

Northern Ireland  
Environment Agency

## LOWER LOUGH ERNE

Local Management Area Information Leaflet



## **Information Leaflet - Lower Lough Erne Local Management Area**

The River Basin Management Plans will be implemented through Local Management Areas (LMAs) during the 2010 to 2015 planning cycle. This information leaflet is one of a series, for each of the 26 LMAs, across the Neagh Bann, North Western and North Eastern Districts. The leaflet includes details of the characteristics and quality of the water environment within the area and specific local measures identified to improve the water environment.

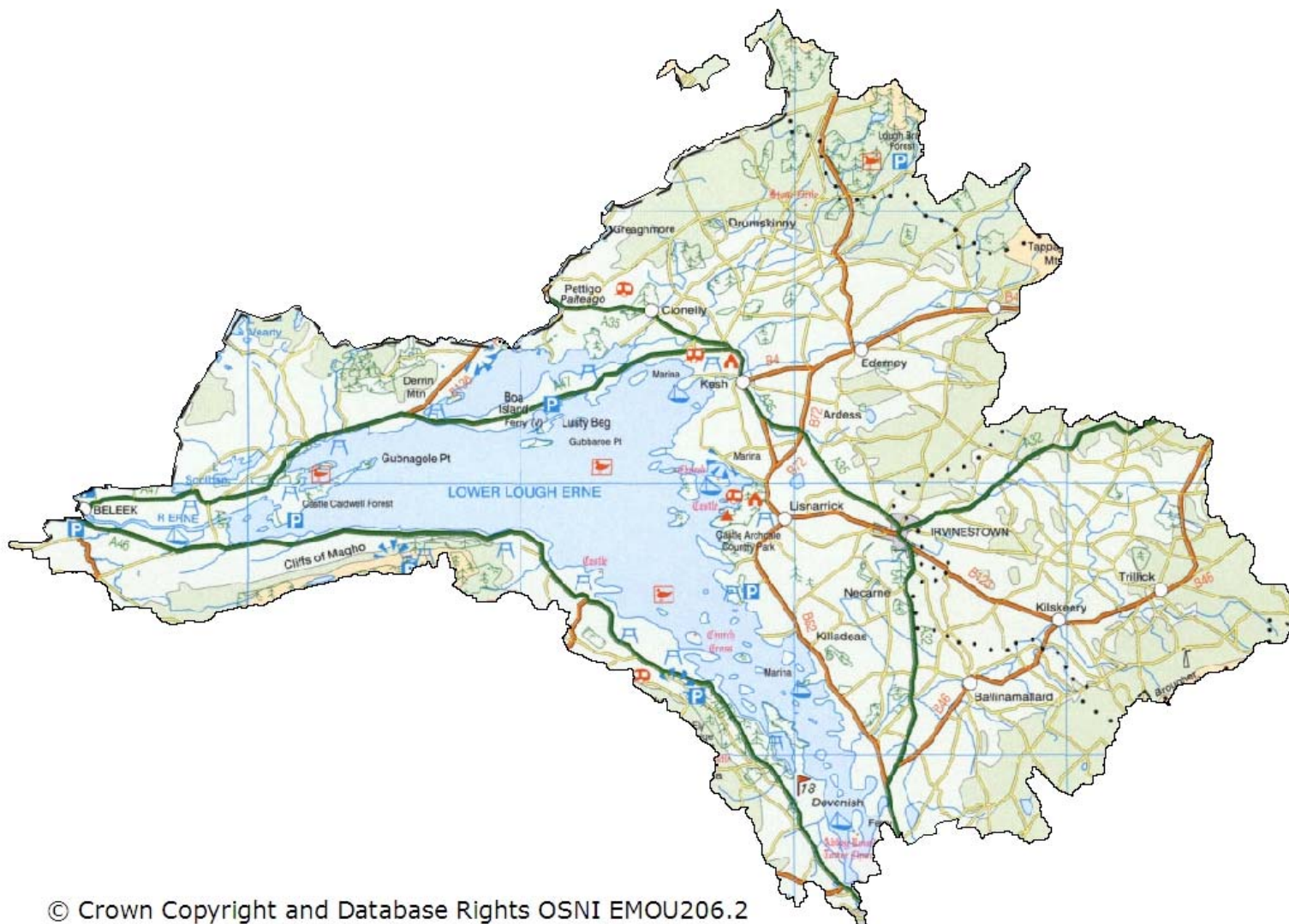
The leaflet will inform work with stakeholders, through **Catchment Stakeholder Groups**, to develop focused implementation plans for each LMA in the North Western District. These LMA Plans will be implemented on a three-year rolling programme within the North Western District as set out below:

- Lower Lough Erne, Owenkillew and Burn Dennet & Foyle in 2010;
- Upper Lough Erne, Derg & Mourne and Roe in 2011;
- Lough Melvin and Arney, Strule and Faughan in 2012.

### **Introduction**

Lower Lough Erne LMA, part of the North Western River Basin District, covers an area of approximately 648 km<sup>2</sup>. The River Erne rises in the Republic of Ireland and flows north westerly via both Lough Ernes before ultimately draining into Donegal Bay at Kildoney Point. This LMA contains the Lower Lough and all the rivers and tributaries that flow into it e.g. Ballinamallard, Trillick, Ballycassidy, Hollow, Mantlin, Kesh and Bannagh.

The main town is Irvinestown, with a number of smaller towns and villages including Ballinamallard, Trillick, Lisnarrick, Kesh and Belleek. In all, the area supports over 16000 people. The dominant land use is improved grassland with acid grass.



**Key Facts**

**LMA area:** 648km<sup>2</sup>

**WFD water bodies:**

- 29 river water bodies
- 4 lake water bodies
- 10 groundwater bodies

**Main land use:**

Agriculture (Improved grassland 40%) Acid Grass 12%

**Key industries:**

Agriculture

**Main towns and populations:**

- Irvinestown (1801\*)
- Ballinamallard (1340\*)
- Kesh (972\*)
- Belleek (830\*)

\* Figures based on 2001

**Lower Lough Erne LMA with main rivers identified**



## The quality of water bodies in Lower Lough Erne LMA

Our understanding of the state of Northern Ireland’s Water environment and Lower Lough Erne LMA has developed as we have adapted to the requirements of the Water Framework Directive. Now, when assessing water quality, we consider both ecological and chemical quality, as well as the pressures that can affect these factors.

Some water bodies have been changed to such a degree that they can no longer be restored to their original condition without compromising their current use. For example, some have been deepened to allow for navigation, others have flood defences or have been dammed to provide a source of drinking water. These are called Heavily Modified or Artificial water bodies and are required to meet Good Ecological Potential (GEP) rather than good status.

There are four water bodies in Lower Lough Erne LMA classified as heavily modified; all for flood defences and one also for navigational reasons.

### What is the current status of surface waters in Lower Lough Erne LMA?

73% of the surface water bodies in Lower Lough Erne LMA have been classified as less than good. The main reason was due to the impact on the invertebrate communities.

