

## **BRAID AND MAIN**

### Local Management Area Information Leaflet



## **Information Leaflet - Braid and Main 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 Neagh Bann District. These LMA Plans will be implemented on a three-year rolling programme within the Neagh Bann District as set out below:

- Ballinderry and Lough Neagh in 2010;
- Blackwater, Lower Bann and Carlingford & Newry in 2011;
- Upper Bann, Moyola, Six Mile Water and Braid & Main in 2012.

### **Introduction**

Braid and Main LMA, part of the Neagh Bann River Basin District, drains into Lough Neagh at Randalstown Forest. The land area covered by the LMA is approximately 714 km<sup>2</sup>. The main river is the River Main, with a very significant River Braid draining into the Main near Ballymena. Both the Braid and the Main have tributaries feeding them such as Kells Water, Ahoghill Burn, Artoges River and the Clogh River. The rivers and their tributaries also support a wide range of recreational activities including walking, canoeing and angling.

The main towns are Ballymena and Randalstown and there are several smaller towns throughout the area, such as Ahoghill, Cullybackey, Broughshane, Dunloy, Cloughmills and Kells. The main land use is improved grassland with some forestry and a number of important bogs present in the LMA. The north and west of the LMA borders on the Antrim Hills and this region contains the Antrim Coast and Glens Area of Outstanding Natural Beauty.



**Braid and Main LMA with main rivers identified**



## The quality of water bodies in Braid and Main LMA

Our understanding of the state of Northern Ireland's water environment and Braid and Main 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 them.

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.

Sections of Braid and Glenwhirry Rivers and Glenravel Water have been classified as heavily modified.

### What is the current status of surface waters in Braid and Main LMA?

66% of surface water bodies in Braid and Main LMA have been classified as less than good status. Many of the rivers failed to achieve good status due to suppressed invertebrates, macrophytes and diatoms.

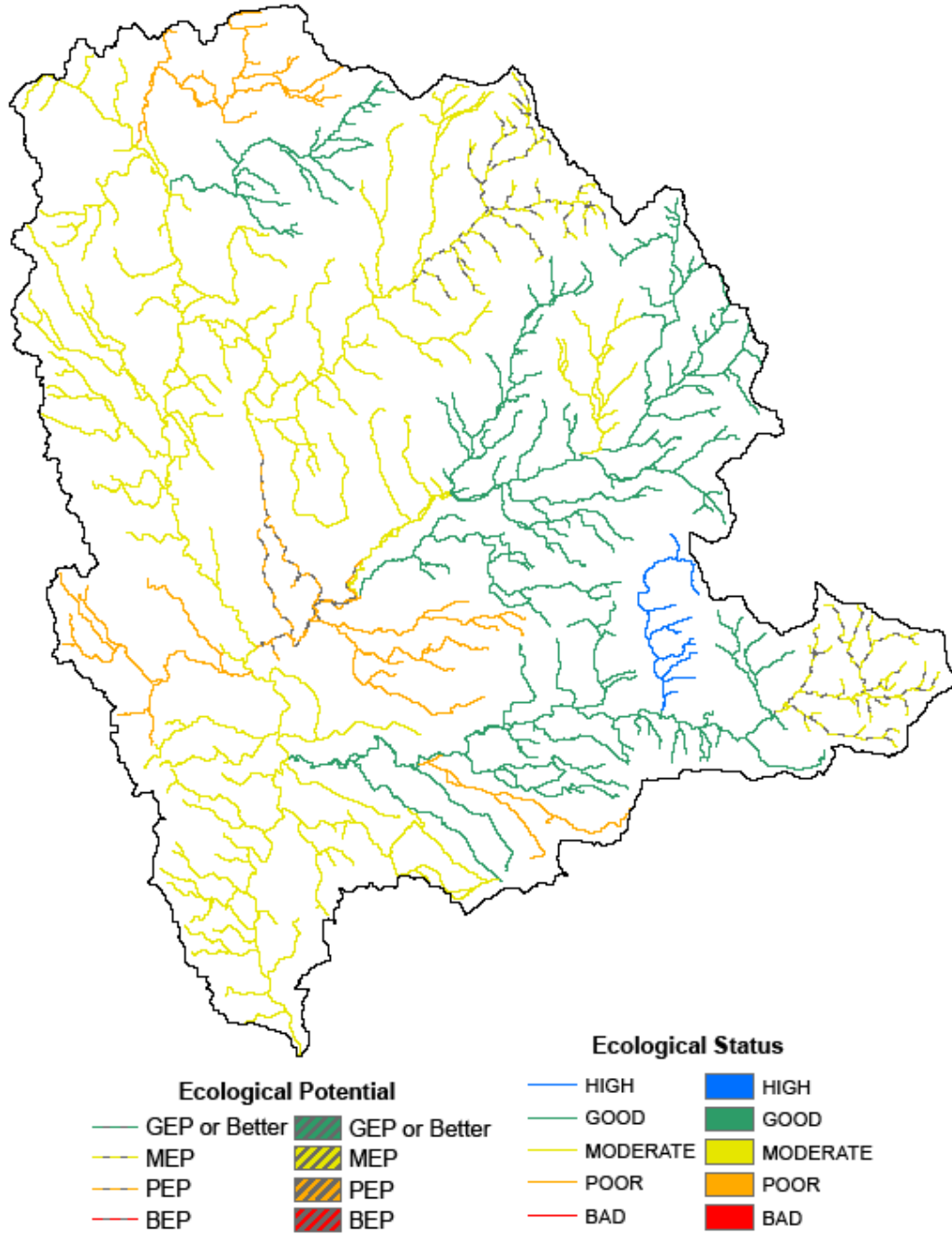
**Table 1: Status of surface waters in Braid and Main LMA**

