Significant Water Management Issues

Owenkillew Local Management Area Action Plan and Update

December 2013

An Agency within the Department of the Environment
www.doeni.gov.uk

INVESTORS IN PEOPLE

NIEA Northern Ireland Environment Agency
www.doeni.gov.uk/niea

- These LMA action plans are working documents which will evolve as new projects are committed to over time during the River Basin Planning cycle
- This summary provides an update on operational actions in the LMA. Many actions are based on implementation meetings with Upper Foyle Catchment Stakeholder Group members in 2010/2011

- If you, as an individual or organisation, can input additional information on actions or projects in the Owenkillew Action Plan please contact Steven.McDowell@doeni.gov.uk or telephone 028 92 623114

	LMA Action	Progress Report
1	Promote public participation by organising two Catchment Stakeholder Group meetings per year to provide an open forum for discussion on water issues and encourage involvement in developing and implementing the Local Management Area Plan.	The Autumn meeting was on 14th October 2013 at 7pm in Loughmacrory, Omagh. Presentations and minutes of meetings can be found at http://www.doeni.gov.uk/niea/water-home/wfd/public_partic_3/catchment_stakeholder_groups/upper_foyle.htm
2	Promote public participation and raise awareness of catchment management issues by release of relevant press articles and web publication of LMA e-zines	Updated on a regular basis on the web site and through local newspapers re local events.
3	Promote public participation and encourage local projects through NIEA's Water Quality Improvement Grant Scheme	Owenkillew Development Company Ltd (ODCL), in conjunction with Dalradian Gold Limited (DGL), has been successful in securing a grant from The Water Quality Improvement Grant Scheme. Funding is being used to install fencing in some areas along the Owenkillew and educational programmes are being developed with land owners. Engaging with local primary school children from St. Patrick's Primary School and Gortin Primary School, will receive a talk from staff at the Ballinderry Hatchery and then be able to follow up with a visit to the Hatchery.
4	Highlight external funding opportunities for water management projects to local partners.	Stakeholders informed about NIEA's Water Quality Improvement Grant Scheme http://www.doeni.gov.uk/niea/water-home/wfd/water_quality_improvement_grant.htm Minister Mark Durkan announced Challenge Fund on 18th October 2013. Provides funding for communities and organisations to develop local environmental projects. £1.2 million being funded (NIEA and Forest Service) http://www.nienvironmentlink.org/projects/nieachallengefund.php

5	Carry out compliance assessment at industrial consented sites, WWTW and cross-compliance inspections at selected farms within the Owenkillew LMA.	LMA Cross Compliance inspections by WMU Agricultural Regulations Team In 2011 there were no breaches. On-going monitoring and compliance.
6	Assess the possibility of designating this water body as an Area of Special Scientific Interest.	The Owenreagh is a proposed ASSI for the features of Freshwater Pearl Mussel *Margaritifera margaritifera*. It is anticipated that this will be declared an ASSI 2013/2014.
	Develop Action Plans for Designated for designated Freshwater Pearl Mussel Special Areas of Conservation Assessment of river conditions through research and river surveys to locate sources of sediment Consider site restoration and protection methods to reduce sedimentation and improve habitat to improve Freshwater Pearl mussel conditions and enhance recruitment	<u>Status update September 2012 – INTERREG IVA</u> Catchment surveys have been completed in all 3 FPM SAC catchments. Trialling of measures in relation to forestry, agriculture and on site wastewater systems is ongoing in selected catchments. Sediment traps have been installed Household survey has taken place in relation to FPM awareness and water usage. Draft plan strategies have been prepared for the Swanlinbar, Owenkillew and Ballinderry Catchments. Liaison with stakeholders is ongoing using a range of media and engagement options.
7	Complete the phosphorus nutrient budget work for Northern Ireland to establish nutrient inputs from different sectors.	Nutrient budgets are being analysed alongside SIMCAT (SIMulation of the water quality of CATchments) models developed to represent the behaviour of flow and pollutants in rivers. This will inform actions to address diffuse and point source nutrient inputs to the water environment.
8	Create an inventory of physical structures within the river channel and bank structures to ensure required standards are met	NIEA staff have been trained in the use of this tool and are beginning to carry out assessments. If you are aware of any barriers in the Derg and Mourne and would like to have this assessed using the UK Fish Passability Tool please contact your Catchment Officer.
9	Review of groundwater abstraction and planning applications where necessary.	On-going. The groundwater team is a regular consultee on groundwater abstractions and planning applications for all of Northern Ireland.

10	Develop leaflets and articles to promote effective farm nutrient and waste Management.	Pesticide Working Group – NIW, UFU, DARD, CAFRE, AFBI, Rivers Agency, Loughs Agency and NIEA and they raise awareness of the problem with pesticide detections in Drinking Water Catchments. Through the 'Pesticide Working Group' have developed a Pesticide flyer. NIW published 'stop and think about the water you drink' under the same group. UFU sourced pesticide awareness leaflets from the Voluntary Initiative. 'Landowner's Awareness – Improving Water Quality in your local area' leaflet developed in conjunction with DARD, UFU and Loughs Agency. NIEA attended the Horticultural Show at Greenmount to promote Pesticide issues. The Water Catchment Partnership was established NIW, UFU, DARD, CAFRE, The Voluntary Iniative, DOE and NIEA to proactively work together to promote and raise awareness of best practice when using pesticides in the garden or on the farm. Attended agricultural shows – Omagh and Clogher Valley.
11	Raise awareness and promote the benefits of effective farm nutrient and waste management.	All applicants to DARD Agri-Environment Schemes receive farm waste management advice as part of their application to the scheme. DARD has produced a 'Code of Good Agricultural Practice' which contains practical management advice on how farm wastes can be collected, stored and spread with minimal risk to the environment. Production of 'Improving Water Quality' leaflet for Landowners. This leaflet has been developed jointly with Loughs Agency, UFU and DARD to raise awareness amongst the agricultural sector. The issues were initially raised through the implementation meetings eg gravel removal, river litter. DARD has developed an agri-environment training course for farmers dealing with farm wastes and nutrient management planning. Water Framework Directive awareness talk given to CAFRE students in April 2011. Farm Nutrient and Waste Management Planning talk given to CAFRE students April 2012. Joint leaflet published. 'Water Quality Plans in Action' article published in Farming Life Oct 2012
12	Encourage riparian zone management with an aim to improve biodiversity and minimise sedimentation through practical management measures on farms.	A measure within the Nitrates Action Programme is that all farms must carry out crop and soil management to minimise soil erosion and nutrient runoff. This is verified during cross-compliance visits.
13	Promote best practice in the use of pesticides on farms	NIEA attended the Horticultural Show at Greenmount to promote Pesticide issues.

14	Carry out fish monitoring and assessment for annual report on catchment status and WFD fish monitoring programme.	Loughs Agency – completed on an annual basis http://www.loughs-agency.org/fs/doc/publications/owenkillew-river-and-owenreagh-east-catchment-status-report-2011.pdf
15	Carry out pre and post fish habitat improvement works survey where funding is committed for works.	Ongoing when funding available
16	Continue regulatory investigation and action against unlicensed activities impacting on fish populations and habitats	Loughs Agency continue to investigate gravel removal at sites Broughderg , Glenelly River,Glenknock, OKW N'stewart and OKW in the catchment
17	Assess forestry operations, felling and redesign plans to ensure appropriate measures are in place to mitigate risk to adjacent watercourses.	Discussions with Forest Service are ongoing through regular meetings and appropriate measures are incorporated into felling operations to ensure minimal risk to adjacent watercourses.
18	Support pollution prevention campaigns such as 'Reduce Reuse Recycle', 'Bag It & Bin It', 'Stop and Think (Not Down the Sink)', 'Stop and think (about the water you drink)'.	NIEA incorporates the 'Reduce Reuse Recycle', 'Bag It & Bin It', 'Stop and Think (Not down the Sink)' messages in our information leaflets and promotes these philosophies during engagement with the public. NIEA in conjunction with Northern Ireland Water, have produced an information leaflet to highlight the dangers of pesticides around waterways and the potential impacts on wildlife and drinking water. These messages are promoted at events and functions.
19	Review Rivers Agency's annual watercourse maintenance program	Quarterly meetings with Rivers Agency and DCAL to discuss maintenance programme and any other projects

20	Promote public participation by supporting local community events	• Owenkillew Wetlands and Forests Day – 05/02/2011 • Loughs Agency Fair Newtownstewart – 21-22/05/2011 • Beneath the Burn – Killyclogher – 29/08/2011 • Conserving the Glenelly River Cleanup – 20/11/2011 • Loughmacrory Winter Fair – 26/11/2011 • Greenmount Centenary Show Sat 16th June 2012 – Greenmount • Clipper Event Sat 7th July 2012 – Londonderry City Council • Staff also attended The Balmoral Show 16th-18th May 2012 and Horticultural Show Greenmount 19th Sept 2012. • All events attended were very successful. Positive feedback from the public re Action Plans, displays, Good/Bad bugs as indicator species of pollution. • Staff also attended The Balmoral Show 15th July 2013 • Clogher Valley Show 31/07/2013 – Raising awareness of pesticides in our catchment and drinking water. • "Source of Dennet to Mouth" – awareness event publicity of Dennet angling group, walk and talk on litter.

