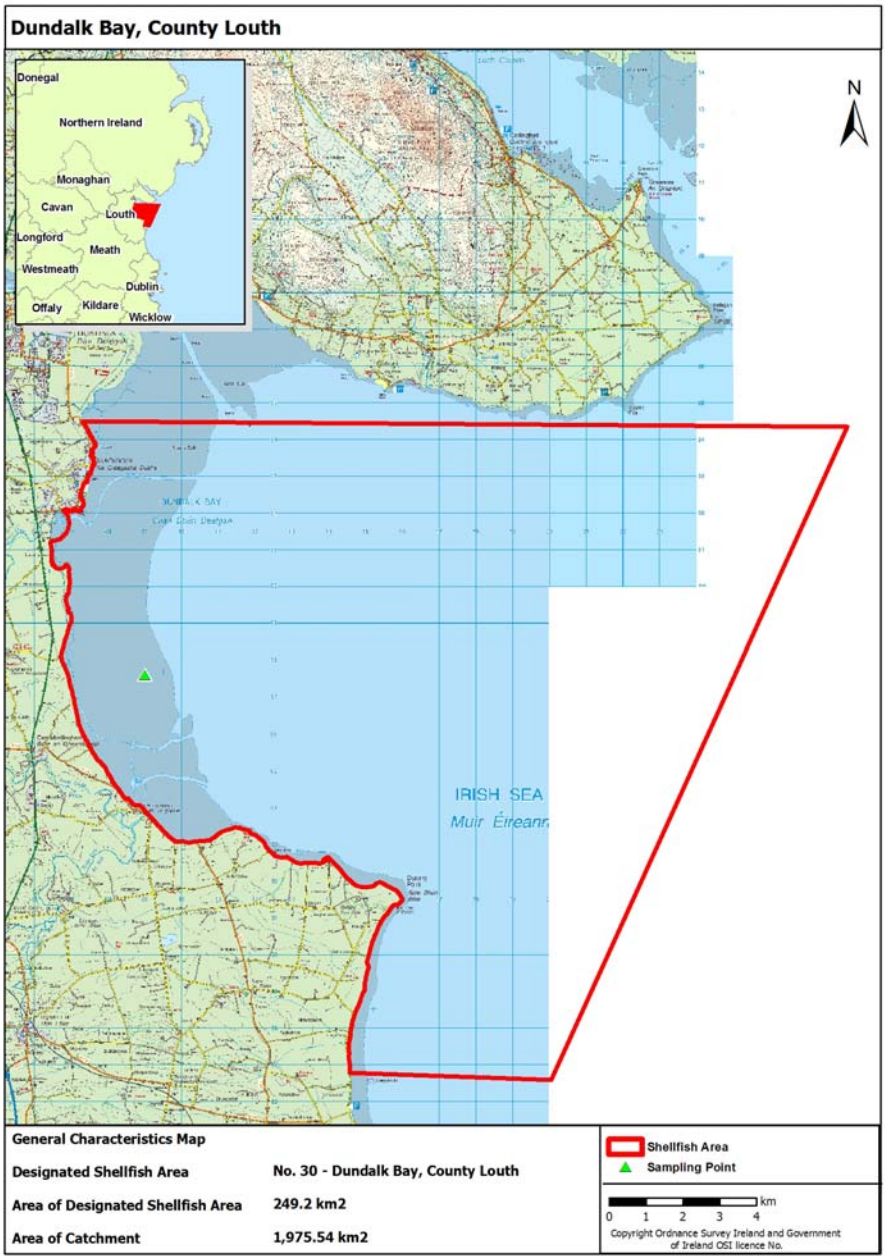
Dundalk Bay Pollution Reduction Programme



Name	**Dundalk Bay Shellfish Area**
Map number	30
Year of designation	2009
Area	249.2 km^2
River Basin District	Neagh Bann IRBD
County	Louth
Location of sampling point	53 deg 55.00 min North (Lat) 6 deg 20.50 min West (Long)
Catchment area	1,976 km^2

1.0 INTRODUCTION

"I, John Gormley, T.D., Minister for the Environment, Heritage and Local Government pursuant to the provisions of Section 6 of the European Communities (Quality of Shellfish Waters) Regulation 2006 (as amended) S. I. No. 268 of 2006, taking into account the public consultation process and the Strategic Environmental Assessment carried out under Directive 2001/42/EC, on the assessment of certain plans and programmes on the environment hereby establish the following pollution reduction programme for Dundalk Bay".