Water body type	High	Good	Moderate	Poor	Bad	GEP	MEP	PEP	BEP
River	1	11	16	4	0	0	2	1	0
%	3	31	46	11	0	0	6	3	0
Lake	0	0	0	0	0	0	0	0	0
%	0	0	0	0	0	0	0	0	0
Transitional & Coastal	0	0	0	0	0	0	0	0	0
%	0	0	0	0	0	0	0	0	0
Total Surface Waters	1	11	16	4			2	1	
%	3	31	46	11	0	0	6	3	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.

There is one groundwater body within Braid and Main LMA. Ballymena groundwater body is currently at poor status due to nitrate levels but is expected to achieve good status by 2021.

Overall status of water bodies in Braid and Main LMA



## Protected areas in Braid and Main 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 Braid and Main LMA**

Protected Area Type	Location
Waters used for the abstraction of drinking water (drinking water protected areas)	There are 5 drinking water protected areas.
<p>Areas designed to protect economically significant aquatic species</p> <p>Freshwater Fish Directive (78/659/EEC)</p> <p>Shellfish Waters Directive (79/923/EC)</p>	<p>There are 287 km of rivers identified under the Freshwater Fish Directive, all designated Salmonid.</p> <p>There are no designated shellfish waters.</p>
<p>Bathing Waters</p> <p>These are bathing waters identified under the Bathing Waters Directives (76/160/EEC)</p>	There are no identified bathing waters.
<p>Nutrient Sensitive Areas</p> <p>Areas designated as sensitive under the Urban Waste Water Treatment Directive (91/271/EEC) and the Nitrates Directive (91/676/EEC)</p>	<p>There is 1 Urban Waste Water Treatment Directive sensitive area; Lough Neagh.</p> <p>A total territory approach has been adopted in Northern Ireland for the Nitrates Directive.</p>
<p>Areas designated for the protection of habitats or species (Natura 2000 sites)</p> <p>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.</p> <p>Habitats Directive (92/43/EEC)</p> <p>Birds Directive (79/409/EEC)</p>	<p>There are 3 water dependent Special Areas of Conservation; Garron Plateau, Rea's Wood &amp; Farr's Bay and Main Valley Bog.</p> <p>There are 2 Special Protection Areas; Lough Neagh and Lough Beg and Antrim Hills.</p>

## 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**

3 water bodies in the area were identified as being impacted by **abstraction and flow regulation**. Braid River at Ballymena has been altered for flood defence and is extensively culverted. Glenwhirry River has abstractions at Crosswater for Killylane WWTW. Glenravel River has an abstraction at the Dungonnell Dam which has an intake from the Inver River.

A number of the 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
Macrophytes	10
Diatoms	8
Phytoplankton	N/A
Macroalgae	N/A
Angiosperms	N/A
Invertebrates	12
Fish	1
DIN	N/A
Phosphorous	1
Dissolved Oxygen	7
Specific Pollutants / Priority Substances	1

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

The specific pollutant in the above table is ammonia.

In this LMA the main impacts were seen in invertebrate and macrophyte suppression. The rivers affected were: Main, Deerfin, Braid, Aghill Burn, Sharvogues Burn, Killagan and Skerry Water.

6 water bodies were identified as being affected by **changes to morphology (physical habitat)**. The main rivers affected were: Clogh, Kells, Braid, Connor Burn and Skerry Water.