Northern Ireland
Environment Agency

Action Plan 2010/2011

OWENKILLEW
Local Management Area

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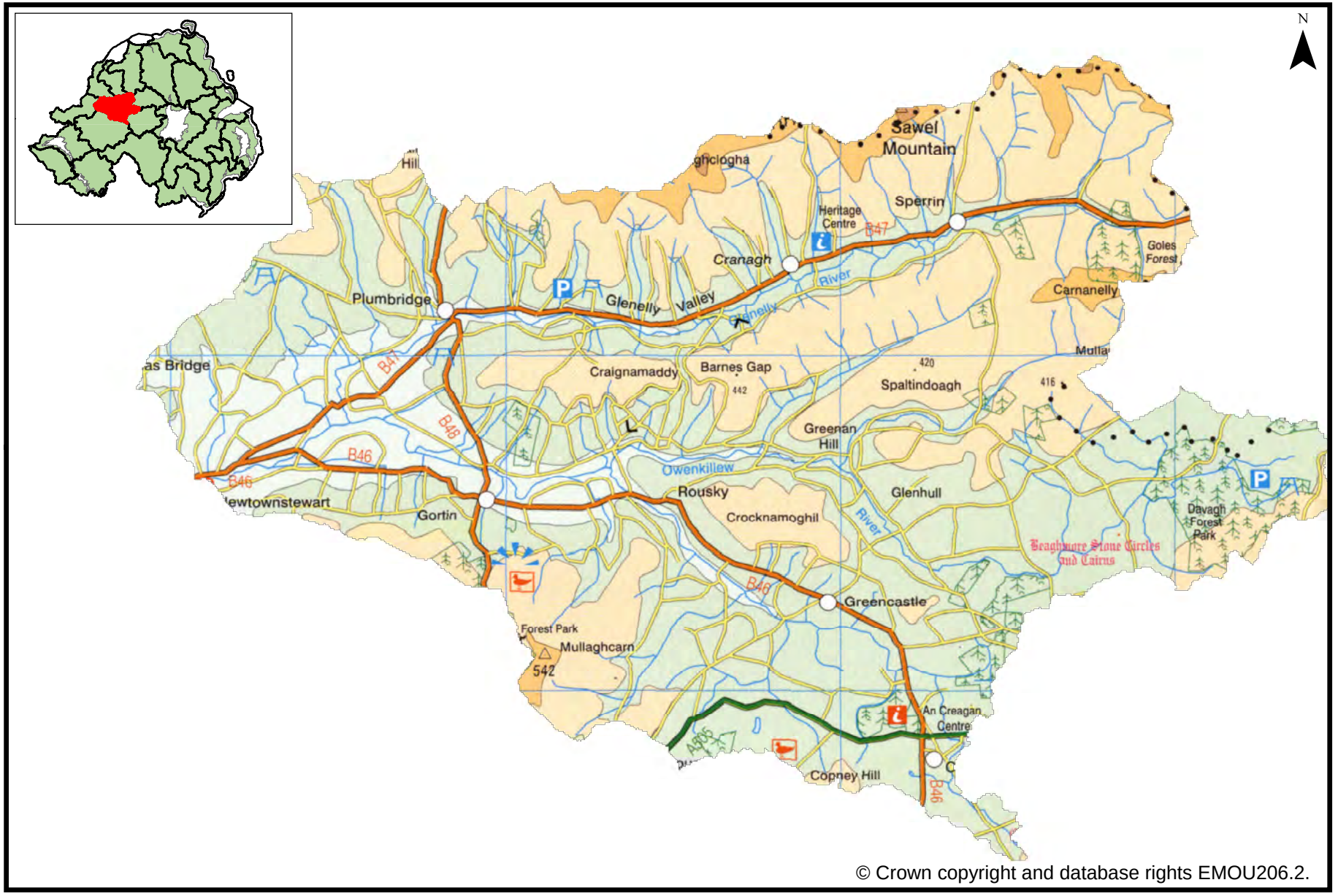
Map 1: Owenkillew Local Management Area



Introduction

River Basin Management Plans were published in December 2009. The plans describe where the water environment needs to be protected or improved, the timeframe to make these improvements and how that can be achieved. The plans will be implemented through Local Management Areas (LMAs) during the 2010 to 2015 planning cycle. This Owenkillew LMA Action Plan is one of a series of action plans that are being developed for the 26 LMAs across the Neagh Bann, North Western and North Eastern River Basin Districts. The action plan details local measures identified to improve the water environment.

River Basin Planning

NIEA, in partnership with other Departments and Agencies, have developed a Programme of Measures to improve the water environment and to protect it from deterioration. There are also a number of existing plans and programmes that contribute to the management of our waters. Further details on the Programme of Measures, and the policy, legal and financial tools used to implement it, can be found on the North Western River Basin District Programme of Measures section on the NIEA website at:
http://www.doeni.gov.uk/niea/water-home/wfd/north_western_rbp/nw-pom.htm

Owenkillew Local Management Area

The Owenkillew LMA (Map 1) is in the North Western River Basin District and covers an area of approximately 454 km^2. Several significant rivers are present in this LMA – Owenkillew, Glenelly, Owenreagh and Broughderg Burn. The main Owenkillew River rises in Davagh Forest and flows westwards, forming part of the Lough Foyle system. There are no large towns in the area but there are numerous small villages such as Plumbridge, Gortin and Greencastle. Improved grassland predominates the land usage in the west and along the Glenelly Valley and Owenkillew River. The upland area of the Sperrins is predominantly acid grass, heath and peat. The Owenkillew LMA is enveloped almost completely within the Sperrin Area of Outstanding Natural Beauty.

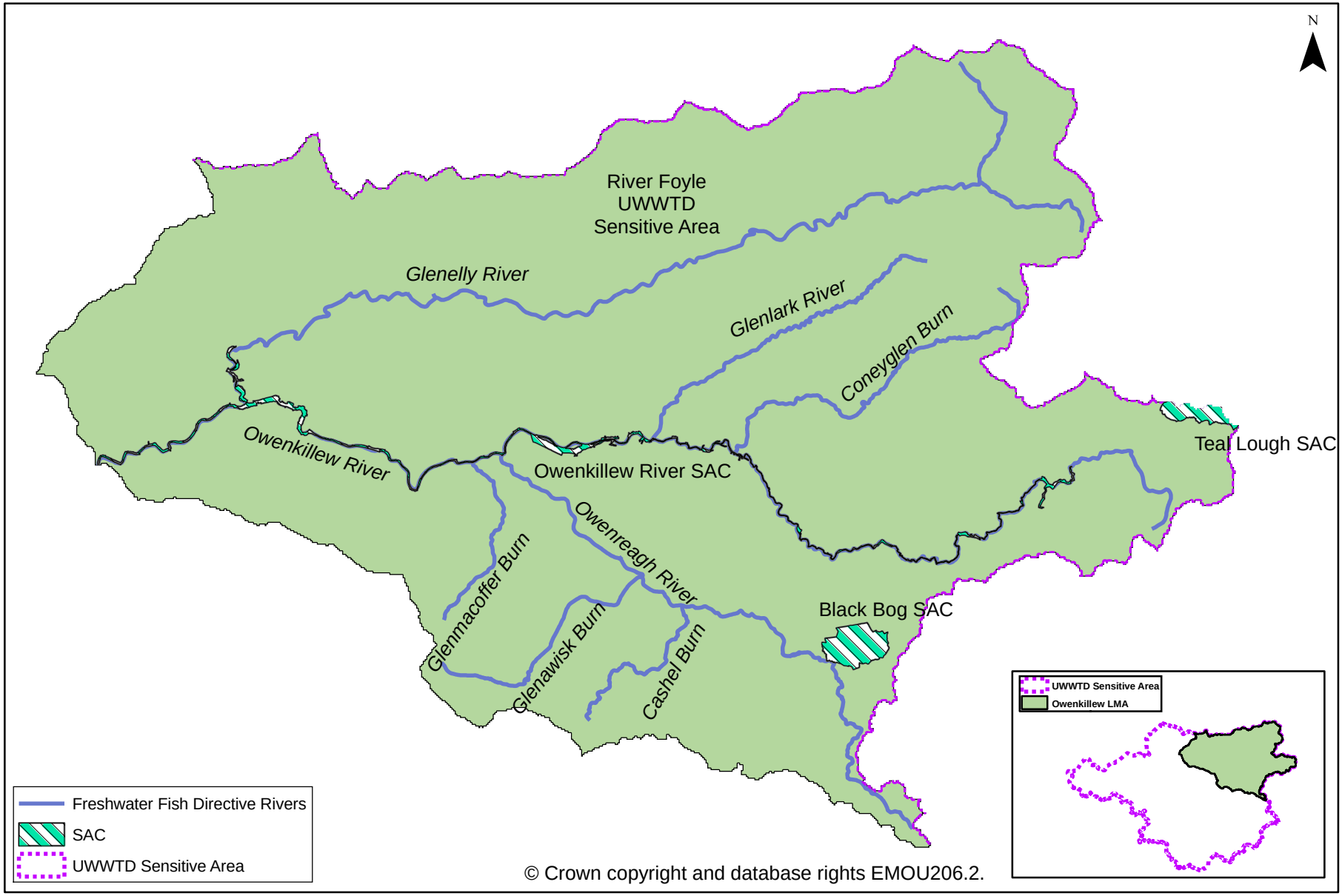
Protected areas in Owenkillew LMA

The Owenkillew LMA supports important habitats and wildlife. These areas have been designated under European Directives and require special protection. The protected areas are summarised in Table 1 and shown in Map 2.

