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**SHANNON INTERNATIONAL  
RIVER BASIN DISTRICT  
PROJECT**

**FRESHWATER MORPHOLOGY POMS STUDY**

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**POLICY AND LEGISLATION REVIEW**

**JANUARY 2008**

WFD – Further Characterisation	Freshwater Morphology Study
Policy and Legislation Review	Shannon (I)RBD

<p><b>SHANNON INTERNATIONAL RIVER BASIN DISTRICT</b></p> <p><b>PROJECT</b></p> <p>Freshwater Morphology POMS Study –Policy and Legislation Review</p>					
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## 1.0 Introduction

This policy and legislation review has been completed under Work Package 1 of the Terms of Reference of the Shannon International River Basin District's Freshwater Morphology Programmes of Measures and Standards (POMS) Study as agreed in October 2005.

The purpose of this report is to give an overview of national and European legislation relevant to the Freshwater Morphology POMS Study, giving particular emphasis to the EU Water Framework Directive (WFD) which will be the main mechanism for controlling freshwater morphology pressures in the future.

The WFD is a European directive which provides a framework for the protection of the aquatic environment and terrestrial ecosystems and wetlands directly depending on the aquatic environment. In addition to specifying its own environmental objectives, the WFD incorporates the objectives of a number of pre-existing European directives which must be achieved to be fully WFD compliant.

The WFD requires that River Basin Management Plans (RBMPs) be drawn up containing detailed Programmes of Measures (POMs). POMs will introduce measures to achieve the objectives of the WFD. Specific morphological measures are outlined in a separate best practice review completed under Work Package 2 of the Freshwater Morphology POMS Study. This policy and legislation report focuses on the legal framework in place for delivering these measures

The WFD requires that new legislation be introduced to implement the WFD in relation to freshwater morphology. However, several pieces of legislation are already in place which provide for the introduction of measures that can meet some of the freshwater morphology requirements.

Legislation already in place was brought in for a range of purposes including land use and spatial planning, land drainage, flood management and habitat and species conservation. This existing legislation is implemented at both national and local levels and a range of authorities and statutory bodies are involved.

The plans and programmes provided for in existing European directives and national legislation will have to be coordinated with RBMPs. This report identifies what work is required to coordinate all of this legislation. It identifies legislative and policy gaps that need to be addressed in the context of freshwater morphology and suggests where new legislation, or amendments to existing legislation, is required. A review and possible re-alignment of existing policy and legislation is required and some current practices may need to be adapted.

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## 2.0 Background

Morphological pressures were identified as significant throughout Europe during the WFD 2004 Article V Characterisation process, potentially resulting in some waters failing to meet standards and objectives specified in the WFD. In Ireland, approximately 40% of river water bodies and 20% of lake water bodies are at risk of failing to meet the objectives of the WFD due to morphological pressures. As a result of this, plus expert opinion and consultations, morphological pressures were included in the WFD Article 14 report on Significant Water Management Issues (SWMI), published in June 2007.

Article 13 of the WFD requires that River Basin Management Plans (RBMPs) be drawn up in draft form by December 2008. A key component of RBMPs will be the Programmes of Measures (POMs) which will introduce measures designed to achieve the objectives of the WFD.

There are still gaps in the scientific understanding of morphological issues, particularly regarding the link between morphological pressures and their ecological impacts. Detailed national studies are currently taking place in the Republic of Ireland (RoI) called Programmes of Measures and Standards (POMS) studies. The Freshwater Morphology POMS study, of which this report is an output, will fill some of these knowledge gaps and contribute to developing POMs to avoid or mitigate the impacts of morphological pressures. It will also develop a decision support tool to aid in the control of those activities exerting morphological pressures.

Morphology has been identified for further research at a European level also. The findings of relevant research projects will feed into mechanisms and measures for avoiding or mitigating morphological impacts as they become available.

## 3.0 Activities and morphological pressures

Many of the activities that take place in and around freshwaters can exert morphological pressures which can alter the natural structure and form of rivers and lakes and impact on water quantity (affecting water flow, floods and droughts) as well as on water quality. These activities can also lead to a reduction in the occurrence and diversity of natural habitats (affecting animal populations and vegetation) and can impact on the natural beauty and amenity of an area.

Such activities include the construction, maintenance and removal of structures in, on or near rivers and lakes as well as the maintenance and use of rivers and lakes themselves, including their banks and shores. These types of activities are often carried out for the benefit of flood management, infrastructure, recreation, navigation, abstraction, and also land use activities such as urban development, agriculture, peat exploitation and forestry.

The morphological pressures included in the RoI Pressures and Impacts Risk Assessments under Article V of the WFD included:

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- channelisation and flood embankments - can impact river depth, width and floodplain connectivity
- impoundments & water regulation - can impact river continuity
- intensive land use - can impact hydrological and morphological conditions

In addition to these pressures, the Freshwater Morphology POMS Study is addressing the impact of in-stream structures which act as barriers to migration, thereby affecting river continuity.

Specific measures to avoid and mitigate the morphological impacts caused by these pressures will be identified in the best practice review under Work Package 2 and prioritised in the POMs.

#### **4.0 Brief overview of relevant legislation**

The WFD is a European directive which provides a framework for the protection of the aquatic environment. It is the most significant piece of legislation in the field of water policy to date. It entered into force on 22<sup>nd</sup> December 2000 and was transposed into Irish law in December 2003 via the Water Policy Regulations, 2003 (S.I. No. 722 of 2003) which were later amended in 2005 (S.I. No. 413 of 2005). The WFD is broad ranging, incorporating morphological elements, and will provide the key mechanisms for controlling activities causing morphological pressures in the future.

Pre-existing European and national legislation already provides measures to control some morphological pressures and thereby satisfy some of the requirements of the WFD. However, current legislation relating to freshwater morphology is fragmented. The WFD provides a framework to consolidate and strengthen this legislation.

At a European level, a number of European Community (EC) Directives have a role to play in protecting against morphological impacts on freshwaters. The WFD incorporates the objectives and requirements of these pre-existing directives. To be compliant with the WFD, all of the objectives and requirements of these directives must be implemented in full. These are referred to as the ‘basic measures’ of the WFD. These directives are listed in Annex VI of the WFD and those with a direct role to play in controlling freshwater morphology pressures include:

- the Habitats Directive
- the Birds Directives
- the Environmental Impact Assessment (EIA) Directive

The WFD also requires the introduction of ‘additional new basic measures’. Those directly relevant to freshwater morphology include:

- controls on physical modifications to surface waters
- measures to protect drinking water sources
- controls on abstractions and impoundments.

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New Regulations providing for these measures are being considered and some may be introduced during 2008 and 2009.

Any gaps that exist in achieving WFD objectives after the basic measures and additional basic measures have been implemented will be addressed, where appropriate, through ‘supplementary measures’. Supplementary measures can include economic or fiscal instruments; negotiated environmental agreements; emission controls; codes of good practice and rehabilitation projects to give some examples.

In addition to the basic measures, additional new basic measures and supplementary measures under the WFD, the new EC Floods Directive (2007/60/EC), through Flood Risk Management Plans, will play an important role in managing morphological impacts on rivers and lakes, and will work in harmony with the timetable and administrative arrangements of RBMPs and the WFD.

Currently, at a national level, planning legislation and drainage legislation provide regulators with a limited degree of control over activities causing freshwater morphology pressures. This legislation may provide ‘supplementary measures’ where basic measures do not ensure that the status objectives of the WFD are met.

The relationship between the plans and programmes under current EU and national legislation and the RBMPs under the WFD will have to be aligned. This will be a two-way process with the RBMPs influencing existing plans and programmes and vice versa. Successful integration of all of these plans and programmes will be achieved with the help of guidance and general policy direction from the Minister of the Environment, Heritage and Local Government as well as with liaison and consultation between all interested parties.

The following sections summarise the legislation directly relevant to freshwater morphology including the aims of the legislation and the implementing plans and programmes provided under the legislation. An assessment is also provided of how this legislation could best be coordinated with the WFD process. Legislative gaps are also identified and suggestions given regarding where new legislation, or amendments to existing legislation is required.

## **5.0 European and National Legislation**

This section of the report provides a more in-depth review of European and national legislation relevant to freshwater morphology. It highlights the shortfalls in the legislation with respect to achieving WFD objectives and suggests where new legislation, or amendments to existing legislation is required. More detailed objectives and requirements of the legislation as well as the measures provided by the legislation to enable responsible authorities to achieve the legislative objectives are outlined in Table 1 in Appendix I.

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## 5.1 *Basic Measures Directives*

This section gives a review of the WFD and other pre-existing directives which are relevant to freshwater morphology pressures, describing how they contribute to controlling these pressures. All of the objectives and requirements of these directives must be fully implemented in order to be WFD compliant.

### 5.1.1 *The Water Framework Directive*

The WFD is a European directive which provides a framework for the protection of the aquatic environment. The objectives outlined in the WFD that relate to freshwater morphology are:

- to achieve at least ‘good status’ in all waters by 2015
- to prevent deterioration of status in all waters and maintain high and good status where they exist
- to achieve ‘good ecological potential’ and ‘good chemical status’ in heavily modified and artificial water bodies
- to achieve compliance with the standards and objectives laid down in specified pre-existing directives by 2015 unless otherwise stated.

The WFD was transposed into Irish law via the Water Policy Regulations, 2003 (S.I. No. 722 of 2003) and the 2005 amendment (S.I. No. 413 of 2005). The lead competent authorities responsible for implementing these regulations are the Local Authorities and the EPA but all public authorities must execute their duties in a manner which is consistent with, and contributes to, achieving the objectives of the WFD.

Local Authorities must introduce River Basin Management Plans (RBMPs) in December 2009 and ensure their implementation. The EPA must ensure that the RBMPs are consistent with the WFD and across RBDs. RBMPs will outline default objectives for each water body, depending on the status of the water body. For example, if monitoring establishes that a water body is at less than good status, the default objective for that water body is to improve its status to good or better by 2015. Some water bodies will have alternative objectives, for example, water bodies in designated protected areas may be subject to more stringent objectives and water bodies designated as artificial or heavily modified may be subject to less stringent objectives or extended deadlines. Local Authorities can also apply alternative objectives in instances of over-riding public interest to allow for the continuation of sustainable human development activities, or in instances where it is technically infeasible or disproportionately expensive to achieve good status by 2015.

To ensure that the objectives for each water body are met, the RBMPs will contain Programmes of Measures (POMs). POMs contains basic measures, additional new basic measures and supplementary measures. The Local Authorities must firstly apply the basic



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measures i.e. achieve full compliance with the protected areas and other pre-existing directives by 2015. Next, the new additional basic measures prescribed in the WFD should be introduced. Finally, any estimated gaps in meeting the objectives, after achieving compliance with the basic and additional new basic measures, should be addressed with the introduction of appropriate supplementary measures. Supplementary measures can include such measures as economic or fiscal instruments, negotiated environmental agreements or codes of good practice. Supplementary measures can be provided by existing national legislation. This report outlines how the contribution of existing national legislation to achieving WFD objectives in relation to freshwater morphology can be maximised.

