Significant Water Management Issues

Bush Local Management Area Action Plan and Update

December 2013

An Agency within the Department of the Environment
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NIEA Northern Ireland Environment Agency
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LMA Action	Progress Update
Highlight external funding opportunities for water management projects to local partners	• NIEA has piloted a dedicated competitive grant scheme which will be used to allocate funds to voluntary 'not for profit' bodies and local councils to support their operational work in the delivery of agreed water focused environmental objectives identified in the DOE and NIEA business plans. In the current financial year the pilot scheme is focused on WFD objectives as identified in River Basin Management Plans. The total funding for this grant aid in 2012/13 and 2013/14 is a maximum of £100K, with individual projects capped at £10K. The Water Quality Improvement Grant has been promoted through the NIEA website, mailing lists and at CSG meetings. Further information is available at http://www.doeni.gov.uk/niea/water-home/wfd/water_quality_improvement_grant.htm • NIEA Challenge Fund (2012 & 2013) promoted through CSG meeting, NIEA website and mailing lists. Further information available at http://www.nienvironmentlink.org/ • Water Environment Community Awards promoted through CSG meeting, NIEA website and mailing list.
Organise two Catchment Stakeholder Group meetings per year to provide an open forum for discussion of water issues and encourage involvement in developing and implementing the Local Management Area Plan	Meetings held - 14th October 2010 - 19th April 2011 - 18th October 2011 - 25th April 2012 - 10th October 2012 - 1st May 2013 - 17th October 2013 Presentations and notes of meetings can be found at http://www.doeni.gov.uk/niea/water-home/wfd/public_partic_3/catchment_stakeholder_groups/bush_and_glens.htm
Promote and encourage local projects through Water Environment Community Awards	Water Environment Community Awards promoted through CSG meetings, NIEA website and through the CSG stakeholder mailing list. Environment Minister Alex Attwood presented nine community groups £1,000 each for their environmental improvement projects on 26thMay 2011. The 2011 winner in the Bush & Glens area was the Causeway Coast and Glens Heritage Trust for their 'Water of Life' project. A primary school from Armoy became 'water detectives' to report on

	the river from its source at Slieveanorra to the sea at Portballintrae. In 2012, the winner in the Bush & Glens area was Larne High School. The school developed a pond in the grounds of the school which they are using as an educational resource.
Promote the NIEA Water Pollution Hotline through advertising, promotion and waterside signage	• Official launch of new signage initiative by NIEA Chief Executive, Enler Anglers and Castlereagh Borough Council Countryside Access Officer – 18th April 2012. • The Water Pollution Hotline number has been included on 40 new signs produced by DCAL and these are now placed at various locations along the River Bush. • 'NIEA & Water Pollution – Improving Water Quality' postcards produced to raise awareness on the role of the NIEA Regional Operations team and who to contact in the event of a pollution incident. These have been distributed at a number of events and shows. • The pollution hotline number is promoted frequently on NIEA facebook and Twitter website.
Raise awareness of catchment management issues by release of relevant press articles and web publication of LMA e-zine. Support local community events	• 5 issues of the Bush e-zine have been published on the NIEA website and circulated to the Bush & Glens CSG electronic mailing list. E-zines can be viewed at http://www.doeni.gov.uk/niea/water-home/wfd/public_partic_3/lma_e-newsletters.htm • NIEA staff support a number of local groups, providing advice and guidance as required and attend events to raise awareness of the water environment: Stands provided at o Balmoral Show 2011, 2012, 2013 o Greenmount Centenary Show 16- 17 June 2013 o Horticulture 2012 at Greenmount 9 September 2012 (focusing on pesticide awareness and water quality issues) • Stand providing information on river basin management plans, local management area action plans and displays of 'good bugs/bad bugs'. o Bushmills Salmon Station Open Day 8 July 2011 o Water Detectives, Portballintrae 24 June 2011 o Bushmills Salmon Station Open Day 5 July 2012 o Bushmills Salmon and Whiskey Festival 10 September 2013 o Armoy Environment Day 23 July 2013 o Bushmills Salmon and Whiskey Festival 21 September 2013
Work with and support the Causeway Coast and Glens Heritage Trust in raising awareness of environmental issues and	Facilitated a site visit for 'water detectives' at the River Bush (Magherahoney) on 8th June 2011 and provided hands-on demonstration of river ecology. Attendance at Water for Life event organised by Causeway Coast and Glens Heritage Trust on

projects. Seek to identify solutions to water management problems and develop and promote the Bush LMA Action Plan	24th June 2011. Support the development of the Causeway Coast AONB action plan.
Collate existing information on location of aquatic invasive alien species	During river walks undertaken by NIEA, any sightings or suspected sightings of invasive alien species are collated and reported to Invasive Species Ireland http://invasivespeciesireland.com. Japanese knotweed has been identified in the following waterbodies – River Bush Lower, River Bush Upper, Well Water.
Create an inventory of physical structures within the river channel and bank structures	Staff from Water Management Unit have been liaising with the Ulster Angling Federation on a pilot study for the River Bush catchment. The Ulster Angling Federation have volunteered to ask relevant angling clubs to assess obstacles to fish movement, using a form agreed between the Federation and NIEA. A number of potential barriers to fish have been assessed in the River Bush Catchment.
Develop leaflets and articles to promote effective farm nutrient and waste management	Articles on Nitrates Action Plan and Phosphorus Regulations published in the 'Helping You To Comply booklets circulated to farmers and published on DARD website. 'Water quality plans in action' article published in the Farming Life October 2010. 'It's time now to check your silos' article published in Farmweek May 2013. 'Tidy Farms help prevent litter reaching the sea' article published in the Farming Life July 2013.
Encourage riparian zone management with an aim to improve biodiversity and minimise sedimentation through practical management measures on farms	Under the Nitrates Action Programme all farms must carry out crop and soil management to minimise soil erosion and nutrient run-off. This is verified during cross-compliance visits.
Promote the control of invasive alien species on farmland	Control is promoted through the DARD Northern Ireland Countryside Management Scheme (NICMS). Funding is available to progress around 1000 applications for admission to the scheme in January 2012, with a further 1300 joining in January 2013.
Raise awareness and promote the benefits of effective farm nutrient and waste management	'Landowner Awareness – Improving water quality in your local area' leaflet developed jointly with Loughs Agency, UFU and DARD to raise awareness amongst landowners.
	Annual presentation to CAFRE students on Water Framework Directive and water quality issues related to agriculture.
	'NIEA & Water Pollution – Improving water quality' postcards produced to raise awareness on the role of the NIEA Regional Operations team and who to contact if water pollution is observed.
	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. DARD has also developed an agri-environment training course for farmers dealing with farm wastes and nutrient management planning.