Table 1: Protected Areas in the Owenkillew LMA

Protected Area Type	Location
Waters used for the abstraction of drinking water (drinking water protected areas)	There are 2 drinking water protected rivers There is 1 drinking water protected groundwater
Areas designed to protect economically significant aquatic species Freshwater Fish Directive (78/659/EEC) Shellfish Waters Directive (79/923/EEC)	 There are 152 km of rivers identified under the Freshwater Fish Directive, all designated as salmonid. There are no designated shellfish waters
Bathing Waters These are bathing waters identified under the Bathing Water Directive (76/160/EEC)	There are no identified bathing waters
Nutrient Sensitive Areas 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; River Foyle A total territory approach has been adopted in Northern Ireland for the Nitrates Directive
Areas designated for the protection of habitats or species (Natura 2000 sites) 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) Birds Directive (79/409/EEC)	 There are 4 water dependent Special Areas of Conservation (SAC); Owenkillew River, River Foyle and Tributaries, Teal Lough and Black Bog. There are no water dependent Special Protection Areas (SPA)

Map 2: Protected Areas in the Owenkillew LMA

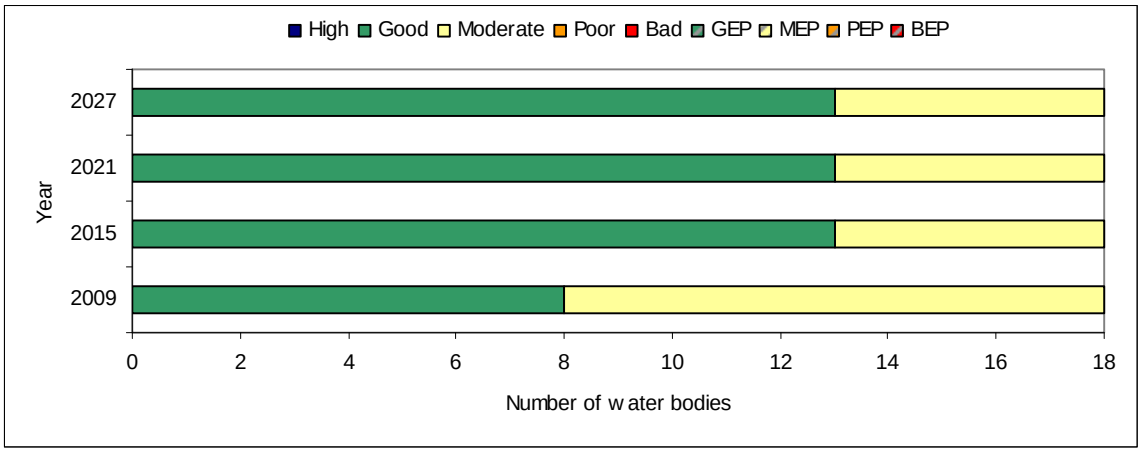


What improvements do we plan to achieve?

Surface Waters

The current status (as published in December 2009) and environmental objectives for surface waters (rivers) are shown in Figure 1. We aim to achieve good status or better in 72.2% of our surface waters by 2015.

Figure 1: Current status and proposed objectives for surface waters in Owenkillew LMA



Groundwater

There is 1 groundwater body within the Owenkillew LMA; Gortin. It has been classified as good for both quantitative and chemical status. We aim to maintain good status in this groundwater body.

Action Plan[1]

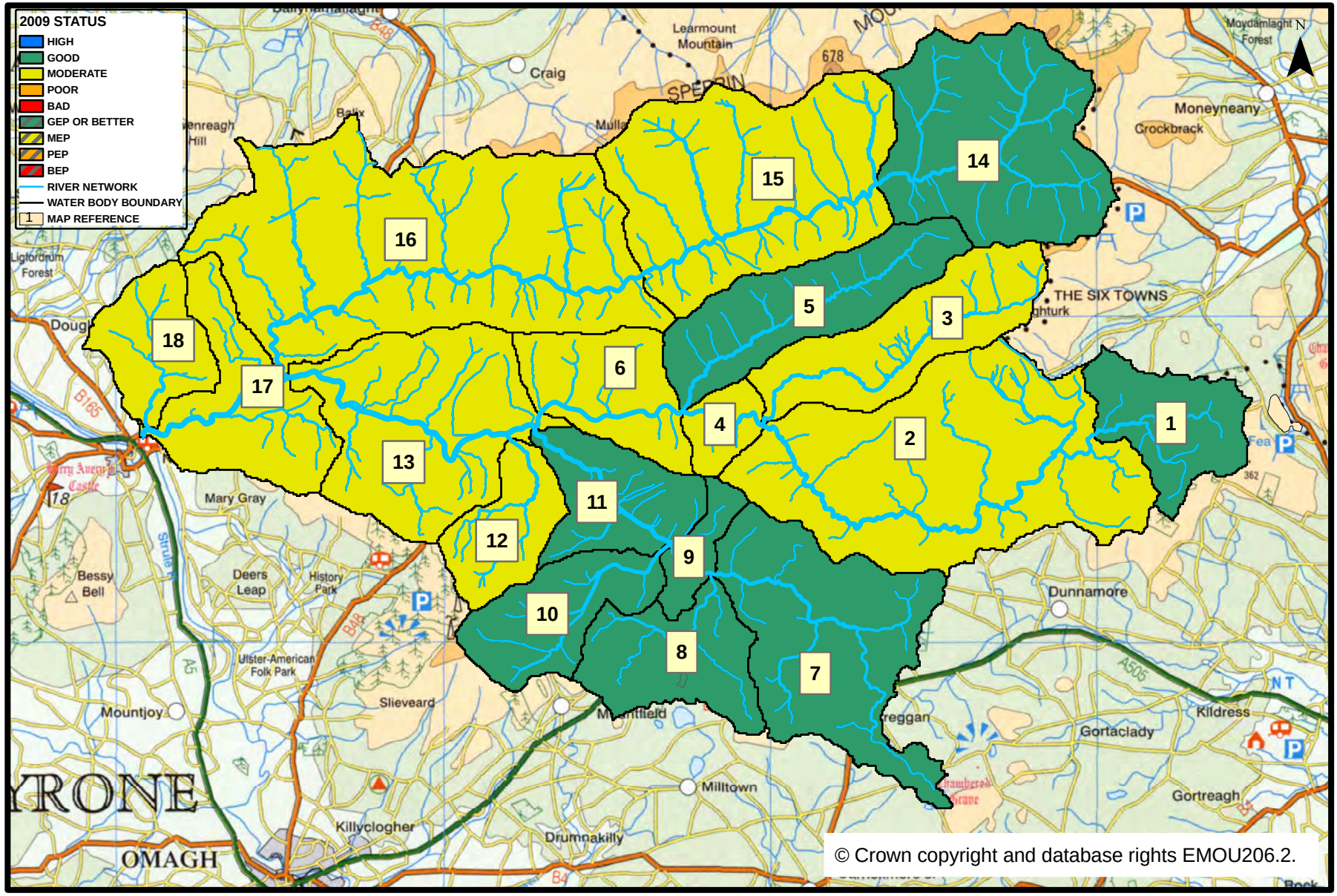
The current status and environmental objectives for each water body within the Owenkillew LMA are summarised in Table 2. The Map Reference column can be used to identify the water bodies shown in Map 3. The water body map reference numbers are also shown in brackets after the water body names used later in the document. The planned actions for water bodies within the Owenkillew LMA are set out in the next section of this document.