Mr John Gormley TD
Minister for the Environment,
Heritage and Local Government

22/12/09
DATE

1.1 Programme Objective

Compliance with the standards and objectives established by the Quality of Shellfish Waters Regulations 2006 (S.I. No. 268 of 2006) (as amended) for the designated shellfish growing waters at Dundalk Bay and with Article 5 of Directive 2006/113/EC of the European parliament and of the Council on the quality required for shellfish waters.

1.2 Pollution Reduction Programme

This pollution reduction programme for the shellfish growing waters at Dundalk Bay has been established by the Minister for the Environment, Heritage and Local Government in order to protect and improve water quality in the designated shellfish growing areas in Dundalk Bay and in particular, to ensure compliance with the standards and objectives for these waters established by the 2006 Quality of Shellfish Waters Regulations (S.I. No. 268 of 2006) and with Article 5 of Directive 2006/113/EC of the European parliament and of the Council on the quality required for shellfish waters.

1.3 Supporting Characterisation Report and Toolkit of Measures

The Pollution Reduction Programme stems from the work undertaken in the characterisation report for Dundalk Bay. The characterisation is designed to achieve the following:

- establish the catchment that influences the water quality of the designated area;
- identify the different types of pressures or impacts prevalent in the catchment;
- establish an initial assessment of the water quality within the catchment and within the designated shellfish area using all water quality data available;

- from the above three elements identify the pressures that are active in the catchment and subsequently impacting the water quality in the designated shellfish area;

- having identified the pressures impacting on the water quality the characterisation report prioritises them in relation to their impact.

The characterisation report thus provides a prioritised list of pressures/impacts/effects on water quality. The pollution reduction programme or action plan takes this prioritised list and addresses each issue with actions to help ensure that compliance with the relevant water quality standards is achieved or ensured.

The measures/actions included in this PRP to address the identified pressures on shellfish water quality in this catchment are based on a National Toolkit of Measures. The National Toolkit has been derived from earlier work carried out on the River Basin Management Plans under the Water Framework Directive (WFD), reflecting the common objective to improve water quality in the two Directives. In addition, designated shellfish waters are part of the WFD Register of Protected Areas, providing a further link between the Pollution Reduction Programmes and River Basin Management Planning.

Within each individual PRP specific measures from the National Toolkit are applied, where required, to address the key and secondary pressures identified in each of the designated shellfish waters.

1.4 Strategic Environmental Assessment and Habitats Directive Assessment

The Strategic Environmental Assessment (SEA) and Habitats Directive Assessment (HDA) processes were carried out in tandem with the PRP compilation process. These assessments both informed the development of alternatives considered for the PRP and included detailed high-level assessments highlighting the potential positive and negative impacts (including cumulative impacts) associated with application of the measures contained in the National Toolkit. In addition, a more focussed assessment was also carried out which considered the individual and cumulative impacts associated with implementation of the measures brought forward into this individual PRP.

As a result of the SEA and HDA assessments mitigation measures were identified in order to reduce potential negative impacts associated with implementation of the PRP. The relevant mitigation measures are included in Annex 2 of the PRP. The mitigation measures arising from the SEA are noted in black, while the mitigation measures arising from the HDA noted in blue.