	LMA Cross Compliance Inspections and referrals carried out by NIEA Agricultural Regulations Team. 'Water Quality in Action' article published in Farming Life October 2012.
Carry out a visual inspection of wastewater treatment works to inform future upgrades	Inspections have been carried out at: Magherahoney, Glensbush Road, Altnahinch, Tureagh, Glenshesk Road, Bregagh Road, Gracehill, Drones, Hillcrest, Ballyknock, Ballyveely, Pharis Road, Magheramore Road, Hillside Road, Moyarget Road, Chatham Road, Maghernahar Road, Ballinlea Road, Straid Road, Lisnagat Road, Dervock, Ballyrock, Castlenagree, Priestland, Priestland Road, Derrykeighan, Bushmills, Stranocum Coolkeeran, Toberkeagh, Deffrick, Liscolman, Benvardin Road, Lisnisk, Ballyholme, Causeway Road Bushmills, Lisnagunogue, Leeke Road, Glenstaughey Road, Causeway Road, Dunseverick, Moss-side, Dervock, Armoy, Stranocum, Loughguile and Bushmills Waste Water Treatment Works.
Carry out a compliance assessment of Moss-side, Dervock and Bushmills WWTW to inform future upgrades	Moss-side, Dervock and Bushmills WWTWs were compliant with their Water Order consents in 2012.
Conduct a water resource assessment and target investigative study on heavily modified water body with a view to reviewing abstraction licence if necessary	A study was carried out during 2010/2011 to determine the influence of Altnahinch Dam and the release of compensatory flow on dissolved oxygen levels, temperature and flow on the downstream stretch of the River Bush. Results and recommendations from the study were presented at the Autumn meeting of the Bush & Glens CSG in 2012. The presentation is available at http://www.doeni.gov.uk/niea/altnahinch_investigation_patrick_murphy_autumn_2012.pdf
Carry out Rapid Hydromorphology Assessment Technique survey to ground truth heavily modified designation	Assessment carried out in the River Bush Upper waterbody in January 2011. The River Bush Upper water body will be split into 2 water bodies in the next river basin planning cycle based on the morphology assessment and the results of the Altnahinch Investigation.
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	River walks have been carried out in the following water bodies: River Bush Lower (4042) – January 2011 Stracam River (4006) – June, July 2011 Dervock River (4004) – July, August 2011 Doughery Water (4003) – July & August 2011 Flesk Water (4050) – April & August 2011 Burn Gushet River (4053) – September 2011 Moss-side Water (4035) – September 2011 Well Water (4038) – October 2011 Dunseverick River (3034) – March 2012 Blackwater River (4002) – July 2012

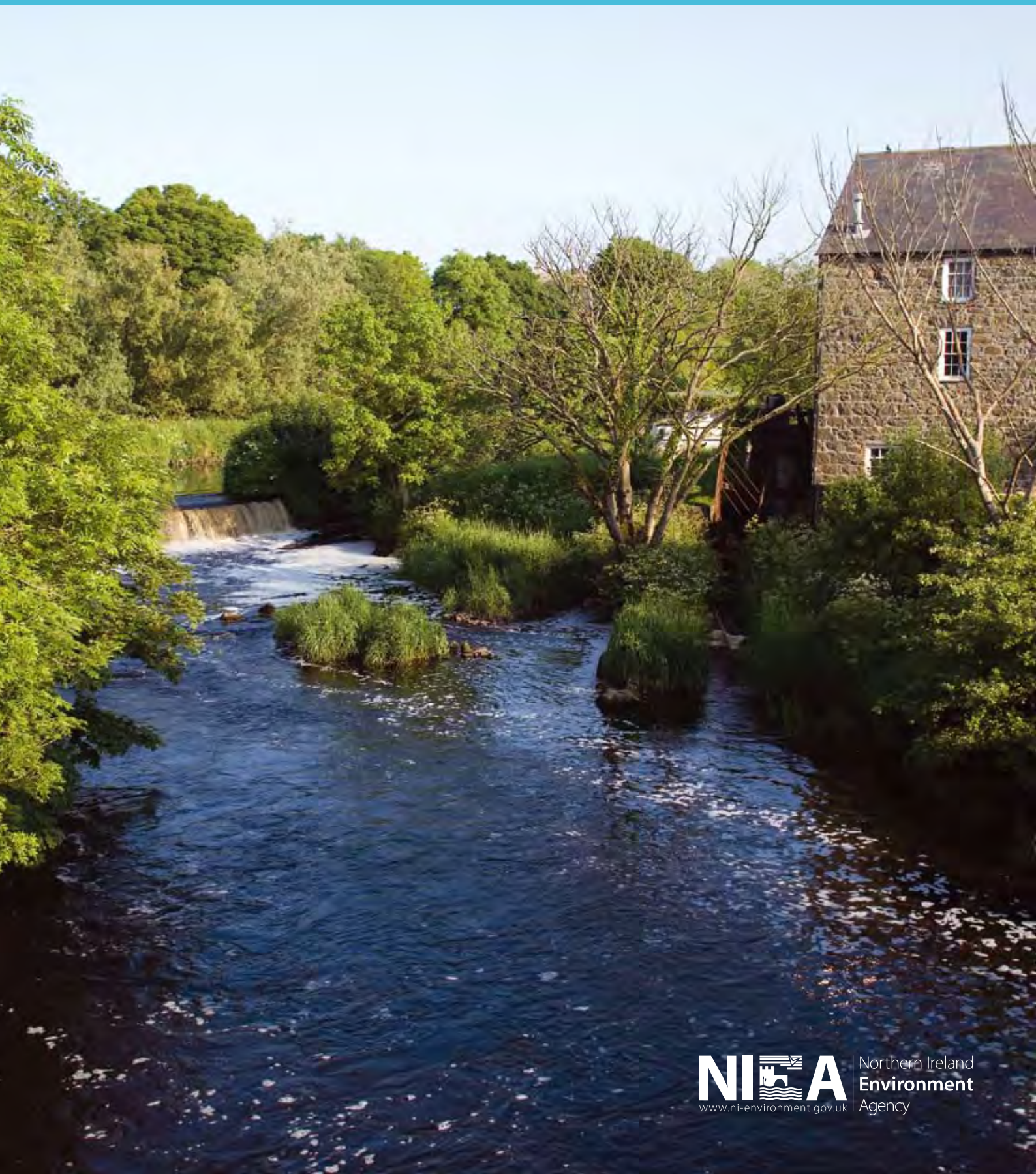
	The main issues identified include bank erosion, poaching by livestock, alien species, agricultural discharges, polluting discharges from septic tanks and fly-tipping. These issues are being addressed using follow-up visits from Agricultural Regulations and Regional Operations teams. Fly-tipping incidents have been referred to Waste Management unit. Alien species are collated and reported to Invasive Species Ireland (http://invasivespeciesireland.com). Further river walks are planned to obtain more information as required.
Complete the phosphorus nutrient budget work for Northern Ireland	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.
Carry out nursery habitat improvement works on the River Bush near Stranocum	This project was a collaborative study involving the North Antrim Angling Association, DCAL, Rivers Agency, NIEA, and University of Ulster. Work was carried out on a 850m of the River Bush downstream from Stranocum. Actions included the addition of cobble/boulder habitat and a thalweg (deeper centre line), gravel raking (to remove silt) addition, weed-removal, new fencing and tree planting.
Carry out surveys to establish baseline conditions for hydromorphology, invertebrate and macrophyte communities on the River Bush near Stranocum	Hydromorphology surved carried out June 2010. Invertebrate and macrophyte surveys carried out July 2010.
Carry out post-works surveys to establish impact of nursery habitat improvement works on the Rive Bush near Stranocum	Hydromorphology survey carried out February 2011. Invertebrate survey carried out October 2010 and August 2011.
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	River walks have been carried out in the following water bodies: River Bush Lower (4042) – January 2011 Stracam River (4006) – June, July 2011 Dervock River (4004) – July, August 2011 Doughery Water (4003) – July & August 2011 Flesk Water (4050) – April & August 2011 Burn Gushet River (4053) – September 2011 Moss-side Water (4035) – September 2011 Well Water (4038) – October 2011 Dunseverick River (3034) – March 2012 Blackwater River (4002) – July 2012 The main issues identified include bank erosion, poaching by livestock, alien species, agricultural discharges, polluting discharges from septic tanks and fly-tipping. These issues are being addressed using follow-up visits from Agricultural Regulations and Regional Operations teams. Fly-tipping incidents have been referred to Waste Management unit. Alien species are collated