[1] A table of abbreviations is available at the end of this document

Table 2: Summary of current status and environmental objectives

Map Reference	Water Body Code	Water Body Name	2009 Status	2015 Objective	Page number
1	UKGBNI1NW010102081	Davagh Water	Good	Good	11
2	UKGBNI1NW010102086	Broughderg Burn	Moderate	Moderate	13
3	UKGBNI1NW010102085	Coneyglen Burn	Moderate	Good	17
4	UKGBNI1NW010102026	Owenkillew River	Moderate	Moderate	19
5	UKGBNI1NW010102025	Glenlark River	Good	Good	21
6	UKGBNI1NW010102011	Owenkillew River	Moderate	Moderate	23
7	UKGBNI1NW010102091	Owenreagh River	Good	Good	27
8	UKGBNI1NW010102024	Cashel Burn	Good	Good	29
9	UKGBNI1NW010102038	Owenreagh River	Good	Good	31
10	UKGBNI1NW010102023	Glenawisk Burn	Good	Good	33
11	UKGBNI1NW010102022	Owenreagh River	Good	Good	35
12	UKGBNI1NW010102043	Glenmacoffer Burn	Moderate	Good	37
13	UKGBNI1NW010102027	Owenkillew River Gortin	Moderate	Moderate	39
14	UKGBNI1NW010102083	Glenelly River	Good	Good	41
15	UKGBNI1NW010102048	Glenelly River	Moderate	Good	43
16	UKGBNI1NW010102073	Glenelly River	Moderate	Good	47
17	UKGBNI1NW010102028	Owenkillew Newtownstewart	Moderate	Moderate	49
18	UKGBNI1NW010102096	Glenknock River	Moderate	Good	51

Map 3: Current status of surface water bodies in the Owenkillew LMA



Generic Actions applied throughout the Local Management Area.

Action to be taken	Action to be taken by	Make operational by	Water body types
Organise two Catchment Stakeholder Group meetings per year to provide an open forum for discussion on water issues and encourage involvement in developing and implementing the Local Management Area Plan.	DOE NIEA	Ongoing	All
Raise awareness of catchment management issues by release of relevant press articles and web publication of LMA e-zine. Support local community events.	DOE NIEA	2010	All
Promote and encourage local projects through WATER Environment Community awards.	DOE NIEA	2010	All
Highlight external funding opportunities for water management projects to local partners.	DOE NIEA	Ongoing	All
Promote the NIEA Water Pollution Hotline through increased advertising, promotion and waterside signage.	DOE NIEA	2010	Rivers, Lakes

Specific Actions applied throughout the Local Management Area where status or ecological potential is less than good.

Problem	Solution			
Failing Element	Action to be taken	Action to be taken by	Make operational by	Water body types
Pearl Mussel, Fish, Invertebrates, Zinc, Copper, Macrophytes	Create an inventory of physical river channel and bank structures of water bodies in the LMA.	Loughs Agency, NIEA, Angling clubs	2011	Rivers, Lakes
	Support pollution prevention campaigns such as 'Reduce Reuse Recycle', 'Bag It & Bin It', 'Stop and Think (Not Down the Sink)'.	DOE NIEA	Ongoing	All
	Work with and support local Stakeholders in raising awareness of environmental issues and projects. Seek to identify solutions to water management problems and develop and promote the LMA Action Plan.	DOE NIEA	2010	All
	Promote the control of invasive alien species on farmland	DARD Countryside Management Branch	Ongoing	Rivers, Lakes
	Encourage riparian zone management with an aim to improve biodiversity and minimise sedimentation through practical management measures on farms	DARD Countryside Management Branch	Ongoing	Rivers
	Develop leaflets and articles to promote effective farm nutrient and waste management	DOE NIEA, DARD Countryside Management	2010	All
	Raise awareness and promote the benefits of effective farm nutrient and waste management	DARD Countryside Management Branch	2010	All

	Collate existing information on location of aquatic invasive alien species.	DOE NIEA	2011	All
	Review River's Agency maintenance program	DOE NIEA	2010	Rivers, Lakes
	Complete the phosphorus nutrient budget work for Northern Ireland	AFBI	2011	All
	Review the relevance of nutrient budget in the context of this LMA.	DOE NIEA	2012	All

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Water body name:	Davagh Water
Water body identification code:	UKGBNI1NW010102081
Catchment stakeholder group:	Upper Foyle
Local management area:	Owenkillew
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Alkalinity 10-50 (as mg/l of $CaCO_3$)
2005 risk assessment:	1b - Likely to be at risk
Current overall status:	Good
(Confidence in overall status:	Medium)

Benthic invertebrates:	High
Macrophytes:	High
Dissolved oxygen:	High
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	High
Temperature*:	High

Hydrological regime:	High
Morphological conditions:	Moderate

Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see: http://www.ni-environment.gov.uk/water-home/wfd/north_western_rbp/nw-riverslakes.htm

Water body name: Davagh Water (1) #
Water body identification code: UKGBNI1NW010102081
2009 status: Good
2015 Objective: Good
Upstream water bodies:
Downstream water body: Broughderg Burn (2)
(UKGBNI1NW010102086)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
	1	Investigate impact of forestry operations in the Davagh Water waterbody. Ascertain and review felling plans and ensure appropriate measures are in place to mitigate risks from felling.	DARD Forest Service	2011
	2	Maintain current regulatory controls, monitoring existing measures in order to maintain the good status of this waterbody	All	Ongoing
		A number of catchment wide actions also apply to this water body. These can be found on Page 8.		

number in brackets refers to Map 3.

Water body name:	Broughderg Burn
Water body identification code:	UKGBNI1NW010102086
Catchment stakeholder group:	Upper Foyle
Local management area:	Owenkillew
2015 Objective:	Moderate Status
2021 Objective:	Moderate Status
2027 Objective:	Moderate Status
The type of this water body is:	Alkalinity 10-50 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Moderate
(Confidence in overall status:	High)

Benthic invertebrates:	Good
Macrophytes:	High
Phytobenthos:	High
Pearl mussel:	Moderate
Dissolved oxygen:	High
Soluble reactive phosphorus:	High
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	High
Temperature*:	High

Hydrological regime:	High

Atrazine:	Good
Chlorfenvinphos:	Good
Chlorpyriphos:	Good
Dissolved copper:	Good
Diazinon:	Good
Fenitrothion:	Good
Malathion:	Good
Phenol:	Good
Simazine:	Good
Triazaphos:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see: http://www.ni-environment.gov.uk/water-home/wfd/north_western_rbp/nw-riverslakes.htm

Water body name: Broughderg Burn (2) #
Water body identification code: UKGBNI1NW010102086
2009 status: Moderate
2015 Objective: Moderate
Upstream water bodies: Davagh Water (1) (UKGBNI1NW010102081)
Downstream water body: Owenkillew River (4) (UKGBNI1NW010102026)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Pearl Mussel	1	Assessment of river conditions through research and river surveys to locate sources of sediment	INTERREG IVA	2011
	2	Consider site restoration and protection methods to reduce sedimentation and improve habitat.	INTERREG IVA	2011
	3	Carry out Broughderg Burn restoration project	Loughs Agency	2010
	4	Develop action plans for designated Freshwater Pearl Mussel Special Areas of Conservation	INTERREG IVA	2011
	5	Identify river remedies and possible options to improve Freshwater Pearl Mussel conditions and enhance recruitment	INTERREG IVA	2011
	6	Assess sources of organic pollution including agriculture, NIW intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA	2010
	7	Investigate impact of forestry operations in the Broughderg Burn waterbody. Ascertain and review felling plans and ensure appropriate measures are in place to mitigate risks from felling.	DARD Forest Service	2011
	8	Continue to monitor fish populations and investigate the feasibility of habitat improvement as required	Loughs Agency	Ongoing
	9	Continue regulatory investigation and action against unlicensed activities impacting on fish populations and habitats	Loughs Agency	Ongoing
	10	Investigate possibility of creating buffer zones and investigate the feasability of carrying out river bank stabilisation work to reduce sediment release and cattle poaching.	Loughs Agency, DOE NIEA	2011
	11	Conduct local management area investigative surveys to assess benthic invertebrates	DOE NIEA	2010
	12	Investigate agricultural practices in the catchment through river walks and analysis of agricultural pollution incidents and cross compliance data and carry out site visits where necessary	DOE NIEA	2010
	13	Raise awareness of the issue of pesticide use and disposal	DOE NIEA	2011
	14	Promote best practice in the use of pesticides on farms	DARD Countryside Management Branch	2011
	15	Assess significance of sheep dip usage and review groundwater authorisations where appropriate.	DOE NIEA	2011

	16	Targeted education, advice and regulatory action to prevent pollution and protect the water environment	DOE NIEA	2011
	17	Monitor fish populations at selected sites	Loughs Agency	2010
	18	Carryout Rapid Hydro morphology Assessment Technique (RHAT) survey to assess morphological impacts	DOE NIEA	2010
		A number of catchment wide actions also apply to this water body. These can be found on Page 8.		

number in brackets refers to Map 3.