RBMPs are implemented over a six year period during which time the objectives and measures must be reviewed and revised for the subsequent plan. Measures can therefore be prioritised from plan to plan to achieve the most efficient implementation of the WFD.

The outcomes of the Programmes of Measures and Standards (POMS) studies will assist the relevant authorities in identifying and prioritising where resources under the respective plans and programmes need to be focussed to secure maximum benefit. Local Authorities should give serious consideration to coordinating and collaborating in implementing these measures on a regional basis.

### 5.1.2 Protected Area Directives

The following protected area directives are key basic measures in the POMs under the WFD and have a direct role to play in controlling morphological pressures and contributing to the achievement of WFD objectives. All objectives and requirements relating to protected areas designated under associated regulations must be complied with by 2015, unless otherwise stated in the relevant legislation, in order to be fully compliant with the WFD.

#### 5.1.2.1 The Habitats Directive (92/43/EEC) and The Birds Directive (79/409/EEC)

These Directives aim to support biodiversity throughout Europe through the protection and improvement of natural habitats and their associated water environments. Full implementation of these Directives would therefore help to minimise morphological impacts on freshwaters in designated protected areas and upstream of these areas.

The objectives of the Habitats and the Birds Directive for Natura 2000 sites are:

- to contribute towards ensuring biodiversity through the conservation of natural habitats and of wild fauna and flora
- to identify and designate areas with important bird species or habitats for their protection
- to achieve favourable conservation status at Natura 2000 sites

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- to protect and improve the associated water environment to the extent necessary to achieve favourable conservation status.

National legislation put in place to achieve the objectives in the Habitats Directive and the Birds Directive includes the Natural Habitats Regulations, 1997 to 2005. The Wildlife Acts, 1976 and 2000, also have a role to play in supporting biodiversity.

The National Parks and Wildlife Service (NPWS) are the body responsible for ensuring that this legislation is implemented on behalf of the Minister for the Environment, Heritage and Local Government.

The Regulations require that a network of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), composed of sites hosting listed rare, threatened and characteristic habitats and species be established. The network of sites is called the Natura 2000 network and sites in the network must achieve Favourable Conservation Status (FCS).

The NPWS must establish conservation measures, including Management Plans where necessary, to maintain Natura 2000 sites at, or restore them to, FCS. These measures and plans must coordinate with RBMPs. All of the Natura 2000 sites with water dependant habitats and species have been included in the WFD Register of Protected Areas and are subject to both WFD objectives and protected area objectives. Protected area objectives can be more stringent than WFD objectives. However, achievement of the status objectives of the WFD will support the attainment of favourable conservation status established under protected area legislation and vice versa.

The protection of the Natura 2000 network must also be incorporated into the plans and programmes provided for under other legislation. In particular, land use plans and policies must take account of the possible impacts on the Natura 2000 network from activities that occur both within and outside of these sites. For example, if approval or consent is being sought for an activity that might impact on a Natura 2000 site, appropriate assessment must be carried out before it is issued. RBMPs will make explicit the requirement that land-use planning and development activities at and upstream of Natura 2000 sites be managed in such a way as to allow achievement of the WFD status objectives and the conservation objectives of the sites.

In addition to requiring the preparing of conservation measures and plans, the Regulations provide powers to government ministers to control activities likely to impact on the network. In particular, the Minister of the Environment, Heritage and Local Government has a regulatory role with respect to controlling damaging activities which could impact on designated sites or listed species. Ministers also have the power to enter into management agreements with owners, occupiers or lessees of land within Natura 2000 sites or land adjacent to them.

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### 5.1.3 *The Environmental Impact Assessment Directive (85/337/EEC and 2003/35/EC)*

This Directive imposes a requirement for assessment of the environmental impact of certain developments before planning permission is granted. The Environmental Impact Assessment (EIA) process should pick up the morphological pressures of proposed developments at individual project level and therefore full implementation of this Directive could help to minimise morphological impacts on freshwaters.

The objective of the Environmental Impact Assessment Directive is:

- to ensure that public and private projects that are likely to have significant effects on the environment are subject to an assessment of their likely impacts before authorisation is given.

National legislation put in place to achieve the objective of the Environmental Impact Assessment Directive includes the EIA Regulations, 1988 to 2001, the Planning and Development Regulations, 1977 to 2002, and the Planning and Development Acts, 2000 to 2002.

The Local Authorities are the main Planning Authorities involved in the planning process in Ireland. An Bord Pleanála consider planning appeals and the EPA has an advisory role in relation to the preparation of EIAs.

Developments can impact on the physical characteristics of water bodies and thus on the achievement of WFD objectives. The EIA procedure provides an assessment of the likely impact on various aspects of the environment of certain types of developments. The EIA process needs to be reviewed with respect to how closely it is aligned with the environmental objectives of the WFD. The process should explicitly consider WFD objectives and the likely effects of proposed developments on those objectives. Amendment to the Planning and Development Acts will be necessary to ensure that this requirement is incorporated. When the process is aligned with the objectives in RBMPs, it can ensure that appropriate planning conditions and obligations are attached to planning permissions and that inappropriate development will be restricted based on the risks it poses to achieving water objectives.

## 5.2 *Additional New Basic Measures*

The WFD prescribes additional new basic measures which have to be introduced in order to be WFD compliant.

Those additional new basic measures that are directly relevant to freshwater morphology include:

- controls on physical modifications to surface waters

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- measures to protect drinking water sources
- controls on abstractions and impoundments.

The Department of the Environment, Heritage and Local Government are currently considering how to provide for these requirements. New Regulations may be introduced in 2008 and 2009 in relation to some or all of these requirements.

#### *5.2.1 Controls on physical modifications to surface waters*

The planning process provides a general level of control over physical modifications to surface waters at the approval stage but these existing controls are limited in scope and vary depending on the type of physical modification and the proposed location. There is at present no comprehensive system to regulate physical modifications to surface waters or to monitor and protect the physical conditions of surface waters. This has been identified as a major gap throughout Europe and the WFD has specifically prescribed that controls be introduced on physical modifications to surface waters with an impact on the status of surface water.

The Department of the Environment, Heritage and Local Government is considering the introduction of new Regulations to satisfy this requirement. These would provide for a licensing regime or registration system of physical modifications based on general binding rules and administered by an existing statutory environmental body. Section 8 of this report makes suggestions as to how this system could be established and which body would be most appropriate to administer it.

#### *5.2.2 Measures to protect drinking water sources*

The WFD requires drinking water sources to be protected and allows for the establishment of safeguard zones around abstraction points which are identified as needing protection.

The Department of the Environment, Heritage and Local Government is currently considering the establishment of a network of drinking water safeguard zones. Additional protective measures may apply in these safeguard zones which could potentially reduce morphological pressures in these designated areas.

#### *5.2.3 Controls on abstractions and impoundments*

The impoundment of surface waters, for the purposes of abstraction and power generation, exerts a direct morphological pressure on surface waters. The WFD requires that controls apply to the abstraction and impoundment of fresh surface waters including a requirement for prior authorisation.

The Eastern River Basin District Project's Abstraction Pressures POMS Study outcome will inform the Department of the Environment, Heritage and Local Government in

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preparing new Regulations to control these pressures. It is also likely to recommend that current legislation will need to be updated and extended to adequately meet these needs.

### **5.3 Other new legislation relevant to freshwater morphology**

#### **5.3.1 The Floods Directive, 2007 (S.I. No. 60 of 2007)**

The purpose of the Floods Directive is to establish a framework for the assessment and management of flood risks, aiming at the reduction of the adverse consequences for human health, the environment, cultural heritage and economic activity. The Directive will support sustainable land use practices and should therefore contribute to meeting WFD objectives in relation to freshwater morphology.

Regulations must be made to give effect to this Directive and identify the competent authorities by 26<sup>th</sup> November 2009. It is not yet clear which Government department will make these Regulations. The Regulations will require the competent authorities to carry out Flood Risk Assessments to identify potential significant flood risk areas. Flood Hazard Maps and Flood Risk Maps must be developed for these areas and Flood Risk Management Plans must be developed by 2015 for each RBD to achieve the objectives of the directive.

Local Authorities must take into consideration long term development, including climate change, as well as sustainable land use practice in the flood risk management cycle. Flood Risk Management Plans and RBMPs will be well coordinated. Flood Risk Management Plans will utilize the RBDs and administrative arrangements established under the WFD and the information generated during the WFD implementation process. The timetable for implementation of Flood Risk Management Plans is also coordinated with the WFD.

### **5.4 Existing National Legislation**

National legislation is already in place providing controls on freshwater morphology pressures. An in-depth review and possible re-alignment of the objectives and requirements of this legislation will have to be undertaken to ensure that they coordinate with those of the WFD. Plans and programmes, codes of practice and licenses introduced under this legislation must all be integrated in a coherent way with RBMPs to ensure that WFD objectives are met.

#### **5.4.1 National Drainage and Flooding legislation**

The Office of Public Works (OPW) is the body through which Central Government exercises its statutory responsibilities with respect to river drainage and flood relief as set out in the Arterial Drainage Act, 1945, and the Arterial Drainage (Amendment) Act, 1995.

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Legislation relating to drainage goes back to the mid nineteenth century and includes the Drainage and Navigation (Ireland) Acts, 1842 to 1857, the Drainage and Improvement of Lands (Ireland) Acts, 1863 to 1892, the Arterial Drainage Act, 1925, the Arterial Drainage (Minor Schemes) Regulations, 1928, plus a number of Acts relating to specific Drainage Districts. Approximately 292 Drainage Districts were established nationwide between 1842 and 1928 under this legislation, each with Drainage Boards made up of local landowners and County Councillors. Many have been abolished or subsumed by the more modern Arterial Drainage Schemes run by the OPW under the Arterial Drainage Act, 1945, and the Arterial Drainage (Amendment) Act, 1995, but 173 of the original Drainage Districts are still active in Ireland today.

Current drainage and flood relief activity constitutes a direct morphological pressure to surface water bodies and therefore poses a risk that WFD objectives will not be achieved. These schemes will have to be assessed and their morphological impact minimised whilst allowing for sustainable development activity and the prevention of adverse consequences arising from flooding.

It may be necessary to apply alternative objectives to some water bodies to allow for drainage and flood relief activity to continue. POMs may impose a requirement for drainage and flood relief activities to be undertaken sensitively, following best practice procedures.

Amendment to drainage legislation may be required to allow for a potential rationalisation of current activity and alignment with the Floods Directive which will be transposed into Irish law in November 2009.