1.5 Monitoring of Water Quality

The Marine Institute is carrying out a monitoring programme to monitor the condition of waters in the shellfish growing area and to verify compliance, or otherwise with the water quality standards outlined in Schedules 2 and 4 of the Quality of Shellfish Waters Regulations (S.I. No. 268 of 2006) and summarised in Table 1 of the Characterisation Report (Chapter 1 of the Characterisation Report refers). The Marine Institute will submit a report on water quality in respect of the designated area to the Minister each year, and will immediately bring to the attention of the Department of the Environment, Heritage and Local Government any non-compliance with a water quality standard to enable investigation to be undertaken.

1.6 Review/monitoring of Pollution Reduction Programme

This pollution reduction programme will be kept under review by the Minister and will be updated and amended as needed from time to time, having regard to water quality conditions within the shellfish growing area including changes in water quality in response to the implementation of measures and other factors arising in the catchment that may affect water quality in the designated area.

The pollution reduction programme will be reviewed at intervals not exceeding three years and, where necessary, at lesser intervals if the monitoring data indicates a deterioration in water quality status or a risk that the objectives or standards laid down in the Regulations will not be achieved.

When the Pollution Reduction Programme is being reviewed the most current baseline data will be consulted.

Prior to the incorporation of the PRP into the second cycle of the River Basin Management Plans a review of the Strategic Environmental Objectives for Water will be carried out as against those drawn up for assessment of the first cycle River Basin Management Plans to ensure that the Shellfish PRP help to meet the wider Water Framework Directive water quality objectives.

1.7 Monitoring of Environmental Impacts

Article 10 of the SEA Directive requires that monitoring be carried out in order to identify at an early stage any unforeseen adverse effects due to implementation of the PRP, with the view to taking remedial action where adverse effects are identified through monitoring. An Environmental Monitoring Programme has been developed which focuses on aspects of the environment that are likely to be impacted by the PRPs. The Environmental Monitoring Programme is included in Table 5 of the National Toolkit of Measures. The Department of the Environment, Heritage and Local Government will be the authority responsible for collecting and collating data under the Environmental Monitoring Programme. The data will be collected at the same time the pollution reduction programme is reviewed.

1.8 Monitoring Implementation of Pollution Reduction Programme

This PRP is effectively a sub-basin plan of the River Basin Management Plan for the catchment and will be implemented during the first implementation cycle under the Water Framework Directive (i.e up to 2015).

Implementation of the pollution reduction programme will be monitored by the Water Quality Section of the Department of the Environment, Heritage and Local Government.

The contact person is:

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2.0 STATUS/IMPACTS	
Overall status	The results of monitoring undertaken for the purposes of the Shellfish Waters Directive (2006/113/EC) and Schedules 2 and 4 of the Quality of Shellfish Waters Regulations (S.I. No. 268 of 2006) indicate that there are water quality issues with faecal coliform levels as well as the levels of copper, lead and zinc within / in the vicinity of this shellfish area. The results of WFD monitoring indicate that there are water quality issues with dissolved inorganic nitrogen, copper and zinc within / in the vicinity of this shellfish area. Monitoring of shellfish flesh for food hygiene purposes indicates faecal contamination in this shellfish area. The bivalve mollusc production areas in Dundalk Bay are classified as 'Class B' for the purposes of EC Regulation 854/2004. Chapter 3 of the Characterisation Report refers.
Other issues	None
3.0 PRESSURES/RISKS	
3.1 Key Pressures	Analysis of the Characterisation Report for this designated shellfish water suggests that the key pressures are urban wastewater systems, on-site waste water treatment systems (OSWWTS) and agriculture. The presence of copper, lead and zinc is also considered a key pressure Chapter 5 (summary at 5.3) of the Characterisation Report refers.
Urban Wastewater Systems	Blackrock Dundalk Annagassan
On-site waste water treatment systems (OSWWTS).	There are 20,598 on-site waste water treatment systems within the Republic of Ireland portion of the catchment and their density is higher than the national average. The characterisation report indicates that a smaller number are located within the coastal region of the catchment, which may have a direct impact on the shellfish area. The characterisation report also indicates that the hydrological condition of the majority of the catchment poses a risk to surface waters, the risk to surface waters from pathogens and phosphorus is high throughout the catchment. The European Court of Justice has ruled against