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Water body name:	Coneyglen Burn
Water body identification code:	UKGBNI1NW010102085
Catchment stakeholder group:	Upper Foyle
Local management area:	Owenkillew
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Alkalinity 10-50 (as mg/l of $CaCO_3$)
2005 risk assessment:	1b - Likely to be at risk
Current overall status:	Moderate
(Confidence in overall status:	Medium)

Benthic invertebrates:	Moderate
Macrophytes:	High
Fish:	Moderate
Phytobenthos:	High
Dissolved oxygen:	High
Soluble reactive phosphorus:	High
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	High
Temperature*:	High

Hydrological regime:	High
Morphological conditions:	Moderate

Atrazine:	Good
Chlorfenvinphos:	Good
Chlorpyriphos:	Good
Dissolved copper:	Good
Diazinon:	Good
Fenitrothion:	Good
Malathion:	Good
Phenol:	Good
Simazine:	Good
Triazaphos:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see: http://www.ni-environment.gov.uk/water-home/wfd/north_western_rbp/nw-riverslakes.htm

Water body name: Coneyglen Burn (3) #
Water body identification code: UKGBNI1NW010102085
2009 status: Moderate
2015 Objective: Good
Upstream water bodies:
Downstream water body: Owenkillew River (4)
(UKGBNI1NW010102026)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Invertebrates, Fish	1	Carry out a river walk to determine and address sources of organic pollution affecting benthic invertebrates and resulting in low biotic scores and/or observed sewage fungus.	DOE NIEA	2011
	2	Conduct local management area investigative surveys to assess benthic invertebrates	DOE NIEA	2010
	3	Assess sources of organic pollution including agriculture, NIW intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA	2010
	4	Investigate impact of forestry operations in the Coneyglen Burn waterbody. Ascertain and review felling plans and ensure appropriate measures are in place to mitigate risks from felling.	Private forest owners	2011
	5	Continue to monitor fish populations and investigate the feasibility of habitat improvement as required	Loughs Agency	Ongoing
	6	Carryout Rapid Hydro morphology Assessment Technique (RHAT) survey to assess morphological impacts	DOE NIEA	2010
	7	Investigate agricultural practices in the catchment through river walks and analysis of agricultural pollution incidents and cross compliance data and carry out site visits where necessary	DOE NIEA	2010
	8	Raise awareness of the issue of pesticide use and disposal	DOE NIEA	2010
	9	Promote best practice in the use of pesticides on farms	DARD Countryside Management Branch	2010
	10	Assess significance of sheep dip usage and review groundwater authorisations where appropriate.	DOE NIEA	2010
	11	Monitor fish populations at selected sites	Loughs Agency	2010
		A number of catchment wide actions also apply to this water body. These can be found on Page 8.		

number in brackets refers to Map 3.

Water body name:	Owenkillew River
Water body identification code:	UKGBNI1NW010102026
Catchment stakeholder group:	Upper Foyle
Local management area:	Owenkillew
2015 Objective:	Moderate Status
2021 Objective:	Moderate Status
2027 Objective:	Moderate Status
The type of this water body is:	Alkalinity 10-50 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Moderate
(Confidence in overall status:	Medium)

Benthic invertebrates:	Moderate
Macrophytes:	High
Pearl mussel:	Moderate
Dissolved oxygen:	High
Soluble reactive phosphorus:	High
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	High
Temperature*:	High

Hydrological regime:	High
Morphological conditions:	Moderate

Dissolved copper:	Failing to achieve good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see: http://www.ni-environment.gov.uk/water-home/wfd/north_western_rbp/nw-riverslakes.htm

Water body name: Owenkillew River (4) #
Water body identification code: UKGBNI1NW010102026
2009 status: Moderate
2015 Objective: Moderate
Upstream water bodies: Coneyglen Burn (3) (UKGBNI1NW010102085)
Broughderg Burn (2)
(UKGBNI1NW010102086)
Downstream water body: Owenkillew River (6)
(UKGBNI1NW010102011)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Invertebrates, Pearl Mussel, Copper	1	Assessment of river conditions through research and river surveys to locate sources of sediment	INTERREG IVA	2011
	2	Develop action plans for designated Freshwater Pearl Mussel Special Areas of Conservation	INTERREG IVA	2011
	3	Identify river remedies and possible options to improve Freshwater Pearl Mussel conditions and enhance recruitment	INTERREG IVA	2011
	4	Consider site restoration and protection methods to reduce sedimentation and improve habitat.	INTERREG IVA	2011
	5	Conduct local management area investigative surveys to assess benthic invertebrates	DOE NIEA	2010
	6	Carry out a river walk to determine and address sources of organic pollution affecting benthic invertebrates and resulting in low biotic scores and/or observed sewage fungus.	DOE NIEA	2011
	7	Investigate possible sources of Copper to surface waters.	DOE NIEA	2011
	8	Assess sources of organic pollution including agriculture, NIW intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA	2010
	9	Continue to monitor fish populations and investigate the feasibility of habitat improvement as required	Loughs Agency	Ongoing
	10	Continue regulatory investigation and action against unlicensed activities impacting on fish populations and habitats	Loughs Agency	Ongoing
		A number of catchment wide actions also apply to this water body. These can be found on Page 8.		

number in brackets refers to Map 3.

Water body name:	Glenlark River
Water body identification code:	UKGBNI1NW010102025
Catchment stakeholder group:	Upper Foyle
Local management area:	Owenkillew
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Alkalinity 10-50 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Good
(Confidence in overall status:	High)

Benthic invertebrates:	Good
Macrophytes:	High
Dissolved oxygen:	High
Soluble reactive phosphorus:	High
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	High
Temperature*:	High
Hydrological regime:	High
Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see: http://www.ni-environment.gov.uk/water-home/wfd/north_western_rbp/nw-riverslakes.htm

Water body name: Glenlark River (5) #
Water body identification code: UKGBNI1NW010102025
2009 status: Good
2015 Objective: Good
Upstream water bodies:
Downstream water body: Owenkillew River (6)
(UKGBNI1NW010102011)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
	1	Maintain current regulatory controls, monitoring existing measures in order to maintain the good status of this waterbody	All	Ongoing
	2	Assess sources of organic pollution including agriculture, NIW intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA	2010
	3	Investigate impact of forestry operations in the Glenlark River waterbody. Ascertain and review felling plans and ensure appropriate measures are in place to mitigate risks from felling.	Private forest owners	2011
	4	Continue to monitor fish populations and investigate the feasibility of habitat improvement as required	Loughs Agency	Ongoing
	5	Carry out a river walk to determine and address sources of organic pollution affecting benthic invertebrates and resulting in low biotic scores and/or observed sewage fungus.	DOE NIEA	2011
	6	Conduct local management area investigative surveys to assess benthic invertebrates	DOE NIEA	2010
	7	Investigate potential causes of pH disturbances in catchment	DOE NIEA	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 8.		

number in brackets refers to Map 3.

Water body name:	Owenkillew River
Water body identification code:	UKGBNI1NW010102011
Catchment stakeholder group:	Upper Foyle
Local management area:	Owenkillew
2015 Objective:	Moderate Status
2021 Objective:	Moderate Status
2027 Objective:	Moderate Status
The type of this water body is:	Alkalinity 10-50 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Moderate
(Confidence in overall status:	Medium)

Benthic invertebrates:	Moderate
Macrophytes:	High
Pearl mussel:	Moderate
Dissolved oxygen:	High
Soluble reactive phosphorus:	High
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	High
Temperature*:	High

Hydrological regime:	High
Morphological conditions:	Moderate

Dissolved copper:	Failing to achieve good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see: http://www.ni-environment.gov.uk/water-home/wfd/north_western_rbp/nw-riverslakes.htm

Water body name: Owenkillew River (6) #
Water body identification code: UKGBNI1NW010102011
2009 status: Moderate
2015 Objective: Moderate
Upstream water bodies: Glenlark River (5) (UKGBNI1NW010102025)
Owenkillew River (4)
(UKGBNI1NW010102026)
Downstream water body: Owenkillew River Gortin (13)
(UKGBNI1NW010102027)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Invertebrates, Pearl Mussel, Copper	1	Assessment of river conditions through research and river surveys to locate sources of sediment	INTERREG IVA	2011
	2	Develop action plans for designated Freshwater Pearl Mussel Special Areas of Conservation	INTERREG IVA	2011
	3	Identify river remedies and possible options to improve Freshwater Pearl Mussel conditions and enhance recruitment	INTERREG IVA	2011
	4	Consider site restoration and protection methods to reduce sedimentation and improve habitat.	INTERREG IVA	2011
	5	Conduct local management area investigative surveys to assess benthic invertebrates	DOE NIEA	2010
	6	Carry out a river walk to determine and address sources of organic pollution affecting benthic invertebrates and resulting in low biotic scores and/or observed sewage fungus.	DOE NIEA	2011
	7	Investigate possible sources of Copper to surface waters.	DOE NIEA	2011
	8	Assess sources of organic pollution including agriculture, NIW intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA	2010
	9	Continue to monitor fish populations and investigate the feasibility of habitat improvement as required	Loughs Agency	Ongoing
	10	Carryout Rapid Hydro morphology Assessment Technique (RHAT) survey to assess morphological impacts	DOE NIEA	2010
	11	Targeted education, advice and regulatory action to prevent pollution and protect the water environment	DOE NIEA	2011
	12	Investigate agricultural practices in the catchment through river walks and analysis of agricultural pollution incidents and cross compliance data and carry out site visits where necessary	DOE NIEA	2010
	13	Raise awareness of the issue of pesticide use and disposal	DOE NIEA	2011
	14	Promote best practice in the use of pesticides on farms	DARD Countryside Management Branch	2011

	15 Investigate possible sources of Copper to surface waters.	DOE NIEA	2011
	A number of catchment wide actions also apply to this water body. These can be found on Page 8.		

number in brackets refers to Map 3.