#### 5.4.2 *National **Planning** legislation*

The planning system controls development at a broad scale, setting the strategic framework for the development of a region, county or town, as well as at a localised scale, controlling the nature and location of specific developments. Local Authorities are the primary planning authority specified in the Planning and Development Act, 2000, and the Planning and Development Regulations, 1994 to 2001.

Both widespread land use policies and individual developments can impact on the physical characteristics of water bodies. It is vitally important that spatial planning processes and river basin planning processes work in parallel, informing and influencing each other to ensure that sustainable development can take place while the objectives of the WFD are achieved.

The planning framework consists of; the National Spatial Strategy (NSS) which is the national strategic planning framework for Ireland; Regional Planning Guidelines which constitute a twenty year strategic planning framework for the development of each region and for inter-regional cooperation; and Development Plans and Local Area Plans which outline policies in relation to land use, amenity and development priority for regions,

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counties, towns or local areas. WFD objectives can be incorporated at all levels of this framework, ensuring that subsequent development is compatible with WFD objectives.

When Local Authorities are preparing Development Plans for their areas or when they are considering planning applications, they should consider the potential risks to WFD objectives. The EIA process should explicitly consider the likely impacts of proposed development on WFD objectives. Amendment to the Planning and Development Act, 2000, will be necessary to ensure that WFD objectives become an explicit component of all parts of the planning process. In instances where future developments are of overriding public interest, Local Authorities can consider applying alternative objectives, provided for in the WFD, to allow for the continuation of sustainable human development activities.

Development Plans in turn will be important sources of information on potential future pressures when Local Authorities are preparing and implementing RBMPs. Local Authorities should therefore take account of future spatial plans and their likely impact when developing RBMPs.

The planning process is particularly important to the WFD objectives of maintaining high status and preventing deterioration in status when this is due to human activities. These objectives can be supported by including appropriate planning conditions and obligations in relevant planning permissions for new developments or by restricting some forms of developments based on the risk they pose. The WFD monitoring programme and risk assessments will assist Local Authorities in making these decisions.

The timing of the WFD process and the planning process are already reasonably well aligned. The first RBMP will be put in place in December 2009 and will be reviewed every six years thereafter. All RPGs must be reviewed by 2010 and reviewed every six years thereafter. Revisions of Development Plans and Local Area Plans must have regard to RPGs and must also be reviewed and updated every six years. The review process will provide an opportunity for WFD objectives to be incorporated into the planning process and for the WFD process to take on board information relating to future development.

## **6.0 General Discussion**

The WFD provides a robust framework for the protection of the aquatic environment and will provide the key mechanisms for controlling activities causing morphological pressures in the future. Full implementation of the basic measures of the WFD will go a long way towards minimising the impact on freshwaters of these activities. However, there is currently no comprehensive regulation of morphological activities, such as a requirement for these activities to be awarded a permit or license with associated obligations and conditions. This is a significant management gap which needs to be addressed to ensure that WFD objectives are achieved.

The additional new basic measures prescribed in the WFD address this gap, specifically the requirement for the control of physical modifications. The Department of the

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Environment, Heritage and Local Government are currently considering how to fulfil these new basic measures. Regulations are being considered in relation to controls on physical modifications causing impacts on surface waters to provide for a licensing regime or registration system of physical modifications based on general binding rules. This is discussed in more detail in Section 8. Regulations will be introduced to provide for an authorisation system for abstractions and impoundments. The designation of safeguard zones to protect drinking water sources would also contribute to meeting WFD objectives in terms of morphology.

If, after full implementation of the basic measures and additional new basic measures, there are some freshwaters that are still experiencing morphological impacts, supplementary measures will have to be put in place to ensure that WFD objectives are met. Existing plans and programmes under existing national legislation may provide some supplementary measures. The coordination of national drainage and planning legislation with RBMPs should ensure that they can effectively contribute towards achieving WFD objectives.

All of the legislation identified in this report as having a role to play in controlling freshwater morphology pressures must be coordinated with RBMPs in a coherent way to ensure that they contribute towards achieving the objectives of the WFD.

The legislation and measures that will be introduced in relation to the additional new basic measures will be consistent with achievement of WFD objectives by design. However, reviews are required of the basic measures directives and national legislation identified in this report to identify where legislation is already well coordinated with RBMPs and where there is a requirement for further integration efforts in the form of new legislation or amendments to existing legislation. This process will be aided by:

- Guidance and general policy direction from the Minister of the Environment, Heritage and Local Government regarding implementation of the RBMP
- Representation on national and RBD level liaison groups
- Formal consultation on river basin planning documents issued by the Local Authorities and the Environmental Protection Agency
- Local Authority and EPA input into other public bodies plans and programmes

The most relevant plans and programmes which need to be integrated with RBMPs in order to provide for the comprehensive control of morphological alterations to freshwaters include:

- conservation measures and protected area management plans
- the IPPC licensing system
- the EIA procedure
- the Nitrates Action Plan
- drainage and flood relief schemes
- the planning process



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Integration will take time, particularly where administrative areas and timeframes for implementation differ. Specific guidance on integrating plans and programmes will be provided by the Department of the Environment, Heritage and Local Government during 2008 and 2009.

## **7.0 Regulation of Morphological Activities**

As already identified in this report, there is at present no comprehensive system to control physical modifications or to monitor and protect the physical conditions of surface waters. This major gap has resulted in the WFD specifically prescribing that controls be introduced on physical modifications to surface waters with an impact on the status of surface waters.

The Department of the Environment, Heritage and Local Government is considering the introduction of new Regulations to satisfy this requirement. These would provide for a licensing regime or registration system of physical modifications based on general binding rules and would be administered by an existing statutory environmental body.

These new Regulations could be drawn up under Section 7 of the Environmental Protection Agency Act, 1992, thus providing for a system of licensing of morphological activities which the EPA could administer. Licensing would enable control to be exercised over these activities. The Regulations could provide for a register of licensed activities and the issuance of best practice guidelines to license holders. The guidelines would be informed by the best practice review completed under Work Package 2 of the Freshwater Morphology POMS study and could take the form of an ancillary manual to the Regulations.

## **8.0 Conclusions**

The WFD provides a framework for protecting freshwaters from morphological pressures. It reinforces existing pieces of legislation and supports their objectives. However, some work needs to be undertaken to ensure that all of the objectives are met.

As already established, the most significant gap in relation to controlling freshwater morphological pressures is in the regulation of morphological activities through a permit or license system. There is also a general need for WFD objectives to be incorporated into other plans and programmes.

### *The Water Framework Directive*

- The competent authorities responsible for basic measures under existing directives must ensure that they are being implemented in full, maximising their contribution to achieving WFD objectives. This will require the assessment and, where necessary, the revision of their respective implementing plans and programmes
- The DEHLG must introduce controls on physical modifications, possibly via new Regulations

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- The DEHLG must introduce controls on drinking water sources in the form of safeguard zones through the introduction of new Regulations
- The DEHLG must introduce controls on abstractions and impoundments through new Regulations and amendment of existing abstraction legislation
- Local Authorities must introduce supplementary measures where appropriate

*Conservation measures*

- Ministers must ensure that conservation objectives are incorporated into all other plans and programmes

*EIA procedure*

- Local Authorities must review procedure to ensure explicit consideration of WFD objectives
- The national EIA Regulations require amendment to ensure consideration of WFD objectives

*Drainage and flood relief schemes*

- The OPW must account for the Water Framework Directive requirements when implementing existing flood relief and drainage works, this may entail a review of existing activities
- Drainage legislation may require amendment to align with the new Floods Directive, though the volume of legislation would make this a big task

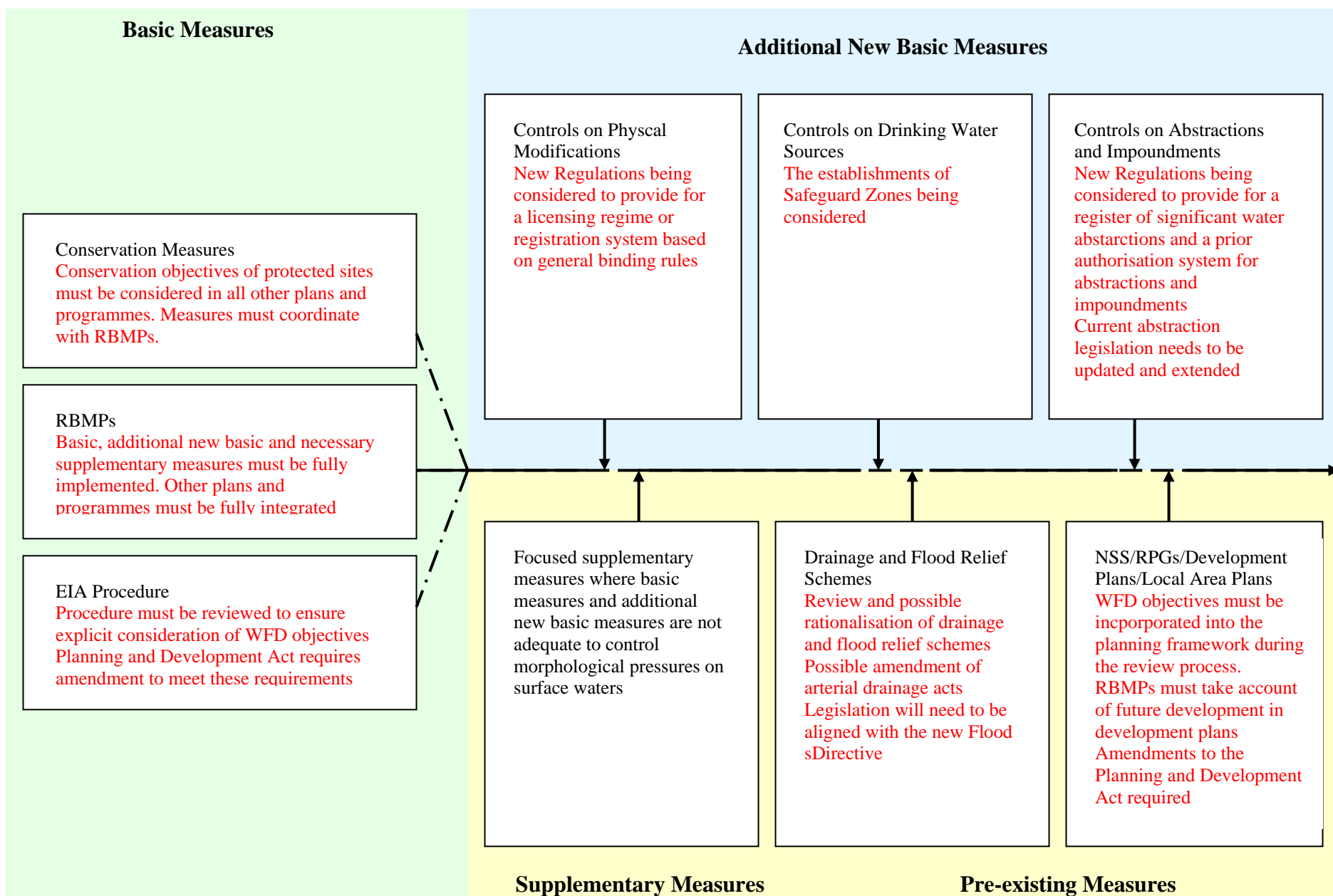
*The planning process*

- Local Authorities must incorporate WFD objectives into all levels of the planning framework during review process
- The Planning and Development Act, 2000, may require amendment to ensure explicit consideration of WFD objectives
- Local Authorities must ensure that all land use planning and development activities within and upstream of protected areas are managed in a way consistent with the conservation objectives of the protected areas.