	Ireland in relation to on-site wastewater treatment systems (ref. Case C-188/08). The Court found that by failing to adopt the necessary legislation to comply with Articles 4 and 8 of Council Directive 75/442/EEC as regards domestic waste waters disposed of in the countryside through septic tanks and other individual waste water treatment systems, Ireland has failed to fulfil its obligations under that directive. To address the ruling, the Department of the Environment, Heritage and Local Government will be bringing forward legislation in the first half of 2010. It is intended that the legislation will provide for the setting of standards for the performance and operation of all septic tanks and similar on-site wastewater treatment systems. The legislation will also provide for the monitoring and inspection of the performance of such treatment systems and will set out the responsibilities of households served by those systems (including requirements to carry out remedial actions where necessary). In order to ensure prompt compliance with the Court ruling, it is intended that this legislation will be in place by Q3 2010.
Agriculture	The estimates of livestock density and fertiliser usage are higher than the national averages.
Other - specific pollutants	Copper and zinc
Other - priority substances	Lead
3.2 Potential Secondary Pressures	Port Activities
Port Activities	Dundalk commercial port and Clogherhead fishing port.
4.0 PROTECTED AREAS	
Designated Shellfish Areas	Dundalk Bay designated Shellfish Water

5.0 ACTION PROGRAMME – MEASURES	
5.1 Key Pressures	
Urban wastewater systems	**Overview:** A system for the licensing or certification by the EPA of waste water discharges from areas served by local authority sewer networks was established in accordance with the requirements of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007). In accordance with these Regulations the EPA is not allowed to grant an authorisation for a waste water discharge, which, in the opinion of the EPA, would: • cause a deterioration in the chemical status or ecological status (or ecological potential as the case may be) in the receiving body of surface water, • exclude or compromise the achievement of the objectives established for protected species and natural habitats in the case of European sites where the maintenance or improvement of the status of water is an important factor in their protection or which is inconsistent with the achievement of environmental quality standards established under national Regulations in relation to designated bathing waters, designated shellfish waters, areas designated for the protection of freshwater fish and areas designated for the abstraction of water intended for human consumption. The requirements of the European Communities (Quality of Shellfish Waters) Regulations, 2006 (as amended) have been fully integrated into the EPA licensing process. In addition this process takes into account the effect of viruses on the quality of shellfish waters. The licence will require detailed actions including infrastructural works, if required, by the licensee within specified time-frames if the discharge does not comply with the above Regulations. Each licence granted will be subject to enforcement by the EPA. Full details of each application and licence decision can be viewed online at www.epa.ie. The following is the position with the key waste water treatment plants for Dundalk Bay: Blackrock - secondary treatment WWTP in place The scheme is included in the current Water Services Investment Programme 2007-2009. A licence application was made by Louth County Council in September 2008 pursuant to the requirements of the Waste Water Discharge (Authorisation) Regulations, 2007. Dundalk - secondary treatment WWTP in place The scheme is included in the current Water Services Investment Programme 2007-2009. A licence application was made by Louth County Council in December 2007 pursuant to