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Water body name:	Owenreagh River
Water body identification code:	UKGBNI1NW010102091
Catchment stakeholder group:	Upper Foyle
Local management area:	Owenkillew
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Alkalinity 10-50 (as mg/l of $CaCO_3$)
2005 risk assessment:	1b - Likely to be at risk
Current overall status:	Good
(Confidence in overall status:	High)

Benthic invertebrates:	Good
Macrophytes:	Good
Dissolved oxygen:	High
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	Good
Temperature*:	High
Hydrological regime:	High
Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see: http://www.ni-environment.gov.uk/water-home/wfd/north_western_rbp/nw-riverslakes.htm

Water body name: Owenreagh River (7) #
Water body identification code: UKGBNI1NW010102091
2009 status: Good
2015 Objective: Good
Upstream water bodies:
Downstream water body: Owenreagh River (9)
(UKGBNI1NW010102038)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
	1	Maintain current regulatory controls, monitoring existing measures in order to maintain the good status of this waterbody	All	Ongoing
	2	Conduct local management area investigative surveys to assess benthic invertebrates	DOE NIEA	2010
	3	Assess sources of oil contamination.	DOE NIEA	2010
	4	Investigate impact of forestry operations in the Owenreagh River waterbody. Ascertain and review felling plans and ensure appropriate measures are in place to mitigate risks from felling.	DARD Forest Service	2011
	5	Investigate agricultural practices in the catchment through river walks and analysis of agricultural pollution incidents and cross compliance data and carry out site visits where necessary	DOE NIEA	2010
	6	Assess the possibility of designating this water body as an ASSI to improve protection	DOE NIEA	2010
		A number of catchment wide actions also apply to this water body. These can be found on Page 8.		

number in brackets refers to Map 3.

Water body name:	Cashel Burn
Water body identification code:	UKGBNI1NW010102024
Catchment stakeholder group:	Upper Foyle
Local management area:	Owenkillew
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Alkalinity 10-50 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Good
(Confidence in overall status:	Medium)

Benthic invertebrates:	Good
Macrophytes:	Good
Dissolved oxygen:	High
Soluble reactive phosphorus:	High
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	High
Temperature*:	High

Hydrological regime:	High
Morphological conditions:	Moderate

Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see: http://www.ni-environment.gov.uk/water-home/wfd/north_western_rbp/nw-riverslakes.htm

Water body name: Cashel Burn (8) #
Water body identification code: UKGBNI1NW010102024
2009 status: Good
2015 Objective: Good
Upstream water bodies:
Downstream water body: Owenreagh River (9)
(UKGBNI1NW010102038)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
	1	Assess sources of organic pollution including agriculture, NIW intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA	2010
	2	Continue to monitor fish populations and investigate the feasibility of habitat improvement as required	Loughs Agency	Ongoing
	3	Maintain current regulatory controls, monitoring existing measures in order to maintain the good status of this waterbody	All	Ongoing
	4	Conduct a water resource assessment to inform review of abstraction licenses	DOE NIEA	2010
		A number of catchment wide actions also apply to this water body. These can be found on Page 8.		

number in brackets refers to Map 3.

Water body name:	Owenreagh River
Water body identification code:	UKGBNI1NW010102038
Catchment stakeholder group:	Upper Foyle
Local management area:	Owenkillew
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Alkalinity 10-50 (as mg/l of $CaCO_3$)
2005 risk assessment:	1b - Likely to be at risk
Current overall status:	Good
(Confidence in overall status:	High)

Benthic invertebrates:	Good
Macrophytes:	High
Dissolved oxygen:	High
Soluble reactive phosphorus:	High
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	High
Temperature*:	High
Hydrological regime:	High
Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see: http://www.ni-environment.gov.uk/water-home/wfd/north_western_rbp/nw-riverslakes.htm

Water body name: Owenreagh River (9) #
Water body identification code: UKGBNI1NW010102038
2009 status: Good
2015 Objective: Good
Upstream water bodies: Owenreagh River (7)
(UKGBNI1NW010102091) Cashel Burn (8)
(UKGBNI1NW010102024)
Downstream water body: Owenreagh River (11)
(UKGBNI1NW010102022)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
	1	Maintain current regulatory controls, monitoring existing measures in order to maintain the good status of this waterbody	All	Ongoing
	2	Carry out a river walk to determine and address sources of organic pollution affecting benthic invertebrates and resulting in low biotic scores and/or observed sewage fungus.	DOE NIEA	2011
	3	Assess the possibility of designating this water body as an ASSI to improve protection	DOE NIEA	2010
		A number of catchment wide actions also apply to this water body. These can be found on Page 8.		

number in brackets refers to Map 3.

Water body name:	Glenawisk Burn
Water body identification code:	UKGBNI1NW010102023
Catchment stakeholder group:	Upper Foyle
Local management area:	Owenkillew
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Alkalinity 10-50 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Good
(Confidence in overall status:	High)

Benthic invertebrates:	High
Macrophytes:	High
Fish:	Good
Dissolved oxygen:	High
Soluble reactive phosphorus:	High
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	High
Temperature*:	High

Hydrological regime:	Moderate
Morphological conditions:	Moderate

Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see: http://www.ni-environment.gov.uk/water-home/wfd/north_western_rbp/nw-riverslakes.htm

Water body name: Glenawisk Burn (10) #
Water body identification code: UKGBNI1NW010102023
2009 status: Good
2015 Objective: Good
Upstream water bodies:
Downstream water body: Owenreagh (11) (UKGBNI1NW010102022)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
	1	Assess sources of organic pollution including agriculture, NIW intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA	2010
	2	Continue to monitor fish populations and investigate the feasibility of habitat improvement as required	Loughs Agency	Ongoing
	3	Conduct a water resource assessment to inform review of abstraction licenses	DOE NIEA	2010
	4	Maintain current regulatory controls, monitoring existing measures in order to maintain the good status of this waterbody	All	Ongoing
		A number of catchment wide actions also apply to this water body. These can be found on Page 8.		

number in brackets refers to Map 3.

Water body name:	Owenreagh River
Water body identification code:	UKGBNI1NW010102022
Catchment stakeholder group:	Upper Foyle
Local management area:	Owenkillew
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Alkalinity 10-50 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Good
(Confidence in overall status:	High)

Benthic invertebrates:	Good
Macrophytes:	High
Dissolved oxygen:	High
Soluble reactive phosphorus:	High
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	High
Temperature*:	High

Hydrological regime:	High
Morphological conditions:	Moderate

Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see: http://www.ni-environment.gov.uk/water-home/wfd/north_western_rbp/nw-riverslakes.htm

Water body name: Owenreagh River (11) #
Water body identification code: UKGBNI1NW010102022
2009 status: Good
2015 Objective: Good
Upstream water bodies: Glenawisk Burn (10) (UKGBNI1NW010102023)
Downstream water body: Owenkillew River Gortin (13) (UKGBNI1NW010102027)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
	1	Maintain current regulatory controls, monitoring existing measures in order to maintain the good status of this waterbody	All	Ongoing
	2	Assess sources of organic pollution including agriculture, NIW intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA	2010
	3	Investigate downstream impacts of WWTWs < 250 PE and review performance if necessary	DOE NIEA	2011
	4	Visual inspection of WWTWs <250 PE to inform future upgrades	DOE NIEA	2011
	5	Continue to monitor fish populations and investigate the feasibility of habitat improvement as required	Loughs Agency	Ongoing
	6	Targeted education, advice and regulatory action to prevent pollution and protect the water environment	DOE NIEA	2011
	7	Conduct a water resource assessment to inform review of abstraction licenses	DOE NIEA	2010
	8	Investigate agricultural practices in the catchment through river walks and analysis of agricultural pollution incidents and cross compliance data and carry out site visits where necessary	DOE NIEA	2010
	9	Raise awareness of the issue of pesticide use and disposal	DOE NIEA	2011
	10	Promote best practice in the use of pesticides on farms	DARD Countryside Management Branch	2011
	11	Carry out a river walk to determine and address sources of organic pollution affecting benthic invertebrates and resulting in low biotic scores and/or observed sewage fungus.	DOE NIEA	2011
	12	Conduct local management area investigative surveys to assess benthic invertebrates	DOE NIEA	2010
	13	Assess the possibility of designating this water body as an ASSI to improve protection	DOE NIEA	2010
		A number of catchment wide actions also apply to this water body. These can be found on Page 8.		

number in brackets refers to Map 3.

