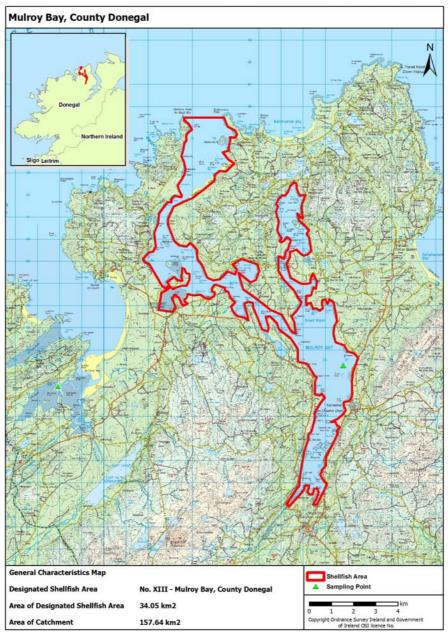
# **Mulroy Bay Pollution Reduction Programme**



Name	Mulroy Bay Shellfish Area	
Map number	XIII	
Year of designation	1994 (S.I. No. 200 of 1994)	
Area	34.05 km²	
River Basin District	North Western International RBD	
County	Donegal	
Location of sampling point	55 deg 19.9 min North (Lat) 7 deg 40 27 min West (Long)	
Catchment area	157.64 km²	

#### 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 Mulroy 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 Mulroy 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 Mulroy 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 Mulroy 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 Mulroy 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, zinc, nickel and dissolved oxygen within / in the vicinity of this shellfish area.
	The results of WFD monitoring indicate that there are water quality issues with 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 Mulroy Bay are classified as 'Class A' for oysters (seasonal) and as 'Class B' for mussels for the purposes of EU 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 and on-site waste water treatment systems (OSWWTS). The presence of copper, lead, zinc and nickel is also considered a key pressure.
	Chapter 5 (summary at 5.3) of the Characterisation Report refers.
Urban Wastewater Systems	Carrigart
Adjacent Agglomerations (potential tidal influence) Ref Lough Swilly Pollution Reduction Programme	Milford
On-site waste water treatment systems (OSWWTS).	There are 2,433 on-site waste water treatment systems in this 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 indicates that the hydrological

### 5.0 ACTION PROGRAMME - MEASURES 5.1 Key Pressures **Urban Waste Water** Overview: A system for the licensing or certification by the EPA of waste systems 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 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 plant for Mulroy Bay: <u>Carrigart</u> – primary treatment WWTP in place with a capacity for approximately 500 P.E. Appropriate treatment is required. The scheme is included in the current Water Services Investment Programme 2007-2009. Donegal County Council propose to appoint consultants to prepare a preliminary report to detail the required upgrades.

Regulations, 2007.

An application for a certificate of authorisation will be submitted to the EPA by 22<sup>nd</sup> of December 2009 in accordance with the requirements of the Waste Water Discharge (Authorisation)

	In the case above, compliance with the 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.
Adjacent Agglomerations (potential tidal influence) Ref Lough Swilly Pollution Reduction Programme	Milford – secondary treatment WWTP in place. The scheme is included in the current Water Services Investment Programme 2007-2009. A licence application was made by Donegal County Council in March 2009 according to the requirements of the Waste Water Discharge (Authorisation) Regulations, 2007.
On-site waste water treatment plants	Donegal County Council to identify systems directly adjacent to estuarine and coastal waters and water courses as well as systems serving large populations. Donegal 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 (e.g. caravan parks) 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.
Other (specific pollutants – copper and zinc)	Donegal 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, Donegal County Council to introduce appropriate measures by December 2010.
Other (priority substances – lead and nickel, priority hazardous substances, and other pollutants)	Donegal County Council and the Marine Institute to establish whether the elevated levels of lead and nickel in the shellfish area are the result of chance, a natural phenomenon or pollution in the catchment and, if required, Donegal 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.
	Donegal County Council, as the lead Local Authority in the North Western International River Basin District, must (not later than June 2012) prepare a plan for the progressive reduction

5.2 Potential	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.
Secondary Pressures	
Agriculture	At this time effective and targeted implementation of the Good Agricultural Practice Regulations is deemed sufficient to address this pressure. Donegal 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.
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
Donegal County Council	Milford	D0342-01	1,001 - 2,000	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 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.

#### 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	This process will need to link to the development planning process of
VV VV Z	WASIE WATER 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
	Impose development controls where there is, or is likely to be in the	scope in any accompanying SEA for development plans.
	future, insufficient capacity at treatment plants.	
		This measure will need to consider whole catchment loading.
WW6 to	WASTE WATER TREATMENT PLANTS	WWG to WW9: Negative impacts on climate associated with GHG
WW9		emissions related to additional energy requirements for these measures
11113	WW6: Where necessary to achieve water quality objectives install	should be offset by use of renewable energy sources or similar.
		Should be offset by use of reflewable effergy sources of similar.
	secondary treatment at smaller plants where this level of treatment	
	would not otherwise be required under the urban wastewater	WW6 to WW9: If these alternatives involve the building of a new plant or
	treatment regulations.	an extension to an existing plant a Habitats Directive Assessment will be
		required. Prior to any proposals for a new plant, further investigation will
	WW7: Apply a higher standard of treatment (stricter emission	be required to show that a new plant will have the desired improvements
	controls) where necessary.	in water quality for which it is being built.
	Controlly Whole heddedly.	In water quanty for which it is boing built.
	WW8: Upgrade the plant to remove specific substances known to	WW6 to WW8: If additional landtake is required for these measures,
	impact on water quality status	environmental studies will be undertaken to assess the impact on the
	Impact on water quality status	environment.
	MANAGO. In stall within winder on similar towns two stars and	environment.
	WW9: Install ultra-violet or similar type treatment.	MANAGO A LILIZO ESCOLA A CONTRA CONTR
		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	A Habitats Directive Assessment will be required to demonstrate that the
		relocation will not negatively impact on protected areas.
	Relocate the point of discharge.	
UP3	ON-SITE WASTE WATER TREATMENT SYSTEMS	The pre-planning process should assess whether Habitats Directive
0.0		Assessment would be required for new development within or adjacent to
	For new developments:	a protected area.
		a protootou aroa.
	At planning assessment stage, apply the GIS risk mapping /      decision 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.	

# UP5 to UP7 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 onsite 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.