	and reported to Invasive Species Ireland (http://invasivespeciesireland.com). Further river walks are planned to obtain more information as required. Additional biological monitoring surveys have been carried out at 43 across the River Bush catchment and Dunseverick River: June 2013 – 13 sites surveyed (Dervock, Stracam, Blackwater and Moss-side river water bodies)
Develop bathing water profiles for Porballintrae (Salmon Rock), Portstewart, Portrush (Whiterocks), Portrush (Mill) West, and Portrush (Curran) East Bathing Waters	Bathing water profiles were published on the NIEA website on the 24th March 2011 and were updated in May 2013. Profiles can be viewed at http://www.doeni.gov.uk/niea/water-home/quality/bathingqualityni/bathing_water_profiles.htm
Investigate sources of faecal coliforms in riverine inputs to Portrush (Curran) East Bathing Water	Investigative study carried out. Faecal coliforms sourced to pollution incident. Prosecution case prepared.
Investigate impact of forestry operations in Garry Wood and Slieveanorra Forest. Ascertain felling programme in the catchment and engage with forestry technical staff to ensure measures are in place to mitigate risks from felling	Meeting and site visits with DARD Forest Service operational staff to discuss mitigation measures employed.
Evaluate salmon spawning habitat potential	Surveys of natural salmon recruitment were undertaken on the upper River Bush in 2010 and 2011.
Assess sources of organic pollution including agriculture, WWTW and septic tanks (domestic and private)	63 site visits were carried out in the following water bodies: Burn Gushet (4053, 4054), Stracam, Inver Burn, Flesk Water, Dervock, River Bush Upper, Doughery Water, Dunseverick and Moss-side. The main issues identified included polluting discharges from septic tanks, bank erosion and livestock poaching.
Target education, advice and regulatory action to prevent pollution and protect the water environment	Two farms in the Moss-side waterbody visited by Regional Operations to highlight importance of preventing yard run-off to river.

Northern Ireland
Environment Agency

Action Plan 2010/2011

BUSH
Local Management Area



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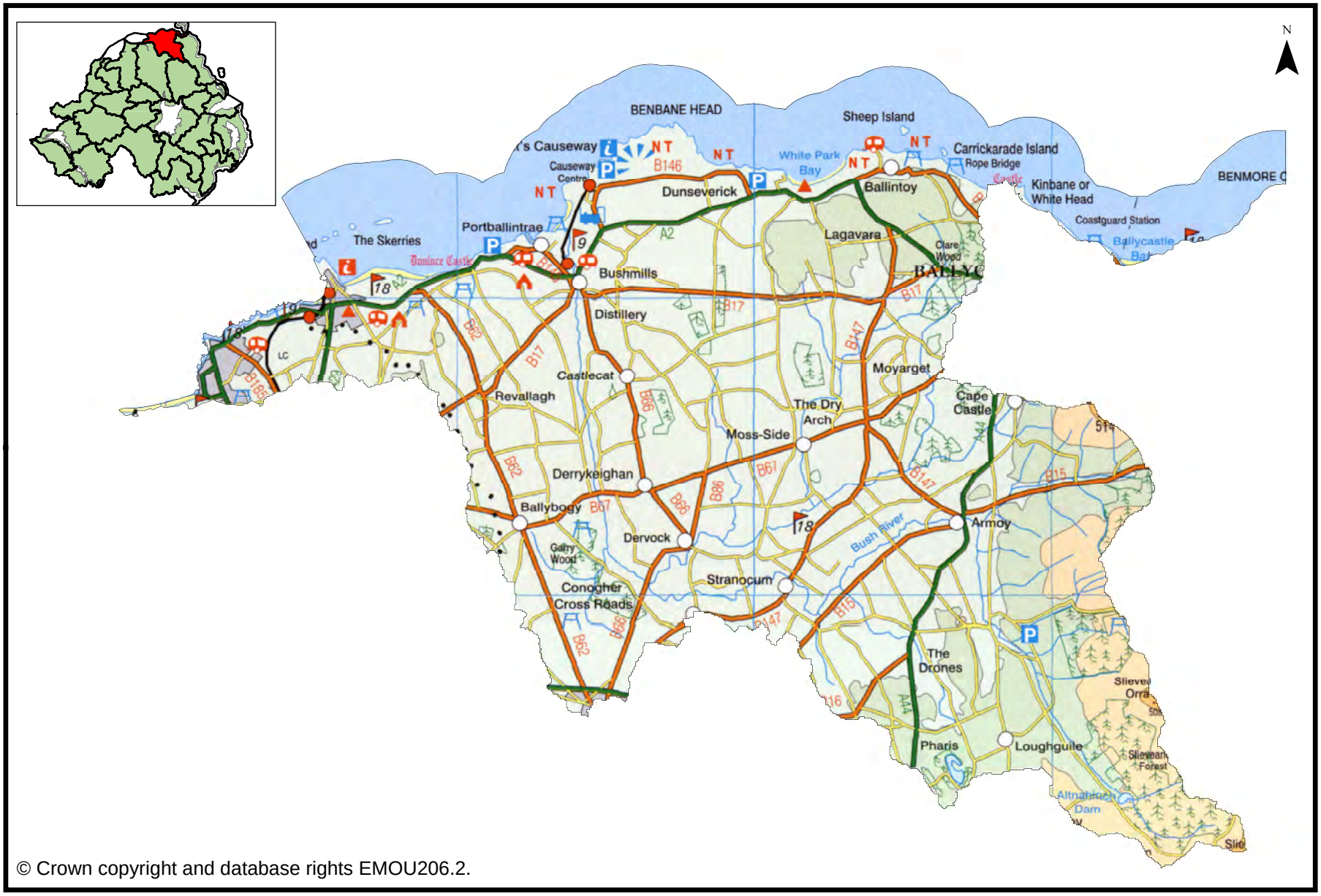
Map 1: Bush Local Management Area