Water body name:	Glenmacoffer Burn
Water body identification code:	UKGBNI1NW010102043
Catchment stakeholder group:	Upper Foyle
Local management area:	Owenkillew
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Alkalinity 10-50 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Moderate
(Confidence in overall status:	Medium)

Benthic invertebrates:	Good
Macrophytes:	Good
Dissolved oxygen:	High
Soluble reactive phosphorus:	High
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	High
Temperature*:	High

Hydrological regime:	High
Morphological conditions:	Moderate

Dissolved copper:	Failing to achieve good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see: http://www.ni-environment.gov.uk/water-home/wfd/north_western_rbp/nw-riverslakes.htm

Water body name: Glenmacoffer Burn (12) #
Water body identification code: UKGBNI1NW010102043
2009 status: Moderate
2015 Objective: Good
Upstream water bodies:
Downstream water body: Owenkillew River Gortin (13) (UKGBNI1NW010102027)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Copper	1	Investigate possible sources of Copper to surface waters.	DOE NIEA	2011
	2	Assess sources of organic pollution including agriculture, NIW intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA	2010
	3	Continue to monitor fish populations and investigate the feasibility of habitat improvement as required	Loughs Agency	Ongoing
	4	Assess sources of organic pollution including agriculture, NIW intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA	2010
	5	Conduct a water resource assessment to inform review of abstraction licenses	DOE NIEA	2010
	6	Conduct local management area investigative surveys to assess benthic invertebrates	DOE NIEA	2010
	7	Assess significance of sheep dip usage and review groundwater authorisations where appropriate.	DOE NIEA	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 8.		

number in brackets refers to Map 3.

Water body name:	Owenkillew River Gortin
Water body identification code:	UKGBNI1NW010102027
Catchment stakeholder group:	Upper Foyle
Local management area:	Owenkillew
2015 Objective:	Moderate Status
2021 Objective:	Moderate Status
2027 Objective:	Moderate Status
The type of this water body is:	Alkalinity 10-50 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Moderate
(Confidence in overall status:	High)

Benthic invertebrates:	Good
Macrophytes:	Good
Phytobenthos:	High
Pearl mussel:	Moderate
Dissolved oxygen:	High
Soluble reactive phosphorus:	High
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	High
Temperature*:	High

Hydrological regime:	High
Morphological conditions:	Moderate

Dissolved copper:	Failing to achieve good
Phenol:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see: http://www.ni-environment.gov.uk/water-home/wfd/north_western_rbp/nw-riverslakes.htm

Water body name: Owenkillew River Gortin (13) #
Water body identification code: UKGBNI1NW010102027
2009 status: Moderate
2015 Objective: Moderate
Upstream water bodies: Glenmacoffer Burn (12) (UKGBNI1NW010102043) Owenkillew River (6) (UKGBNI1NW010102011) Owenreagh River (11) (UKGBNI1NW010102022)
Downstream water body: Owenkillew Newtownstewart (17) (UKGBNI1NW010102028)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Pearl Mussel, Copper	1	Conduct local management area investigative surveys to assess benthic invertebrates	DOE NIEA	2010
	2	Carry out a river walk to determine and address sources of organic pollution affecting benthic invertebrates and resulting in low biotic scores and/or observed sewage fungus.	DOE NIEA	2011
	3	Assessment of river conditions through research and river surveys to locate sources of sediment	INTERREG IVA	2011
	4	Develop action plans for designated Freshwater Pearl Mussel Special Areas of Conservation	INTERREG IVA	2011
	5	Identify river remedies and possible options to improve Freshwater Pearl Mussel conditions and enhance recruitment	INTERREG IVA	2011
	6	Consider site restoration and protection methods to reduce sedimentation and improve habitat.	INTERREG IVA	2011
	7	Investigate possible sources of Copper to surface waters.	DOE NIEA	2011
	8	Assess sources of organic pollution including agriculture, NIW intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA	2010
	9	Continue to monitor fish populations and investigate the feasibility of habitat improvement as required	Loughs Agency	Ongoing
	10	Investigate ammonia elevations	DOE NIEA	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 8.		

number in brackets refers to Map 3.

Water body name:	Glenelly River
Water body identification code:	UKGBNI1NW010102083
Catchment stakeholder group:	Upper Foyle
Local management area:	Owenkillew
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Alkalinity 10-50 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Good
(Confidence in overall status:	High)

Benthic invertebrates:	Good
Macrophytes:	High
Dissolved oxygen:	High
Soluble reactive phosphorus:	High
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	High
Temperature*:	High

Hydrological regime:	High
Morphological conditions:	Moderate

Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see: http://www.ni-environment.gov.uk/water-home/wfd/north_western_rbp/nw-riverslakes.htm

Water body name: Glenelly River (14) #
Water body identification code: UKGBNI1NW010102083
2009 status: Good
2015 Objective: Good
Upstream water bodies:
Downstream water body: Glenelly River (15) (UKGBNI1NW010102048)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
	1	Maintain current regulatory controls, monitoring existing measures in order to maintain the good status of this waterbody	All	Ongoing
	2	Investigate impact of forestry operations in the Glenelly River waterbody. Ascertain and review felling plans and ensure appropriate measures are in place to mitigate risks from felling.	DARD Forest Service	2011
	3	Conduct local management area investigative surveys to assess benthic invertebrates	DOE NIEA	2010
	4	Carry out a river walk to determine and address sources of organic pollution affecting benthic invertebrates and resulting in low biotic scores and/or observed sewage fungus.	DOE NIEA	2011
	5	Assess significance of sheep dip usage and review groundwater authorisations where appropriate.	DOE NIEA	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 8.		

number in brackets refers to Map 3.

Water body name:	Glenelly River
Water body identification code:	UKGBNI1NW010102048
Catchment stakeholder group:	Upper Foyle
Local management area:	Owenkillew
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Alkalinity 10-50 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Moderate
(Confidence in overall status:	Medium)

Benthic invertebrates:	Moderate
Macrophytes:	High
Phytobenthos:	High
Dissolved oxygen:	High
Soluble reactive phosphorus:	High
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	High
Temperature*:	High

Hydrological regime:	High
Morphological conditions:	Moderate

Atrazine:	Good
Chlorfenvinphos:	Good
Chlorpyriphos:	Good
Dissolved copper:	Good
Diazinon:	Good
Fenitrothion:	Good
Malathion:	Good
Phenol:	Good
Simazine:	Good
Triazaphos:	Good
Total zinc:	Failing to achieve good

* This element does not contribute to overall classification.

For more information on the classification process see: http://www.ni-environment.gov.uk/water-home/wfd/north_western_rbp/nw-riverslakes.htm

Water body name: Glenelly River (15) #
Water body identification code: UKGBNI1NW010102048
2009 status: Moderate
2015 Objective: Good
Upstream water bodies: Glenelly River (14) (UKGBNI1NW010102083)
Downstream water body: Glenelly River (16) (UKGBNI1NW010102073)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Invertebrates, Zinc	1	Carry out a river walk to determine and address sources of organic pollution affecting benthic invertebrates and resulting in low biotic scores and/or observed sewage fungus.	DOE NIEA	2011
	2	Conduct local management area investigative surveys to assess benthic invertebrates	DOE NIEA	2010
	3	Assess sources of organic pollution including agriculture, NIW intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA	2010
	4	Visual inspection of Cranagh WWTW <250 PE to inform future upgrades	DOE NIEA	2011
	5	Investigate downstream impacts of WWTWs < 250 PE and review performance if necessary	DOE NIEA	2011
	6	Assess significance of sheep dip usage and review groundwater authorisations where appropriate.	DOE NIEA	2011
	7	Continue to monitor fish populations and investigate the feasibility of habitat improvement as required	Loughs Agency	Ongoing
	8	Continue regulatory investigation and action against unlicensed activities impacting on fish populations and habitats	Loughs Agency	Ongoing
	9	Investigate possible sources of Zinc to surface waters.	DOE NIEA	2011
	10	Carryout Rapid Hydro morphology Assessment Technique (RHAT) survey to assess morphological impacts	DOE NIEA	2010
	11	Investigate agricultural practices in the catchment through river walks and analysis of agricultural pollution incidents and cross compliance data and carry out site visits where necessary	DOE NIEA	2010
	12	Raise awareness of the issue of pesticide use and disposal	DOE NIEA	2011
	13	Promote best practice in the use of pesticides on farms	DARD Countryside Management Branch	2011
	14	Targeted education, advice and regulatory action to prevent pollution and protect the water environment	DOE NIEA	2011
	15	Monitor fish populations at selected sites	Loughs Agency	2010
		A number of catchment wide actions also apply to this water body. These can be found on Page 8.		

number in brackets refers to Map 3.