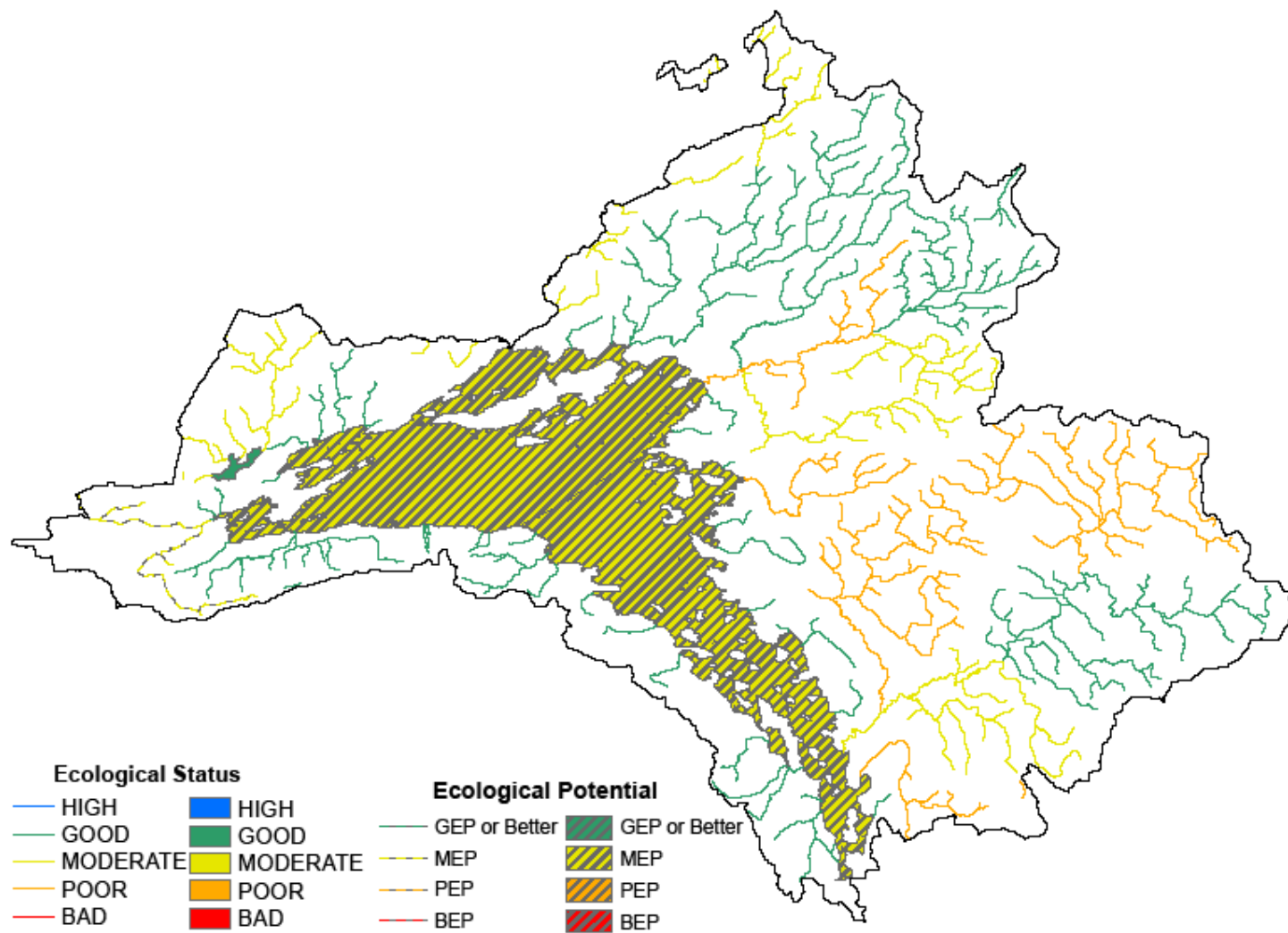
**Table 1: Status of surface waters in Lower Lough Erne LMA**

Water body type	High	Good	Moderate	Poor	Bad	GEP	MEP	PEP	BEP
River	0	8	11	9	0	0	1	0	0
%	0	27.6	37.9	31.0	0	0	3.4	0	0
Lake	0	1	0	0	0	0	3	0	0
%	0	25	0	0	0	0	75	0	0
Total	0	9	11	9	0	0	4	0	0
%	0	27.27	33.33	27.27	0	0	12.12	0	0

**Groundwaters** (underground water) interact with the surface waters around them, thus the quality and quantity of an area’s groundwater can affect the surface waters.

In Lower Lough Erne LMA all groundwaters are all classified as good status.

### Overall status of water bodies in Lower Lough Erne LMA



## Protected areas in Lower Lough Erne LMA

The LMA supports important habitats and wildlife. These areas have been designated under European Directives and require special protection. The protected areas are summarised in the following table.