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 Bush 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 Eastern River Basin District Programme of Measures section on the NIEA website at http://www.doeni.gov.uk/niea/water-home/wfd/north_eastern_rbp/ne-pom.htm.

Bush Local Management Area

The Bush LMA (Map 1) is in the North Eastern River Basin District and covers an area of approximately 490km^2. The main river is the River Bush that rises within the Antrim Plateau about 500m above sea level. It is joined by smaller tributaries before continuing through Bushmills and draining into the Atlantic Ocean at Bushfoot Strand, Portballintrae. The river supports indigenous stocks of Atlantic Salmon and Brown Trout and also a salmon hatchery to maintain stocking levels.

The dominant land use is improved grassland, forestry and arable farming. The main towns include Bushmills, Portrush, Portstewart, Dervock, Stranocum and Armoy. There are also numerous smaller villages scattered throughout the area.

This area also takes in the Giant's Causeway which is Northern Ireland's only UNESCO World Heritage Site and a number of other tourist attractions, including the world's oldest whiskey licensed distillery at Bushmills.

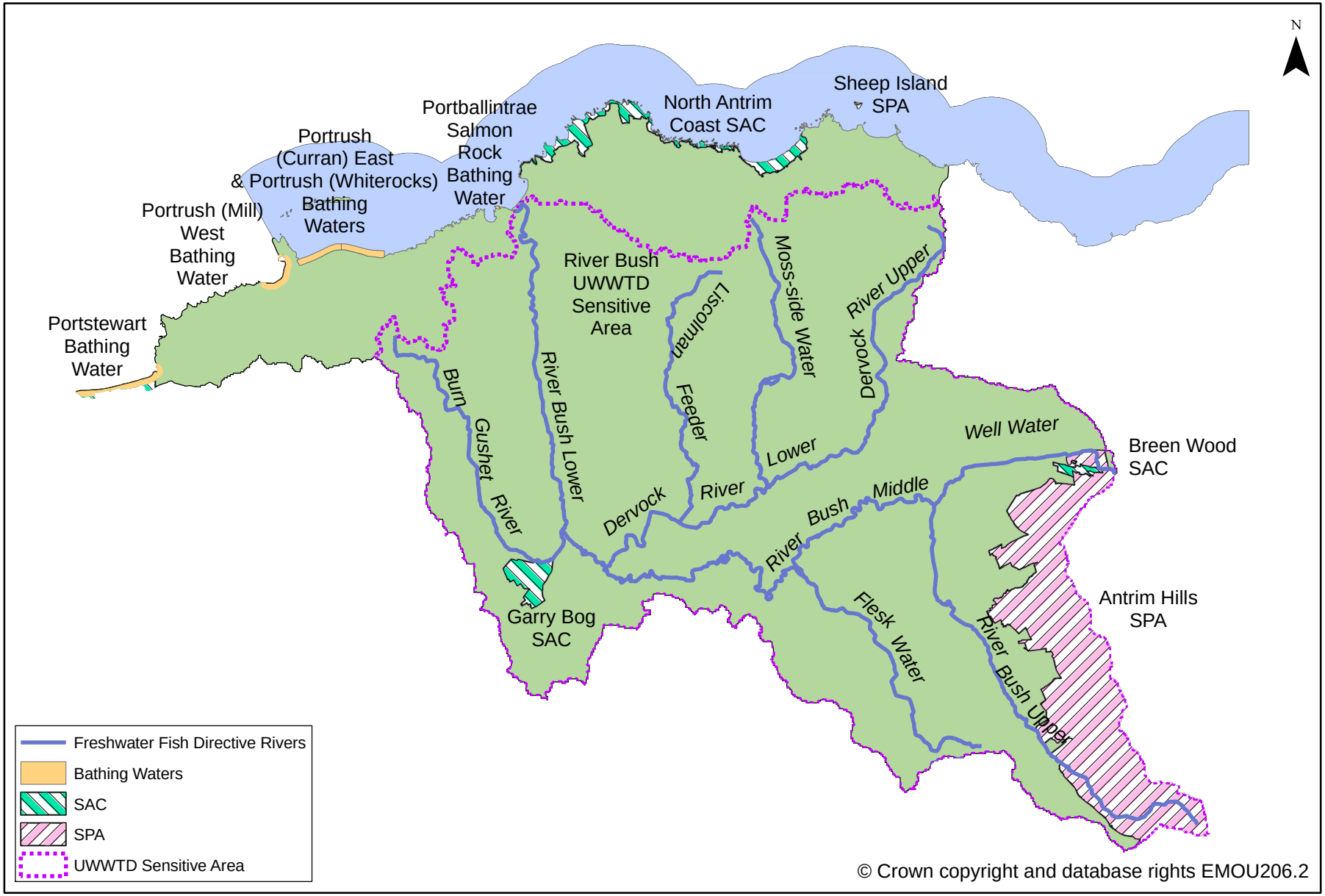
Protected areas in Bush LMA

The Bush 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 Bush LMA

Protected Area Type	Location
Waters used for the abstraction of drinking water (drinking water protected areas)	There is 1 drinking water protected river 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 131 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 5 identified bathing waters; Portrush (Mill) West, Portrush (Curran) East, Portrush (Whiterocks), Portstewart and Portballintrae Salmon Rock
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 Bush 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 3 water dependent Special Areas of Conservation (SAC); Garry Bog, Breen Wood and North Antrim Coast There are 2 water dependent Special Protection Areas (SPA); Sheep Island and Antrim Hills