	the requirements of the Waste Water Discharge (Authorisation) Regulations, 2007. Annagassan – secondary treatment WWTP in place An application for a certificate of authorisation will be made by Louth County Council in December 2009 pursuant to the requirements of the Waste Water Discharge (Authorisation) Regulations, 2007. In the cases above, compliance with any EPA Wastewater Discharge Authorisation will require detailed actions including infrastructural works, if required, by the licensee within specified time-frames if the discharge does not comply with the above Regulations. Each licence granted will be subject to enforcement by the EPA. The financial investments to ensure compliance with any EPA licence conditions requiring additional urban waste water collection or treatment can be made under the Water Services Investment Programme.
On-site waste water treatment plants	Louth County Council to identify systems directly adjacent to estuarine and coastal waters and water courses as well as systems serving large populations. Louth County Council to undertake investigation of the likely extent of microbial contamination of Designated Shellfish Waters from adjoining dwellings and Section 4 licensed activities under the Water Pollution Acts and by not later than end December 2010 to submit a report to the Minister and the relevant statutory authority on the microbial risk to shellfish waters and the measures / enforcement programme to be implemented under the Water Pollution Acts and section 70 of the Water Services Act 2007. Section 70 places a duty of care on owners of septic tanks and provides local authorities with enforcement powers including prosecution to address any problems identified. The Minister and the relevant statutory authority undertake to review this report and take action in terms of additional measures if required.
Agriculture	At this time effective and targeted implementation of the Good Agricultural Practice Regulations is deemed sufficient to address this pressure. Louth County Council to undertake inspection and assessment of farming activities in the vicinity of the shellfish growing waters and, by not later than end December 2010 to submit a report to the Minister and the relevant statutory authority on the possible risk of microbial contamination to the designated waters from adjoining agricultural lands, as well as a report on the measures / enforcement programme to be implemented. The Minister and the relevant statutory authority undertake to review this report and take action in terms of additional measures if required.
Other (specific pollutants – copper and zinc)	Louth County Council and the Marine Institute to establish whether the elevated levels of copper and zinc in the shellfish area are the result of chance, a natural phenomenon or pollution in the catchment and, if required, Louth County Council to introduce appropriate measures by December 2010.

Other (priority substances – lead, priority hazardous substances, and other pollutants)	Louth County Council and the Marine Institute to establish whether the elevated levels of lead in the shellfish area are the result of chance, a natural phenomenon or pollution in the catchment and, if required, Louth County Council to introduce appropriate measures by December 2010. Under the Environmental Objectives (Surface Water) Regulations, the EPA must establish an inventory of emissions, discharges and losses of priority substances, priority hazardous substances and other pollutants for each river basin district. Monaghan County Council, as the lead Local Authority in the Neagh Bann International River Basin District, must (not later than June 2012) prepare a plan for the progressive reduction of pollution by priority substances and other pollutants and the ceasing or phasing out of emissions, discharges and losses of priority hazardous substances. The plan must be updated and included as part of future river basin management plans.
Consultation	Department of the Environment, Heritage and Local Government to consult and coordinate with competent authorities in Northern Ireland to determine the mechanism for coordinated pollution reduction actions.
5.2 Potential Secondary Pressures	
Port activities	Under the Prevention of Pollution at Sea Acts no ship is allowed to discharge within 3 miles of Dundalk Bay. The disposal of ship generated waste (including sewage and bilge water) is covered by the European Communities (Port Reception Facilities for Ship Generated Waste and Cargo Residues) Regulations 2003 (S.I 117/2003) (as amended). The disposal of ship generated waste is facilitated by the making of an application to the Competent Authority, disposal is arranged by the ships agent and conformity checking is carried out by the competent authority.
Future Development	Under Article 4 of the European Communities (Quality of Shellfish Waters) Regulations 2006 (S.I. No. 286 of 2006) (as amended), every public authority that has functions the performance of which may affect shellfish waters shall perform those functions in a manner that will promote compliance with the objectives of this pollution reduction programme and with the objectives of the Shellfish Waters Directive. The functions of particular importance – in light of the objectives of Directive 2006/113/EC and of this PRP – include waste water treatment (licensing and operations), implementation of the GAP Regulations, waste management (licensing and operations), effluent discharge licences, planning and development and building control. Continued monitoring will be carried out during the lifetime of the PRP. Should this monitoring identify pressures that are

	impacting on shellfish water quality in the designated area, the PRP will be appropriately amended.