**Table 2: Protected areas in Lower Lough Erne LMA**

Protected Area Type	Location
<a href="#">Waters used for the abstraction of drinking water (drinking water protected areas)</a>	There are 12 drinking water protected areas.
<a href="#">Areas designed to protect economically significant aquatic species</a>	
Freshwater Fish Directive (78/659/EEC)	There are approximately 173 km of rivers and 105 km <sup>2</sup> of lakes identified under the Freshwater Fish Directive all designated Salmonid.
Shellfish Waters Directive (79/923/EC)	There are no designated shellfish waters.
<a href="#">Bathing Waters</a> These are bathing waters identified under the Bathing Waters Directives (76/160/EEC)	There are no identified bathing waters.
<a href="#">Nutrient Sensitive Areas</a> Areas designated as sensitive under the Urban Waste Water Treatment Directive (91/271/EEC) and the Nitrates Directive (91/676/EEC)	There is 1 Urban Waste Water Treatment Directive sensitive area: Lough Erne.  A total territory approach has been adopted in Northern Ireland for the Nitrates Directive.
<a href="#">Areas designated for the protection of habitats or species (Natura 2000 sites)</a> These are areas designated for the protection of habitats or species where the maintenance or improvement of the status of water is an important factor in their protection.	
Habitats Directive (92/43/EEC)	There are 2 water dependent Special Areas of Conservation; Pettigoe Plateau and Fardrum & Roosky Turloughs.
Birds Directive (79/409/EEC)	There is 1 water dependent Special Protection Area; Pettigoe Plateau.

## Why are some waters not reaching good status?

There are a number of pressures that may prevent some waters reaching good quality. The main ones are considered to be:

- **Abstraction and Flow Regulation**
- **Diffuse and Point source pollution**
- **Changes to Morphology (physical habitat)**
- **Invasive Alien Species**

Four water bodies are being affected by **abstraction and flow regulations**. Three of these are heavily modified. Even though there are abstraction points and controlled water levels within Lough Erne, they are regulated to such a degree they should achieve their objective of Good Ecological Potential by at least 2021.

A number of biological and chemical water quality elements used in classification can be affected by both **diffuse and point source pollution**.

**Table 3: Water bodies not reaching good status due to diffuse and point source pollution**

Classification element affected*	Number of water bodies showing impacts	
	River	Lake
Macrophytes	8	2
Diatoms	3	2
Phytoplankton	N/A	0
Macroalgae	N/A	N/A
Angiosperms	N/A	N/A
Invertebrates	12	N/A
Fish	5	0
DIN	N/A	N/A
Phosphorous	2	3
Dissolved Oxygen	1	0
Specific Pollutants/Priority Substances	1	0

\*More than one element may be affected in each individual water body.

In this LMA the main impact was observed in invertebrate communities. This element is mainly associated with organic enrichment. The rivers affected include the Ballycassidy, Ballinamallard lower and upper only, Hollow and Mantlin.

There was also evidence of nutrient enrichment indicated by the number of water bodies showing impacts on macrophyte and diatom communities. The rivers affected include the upper reaches of the Ballinamallard including the tributary,

Ballycassidy and lower reaches of the Kesh. Lower Lough Erne also shows nutrient enrichment.

Eleven water bodies were identified, during site visits, as being affected by **changes to morphology (physical habitat)**. These include the Lower Ballycassidy, Trillick, Hollow, Bannagh, Kesh Tributary and the Lough itself. Types of morphology pressures include channelization, embankments, water regulation, overgrazing and barriers to migration.

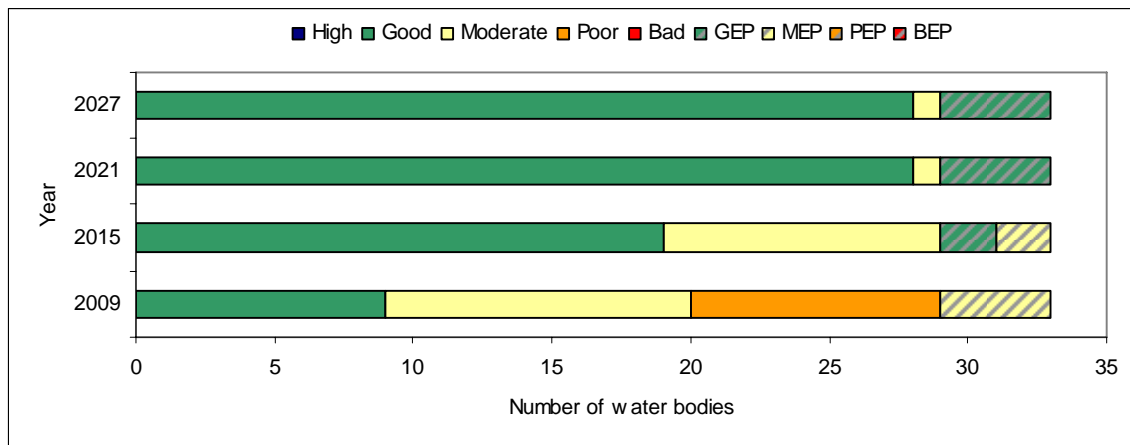
The water environment in Northern Ireland has been impacted by the introduction of **invasive alien species**. Species which have already become established in this area include:

- Japanese Knotweed (*Fallopia japonica*)
- Himalayan Balsam (*Impatiens glandulifera*)
- Giant Hogweed (*Heracleum mantegazzianum*)
- Zebra Mussel (*Dreissena polymorpha*)
- Freshwater Shrimp (*Gammarus pulex*)
- Brown Bullhead Catfish (*Ameiurus nebulosus*)
- Common Bream (*Abramis brama*)
- Roach (*Rutilus rutilus*)

### What improvements do we plan to achieve?

We have set environmental objectives to deliver improvements as shown below. For our surface waters we aim to achieve good quality or better in 64% by 2015. We also aim to maintain good status in 100% of our groundwaters.

### Current status and proposed objectives for surface waters in Lower Lough Erne LMA



## How are we going to maintain and improve the water environment in Lower Lough Erne LMA?

There are a number of measures which will be implemented in Lower Lough Erne LMA in order to maintain and improve the water environment.

The programme of measures described in the North Western River Basin Management Plan has been categorised into two types of measures: **existing and planned** and **supplementary**. Existing and planned measures aim to ensure that existing water uses are appropriately managed and that the water environment remains at good status.

**Existing and planned measures** include those which have been put in place to meet legal requirements. Those which apply in this LMA include:

- The Drinking Water Directive (80/778/EEC) as amended by Directive (98/83/EC);
- The Birds Directive (79/406/EEC);
- The Sewage Sludge Directive (86/278/EEC);
- The Environmental Impact Assessment Directive (85/337/EEC);
- The Urban Waste-water Treatment Directive (91/271/EEC);
- The Plant Protection Products Directive (91/414/EEC);
- The Nitrates Directive (91/676/EEC);
- The Habitats Directive (92/43/EEC); and
- The Integrated Pollution Prevention Control Directive (96/61/EC).

A number of **other existing and planned measures** apply in this LMA:

- Cost recovery for water use and promotion of efficient and sustainable water use;
- Protection of drinking water sources;
- Abstraction and impoundment control;
- Point source and diffuse source discharge control;
- Controls on physical modifications to surface waters;
- Prevention or reduction of the impact of accidental pollution incidents;
- Authorisation of discharges to groundwater;
- Priority substances control; and
- Controls on other activities impacting on water status.

Further information on existing and planned measures for each sector is available on the **programme of measures** section of the website.

The following measures are in place to manage the problems with alien species:

- Zebra Mussel Management Strategy for Northern Ireland 2004-2010.
- Rivers Agency Management protocols (Giant Hogweed, Himalayan Balsam and Japanese Knotweed).

[www.ni-environment.gov.uk/wfd](http://www.ni-environment.gov.uk/wfd)

- NIEA/National Parks and Wildlife Service best practice management guidance for Japanese Knotweed, Giant Hogweed and the Himalayan Balsam. Management plans have also been developed for a wide range of species including the *Didemnum* species (sea squirt) and the Floating Pennywort.
- A number of codes of practice, educational and awareness leaflets have been prepared and are available to download from [www.invasivespeciesireland.com](http://www.invasivespeciesireland.com)

## What measures are agreed for water dependent Natura 2000 sites in unfavourable condition?

**Special Areas of Conservation** (Habitats Directive) and **Special Protection Areas** (Birds Directive) are assessed as being in favourable or unfavourable condition. These areas have been examined to determine if **water dependent features** are present.

Pettigoe Plateau Special Area of Conservation is in favourable condition. Fardrum and Roosky Turloughs Special Area of Conservation has water dependent features which are in unfavourable condition.