Map 2: Protected Areas in Bush LMA

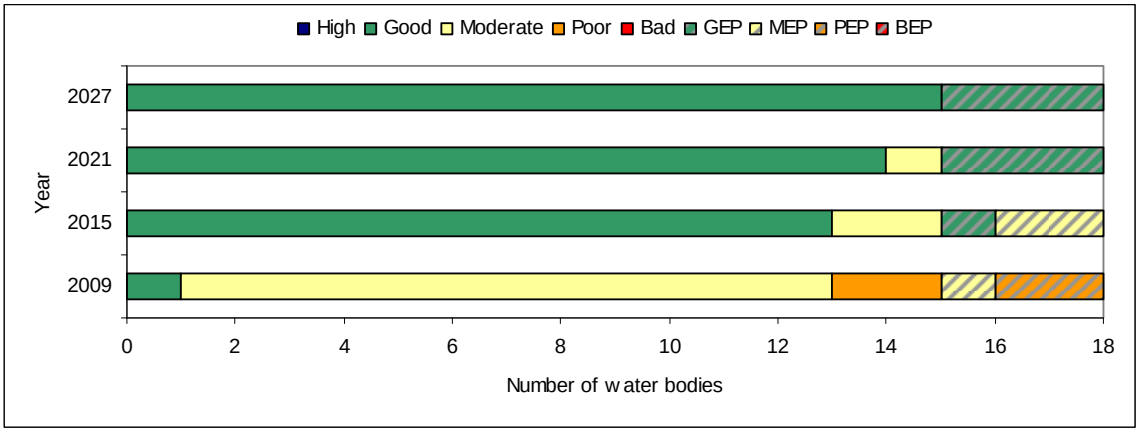


What improvements do we plan to achieve?

Surface Waters

The current status (as published in December 2009) and environmental objectives for surface waters (rivers, and coastal waters) are shown in Figure 1. We aim to achieve good status or better in 72% and good ecological potential (GEP) (for heavily modified water bodies) in 5.6% of our surface waters by 2015. Heavily modified water bodies are defined as water bodies that 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 waters have been deepened to allow for navigation; others have flood defences or have been dammed to provide a source of drinking water.

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



Groundwaters

There is one groundwater body within the Bush LMA; Ballycastle-Armoy. 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]

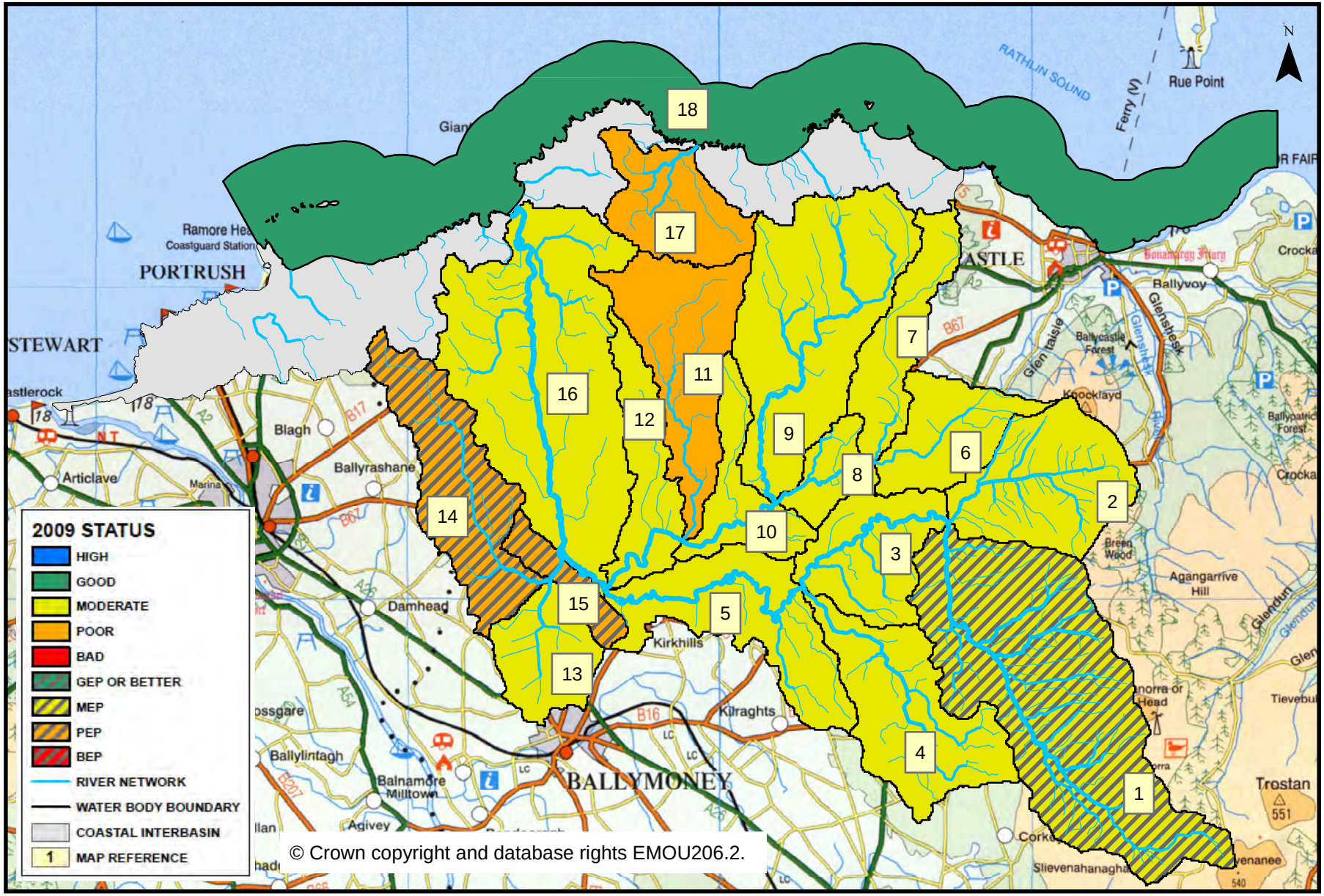
The current status and environmental objectives for each water body within the Bush LMA are summarised in Table 2. The Map Reference column can be used to identify the water bodies shown in Map 3. The water body map reference numbers are also shown in brackets after the water body names used later in the document. The planned actions for water bodies within the Bush 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	UKGBNI1NE040404049	River Bush Upper	MEP	GEP	9
2	UKGBNI1NE040404038	Well Water	Moderate	Good	11
3	UKGBNI1NE040404001	River Bush	Moderate	Good	13
4	UKGBNI1NE040404050	Flesk Water	Moderate	Good	15
5	UKGBNI1NE040404051	River Bush Stranocum	Moderate	Good	17
6	UKGBNI1NE040404040	Inver Burn	Moderate	Good	19
7	UKGBNI1NE040404037	Doughery Water	Moderate	Good	21
8	UKGBNI1NE040404003	Doughery Water	Moderate	Good	23
9	UKGBNI1NE040404035	Moss-side Water	Moderate	Good	25
10	UKGBNI1NE040404002	Black Water	Moderate	Good	27
11	UKGBNI1NE040404036	Stracam River	Poor	Moderate	29
12	UKGBNI1NE040404004	Dervock River	Moderate	Good	31
13	UKGBNI1NE040404055	Burn Gushet River	Moderate	Good	33
14	UKGBNI1NE040404053	Burn Gushet River	PEP	MEP	35
15	UKGBNI1NE040404054	Burn Gushet River	PEP	MEP	37
16	UKGBNI1NE040404042	River Bush Lower	Moderate	Good	39
17	UKGBNI1NE040403034	Dunseverick River	Poor	Moderate	43
18	UKGBNI6NE010	North Coast	Good	Good	45