*Supplementary measures*

- Local Authorities must introduce supplementary measures where full application of the basic measures and additional new basic measures will not achieve WFD objectives. The final combination of supplementary measures should be the most cost-effective combination of supplementary measures identified.

Fig. 1 summarises the above.



**Figure 1**  
DC084/km/Jan 08

Summary of work required to comprehensively control morphological pressures on surface waters

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## REFERENCE LIST

### EU Directives

- Council Directive of 23 October 2000 establishing a framework for Community action in the field of water policy (2000/60/EC)
- Council Directive of 3 November 1998 on the quality of water intended for human consumption (98/83/EC)
- Council Directive of 18 July 1978 on the quality of fresh waters needing protection or improvement in order to support fish life (78/659/EEC)
- Council Directive of 6 September 2006 on the quality of fresh waters needing protection or improvement in order to support fish life (2006/44/EC)
- Council Directive of 15 February 2006 concerning the management of bathing water quality and repealing Directive 76/160/EEC (2006/7/EC)
- Council Directive of 21 May 1991 concerning urban waste water treatment (91/271/EEC)
- Council Directive of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (92/43/EEC)
- Council Directive of 2 April 1979 on the conservation of wild birds (79/409/EEC)
- Council Directive of 24 September 1996 concerning integrated pollution prevention and control (96/61/EC)
- Council Directive of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment (85/337/EEC)
- Council Directive of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources (91/676/EEC)
- Council Directive of 23 October 2007 on the assessment and management of flood risks (2007/60/EC)

### National Legislation

- The Water Policy Regulations, 2003 (S.I. No. 722 of 2003)
- The Water Policy (Amendment) Regulations, 2005 (S.I. No. 413 of 2005)
- The European Communities (Quality of Water Intended for Human Consumption) Regulations, 1988 (S.I. No. 81 of 1988)
- The European Communities (Drinking Water) Regulations, 2000 (S.I. No. 439 of 2000)
- The Drinking Water Regulations, 2007 (S.I. No. 278 of 2007)
- The European Communities (Quality of Salmonid Waters) Regulations, 1988 (S.I. No. 293 of 1988)
- The Quality of Bathing Waters Regulations, 1992 (S.I. No. 155 of 1992)
- The Quality of Bathing Waters Regulations, 1998 (S.I. No. 177 of 1998)
- The Environmental Protection Agency Act, 1992 (S.I. No. 419 of 1994)
- The Urban Waste Water Treatment Regulations, 1994 to 2004 (S. I. No. 419 of 1994; S. I. No. 208 of 1999; S.I. No. 254 of 2001; S. I. No. 440 of 2004)
- The European Communities (Natural Habitats) Regulations, 1997 (S.I. No. 94 of 1997)

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- The European Communities (Natural Habitats) (Amendment) Regulations, 1998 and 2005 (S.I. No. 233 of 1998; S.I. No. 378 of 2005)
- The Wildlife Act, 1976 (S.I. No 39 of 1976)
- The Wildlife (Amendment) Act, 2000 (S.I. No. 38 of 2000)
- The Environmental Protection Agency Act, 1992 (S.I. No. 7 of 1992)
- The Protection of the Environment Act, 2003 (S. I. No. 27 of 2003)
- The Environmental Protection Agency (Licensing) Regulations, 1994 (S.I. No. 85 of 1994)
- The European Communities (Environmental Impact Assessment) Regulations, 1988 to 2001 (S.I. No. 221 of 1988; S.I. No. 538 of 2001)
- The Local Government (Planning and Development) Regulations, 1977 to 2002 (S. I. No. 65 of 1977; S.I. No. 70 of 2002)
- The Local Government (Planning and Development) Acts, 2000 and 2002 (S.I. No. 30 of 2000; S.I. No. 32 of 2002)
- The European Communities (Good Agricultural Practice for Protection of Waters) Regulations, 2006 (S.I. No. 378 of 2006), amended in 2007 (S.I. No. 526 of 2007),
- The Water Services Act, 2007 (S.I. No. 30 of 2007)
- The Fisheries Acts, 1939 to 2003 (S.I. No. 17 of 1939; S.I. No. 21 of 2003)
- The Environmental Protection Agency Act, 1992 (S.I. No. 7 of 1992)
- The Arterial Drainage Act, 1945 (S.I. No. 3 of 1945)
- The Arterial Drainage (Amendment) Act, 1995 (S.I. No. 14 of 1995)
- The Planning and Development Act, 2000 (S.I. No. 30 of 2000)
- The Local Government (Planning and Development) Regulations, 1994 to 2000 (S.I. No. 181 of 2000)
- The Local Government (Planning and Development) (Amendment) Regulations, 2001 (S.I. No. 539 of 2001)
- The Local Government (Water Pollution) Act, 1977 (S.I. No. 1 of 1977)
- The Local Government (Water Pollution) (Amendment) Act, 1990 (S.I. No. 21 of 1990)
- The Local Government Act, 2001 (S.I. No. 37 of 2001)

#### **Other documents**

DEHLG (2007) River Basin Management Planning – A Practical Guide for Public Authorities (draft 6)

DEFRA (2007) Consultation on mechanisms to deliver Water Framework Directive requirements on hydromorphology

SERBD (2007) South Eastern River Basin District Policy and Legislation Report

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## **Appendix I**

Summary Table of the objectives, general requirements and measures provided in legislation directly relevant to freshwater morphology

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**Table 1.1 Summary of legislative objectives and mechanisms directly relevant to freshwater morphology pressures**

Legislation	Objectives	Responsible Body	Current Mechanisms	New Mechanisms
<b>WATER FRAMEWORK DIRECTIVE BASIC MEASURES DIRECTIVES</b>				
Water Framework Directive (2000/60/EC)  Water Policy Regulations, 2003 (S.I. No. 722 of 2003)  Water Policy (Amendment) Regulations, 2005 (S.I. No. 413 of 2005)	<p><b>a.</b> achieve at least good status in all waters by 2015</p> <p><b>b.</b> prevent deterioration of status in all waters</p> <p><b>c.</b> achieve good ecological potential in heavily modified and artificial water bodies</p> <p><b>d.</b> achieve compliance with objectives specified in protected area and other pre-existing directives</p> <p><b>General Requirements</b></p> <ul style="list-style-type: none"> <li>- identify and designate water bodies that are artificial or heavily modified and establish less stringent objectives for them, allowing for sustainable human development activity</li> <li>- establish a Register of Protected Areas comprising areas which have been designated as requiring special protection under various existing EC Directives</li> <li>- identify and establish a register of bodies of water used for the abstraction of drinking water</li> <li>- establish objectives for each water body</li> <li>- establish the risk that water bodies will not achieve their objectives</li> <li>- develop RBMPs with prioritised Programme of Measures (POMs) to achieve water body objectives</li> <li>- establish Environmental Quality Standards (EQSs)</li> <li>- introduce measures to protect and enhance drinking water sources including establishing safeguard zones around abstraction zones where necessary</li> <li>- introduce new Regulations, in the form of prior authorisation or registration, to control morphological pressures.</li> <li>- introduce measures to promote sustainable water use based on a long term protection of available water resources</li> <li>- establish authorisation system for water abstractions and impoundments</li> <li>- contribute to mitigating the effects of floods and droughts</li> <li>- establish monitoring programmes to ascertain whether water bodies are achieving their objectives and to ascertain the effectiveness of POMs</li> <li>- ensure an adequate contribution from the various water users, including at least industry, households and agriculture, to the recovery of the costs of water services, based on economic analysis, taking account of the polluter pays principle.</li> </ul>	<p>LAs, EPA, All public authorities</p>	<p><b>RBMPs and POMs</b> - will incorporate measures to achieve objectives of all basic and additional new basic measures directives</p> <p><b>Alternative Objectives</b> – allow for environmental, social, economic and natural factors to be considered</p> <p><b>Designations</b> – artificial and heavily modified</p> <p><b>Risk Assessment</b> – identification of pressures on water bodies and assessment of the risk they pose that water bodies will not achieve their objectives</p> <p><b>Monitoring Programme</b> – establish status of water bodies and assess the effectiveness of POMs</p> <p><b>Classification System</b> – assess the state of water bodies based on monitoring results and determines whether they pass or fail objectives</p> <p><b>Register of Protected Areas</b> - comprising sites which have been designated as requiring special protection under specific EC directives for the protected of their surface and groundwater and for the conservation of habitats and species directly depending on water</p> <p><b>Guidance</b> – elaboration on the actions required of public authorities to meet WFD objectives</p>	<p><b>Regulations</b> – new regulations are being considered in relation to the additional new basic measures</p>
Habitats Directive (92/43/EEC) Birds Directive (79/409/EEC)  Natural Habitats Regulations, 1997 to 2005 (S.I. No. 94 of 1997)	<p><b>a.</b> contribute towards ensuring bio-diversity through the conservation of natural habitats and wild flora and fauna</p> <p><b>b.</b> identify and designate areas with important habitats or bird species for their protection</p> <p><b>c.</b> achieve FCS at Natura 2000 sites</p> <p><b>d.</b> protect and improve the associated water environment to the extent necessary to achieve FCS</p>	<p>NPWS</p>	<p><b>Designations</b> – identify and designate areas that are suitable for priority bird species and priority habitats – Natura 2000 sites</p> <p><b>Conservation Status</b> – set conservation objectives for these areas</p> <p><b>Conservation Measures</b> – introduce measures to maintain, restore or re-establish habitats and species</p> <p><b>Management Plans</b> – make Management Plans for</p>	