Annex 1

Water Services Authority	Agglomeration Name	Registration Number	Population Equivalent	Status
Louth County Council	Blackrock	D0188-01	2,000- 10,000	Under Assessment
Louth County Council	Dundalk	D0053-01	> 10,000	Under Assessment

Annex 2 - Mitigation Recommendations from the SEA process

The Strategic Environmental Assessment carried out for the Shellfish PRPs has highlighted potential positive and negative environmental impacts (including cumulative impacts) associated with implementation of the range of measures outlined in the National Toolkit of Measures, all of which are aimed at controlling pressures which impact on shellfish water quality.

In most cases, the PRPs identify the need for further investigation to supplement existing information on the types and extent of the pressures which are currently affecting shellfish water quality. Following this, the next step in the protection of shellfish waters will be the introduction of measures from the National Toolkit to address the identified pressures. It should be noted that this PRP is a dynamic document and will be updated regularly in order to outline if, and where, measures are required following the completion of the investigations.

The table below outlines the mitigation measures required to reduce potential impacts from measures in the National Toolkit associated with the key and potential secondary pressures currently identified for this catchment. When considering implementation of specific measures from the National Toolkit, it is required that the relevant mitigation measures below be considered to reduce any potential negative impacts (mitigation measures arising from the Habitats Directive Article 6 Assessment are noted in blue).

Should further key and secondary pressures be identified in this catchment in future, then the full list of mitigation measures, which is included in Table 4 of the National Toolkit, should be consulted to determine if any of those apply. In addition, the authority/organisation/individual responsible for implementing each of the mitigation measures below is listed in Table 4 of the National Toolkit.

	NATIONAL TOOLKIT MEASURE	ASSOCIATED MITIGATION MEASURE
WFD4	**POINT SOURCE & DIFFUSE SOURCE DISCHARGES** Actions: Water Pollution Acts and regulations: • License discharges to surface waters and sewers from small scale industrial and commercial sources. Review licenses at intervals of not less than 3 years. Keep registers of discharge licenses and make them available to the public. • Serve notices or directions on persons requiring measures to be taken in order to prevent or control pollution of waters, where necessary. • Notify Local Authorities of accidental discharges and spillages of polluting materials which enter, or are likely to enter, waters. Other actions: Urban Wastewater Treatment Plants: • Measures for improved management: keep register of plant capacity and update annually; install facilities to monitor influent loads and effluent discharges in accordance with Environmental Protection Agency guidelines and best practice; put auditable procedures in place to monitor compliance of licensed discharges; implement training procedures for staff involved with licensing of discharges; monitor receiving water quality upstream and downstream of the point of discharge. • Optimise treatment plant performance by the implementation of a performance management system. • Revise existing Water Pollution Act industrial licence conditions and reduce allowable pollution loading. • Review existing Industrial Pollution Prevention Control licence conditions and reduce allowable pollution load. • Investigate contributions to the collection system from unlicensed discharges. • Investigate contributions to the collection system of specific substances known to impact ecological status resulting from licensed and unlicensed discharges and issue or revise licenses to reduce or remove such specific substances in the discharge.	Detailed assessment of higher risk works will be required to include environmental considerations (based on EIA guidance). It is recommended that lower risk work should be compelled to consider environmental issues as part of the registration process.

	• Upgrade plant to increase capacity where necessary. • Upgrade plant to provide nutrient removal treatment where necessary. Actions: Wastewater Discharge Authorisation Regulations: • License large Local Authority WWTPs and certify smaller WWTPs as specified in the Regulations (taking account of WFD objectives). Review licenses at intervals not less than 3 years. Enforce compliance with WWTP licensing conditions. Maintain a register of WWTP licences and certificates and make available on request. Inform other relevant public authorities when an application or review is received. Actions: Water Services Act: • Prepare and implement Water Services Strategic Plans. • Duty of care on owners of premises to ensure that treatment systems for wastewater are kept in good condition. Actions: Planning and Development Act (unsewered systems) • Permit on-site waste water treatment systems subject to site suitability assessment. Other actions: Unsewered Systems: • Amend Building Regulations to give effect to new codes of practice for single houses and large systems.	
WFD5	**PHYSICAL MODIFICATIONS** Actions required: physical modifications: • Develop new morphology regulations creating a registration and authorisation system. Actions: Planning and Development Act: • Consider the morphological implications of developments as part of the planning process.	It is recommended that further environmental assessment is undertaken once measures are defined.