Map 3: Current status of surface water bodies in Bush LMA



Generic Actions applied throughout the Local Management Area.

Action to be taken	Action to be taken by	Make operational by	Water body types
Highlight external funding opportunities for water management projects to local partners	DOE NIEA	Ongoing	All
Organise two CSG 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
Promote and encourage local projects through WATER Environment Community awards	DOE NIEA	2010	All
Promote the NIEA Water Pollution Hotline through advertising, promotion and waterside signage	DOE NIEA	2010	Rivers, Lakes
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

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
Benthic Invertebrates, Soluble Reactive Phosphorus, Phytobenthos	Work with and support the Causeway Coast and Glens Heritage Trust in raising awareness of environmental issues and projects. Seek to identify solutions to water management problems and develop and promote the Bush LMA Action Plan	DOE NIEA	2010	All
	Collate existing information on location of aquatic invasive alien species	DOE NIEA	2011	All
	Create an inventory of physical structures within the river channel and bank structures	DOE NIEA, Angling Clubs	2011	Rivers, Lakes
	Develop leaflets and articles to promote effective farm nutrient and waste management	DOE NIEA, DARD Countryside Management Branch	2010	All
	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
	Promote the control of invasive alien species on farmland	DARD Countryside Management Branch	Ongoing	Rivers, Lakes
	Raise awareness and promote the benefits of effective farm nutrient and waste management	DARD Countryside Management Branch	2010	All

Water body name:	River Bush Upper
Water body identification code:	UKGBNI1NE040404049
	This is a heavily modified water body.
Catchment stakeholder group:	Bush & Glens
Local management area:	Bush
2015 Objective:	Good ecological potential
2021 Objective:	Good ecological potential
2027 Objective:	Good ecological potential
The type of this water body is:	Alkalinity 10-50 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current ecological potential:	Moderate
(Confidence in ecological potential:	Low)

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

Hydrological regime:	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-heavily-modified.htm

Water body name: River Bush Upper (1) #
Water body identification code: UKGBNI1NE040404049
2009 status: Moderate Ecological Potential
2015 Objective: Good Ecological Potential or better
Upstream water bodies:
Downstream water body: River Bush (UKGBNI1NE040404001)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Hydrological regime	1	Carry out a visual inspection of Magherahoney, Glenbush Road and Altnahinch WWTWs to inform future upgrades	DOE NIEA	2011
	2	Conduct a water resource assessment and target investigative study on HMWB with a view to reviewing abstraction licence if necessary	DOE NIEA	2010
	3	Carry out Rapid Hydromorphology Assessment Technique (RHAT) survey to ground truth heavily modified designation	DOE NIEA	2010
	4	Investigate impact of forestry operations in Slieveanorra Forest. Ascertain felling programme in the catchment and engage with forestry technical field staff to ensure measures are in place to mitigate risks from felling	DOE NIEA, DARD Forest Service	2011
	5	Evaluate salmon spawning habitat potential	DCAL, AFBI	2013
		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:	Well Water
Water body identification code:	UKGBNI1NE040404038
Catchment stakeholder group:	Bush & Glens
Local management area:	Bush
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
Phytobenthos:	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:	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: Well Water (2) #
Water body identification code: UKGBNI1NE040404038
2009 status: Moderate
2015 Objective: Good
Upstream water bodies:
Downstream water body: River Bush (UKGBNI1NE040404001)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic Invertebrates, Phytobenthos	1	Assess sources of organic pollution including agriculture, WWTW and septic tanks (domestic and private)	DOE NIEA	2010
	2	Carry out a visual inspection of Tureagh and Glenshesk Road WWTWs to inform future upgrades	DOE NIEA	2011
	3	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
	4	Target education, advice and regulatory action to prevent pollution and protect the water environment	DOE NIEA	2011
	5	Complete the phosphorus nutrient budget work for Northern Ireland	AFBI	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:	River Bush
Water body identification code:	UKGBNI1NE040404001
Catchment stakeholder group:	Bush & Glens
Local management area:	Bush
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 100-200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Moderate
(Confidence in overall status:	Low)