**Table 4: Measures for water dependent features of the Fardrum and Roosky Turloughs Special Area of Conservation**

Name	Current condition assessment of water dependent features	Measures in place
Fardrum and Roosky Turloughs	Turloughs unfavourable due to under-grazing, over-grazing (including deer browsing) and Water management (including drainage, dredging or alterations to the water table. Could be too much water or too little)	There are 2 MOSS agreements in place for the 3 landowners. These MOSS agreements have grazing regimes.  There are currently no NICMS referrals for this site.  Ongoing research.

The Pettigoe Plateau Special Protection Area in this LMA is unfavourable. Unfavourable Special Protection Areas require investigation to identify external and internal factors. The issues are unclear; may be changes in migratory patterns, disturbance to high tide roost sites, water quality and/or ecological factors. Further details on Special Areas of Conservation and Special Protection Areas in the Lower Lough Erne LMA are available in the **protected areas** section of the website.

**Supplementary measures** required to achieve environmental objectives for rivers, lakes, transitional and coastal water bodies have been identified for a number of sectors and pressures in this LMA. Supplementary measures will be applied during the implementation phase of the River Basin Management Plans subject to necessary funding and tests to justify technical feasibility and cost effectiveness.

**Table 5: <sup>1</sup>Supplementary measures in Lower Lough Erne LMA**

<b>Key sectors</b>	<b>Supplementary measures</b>	<b>Additional information</b>
Agriculture	Targeted education, advice and regulatory action	See Table 3 for number of water bodies where invertebrates are less than good.
Collection and treatment of sewage	Assess significance of septic tanks and take action accordingly	See Table 3 for number of water bodies where invertebrates are less than good.
Industry and Other Business	Improve compliance with discharge consents	There are 9 non compliant discharges based on 2008 compliance data
Agriculture, Collection & treatment of sewage and Industry & Other Business	Assess point source phosphorus loads	See Table 3 for number of water bodies where SRP, diatoms or macrophytes are less than good.
	Target further phosphorus controls from point sources	
	Assess diffuse nutrient loads from mathematic modelling	
	Target further phosphorus controls from diffuse sources	
<b>Pressures</b>	<b>Supplementary measures</b>	<b>Additional information</b>
Specific & priority substances	Development and implementation of Pollution Reduction Programmes	See Table 3 for number of water bodies impacted by Specific Pollutants/Priority Substances.
Abstraction & flow regulation Morphology	Develop Mitigation measures identified for hydromorphology pressures	There are 4 HMWBs at <GEP and 11 water bodies are affected by changes to morphology.
Pressure Unknown	Carry out further Investigation	There is 1 water body where cause of pressure cannot be identified There are 9 water bodies where confidence in class is low.

<sup>1</sup> Strategic Environmental Assessment has considered the impacts associated with the suite of supplementary measures proposed. Where impacts were identified, mitigation measures were proposed and are detailed in the SEA Mitigation Measures document which is available on the website.

Responses from the draft River Basin Plan consultation were used to identify the measures below:

- promote efficient use of water;
- introduce seasonal discharge consents, where possible, to promote installation of reed beds and constructed wetlands for sewage treatment;
- improve septic tank maintenance, installation and design;
- review and investigate the effectiveness of wetlands in the reduction of nutrient loadings;
- facilitate River Trusts across Northern Ireland.

The improvements in water quality proposed above will be delivered through a programme of measures coordinated by the Department of the Environment. Some of these measures are already being carried out in Lower Lough Erne LMA.

**Local measures** are also being applied in this LMA. There are a number of projects and initiatives run, for example, by local communities, angling groups and voluntary environmental organisations that will contribute to achieving the objectives we have set for our waters. Some of those happening in Lower Lough Erne LMA are shown below.

A **Lough Erne Management Strategy** is currently being prepared by Fermanagh District Council. An Erne catchment management plan will be produced and this will add to the information and measures being introduced under the River Basin Management Plan for the North West.

If you are running a project or carrying out work that will assist in protecting the water environment or water dependant features, or restoring natural waters then we would encourage you to let us know.

Contact details for your **Catchment Stakeholder Group** are available on the **public participation** section of the website.