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Legislation	Objectives	Responsible Body	Current Mechanisms	New Mechanisms
(S.I. No. 233 of 1988) (S.I. No. 378 of 2005) Wildlife Acts, 1976 to 2000 (S.I. No. 39 of 1976) (S.I. No. 38 of 2000)	<b>General Requirements</b> - establish an ecological network composed of SACs and SPAs under the title ‘Natura 2000’ - take appropriate steps to avoid deterioration of natural habitats and species as well as disturbance of the species for which the areas have been designated - establish Favourable Conservation Status (FCS) on the basis of specialist surveys - introduce measures to maintain, restore or re-establish habitats and species of Community interest to FCS - ensure sustainable development - undertake appropriate assessment of the implications of any plan or project likely to have a significant effect on a site. The plan or programme can only go ahead after ascertained that it will not adversely affect the integrity of the site except in instances where a plan or project must be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. Compensatory measures must be adopted in these instances to ensure the overall coherence of Natura 2000 is protected - encourage necessary research and scientific work with regard to the objectives of the directives - study the desirability of re-introducing native species in terms of contribution to conservation ensure that deliberate introduction of non-native species is regulated so as not to prejudice natural habitats and species and prohibit the introduction of non-native species where necessary - promote education and general information on the need to protect and conserve species and habitats - encourage the management of features in the landscape which are of importance to habitats and species in land-use planning and development policies - undertake surveillance of the conservation status of habitats and species - avoid disturbance of habitats and species and destruction of breeding sites and resting places		these areas to ensure that favourable conservation status is achieved <b>Assessment</b> – Any proposed plan or project likely to have a significant impact on these sites must undergo ‘appropriate assessment’ of the likely implications for the sites The proposed plans or projects can only go ahead if it has been ascertained that there will not be an adverse effect on the site involved. If the assessment concludes that the proposed plan or project will have an adverse impact on a Natura 2000 site, the plan or programme should not go ahead unless there is an over-riding public interest and there is no alternative. If the impacts of the plan or development cannot be avoided or mitigated, a compensatory habitat must be provided elsewhere in order to ensure the continued integrity of the Natura 2000 network <b>Surveillance</b> – undertake surveillance of the conservation status of habitats and species <b>Regulation</b> – regulate damaging activities within designated sites and to injunct damaging activities both within and outside designated sites <b>Derogation Licensing</b> – control activities that can cause damage to species through a system of licensing <b>Management Agreements</b> – agreements with owners, lessees or occupiers of land forming part of a Natura 2000 site, or land adjacent to a site, in order to protect the site	
EIA Directive (85/337/EEC) (2003/35/EC)  EIA Regulations, 1988 to 2001 (S.I. No. 221 of 1988) (S.I. No. 538 of 2001) Local Government (Planning and Development) Regulations, 1977 to 2002 (S.I. No. 65 of 1977) (S.I. No. 70 of 2002) Local Government (Planning and Development) Acts, 2000 and 2002	<b>a.</b> ensure that public and private projects that are likely to have a significant effect on the environment are subject to an assessment of their likely impacts  <b>General Requirements</b> - ensure that projects likely to have a significant effect on the environment are subject to assessment before consent is given	LAs, An Bord Pleanála, EPA	<b>EIAs</b> - Environmental Impact Assessments (EIAs) must be submitted for certain types of projects which systematically outline the likely environmental effects of those projects. <b>Planning Appeals</b> – decisions can be appealed to An Bord Pleanála	



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Legislation	Objectives	Responsible Body	Current Mechanisms	New Mechanisms
(S.I. No. 30 of 2000) (S.I. No. 32 of 2002)				
<b>WATER FRAMEWORK DIRECTIVE ADDITIONAL NEW BASIC MEASURES DIRECTIVES</b>				
under consideration	<ul style="list-style-type: none"> <li>a. controls on physical modifications to surface waters</li> <li>b. measures to protect drinking water sources</li> <li>c. controls on abstractions and impoundments</li> </ul>	to be decided		<b>Regulations</b> – The DEHLG are considering the introduction of new regulations in relation to these objectives
<b>OTHER NEW LEGISLATION</b>				
Floods Directive, 2007 (S.I. No. 60 of 2007)	<ul style="list-style-type: none"> <li>a. establish a framework for the assessment and management of flood risk</li> <li>b. reduce the adverse affects for human health, the environment, cultural heritage and economic activity of flooding</li> </ul>	to be decided	<p><b>Flood Risk Assessments</b> – an assessment of the potential risks of flooding, identifying potential significant flood risk areas</p> <p><b>Flood Hazard Maps/Flood Risk Maps</b> – identifying probability of floods in potential significant flood risk areas, must be prepared by 2013</p> <p><b>Flood Risk Management Plans</b> – these will be developed by 2015 for each RBD and will include measures for achieving the objectives for the directive such as sustainable land use practices to improve water retention and taking account of the likely impact of climate change</p>	<b>Regulations</b> – new regulations will be made to give affect to this directive by 26 <sup>th</sup> November 2009
<b>NATIONAL LEGISLATION</b>				
The Arterial Drainage Act, 1945 (S.I. No. 3 of 1945) The Arterial Drainage (Amendment) Act, 1995 (S.I. No. 14 of 1995)	<ul style="list-style-type: none"> <li>a. river drainage</li> <li>b. flood relief</li> </ul>	OPW	<p><b>Drainage Schemes</b> - this legislation places a statutory requirement on the OPW to prevent or substantially reduce the periodical flooding of lands or improve drainage of lands by undertaking arterial drainage and follow up maintenance</p> <p><b>Flood Relief Schemes</b> – these address localised flooding problems</p> <p><b>Drainage District Schemes</b> - the OPW also monitor the maintenance undertaken by Local Authorities of pre-1945 Drainage District Schemes</p> <p><b>In-Stream Works</b> – the OPW are involved in the installation and maintenance of bridges and weirs in watercourses</p> <p><b>Land Acquisition</b></p> <p><b>Maintenance</b> – Local Authorities and the OPW must maintain their drainage works</p> <p><b>Controls of embankments</b> - control and management of weirs</p> <p><b>Restrictions</b> – on construction or alteration of bridges or weirs without consent</p> <p><b>Compulsory Drainage Orders</b> – The Minister and Local Authorities have the power to compel the drainage of areas outside drainage works</p> <p><b>Compulsory repair of watercourses</b> – The OPW have the power to compel the repair of watercourses</p> <p><b>Penalties</b> – fines and imprisonment can be imposed on anyone who interferes with drainage works</p> <p><b>Bye Laws</b> – The OPW can introduce bye laws to ensure the protection and efficient functioning of drainage works</p>	
The Planning and Development	a. strategic framework for development	LAs, an Bord	<b>National Spatial Strategy</b> – national strategic	

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Legislation	Objectives	Responsible Body	Current Mechanisms	New Mechanisms
<p>Act, 2000 (S.I. No. 30 of 2000) The Local Government (Planning and Development) Regulations, 1994 to 2000 (S.I. No. 181 of 2000) The Local Government (Planning and Development) (Amendment) Regulations, 2001 (S.I. No. 539 of 2001)</p>	<p>b. assess developments before consent is given</p>	<p>Pleanála</p>	<p>planning framework for achieving a better balance of social, economic and physical development between the regions <b>Regional Planning Guidelines</b> – strategic planning framework for the development of a region for 6-year periods, confer powers to regional authorities for the purpose of implementing the National Spatial Strategy in their area <b>Development Plans</b> – outline policies in relation to land use, amenity and development priority for 6 year periods. They are normally drawn up in relation to Counties, but can also exist in relation to larger towns and local areas <b>Local Area Plans</b> – must be prepared for towns and areas with populations greater than two thousand <b>Ministerial Guidance</b> – <b>General Policy Directions</b> - <b>Planning Permission</b> – Local Authorities grant planning permission for private developments. Applications can be refused, amended or have conditions attached to them to avoid or reduce environmental impacts. All planning applications are assessed to determine their conformity with the objectives outlined in the Development Plan in the area to which the application relates Environmental Impact Assessment - Local Authorities can request the production of EIAs for certain developments which will predict the likely morphological impacts from developments <b>Land Acquisition</b> – for the purposes of open spaces, to acquire protected structures, for strategic developments of economic or social importance <b>Strategic Development Zones</b> – to facilitate developments of economic or social importance <b>Areas of Special Amenity</b> – can be declared as such due to outstanding natural beauty or special recreational value and have special objectives outlined by order of the Minister in policy directions <b>Landscape Conservation Areas</b> – any area or place can be designated by order of the Minister for the purposes of preservation of the landscape <b>Tree Preservation Orders</b> – make provision for the protection of trees and woodlands <b>Public Rights of Way</b> – by order <b>Register of Quarries</b> – <b>Enforcement</b> – failure to comply with this act is an prosecutable offence with penalties of fines and imprisonment <b>An Bord Pleanála</b> – applicants for developments can appeal to the Board. The Board can raise issues with the High Court <b>Removal of Structures</b> – Local Authorities can</p>	

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Legislation	Objectives	Responsible Body	Current Mechanisms	New Mechanisms
			<p>serve notice if it decides that any structure should be demolished, removed, altered or replaced, or if any uses should be discontinued</p> <p><b>Regulation</b> – Local Authorities can regulate the development or use of land</p> <p><b>Record of Protected Structures</b> – development plans should include a list of structures which are of particular importance</p> <p><b>Ministerial Guidelines</b> – The Minister for the Environment, Heritage and Local Government can issue guidelines in relation to protected structures</p> <p><b>Duty of Care</b> – owners and occupiers of protected structures must protect them from endangerment</p> <p><b>Works to Protected Structures</b> – Local Authorities can issue a notice to require works to be carried out in relation to endangerment of protected structures.</p>	

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## **Appendix II**

Summary of objective, general requirements and measures provided in legislation that is indirectly relevant to freshwater morphology

## 1.0 Introduction

Basic measures directives that have an indirect role to play in protecting against morphological impacts on freshwaters include:

- the Drinking Waters Directive
- the Bathing Waters Directive
- the Urban Waste Water Treatment Directive
- the Integrated Pollution Prevention and Control (IPPC) Directive
- the Nitrates Directive

To be compliant with the WFD, all of the objectives and requirements of these directives must be implemented in full.

Additional new basic measures that are indirectly relevant to freshwater morphology include:

- measures taken to apply the principles of cost recovery using the polluter pays principle
- measures to promote efficient and sustainable water use

Other directives that have an indirect role to play in protecting against morphological impacts on freshwaters include:

- The Freshwater Fish Directive (78/659/EEC)

National legislation with an indirect role to play in controlling freshwater morphology pressures includes:

- the Fisheries Acts
- the EPA Act
- the Local Government Acts

## 2.0 Summary of Legislation

### 2.1 *The Drinking Water Directive (98/83/EC)*

Abstraction of surface waters can cause morphological impacts. Full implementation of the objectives and requirements of this Directive would minimise the morphological impacts of these activities.