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

Hydrological regime:	Good

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: River Bush (3) #
Water body identification code: UKGBNI1NE040404001
2009 status: Moderate
2015 Objective: Good
Upstream water bodies: River Bush Upper (UKGBNI1NE040404049)
Well Water (UKGBNI1NE040404038)
Downstream water body: River Bush Stranocum
(UKGBNI1NE040404051)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic Invertebrates	1	Assess sources of organic pollution including agriculture, WWTW, NIW intermittent discharges, sewage pumping stations and septic tanks (domestic and private)	DOE NIEA	2010
	2	Carry out a visual inspection of Bregagh Road and Gracehill WWTWs to inform future upgrades	DOE NIEA	2011
	3	Carry out compliance assessment of Armoy WWTW to inform future upgrades	DOE NIEA	2011
	4	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
	5	Target education, advice and regulatory action to prevent pollution and protect the water environment	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:	Flesk Water
Water body identification code:	UKGBNI1NE040404050
Catchment stakeholder group:	Bush & Glens
Local management area:	Bush
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 100-200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Moderate
(Confidence in overall status:	Low)

Benthic invertebrates:	Moderate
Fish:	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: Flesk Water (4) #
Water body identification code: UKGBNI1NE040404050
2009 status: Moderate
2015 Objective: Good
Upstream water bodies:
Downstream water body: River Bush Stranocum (UKGBNI1NE040404051)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic Invertebrates	1	Assess sources of organic pollution including agriculture, WWTW and septic tanks (domestic and private)	DOE NIEA	2010
	2	Carry out a visual inspection of Drones, Hillcrest, Ballyknock and Ballyveely WWTW to inform future upgrades	DOE NIEA	2011
	3	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
	4	Target education, advice and regulatory action to prevent pollution and protect the water environment	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:	River Bush Stranocum
Water body identification code:	UKGBNI1NE040404051
Catchment stakeholder group:	Bush & Glens
Local management area:	Bush
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 100-200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Moderate
(Confidence in overall status:	Low)

Benthic invertebrates:	Moderate
Dissolved oxygen:	High
Soluble reactive phosphorus:	Good
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: River Bush Stranocum (5) #
Water body identification code: UKGBNI1NE040404051
2009 status: Moderate
2015 Objective: Good
Upstream water bodies: River Bush (UKGBNI1NE040404001) Flesk Water (UKGBNI1NE040404050)
Downstream water body: River Bush Lower (UKGBNI1NE040404042)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic Invertebrates	1	Assess sources of organic pollution including agriculture, WWTW and septic tanks (domestic and private)	DOE NIEA	2010
	2	Carry out a visual inspection of Pharis Road WWTW to inform future upgrades	DOE NIEA	2011
	3	Carry out compliance assessment of Stranocum WWTW to inform future upgrades	DOE NIEA	2011
	4	Carry out nursery habitat improvement works	DCAL, AFBI, DARD Rivers Agency, DOE NIEA, North Antrim Anglers Association	2010
	5	Carry out surveys to establish baseline conditions for hydromorphology, invertebrate and macrophyte communities	DOE NIEA	2010
	6	Carry out post-works surveys to establish impact of nursery habitat improvement works	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:	Inver Burn
Water body identification code:	UKGBNI1NE040404040
Catchment stakeholder group:	Bush & Glens
Local management area:	Bush
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 100-200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1b - Likely to be at risk
Current overall status:	Moderate
(Confidence in overall status:	Low)

Benthic invertebrates:	Moderate
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: Inver Burn (6) #
Water body identification code: UKGBNI1NE040404040
2009 status: Moderate
2015 Objective: Good
Upstream water bodies:
Downstream water body: Doughery Water (UKGBNI1NE040404003)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic Invertebrates	1	Assess sources of organic pollution including agriculture, WWTW and septic tanks (domestic and private)	DOE NIEA	2010
	2	Carry out a visual inspection of Magheramore Road and Hillside Road WWTWs to inform future upgrades	DOE NIEA	2011
	3	Target education, advice and regulatory action to prevent pollution and protect the water environment	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:	Doughery Water
Water body identification code:	UKGBNI1NE040404037
Catchment stakeholder group:	Bush & Glens
Local management area:	Bush
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 100-200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Moderate
(Confidence in overall status:	Low)

Benthic invertebrates:	Moderate
Dissolved oxygen:	High
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	Good
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: Doughery Water (7) #
Water body identification code: UKGBNI1NE040404037
2009 status: Moderate
2015 Objective: Good
Upstream water bodies:
Downstream water body: Doughery Water (UKGBNI1NE040404003)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic Invertebrates	1	Assess sources of organic pollution including agriculture, WWTW and septic tanks (domestic and private)	DOE NIEA	2010
	2	Carry out a visual inspection of Moyarget Road WWTW to inform future upgrades	DOE NIEA	2011
	3	Target education, advice and regulatory action to prevent pollution and protect the water environment	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:	Doughery Water
Water body identification code:	UKGBNI1NE040404003
Catchment stakeholder group:	Bush & Glens
Local management area:	Bush
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 100-200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1b - Likely to be at risk
Current overall status:	Moderate
(Confidence in overall status:	Low)

Benthic invertebrates:	Moderate
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: Doughery Water (8) #
Water body identification code: UKGBNI1NE040404003
2009 status: Moderate
2015 Objective: Good
Upstream water bodies: Doughery Water (UKGBNI1NE040404037)
Inver Burn (UKGBNI1NE040404040)
Downstream water body: Black Water (UKGBNI1NE040404002)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic Invertebrates	1	Assess sources of organic pollution including agriculture and septic tanks (domestic and private)	DOE NIEA	2010
	2	Carry out a visual inspection of Chathan Road WWTW to inform future upgrades	DOE NIEA	2011
	3	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
	4	Target education, advice and regulatory action to prevent pollution and protect the water environment	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:	Moss-side Water
Water body identification code:	UKGBNI1NE040404035
Catchment stakeholder group:	Bush & Glens
Local management area:	Bush
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 100-200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Moderate
(Confidence in overall status:	Medium)