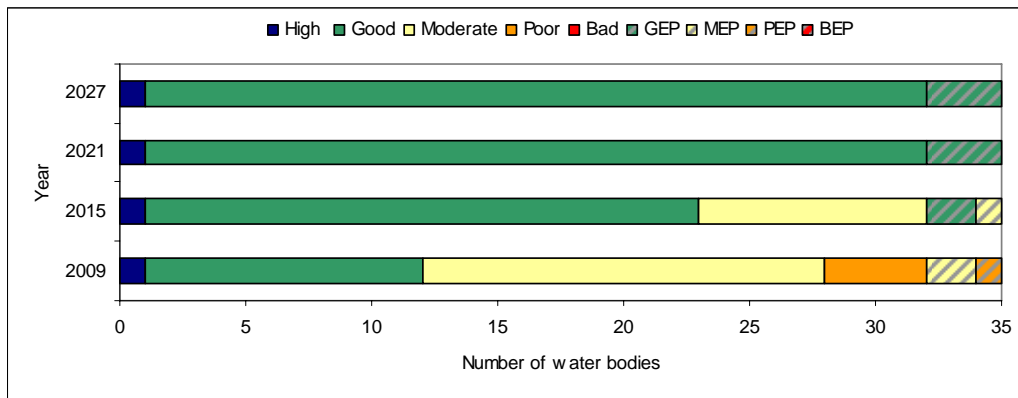
The water environment in Northern Ireland has been impacted by the introduction of **invasive alien species**. Species which have already become established in this area include:

- Canadian Pondweed (*Elodea canadensis*)
- Giant Hogweed (*Heracleum mantegazzianum*)
- Japanese Knotweed (*Fallopia japonica*)

## What improvements do we plan to achieve?

We have set environmental objectives to deliver improvements as shown below. We aim to achieve good status or better in 71% of our surface waters by 2015 and good status in 100% of our groundwaters by 2021.

### Current status and proposed objectives for surface waters in Braid and Main LMA



## How are we going to maintain and improve the water environment in Braid and Main LMA?

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

The programme of measures described in the Neagh Bann 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 Birds Directive (79/409/EEC);
- The Drinking Water Directive (80/778/EEC) as amended by Directive (98/83/EC);
- The Environmental Impact Assessment Directive (85/337/EEC);
- The Sewage Sludge Directive (86/278/EEC);
- The Major Accidents Directive (96/82/EC)
- 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;
- 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;
- 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:

- Rivers Agency Management protocols (Giant Hogweed and Japanese Knotweed)
- NIEA/National Parks and Wildlife Service best practice management guidance for Japanese Knotweed and Giant Hogweed.
- 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.

There are no specific measures for the Garron Plateau and Rea's Wood & Farr's Bay Special Areas of Conservation as there are no water related adverse activities causing the condition assessment of the water dependent features. The Main Valley Bogs Special Area of Conservation has water dependent features which are in unfavourable condition.

**Table 4: Measures for water dependent features of Special Areas of Conservation**

<b>Name</b>	<b>Current condition assessment of water dependent features</b>	<b>Measures in place</b>
Main Valley Bogs	Active raised bogs unfavourable due to water management (including drainage, dredging or alterations to the water table. Could be too much water or too little) and burning	Investigation ongoing; Management agreement / scheme: Wells in place for hydrology assessment

The Lough Neagh and Lough Beg Special Protection Area in this LMA is in unfavourable condition. Special Protection Areas in unfavourable condition 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. The condition of all the features of Antrim Hills Special Protection Area has not yet been assessed. Further details on Special Areas of Conservation and Special Protection Areas in Braid and Main 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 Plans subject to necessary funding and tests to justify technical feasibility and cost effectiveness.

**Table 5: <sup>1</sup>Supplementary measures in the Braid and Main LMA**

<b>Key sectors</b>	<b>Supplementary measures</b>	<b>Additional information</b>
Agriculture	Target education, advice and regulatory action	See Table 3 for number of water bodies where invertebrates are less than good.
Collection & 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.
Collection & treatment of sewage	Upgrade WWTWs with a population equivalent greater than 250	<sup>2</sup> Cloughmills upgrade under PC10
	Upgrade of WWTWs under the Rural Wastewater Investment Programme	<sup>2</sup> Duneany and Glarryford to be completed by 2010
Industry & Other Business	Improve compliance with discharge consents	There are 9 non compliant discharges based on 2008 compliance data
Agriculture Collection & treatment of sewage 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 using mathematical 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 3 HMWBs at <GEP and 6 water bodies are affected by changes to morphology.
Groundwater	Further investigation of the recovery time with respect to elevated nitrate levels	
Pressure unknown	Carry out further Investigation	There are 6 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.

<sup>2</sup> The dates/works upgrades may be subject to change. PC10 upgrades cover the period April 2010 – March 2013

Responses from the draft River Basin Management 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 applied in Braid and Main 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 Braid and Main LMA are shown below.

The **Main Issue Log** is a catchment investigation by NIEA Regional Operations team into reported point and diffuse pollution sources highlighted by the Main Angling Club and the Main Enhancement Partnership. Actions resulting from the investigations have in some cases lead directly to a review of consents and cessation of direct discharges.

The Main Angling Club's ongoing **River Main River Bank Enhancement** project aims to keep the river banks and waterways free from litter and weeds. Monitoring is ongoing.

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.

Our aim is to protect, conserve and promote the natural environment and built heritage for the benefit of present and future generations.

Northern Ireland Environment Agency  
Water Management Unit  
17 Antrim Road  
Lisburn  
BT28 3AL



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**Environment**  
[www.doeni.gov.uk](http://www.doeni.gov.uk)



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