The primary objectives of the Drinking Water Directive for waters used for the abstraction of drinking water are:

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| <ul style="list-style-type: none"> <li>➤ to protect human health from the adverse effects of any contamination of water intended for human consumption by ensuring that it is wholesome and clean.</li> <li>➤ to ensure that water intended for human consumption is free from any micro-organisms and parasites and any substances which constitute a danger to human health</li> <li>➤ to ensure that water meant for human consumption meets set water quality standards</li> </ul> |
|--|

National legislation put in place to achieve the objectives of the **Drinking Water Directive** includes:

- the European Communities (Quality of Water Intended for Human Consumption) Regulations, 1988 (S.I. No. 81 of 1988)
- the European Communities (Drinking Water) Regulations, 2000 (S.I. No. 439 of 2000)
- the Drinking Water Regulations, 2007 (S.I. No. 278 of 2007)

The competent authorities responsible for implementing this legislation are the Water Services Authorities (city and county councils). The EPA have a supervisory role.

Mechanisms and measures provided in the legislation to meet the objectives include:

- **Designations** – identify and designate bodies of water used for the supply of drinking water in order to protect the environment and human health
- **Monitoring Programmes** – monitor drinking water quality
- **Quality Standards** – set and meet drinking water quality standards
- **Action Programmes** – prepare Action Programmes where the quality of the water does not meet the drinking water quality standards
- **Action Plans** – require that a person responsible for pollution must prepare and implement an Action Plan to prevent pollution and mitigate its effects.
- **Guidelines**
- **Safeguard Zones** – safeguard zones can be established around abstraction zones for their protection

## 2.2 *The Bathing Waters Directive (76/160/EEC)*

Full implementation of this Directive would exert control over morphological pressures through measures to achieve the stringent quality objectives.

The objectives of the Bathing Waters Directive for areas designated as recreational and bathing waters are:

- |  |
|--|
| <ul style="list-style-type: none"> <li>➤ to preserve, protect and improve the quality of bathing waters in order to protect the environment and human health</li> <li>➤ to prevent bathing water quality from breaching quality limit values.</li> </ul> |
|--|

National legislation put in place to achieve the objectives in the **Bathing Waters Directive** include:

- The Quality of Bathing Waters Regulations, 1992 (S.I. No. 155 of 1992)
- The Quality of Bathing Waters Regulations, 1998 (S.I. No. 177 of 1998)

Local Authorities are the competent authorities responsible for ensuring that this legislation is implemented.

Mechanisms and measures provided in the legislation to meet the objectives include:

- **Designations** – identify and designate bodies of water that are used as bathing areas for the protection of the environment and human health.
- **Monitoring Programmes** – carry out bathing water quality assessments
- **Quality Standards** – set and not breach quality limit values
- **Classification System** – classify bathing waters
- **Bathing Water Profiles** – develop these for their bathing waters
- **Water Pollution Reduction Programmes** – take all necessary measures to ensure compliance.

### 2.3 *The Urban Waste Water Treatment Directive (91/271/EEC)*

The disposal routes and discharge points of waste water can sometimes have a morphological impact on freshwaters. Full implementation of this directive would minimise the impact on the environment of these pressures.

The objectives of the Urban Waste Water Treatment Directive for nutrient sensitive areas are:

- to harmonise measures on urban waste water treatment throughout Europe
- to identify and designate bodies of water sensitive to eutrophication for their protection
- to provide extra waste water treatment in these nutrient sensitive areas
- to protect the environment from any adverse effects due to discharges of urban waste water.

National legislation put in place to achieve the objectives in the **Urban Waste Water Directive** include:

- The Environmental Protection Agency Act, 1992 (S.I. No. 419 of 1994)

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- The Urban Waste Water Treatment Regulations, 1994 to 2004 (S. I. No. 419 of 1994; S. I. No. 208 of 1999; S.I. No. 254 of 2001; S. I. No. 440 of 2004)

Water Services Authorities are the competent authorities responsible for ensuring that this legislation is implemented. The results of monitoring must be reported to the EPA.

Mechanisms and measures provided in the legislation to meet the objectives include:

- **Designations** – identify and designate bodies of water that are sensitive to eutrophication for their protection
- **Water Quality Objectives** – set objectives for these waters
- **Monitoring Programmes** – monitor the quality of these areas
- **Licensing** – license to discharge of effluents into freshwaters
- **Authorisation** – disposal of sludge
- **Programme of Implementation**

*New amended Urban Waste Water Treatment Regulations are due to be published in early 2008.*

#### 2.4 Integrated Pollution Prevention and Control Directive (96/61/EC)

This Directive imposes a requirement for certain large scale industrial and agricultural activities with a high pollution potential to acquire a license which will only be awarded if certain environmental conditions are met. These conditions may relate to physical conditions at the site of the activity and therefore full implementation of this Directive could help to minimise morphological impacts on freshwaters.

The objectives of the Integrated Pollution Prevention and Control Directive in relation to these activities are:

- to take an integrated approach to pollution prevention and control arising from a range of activities to ensure a high level of protection of the environment as a whole
- to apply the principles of Best Available Technology (BAT).

National legislation put in place to achieve the objective of the Integrated Pollution Prevention Control (IPPC) Directive include the EPA Act, 1992, the Protection of the Environment Act, 2003, and the EPA Licensing Regulations, 1994.

The EPA administers an IPPC licensing system under this legislation which covers all operations carried out in connection with licensed large scale industrial and agricultural activities. All IPPC licenses contain certain basic obligations, such as the requirement to return a site to its original state after activity ceases, but specific requirements can also be attached to licenses.



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In order to ensure that current licenses support achievement of the status objectives of the WFD, the EPA will have to undertake a review, and possible revision, of current IPPC licenses and the conditions attached to them. When new license applications are being assessed, explicit consideration will have to be given to WFD objectives. As morphology is one of the elements of the WFD classification system, consideration will have to be given to how IPPC licensed activities might affect the physical characteristics of water bodies. The EPA may need to attach specific requirements to licenses in relation to physical alterations of water bodies and may even reject some license applications based on the likely impact of the activity on the physical characteristics of water bodies.

## 2.5 The Nitrates Directive (91/676/EEC)

This Directive imposes rules on farming practices, some of which address morphological pressures on freshwaters from agriculture, for example, by requiring that streams are fenced off to exclude livestock. Full implementation of this Directive could therefore help to minimise morphological impacts from agriculture.

The objectives of the Nitrates Directive are:

- to reduce water pollution caused or induced by nitrates from agricultural sources
- to prevent further such pollution.

This Directive was transposed into Irish law via The European Communities (Good Agricultural Practice for Protection of Waters) Regulations, 2006 (S.I. No. 378 of 2006), and amended in 2007 (S.I. No. 526 of 2007). A national Nitrates Action Programme (NAP) was developed jointly by the Department of the Environment, Heritage and Local Government and the Department of Agriculture, Fisheries and Food following much consultation with interested parties. This national approach to implementing the Nitrates Directive is considered to be compatible with RBMPs and the achievement of WFD objectives.

The NAP consists of a set of rules relating to farming practices, such as landspreading activity and manure storage, which are set out in a Code of Good Agricultural Practice. The programme commenced in January 2006 and is being implemented on a phased basis over a four year period.

Compliance with the rules in the NAP is the responsibility of individual farmers but the Department of the Environment, Heritage and Local Government is ultimately responsible for ensuring that the NAP is implemented. On-farm compliance checks will be carried out by the Department of Agriculture, Forestry and Food, with respect to cross-compliance and single farm payments, and by the Local Authorities, with respect to compliance with the Nitrates Regulations. These farm inspections must be coordinated as far as possible. Water quality monitoring for the purposes of the NAP has been incorporated into the WFD monitoring programme and local Authorities may use this

information, and the results of WFD risk assessments, to help in the design of their on-farm compliance checking programme.

Implementation of the first NAP is being closely monitored on an on-going basis to ascertain its effectiveness. This may result in adjustments being made to subsequent NAPs. Of particular interest is the assessment of whether the implementation of the NAP will support achievement of the stringent objectives related to protected areas. It may be that the rules laid out in NAP are not adequate to meet these objectives and additional agricultural measures may be needed in these areas.

## 2.6 *The Freshwater Fish Directive (78/659/EEC)*

Morphological alterations to freshwaters can have damaging effects on fish populations. Full implementation of this Directive would minimise these impacts while protecting fish habitats.

The primary objectives of the Freshwater Fish Directive for areas designated for the protection of economically significant aquatic species are:

- to protect or improve the quality of running or standing freshwaters which support or which, if pollution were reduced or eliminated, would become capable of supporting, indigenous and desirable fish species
- to ensure that designated waters meet physical and chemical water quality standards.

The European Communities (Quality of Salmonid Waters) Regulations, 1988 (S.I. No. 293 of 1988) were put in place to achieve the objectives of the **Freshwater Fish Directive**.

Local Authorities are the competent authorities responsible for ensuring that this legislation is implemented. All public authorities have a duty to exercise their functions in a manner which is consistent with protecting the quality objectives of salmonid waters and to take action as may be appropriate to ensure compliance.

Mechanisms and measures provided in the legislation to meet the objectives include:

- **Designations** – identify and designate bodies of water that are capable of sustaining fish populations for the protection of economically significant aquatic species.
- **Monitoring Programmes** – monitor the quality of salmonid protected areas to establish compliance with the regulations
- **Quality Standards** – set and meet water quality standards
- **Water Pollution Reduction Programmes** – ensure that designated waters meet their objectives
- **Action Programmes** – develop and implement Action Programmes if the standards are not met.

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## 2.7 *Cost recovery and the polluter pays principle*

The Water Services Act, 2007, provides for the recovery of all costs associated with the provision of water services for non-domestic use. Currently, domestic users do not have to pay for water services.

## 2.8 *Efficient and sustainable water use*

The Water Services Act, 2007, provides for the efficient and sustainable use of water through a requirement for upgrade and maintenance of water works as well as a general duty of care on water users to ensure that their water distribution systems are in a fit state and free from leaks.

## 2.9 *The Water Services Act, 2007 (S.I. No. 30 of 2007)*

This Act is a comprehensive and modern piece of legislation which aims to facilitate the provision of sufficient water services for domestic and non-domestic requirements whilst protecting human health and the environment and supporting proper planning and sustainable development including the sustainable use of water resources. It consolidates and modernises the legislation governing water services. It focuses on management of water ‘in the pipe’, as distinct from broader water issues such as river water quality. Water services planning and river basin planning will be parallel processes ensuring sustainable development.

Water services authorities are the competent authorities responsible for delivering water services.

Mechanisms and measures provided in the legislation to meet the objectives include:

- **Meters** - the recovery of the full cost of water services from non-domestic users in line with the polluter pays principle
- **Guidance** – regarding fulfilling the functions of water services authorities
- **Drinking Water Quality Standards**
- **Technical Standards** – to ensure that
- **Monitoring Programmes** – to ensure that quality standards are achieved and assess the effectiveness of measures
- **Financial Assistance Schemes** – can be made available at the discretion of the Minister
- **Measures** –take all necessary measures must be taken to ensure that water meets drinking water quality standards
- **Water Conservation Measures** – rehabilitation of existing water and sewerage works, general duty of care on water users
- **Water Services Strategic Plans** –specify measures to achieve the objectives of the act, will feed into development plans

### 2.10 National **Fisheries** Legislation

- The Fisheries Acts, 1939 to 2003 (S.I. No. 17 of 1939; S.I. No. 21 of 2003)

These acts provide for the efficient and effective management, conservation, protection, development and improvement of fisheries, hatcheries and fish farms. The bodies responsible for their implementation are the Fisheries Boards.