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Water body name:	Glenelly River
Water body identification code:	UKGBNI1NW010102073
Catchment stakeholder group:	Upper Foyle
Local management area:	Owenkillew
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Alkalinity 10-50 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Moderate
(Confidence in overall status:	Medium)

Benthic invertebrates:	Moderate
Macrophytes:	High
Fish:	Moderate
Dissolved oxygen:	High
Soluble reactive phosphorus:	High
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	High
Temperature*:	High

Hydrological regime:	High
Morphological conditions:	Moderate

Dissolved copper:	Failing to achieve good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see: http://www.ni-environment.gov.uk/water-home/wfd/north_western_rbp/nw-riverslakes.htm

Water body name: Glenelly River (16) #
Water body identification code: UKGBNI1NW010102073
2009 status: Moderate
2015 Objective: Good
Upstream water bodies: Glenelly River (15) (UKGBNI1NW010102048)
Downstream water body: Owenkillew Newtownstewart (17) (UKGBNI1NW010102028)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Invertebrates, Fish, Copper	1	Assess sources of organic pollution including agriculture, NIW intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA	2010
	2	Conduct local management area investigative surveys to assess benthic invertebrates	DOE NIEA	2010
	3	Carry out a river walk to determine and address sources of organic pollution affecting benthic invertebrates and resulting in low biotic scores and/or observed sewage fungus.	DOE NIEA	2011
	4	Investigate impact of forestry operations in the Glenelly River waterbody. Ascertain and review felling plans and ensure appropriate measures are in place to mitigate risks from felling.	DARD Forest Service	2011
	5	Assess significance of sheep dip usage and review groundwater authorisations where appropriate.	DOE NIEA	2011
	6	Continue to monitor fish populations and investigate the feasibility of habitat improvement as required	Loughs Agency	Ongoing
	7	Continue regulatory investigation and action against unlicensed activities impacting on fish populations and habitats	Loughs Agency	Ongoing
	8	Conduct a water resource assessment to inform review of abstraction licenses	DOE NIEA	2010
	9	Investigate agricultural practices in the catchment through river walks and analysis of agricultural pollution incidents and cross compliance data and carry out site visits where necessary	DOE NIEA	2010
	10	Raise awareness of the issue of pesticide use and disposal	DOE NIEA	2011
	11	Promote best practice in the use of pesticides on farms	DARD Countryside Management Branch	2011
	12	Compliance assessment of Plumbridge WWTW >250 PE to inform future upgrades	DOE NIEA	2011
	13	Investigate possible sources of Copper to surface waters.	DOE NIEA	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 8.		

number in brackets refers to Map 3.

Water body name:	Owenkillew N'stewart
Water body identification code:	UKGBNI1NW010102028
Catchment stakeholder group:	Upper Foyle
Local management area:	Owenkillew
2015 Objective:	Moderate Status
2021 Objective:	Moderate Status
2027 Objective:	Moderate Status
The type of this water body is:	Alkalinity 10-50 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Moderate
(Confidence in overall status:	High)

Benthic invertebrates:	Good
Macrophytes:	Good
Phytobenthos:	High
Pearl mussel:	Moderate
Dissolved oxygen:	High
Soluble reactive phosphorus:	High
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	High
Temperature*:	High

Hydrological regime:	High

Chloroform (trichloromethane):	Good
Dissolved copper:	Failing to achieve good
Carbon tetrachloride:	Good
1,2-Dichloroethane:	Good
Phenol:	Good
Tetrachloroethylene:	Good
Trichloroethylene:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see: http://www.ni-environment.gov.uk/water-home/wfd/north_western_rbp/nw-riverslakes.htm

Water body name: Owenkillew Newtownstewart (17) #
Water body identification code: UKGBNI1NW010102028
2009 status: Moderate
2015 Objective: Moderate
Upstream water bodies: Owenkillew River Gortin (13) (UKGBNI1NW010102027) Glenelly River (16) (UKGBNI1NW010102073) Glenelly River (18) (UKGBNI1NW010102096)
Downstream water body: Mourne River (UKGBNI1NW010102074)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Pearl Mussel, Copper	1	Assessment of river conditions through research and river surveys to locate sources of sediment	INTERREG IVA	2011
	2	Develop action plans for designated Freshwater Pearl Mussel Special Areas of Conservation	INTERREG IVA	2011
	3	Identify river remedies and possible options to improve Freshwater Pearl Mussel conditions and enhance recruitment	INTERREG IVA	2011
	4	Investigate possible sources of Copper to surface waters.	DOE NIEA	2011
	5	Assess sources of organic pollution including agriculture, NIW intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA	2010
	6	Investigate performance of industrial and private discharges to establish potential sources of pollution and review discharge compliance monitoring or IPPC site licence.	DOE NIEA	2011
	7	Continue to monitor fish populations and investigate the feasibility of habitat improvement as required	Loughs Agency	Ongoing
	8	Continue regulatory investigation and action against unlicensed activities impacting on fish populations and habitats	Loughs Agency	Ongoing
	9	Carryout Rapid Hydro morphology Assessment Technique (RHAT) survey to assess morphological impacts	DOE NIEA	2010
	10	Conduct local management area investigative surveys to assess benthic invertebrates	DOE NIEA	2010
	11	Monitor fish populations at selected sites	Loughs Agency	2010
	12	Consider site restoration and protection methods to reduce sedimentation and improve habitat.	INTERREG IVA	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 8.		

number in brackets refers to Map 3.

Water body name:	Glenknock River
Water body identification code:	UKGBNI1NW010102096
Catchment stakeholder group:	Upper Foyle
Local management area:	Owenkillew
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 50-100 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Moderate
(Confidence in overall status:	Low)

Benthic invertebrates:	Moderate
Macrophytes:	Moderate
Dissolved oxygen:	High
Soluble reactive phosphorus:	High
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	High

Hydrological regime:	High
Morphological conditions:	Moderate

* This element does not contribute to overall classification.

For more information on the classification process see: http://www.ni-environment.gov.uk/water-home/wfd/north_western_rbp/nw-riverslakes.htm

Water body name: Glenknock River (18) #
Water body identification code: UKGBNI1NW010102096
2009 status: Moderate
2015 Objective: Good
Upstream water bodies:
Downstream water body: Owenkillew Newtownstewart (17) (UKGBNI1NW010102028)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Invertebrates, Macrophytes	1	Assessment of river conditions through research and river surveys to locate sources of sediment	INTERREG IVA	2011
	2	Conduct local management area investigative surveys to assess benthic invertebrates	DOE NIEA	2010
	3	Carry out a river walk to determine and address sources of organic pollution affecting benthic invertebrates and resulting in low biotic scores and/or observed sewage fungus.	DOE NIEA	2011
	4	Assess sources of organic pollution including agriculture, NIW intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA	2010
	5	Continue to monitor fish populations and investigate the feasibility of habitat improvement as required	Loughs Agency	Ongoing
	6	Continue regulatory investigation and action against unlicensed activities impacting on fish populations and habitats	Loughs Agency	Ongoing
	7	Targeted education, advice and regulatory action to prevent pollution and protect the water environment	DOE NIEA	2011
	8	Investigate agricultural practices in the catchment through river walks and analysis of agricultural pollution incidents and cross compliance data and carry out site visits where necessary	DOE NIEA	2010
	9	Raise awareness of the issue of pesticide use and disposal	DOE NIEA	2011
	10	Promote best practice in the use of pesticides on farms	DARD Countryside Management Branch	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 8.		

number in brackets refers to Map 3.

Abbreviations

Term	Explanation
AFBI	Agri-Food and Biosciences Institute
ASSI	Area of Special Scientific Interest
DARD	Department of Agriculture and Rural Development
DOE	Department of the Environment
INTERREG IVA	The INTERREG IVA Programme for Northern Ireland, the Border Region of Ireland and Western Scotland is a European Union supported Structural Funds Programme which seeks to address the economic and social problems which result from the existence of borders. It supports strategic cross-border co-operation for a more prosperous and sustainable region.
NIEA	Northern Ireland Environment Agency
WWTW	Waste Water Treatment Works

Northern Ireland Environment Agency
www.ni-environment.gov.uk

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

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