution) Act 1 of 1977 and amendments	Enforce Section 4s (discharges to waterbodies)	S4
DLRCC	Urban Waste Water Treatment Regulations, 2001 - 2004	Urban Waste Water Treatment Regulations, 2001 - 2004	WWTP
DLRCC	Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007)	Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007)	WWTP
DLRCC	Water Services Act 2007	Water Services Act 2007	WWTP

Proposed Programme of Measures – Supplementary Measures for Rivers

Local Authority	Measure Name	Measure Type	Source
DLRCC	Develop Habitat Suitability Curves for coarse fish and other important aquatic organisms	Guidance	ABS
DLRCC	Develop Habitat Suitability Curves for salmonids in Irish Rivers	Guidance	ABS
DLRCC	Emphasise linkage between Planning, Water Services, and Environmental Sections within Local Authorities for Planning Purposes	Proposed	CROSS
DLRCC	Investigate implementing smaller water schemes to reduce demand on other resources	Proposed	ABS
DLRCC	In flow regulated rivers, establish guidance on flow variations to support ecology	Proposed	ABS
DLRCC	Record daily abstraction rates	Proposed	ABS
DLRCC	Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater	Proposed	ABS
DLRCC	Modernise Abstraction Legislation, including a system for licensing surface water abstractions	Proposed	ABS
DLRCC	GSDSDS Compliance - CSOs	Supplementary	WWTP
DLRCC	Investigate and eliminate misconnections	Supplementary	WWTP
DLRCC	Introduce Soft Edges to Inferior Habitats	Supplementary	MORP
DLRCC	Preservation and/or restoration of the bank	Supplementary	MORP
DLRCC	Facilitate Fish Migration	Supplementary	MORP
DLRCC	Alter the availability of supply through conjunctive use or integrated water resources management, water reuse, implementing S.U.D schemes in developed areas, implementation of abstraction controls, use of additional storage or alternative water source	Supplementary	ABS
DLRCC	Investigate Fats, Oils and Grease Issues	Supplementary	WWTP
DLRCC	Reduce water demand through improved conservation, plumbing code changes, reduce unaccounted for water, rainwater harvesting, domestic water metering, universal water charging, or restricting development where water resources are over-subscribed	Supplementary	ABS
DLRCC	River Polishing - Reed Bed	Supplementary	CROSS
DLRCC	Survey Banks/Coast	Supplementary	DATA+
DLRCC	Survey Banks/Coast	Supplementary	DATA+
DLRCC	Address diffuse silt pollution from green field site development	Supplementary	MORP

Appendix 2:

Alternative Programme of Measures



Alternative Programme of Measures – Basic Measures for Rivers

Local Authority	Measure Name	Sub-Measure Name	Source
DLRCC	EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards)	Create an EIS prior to any development as specified in legislation	CROSS
DLRCC	Local Government (Water Pollution) Act 1 of 1977 and amendments	Enforce Section 4s (discharges to waterbodies)	S4

Alternative Programme of Measures – Supplementary Measures for Rivers

Local Authority	Measure Name	Measure Type	Source
DLRCC	Modernise Abstraction Legislation, including a system for licensing surface water abstractions	Proposed	ABS
DLRCC	Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater	Proposed	ABS
DLRCC	Reduce water demand through improved conservation, plumbing code changes, reduce unaccounted for water, rainwater harvesting, domestic water metering, universal water charging, or restricting development where water resources are over-subscribed	Proposed	ABS
DLRCC	Alter the availability of supply through conjunctive use or integrated water resources management, water reuse, implementing S.U.D schemes in developed areas, implementation of abstraction controls, use of additional storage or alternative water source	Proposed	ABS
DLRCC	Record daily abstraction rates	Proposed	ABS
DLRCC	Investigate implementing smaller water schemes to reduce demand on other resources	Proposed	ABS
DLRCC	In flow regulated rivers, establish guidance on flow variations to support ecology	Proposed	ABS
DLRCC	Develop Habitat Suitability Curves for coarse fish and other important aquatic organisms	Proposed	ABS
DLRCC	Develop Habitat Suitability Curves for salmonids in Irish Rivers	Proposed	ABS
DLRCC	River Polishing - Reed Bed	Supplementary	CROSS
DLRCC	Emphasise linkage between Planning, Water Services, and Environmental Sections within Local Authorities for Planning Purposes	Supplementary	CROSS
DLRCC	Survey Banks/Coast	Supplementary	DATA+
DLRCC	Survey Banks/Coast	Supplementary	DATA+
DLRCC	Introduce Soft Edges to Inferior Habitats	Supplementary	MORP
DLRCC	Facilitate Fish Migration	Supplementary	MORP
DLRCC	Preservation and/or restoration of the bank	Supplementary	MORP
DLRCC	Address diffuse silt pollution from green field site development	Supplementary	MORP
DLRCC	GSDSDS Compliance - CSOs	Supplementary	WWTP
DLRCC	Investigate and eliminate misconnections	Supplementary	WWTP
DLRCC	Investigate Fats, Oils and Grease Issues	Supplementary	WWTP