The Fisheries Boards must ensure the suitability of fish habitats, including taking consideration of the conservation of biodiversity in water ecosystems. Fisheries legislation does not allow barriers to migration or the obstruction of the passage of fair or the impairment of the usefulness of the bed and soil of any waters as spawning grounds or their capacity to produce the food of fish.

- The Foyle and Carlingford Fisheries Order, 2007 (S.I. No. 917 of 2007)
- The Foyle Fisheries Act, 1952 (S.I. No. 75 of 1952)
- The Foyle Fisheries Act (NI), 1952 (S.I. No. 859 of 1952) and 1962 amendment (S.I. 971 of 1962)

This legislation provides for the development, management, conservation and protection of fisheries in the Foyle and Carlingford catchments. The body responsible for its implementation is a cross-border agency called the Loughs Agency. The Agency operates an ongoing programme of works to improve habitats for fish. Also, it is an offence under the Foyle and Carlingford Fisheries Order, 2007, to remove any sand or gravel from the bed of a freshwater river.

### 2.11 National Environmental Protection Agency legislation

- The Environmental Protection Agency Act, 1992 (S.I. No. 7 of 1992)

The Environmental Protection Agency (EPA) has responsibilities for a wide range of licensing, enforcement, monitoring and assessment activities associated with environmental protection.

Mechanisms and measures provided in the legislation to meet the objectives include:

- **Licenses and permits** – certain activities require a license
- **Environmental Quality Standards (EQSs)** – for a range of general and chemical parameters for the purpose of environmental protection
- **Codes of Practice** – The EPA can prepare and publish Codes of Practice for the purposes of environmental protection
- **Guidance** - The EPA can issue information, advice or recommendations for the purposes of environmental protection.
- **Penalties** – fines and prosecution
- **Management Plans** – The EPA can prepare management plans for the purpose of environmental protection

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- **Emission Limit Values** – The EPA can issue ELVs for the purpose of environmental protection
- **EIA** -
- **General Policy Direction** – The EPA can issue general policy directions for the purpose of environmental protection
- **Consultation and Advice** – The EPA provide consultation and advice on a broad range of environmental issues
- **Audits**
- **Monitoring Programmes** – The EPA carry out a broad range of environmental monitoring
- **Accreditation Scheme** – The EPA have established an accreditation scheme
- **Data Storage System**
- **Research**
- **Environmental Enforcement**

### 2.12 *Local Government legislation*

- The Local Government (Water Pollution) Act, 1977 (S.I. No. 1 of 1977)
- The Local Government (Water Pollution) (Amendment) Act, 1990 (S.I. No. 21 of 1990)
- The Local Government Act, 2001 (S.I. No. 37 of 2001)

Local government has both a representational and an operational role in Ireland and is responsible for a range of services, including environmental protection.

Mechanisms and measures provided in the legislation to meet the objectives include:

- **Bye-laws** - prohibit, restrict, control or regulate the manner in which certain functions are carried out including any operation, activity, practice or use of land or other premises
- **Measures** – power to serve a notice requiring measures to be taken in order to prevent or control pollution of waters
- **Powers to prevent or abate pollution** – In certain circumstances, Local Authorities can take urgent measures necessary to prevent pollution of waters and recover the cost from the relevant person
- **Notification of accidental discharges** – the person responsible must notify a Local Authority as soon as practicable of the occurrence of an accidental discharge, spillage or deposit of polluting material which can enter waters
- **Register of licenses** – Local Authorities must keep registers of discharge and abstraction licenses
- **Water Quality Management Plans** – Local Authorities can prepare Water Quality Management Plans whose objective is to prevent and abate pollution to waters
- **Monitoring** – Local Authorities must carry out monitoring as a provision for enforcements regarding licences

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- **Quality Standards** – The Minister for the Environment, Heritage and Local Government can prescribe quality standards for waters, trade effluents of sewage effluents as well as standards regarding the methods of treatment of effluents.
- **General Prohibition** – a person cannot cause or permit any polluting matter to enter water. To do so is a prosecutable offence
- **Enforcement** – Local Authorities can prosecute those who contravene the Act
- **Research** – Local Authorities can contribute to the funds of a person engaging in research, surveys or investigation in relation to water pollution

**Table 2.1 Summary of legislative objectives and mechanisms indirectly relevant to freshwater morphology pressures**

Legislation	Objectives	Responsible Body	Current Mechanisms	New Mechanisms
<b>WATER FRAMEWORK DIRECTIVE BASIC MEASURES DIRECTIVES</b>				
<p>Drinking Water Directive (98/83/EC)</p> <p>Drinking Water Regulations, 1988 to 2007 (S.I. No. 81 of 1988) (S.I. No. 439 of 2000) (S.I. No. 278 of 2007)</p>	<p><b>a.</b> protect human health from the adverse effects of any contamination of drinking water by ensuring that it is wholesome and clean</p> <p><b>b.</b> ensure that drinking water is free from micro-organisms and parasites and other substances which constitute a danger to human health</p> <p><b>e.</b> ensure that drinking water meets water quality standards</p> <p><b>General Requirements</b></p> <ul style="list-style-type: none"> <li>- identify and designate bodies of water used for the abstraction of drinking water, or which could be used for the abstraction of drinking water in future, providing more than 10m<sup>3</sup> a day as an average or serving more than 50 persons, for the protection of human health</li> <li>- introduce measures to ensure that water intended for human consumption is wholesome and clean</li> <li>- set quality standards for drinking waters</li> <li>- avoid deterioration in the quality of drinking water sources so that the required level of purification treatment is reduced</li> <li>- establish safeguard zones at abstraction points which need to be protected</li> <li>- focus additional protective measures on safeguard zones where there is a risk of deterioration</li> <li>- ensure that measures do not, directly or indirectly, lead to deterioration in the quality of water intended for human consumption</li> <li>- immediately investigate the causes of non-compliances</li> <li>- carry out remedial action or put restrictions in place if measures do not fix the non-compliance</li> <li>- establish monitoring programmes for bodies of waters which provide more than 100m<sup>3</sup> a day as an average to ensure that obligations are met</li> <li>- issue guidelines to help competent authorities to fulfil their obligations</li> <li>- review parameters and parametric values and monitoring needs and analysis outlined in the directive at least every five years in light of scientific and technical progress</li> </ul>	Water Services Authorities	<p><b>Designations</b> –identify and designate bodies of water used for the supply of drinking water in order to protect the environment and human health</p> <p><b>Monitoring Programmes</b> –monitor drinking water quality</p> <p><b>Quality Standards</b> –set and meet drinking water quality standards</p> <p><b>Action Programmes</b> –prepare Action Programmes where the quality of the water does not meet the drinking water quality standards</p> <p><b>Action Plans</b> –require that a person responsible for pollution must prepare and implement an Action Plan to prevent pollution and mitigate its effects.</p> <p><b>Guidelines</b></p> <p><b>Safeguard Zones</b> – safeguard zones can be established around abstraction zones for their protection</p>	
<p>Nitrates Directive (91/676/EEC)</p> <p>Good Agricultural Practice for the Protection of Waters Regulations, 2006 (S.I. No. 378 of 2006)</p> <p>Good Agricultural Practice for the Protection of Waters (Amendment) Regulations,</p>	<p><b>a.</b> reduce water pollution caused or induced by nitrates from agricultural sources</p> <p><b>b.</b> prevent further such pollution</p> <p><b>General Requirements</b></p> <ul style="list-style-type: none"> <li>- identify and designate waters affected by pollution and waters which could be effected by pollution if action were not taken</li> <li>- designate specific vulnerable zones or apply national action programmes to introduce measures to tackle</li> </ul>	DAFF, LAs	<p><b>Nitrates Action Programme</b> – applies to the whole of Ireland and is the mechanism which introduce measures to achieve the objectives of this legislation, operating on a 4 year period from June 2009</p> <p><b>Designations</b> – provides for the designation of waters affected by pollution or waters that could be affected by pollution if no action is taken</p> <p><b>Codes of Good Agricultural Practice</b> - CGAP can be developed to protect waters from pollution</p>	

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Legislation	Objectives	Responsible Body	Current Mechanisms	New Mechanisms
2007 (S.I. No. 526 of 2007)	<p>pollution in sensitive areas</p> <ul style="list-style-type: none"> <li>- establish codes of good agricultural practice to be implemented by farmers on a voluntary basis</li> <li>- address waters which are eutrophic even where the eutrophication is mainly due to impacts of phosphorus rather than nitrogen from agriculture</li> <li>- draw up and implement suitable monitoring programmes to assess the effectiveness of action programmes</li> <li>- review and, if necessary, revise action programmes at least every four years</li> </ul>		<p>by nitrates. Although the provisions contained in the CGAP are voluntary, except to those claiming aid under the direct payments scheme, they may evolve into standards of conduct</p> <p><b>Regulations</b> – New Regulations may be made to make the NAPs enforceable</p> <p><b>Bye-laws</b> - Local Authorities will also have to make bye-laws to ensure that the aims of the legislation are met</p> <p><b>Voluntary measures</b> - strengthened under this legislation, include REPS and the more recent Farm Waste <b>Management Scheme</b></p> <p><b>Monitoring</b> – to identify waters which are polluted or are liable to be polluted by nitrates from agriculture and to evaluate the effectiveness of the NAP</p> <p><b>Management Plans</b> - Where monitoring shows that nitrate levels exceed acceptable levels in any area, farmers may be required by Local Authorities to prepare management plans which entail more stringent requirements.</p> <p><b>On-farm compliance checks</b> – carried out by the Department of Agriculture, Fisheries and Food and LAs to ensure farmer compliance with the NAP</p> <p><b>Mini-catchment studies</b> – to assess the effectiveness of the NAP, established and managed by Teagasc</p>	
<p>IPPC Directive (96/61/EC)</p> <p>EPA Act, 1992 (S.I. No. 7 of 1992)</p> <p>Protection of the Environment Act, 2003 (S.I. No. 27 of 2003)</p> <p>EPA Licensing Regulations, 1994 (S.I. No. 85 of 1994)</p>	<p><b>a.</b> take an integrated approach to pollution prevention and control arising from a range of activities to ensure a high level of protection of the environment as a whole</p> <p><b>b.</b> apply the principles of BAT</p> <p><b>General Requirements</b></p> <ul style="list-style-type: none"> <li>- introduce all appropriate preventative measures to protect against pollution, in particular through the application of BAT</li> <li>- introduce measures to ensure that no significant pollution is caused</li> <li>- ensure that, upon cessation of an activity, the site is returned to a satisfactory state</li> <li>- ensure that specified activities do not operate without a license</li> <li>- ensure that the conditions of licenses are fully coordinated to guarantee an effective integrated approach</li> <li>- follow developments in BAT</li> <li>- periodically reconsider and, where necessary, update license conditions</li> </ul>	EPA	<p><b>Measures</b> – to ensure integrated prevention and control of pollution</p> <p><b>Licenses</b> – licences for certain activities must adhere to the principle of Best Available Technology</p> <p><b>ELVs</b> – license conditions include Emission Limit Values</p>	
<p>Freshwater Fish Directive (78/659/EEC)</p> <p>Quality of Salmonid Waters</p>	<p><b>a.</b> protect or improve the quality of waters which support indigenous and desirable fish species</p> <p><b>b.</b> ensure that designated waters meet physical and chemical water quality standards</p>	LAs Public Authorities	<p><b>Designations</b> – identify and designate bodies of water that are capable of sustaining fish populations for the protection of economically significant aquatic species.</p>	