WW1	**WASTE WATER TREATMENT PLANTS** Measures intended to reduce loading to the treatment plant: • Limit or cease the direct importation of polluting matter (e.g. liquid wastes, landfill leachate, sludges). • Investigate the extent of use and impact of under-sink food waste disintegrators and take appropriate actions. • Investigate fats/oils/grease influent concentrations and take actions to reduce FOG entering the collection system.	This measure should be accompanied by an education and awareness campaign for householders and commercial premises aimed at reducing pollution at source. This campaign should include information on the use and disposal of household chemicals, oils, detergents, paints, solvents, etc as well as information on phosphorus-related pollution. Consideration should also be given to targeting specific audiences on issues such as discharges to water and the importance of wetland sites to water quality. This measure will require project level Habitats Directive Assessment if alternative facilities for treatment of waste are constructed, e.g. incinerator.
WW2	**WASTE WATER TREATMENT PLANTS** Impose development controls where there is, or is likely to be in the future, insufficient capacity at treatment plants.	This measure will need to link to the development planning process, e.g. by including a requirement to address wastewater capacity as part of the scope in any accompanying SEA for development plans. This measure will need to consider whole catchment loading.
WW6 to WW9	**WASTE WATER TREATMENT PLANTS** WW6: Where necessary to achieve water quality objectives install secondary treatment at smaller plants where this level of treatment would not otherwise be required under the urban wastewater treatment regulations. WW7: Apply a higher standard of treatment (stricter emission controls) where necessary. WW8: Upgrade the plant to remove specific substances known to impact on water quality status WW9: Install ultra-violet or similar type treatment.	WWG to WW9: Negative impacts on climate associated with GHG emissions related to additional energy requirements for these measures should be offset by use of renewable energy sources or similar. WW6 to WW9: If these alternatives involve the building of a new plant or an extension to an existing plant a Habitats Directive Assessment will be required. Prior to any proposals for a new plant, further investigation will be required to show that a new plant will have the desired improvements in water quality for which it is being built. WW6 to WW8: If additional landtake is required for these measures, environmental studies will be undertaken to assess the impact on the environment. WW9: A Habitats Directive Assessment will be required prior to introduction of UV or similar treatment when the discharge is within or adjacent to a protected area.
WW10	**WASTE WATER TREATMENT PLANTS** Relocate the point of discharge.	A Habitats Directive Assessment will be required to demonstrate that the relocation will not negatively impact on protected areas.

UP3	**ON-SITE WASTE WATER TREATMENT SYSTEMS** For new developments: • At planning assessment stage, apply the GIS risk mapping / decision support system and codes of practice • Notice to planning authority required immediately prior to the installation of on-site effluent treatment systems including percolation areas and polishing filters.	The pre-planning process should assess whether Habitats Directive Assessment would be required for new development within or adjacent to a protected area.
UP5 to UP7	**ON-SITE WASTE WATER TREATMENT SYSTEMS** UP5: Enforce requirements for percolation. UP6: Enforce requirements for de-sludging. UP7: Consider connection to municipal systems.	UP5 & UP6: An education programme should be carried out in tandem with new requirements for tank maintenance, including guidance on disposal of sludges. UP6: Intelligent transport programmes should be put in place to minimise the amount of emissions associated with movement of sludges from on-site treatment systems. UP7: Upgraded treatment works should be required to introduce BAT, including the use of renewable energy sources, in order to reduce GHG emissions and others resulting from increased demand for treatment. UP6 & UP7: New wastewater treatment infrastructure, including sludge disposal infrastructure, will be subject to environmental assessment at the project level to reduce indirect impacts to biodiversity, landscape, cultural heritage and climate. UP7: A Habitats Directive Assessment will be required for new structures.

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