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Legislation	Objectives	Responsible Body	Current Mechanisms	New Mechanisms
Regulations, 1988 (S.I. No. 293 of 1988)	<p><b>General Requirements</b></p> <ul style="list-style-type: none"> <li>- identify and designate bodies of water capable of sustaining fish populations as salmonid waters and cyprinid waters</li> <li>- set physical and chemical water quality standards</li> <li>- establish water pollution reduction programmes to reduce pollution and ensure that designated waters conform to the standards set for them</li> <li>- monitor where necessary</li> <li>- establish reasons for non-compliances and introduce appropriate measures</li> </ul>		<p><b>Monitoring Programmes</b> –monitor the quality of salmonid protected areas to establish compliance with the regulations</p> <p><b>Quality Standards</b> –set and meet water quality standards</p> <p><b>Water Pollution Reduction Programmes</b> – ensure that designated waters meet their objectives</p> <p><b>Action Programmes</b> – develop and implement Action Programmes if the standards are not met.</p>	
Bathing Waters Directive (76/160/EEC)	<p><b>a.</b> preserve, protect and improve the quality of bathing waters in order to protect the environment and human health</p> <p><b>b.</b> prevent bathing water quality from breaching quality limit values</p> <p><b>General Requirements</b></p> <ul style="list-style-type: none"> <li>- identify and designate bodies of water used as bathing areas for the protection of the environment and public health</li> <li>- define the length of the bathing season annually</li> <li>- set quality standards for bathing waters</li> <li>- monitor bathing water quality, including surveillance and early warning systems, by 2008</li> <li>- establish a classification system for bathing waters</li> <li>- develop bathing water profiles describing the characteristics of bathing waters and identifying sources of pollution by 2011</li> <li>- carry out bathing water quality assessments</li> <li>- introduce water pollution reduction programmes</li> <li>- develop a management plan for each site designed to minimise risks to bathers</li> <li>- carry out remedial action if quality standards are not met</li> <li>- introduce measures to improve the status of bathing waters</li> </ul>	LAs	<p><b>Designations</b> – identify and designate bodies of water that are used as bathing areas for the protection of the environment and human health.</p> <p><b>Monitoring Programmes</b> – carry out bathing water quality assessments</p> <p><b>Quality Standards</b> – set and not breach quality limit values</p> <p><b>Classification System</b> – classify bathing waters</p> <p><b>Bathing Water Profiles</b> – develop these for their bathing waters</p> <p><b>Water Pollution Reduction Programmes</b> – take all necessary measures to ensure compliance.</p>	
Urban Waste Water Treatment Directive (91/271/EEC)	<p><b>a.</b> harmonise measures on urban waste water treatment</p> <p><b>b.</b> identify and designate bodies of water sensitive to eutrophication</p> <p><b>c.</b> provide extra waste water treatment in these areas</p> <p><b>d.</b> protect the environment from adverse effects due to discharges of urban waste water</p> <p><b>General Requirements</b></p> <ul style="list-style-type: none"> <li>- develop a programme of implementation of the directive</li> <li>- introduce water quality objectives</li> <li>- provide all urban areas with collecting systems for urban wastewater</li> <li>- introduce monitoring procedures for treatment plants and industrial discharges</li> <li>- ensure that disposal routes of treated waste water and</li> </ul>	Water Services Authorities	<p><b>Designations</b> –identify and designate bodies of water that are sensitive to eutrophication for their protection</p> <p><b>Water Quality Objectives</b> – set objectives for these waters</p> <p><b>Monitoring Programmes</b> –monitor the quality of these areas</p> <p><b>Licensing</b> –license to discharge of effluents into freshwaters</p> <p><b>Authorisation</b> – disposal of sludge</p> <p><b>Programme of Implementation</b></p>	

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	sludge minimise adverse effects on the environment - ensure that disposal of industrial waste water directly to the environment respects conditions established in prior regulations and/or specific requirements outlined by the competent authority - phase out the discharge of sludge from pipelines or any other means and ensure that its disposal is subject to general rules or registration or authorisation			
<b>WATER FRAMEWORK DIRECTIVE ADDITIONAL NEW BASIC MEASURES DIRECTIVES</b>				
under consideration	<b>a.</b> introduce measures to apply the principles of costs recovery using the polluter pays principle <b>b.</b> introduce measures to promote efficient and sustainable water use	to be decided	<b>Water Services Act 2007</b> – provides for the principles of cost recovery and efficient and sustainable water use	
<b>OTHER NEW LEGISLATION</b>				
The Water Services Act, 2007 (S.I. No. 30 of 2007)	<b>a.</b> facilitate the provision of sufficient water services <b>b.</b> protect human health and the environment	Water Services Authorities	<b>Meters</b> - the recovery of the full cost of water services from non-domestic users in line with the polluter pays principle <b>Guidance</b> – regarding fulfilling the functions of water services authorities <b>Drinking Water Quality Standards</b> <b>Technical Standards</b> – to ensure that <b>Monitoring Programmes</b> – to ensure that quality standards are achieved and assess the effectiveness of measures <b>Financial Assistance Schemes</b> – can be made available at the discretion of the Minister <b>Measures</b> –take all necessary measures must be taken to ensure that water meets drinking water quality standards <b>Water Conservation Measures</b> – rehabilitation of existing water and sewerage works, general duty of care on water users <b>Water Services Strategic Plans</b> –specify measures to achieve the objectives of the act, will feed into development plans	
<b>NATIONAL LEGISLATION</b>				
The Fisheries Acts, 1939 to 2003 (S.I. No. 17 of 1939) (S.I. No. 21 of 2003)	<b>a.</b> promote the efficient and effective management, conservation, protection, development and improvement of fisheries, hatcheries and fish farms	Fisheries Boards	<b>Fisheries Development Plans</b> - <b>Licenses</b> - those involved in aquaculture must acquire a license <b>Compulsory purchase orders</b> – power to compulsorily purchase lands adjacent to fisheries <b>Sustainable Practices</b> - achieve sustainable development practices in fisheries taking consideration of the conservation of biodiversity in water ecosystems. <b>Prosecutions</b> – It is an offence to obstruct the passage of fish or to impair the usefulness of the bed and soil of any waters as spawning grounds or their capacity to produce the food of fish <b>Education Courses</b> – Fisheries Boards can establish education and training regarding the management, conservation, protection,	

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Legislation	Objectives	Responsible Body	Current Mechanisms	New Mechanisms
			development and improvement of fisheries, hatcheries and fish farms <b>Barriers to migration</b> – must allow free passage of fish	
The Environmental Protection Agency Act, 1992 (S.I. No. 7 of 1992)	a. broad ranging environmental protection	EPA	<p><b>Licenses and permits</b> – certain activities require a license</p> <p><b>Environmental Quality Standards (EQSs)</b> – for a range of general and chemical parameters for the purpose of environmental protection</p> <p><b>Codes of Practice</b> – The EPA can prepare and publish Codes of Practice for the purposes of environmental protection</p> <p><b>Guidance</b> - The EPA can issue information, advice or recommendations for the purposes of environmental protection.</p> <p><b>Penalties</b> – fines and prosecution</p> <p><b>Management Plans</b> – The EPA can prepare management plans for the purpose of environmental protection</p> <p><b>Emission Limit Values</b> – The EPA can issue ELVs for the purpose of environmental protection</p> <p><b>EIA</b> -</p> <p><b>General Policy Direction</b> – The EPA can issue general policy directions for the purpose of environmental protection</p> <p><b>Consultation and Advice</b> – The EPA provide consultation and advice on a broad range of environmental issues</p> <p>Audits</p> <p><b>Monitoring Programmes</b> – The EPA carry out a broad range of environmental monitoring</p> <p><b>Accreditation Scheme</b> – The EPA have established an accreditation scheme</p> <p><b>Data Storage System</b></p> <p><b>Research</b></p> <p><b>Environmental Enforcement</b></p>	
The Local Government (Water Pollution) Act, 1977 (S.I. No. 1 of 1977) The Local Government (Water Pollution) (Amendment) Act, 1990 (S.I. No. 21 of 1990) The Local Government Act, 2001 (S.I. No. 37 of 2001)	a. environmental protection	LAs	<p><b>Bye-laws</b> - prohibit, restrict, control or regulate the manner in which certain functions are carried out including any operation, activity, practice or use of land or other premises</p> <p><b>Measures</b> – power to serve a notice requiring measures to be taken in order to prevent or control pollution of waters</p> <p><b>Powers to prevent or abate pollution</b> – In certain circumstances, Local Authorities can take urgent measures necessary to prevent pollution of waters and recover the cost from the relevant person</p> <p><b>Notification of accidental discharges</b> – the person responsible must notify a Local Authority as soon as practicable of the occurrence of an</p>	

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Legislation	Objectives	Responsible Body	Current Mechanisms	New Mechanisms
			<p>accidental discharge, spillage or deposit of polluting material which can enter waters</p> <p><b>Register of licenses</b> – Local Authorities must keep registers of discharge and abstraction licenses</p> <p><b>Water Quality Management Plans</b> – Local Authorities can prepare Water Quality Management Plans whose objective is to prevent and abate pollution to waters</p> <p><b>Monitoring</b> – Local Authorities must carry out monitoring as a provision for enforcements regarding licences</p> <p><b>Quality Standards</b> – The Minister for the Environment, Heritage and Local Government can prescribe quality standards for waters, trade effluents of sewage effluents as well as standards regarding the methods of treatment of effluents.</p> <p><b>General Prohibition</b> – a person cannot cause or permit any polluting matter to enter water. To do so is a prosecutable offence</p> <p><b>Enforcement</b> – Local Authorities can prosecute those who contravene the Act</p> <p><b>Research</b> – Local Authorities can contribute to the funds of a person engaging in research, surveys or investigation in relation to water pollution</p>	