Benthic invertebrates:	Moderate	
Fish:	High	
Phytobenthos:	Moderate	
Dissolved oxygen:	Good	
Soluble reactive phosphorus:	Good	
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: Mossside Water (9) #
Water body identification code: UKGBNI1NE040404035
2009 status: Moderate
2015 Objective: Good
Upstream water bodies:
Downstream water body: Black Water (UKGBNI1NE040404002)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic Invertebrates, Phytobenthos	1	Assess sources of organic pollution including WWTW and septic tanks (domestic and private)	DOE NIEA	2010
	2	Carry out a visual inspection of Maghernahar Road, Ballinlea Road and Straid Road WWTWs to inform future upgrades	DOE NIEA	2011
	3	Carry out compliance assessment of Moss-side WWTW to inform future upgrades	DOE NIEA	2011
	4	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
	5	Target education, advice and regulatory action to prevent pollution and protect the water environment	DOE NIEA	2011
	6	Complete the phosphorus nutrient budget work for Northern Ireland	AFBI	2011
	7	Review green management and methods of water management used by golf club	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:	Black Water
Water body identification code:	UKGBNI1NE040404002
Catchment stakeholder group:	Bush & Glens
Local management area:	Bush
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 100-200 (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
Phytobenthos:	Moderate
Dissolved oxygen:	Moderate
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: Black Water (10) #
Water body identification code: UKGBNI1NE040404002
2009 status: Moderate
2015 Objective: Good
Upstream water bodies: Doughery Water (UKGBNI1NE040404003)
Mossside Water (UKGBNI1NE040404035)
Downstream water body: River Bush Lower (UKGBNI1NE040404042)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic Invertebrates, Phytobenthos, Dissolved Oxygen	1	Assess sources of organic pollution including agriculture, WWTW and septic tanks (domestic and private)	DOE NIEA	2010
	2	Carry out a visual inspection of Lisnagat Road WWTW to inform future upgrades	DOE NIEA	2011
	3	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
	4	Target education, advice and regulatory action to prevent pollution and protect the water environment	DOE NIEA	2011
	5	Complete the phosphorus nutrient budget work for Northern Ireland	AFBI	2011
	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
		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:	Stracam River
Water body identification code:	UKGBNI1NE040404036
Catchment stakeholder group:	Bush & Glens
Local management area:	Bush
2015 Objective:	Moderate Status
2021 Objective:	Moderate Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 100-200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Poor
(Confidence in overall status:	Low)

Benthic invertebrates:	Poor
Phytobenthos:	Moderate
Dissolved oxygen:	Poor
Soluble reactive phosphorus:	Moderate
pH:	High
Ammonia:	Good
Biochemical oxygen demand*:	Moderate
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: Stracam River (11) #
Water body identification code: UKGBNI1NE040404036
2009 status: Poor
2015 Objective: Moderate
Upstream water bodies:
Downstream water body: Dervock River (UKGBNI1NE040404004)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic Invertebrates, Phytobenthos, Dissolved Oxygen, Soluble Reactive Phosphorus	1	Assess sources of organic pollution including agriculture, WWTW, industrial sites and septic tanks (domestic and private)	DOE NIEA	2010
	2	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
	3	Target education, advice and regulatory action to prevent pollution and protect the water environment	DOE NIEA	2011
	4	Complete the phosphorus nutrient budget work for Northern Ireland	AFBI	2011
	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
		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:	Dervock River
Water body identification code:	UKGBNI1NE040404004
Catchment stakeholder group:	Bush & Glens
Local management area:	Bush
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 100-200 (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
Phytobenthos:	Moderate
Dissolved oxygen:	Moderate
Soluble reactive phosphorus:	Good
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: Dervock River (12) #
Water body identification code: UKGBNI1NE040404004
2009 status: Moderate
2015 Objective: Good
Upstream water bodies:
Downstream water body: River Bush Lower (UKGBNI1NE040404042)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic Invertebrates, Phytobenthos, Dissolved Oxygen	1	Assess sources of organic pollution including agriculture, WWTW, NIW intermittent discharges and septic tanks (domestic and private)	DOE NIEA	2010
	2	Carry out compliance assessment of Dervock WWTW to inform future upgrades	DOE NIEA	2011
	3	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
	4	Target education, advice and regulatory action to prevent pollution and protect the water environment	DOE NIEA	2011
	5	Complete the phosphorus nutrient budget work for Northern Ireland	AFBI	2011
	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
		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:	Burn Gushet River
Water body identification code:	UKGBNI1NE040404055
Catchment stakeholder group:	Bush & Glens
Local management area:	Bush
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	No type has been assigned
2005 risk assessment:	1b - Likely to be at risk
Current overall status:	Moderate
(Confidence in overall status:	Not measured)

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: Burn Gushet River (13) #
Water body identification code: UKGBNI1NE040404055
2009 status: Moderate
2015 Objective: Good
Upstream water bodies:
Downstream water body: Burn Gushet River (UKGBNI1NE040404054)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Pressures and Impacts	1	Assess sources of organic pollution including agriculture, WWTW, NIW intermittent discharges, sewage pumping stations and septic tanks (domestic and private)	DOE NIEA	2010
	2	Target education, advice and regulatory action to prevent pollution and protect the water environment	DOE NIEA	2011
	3	Investigate impact of forestry operations in Garry Wood. Ascertain felling programme in the catchment and engage with forestry technical field staff to ensure measures are in place to mitigate risks from felling	DOE NIEA, DARD Forest Service	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:	Burn Gushet River
Water body identification code:	UKGBNI1NE040404053
	This is a heavily modified water body.
Catchment stakeholder group:	Bush & Glens
Local management area:	Bush
2015 Objective:	Moderate ecological potential
2021 Objective:	Good ecological potential
2027 Objective:	Good ecological potential
The type of this water body is:	Altitude <80m, alkalinity 100-200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current ecological potential:	Poor
(Confidence in ecological potential:	Low)

Benthic invertebrates:	Poor
Dissolved oxygen:	Moderate
Soluble reactive phosphorus:	Moderate
pH:	High
Ammonia:	Good
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-heavily-modified.htm

Water body name: Burn Gushet River (14) #
Water body identification code: UKGBNI1NE040404053
2009 status: Poor Ecological Potential
2015 Objective: Moderate Ecological Potential
Upstream water bodies:
Downstream water body: Burn Gushet River (UKGBNI1NE040404054)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic Invertebrates Dissolved Oxygen Soluble Reactive Phosphorus	1	Assess sources of organic pollution including agriculture, WWTW, and septic tanks (domestic and private)	DOE NIEA	2010
	2	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
	3	Target education, advice and regulatory action to prevent pollution and protect the water environment	DOE NIEA	2011
	4	Complete the phosphorus nutrient budget work for Northern Ireland	AFBI	2011
	5	Investigate impact of forestry operations in Garry Wood. Ascertain felling programme in the catchment and engage with forestry technical field staff to ensure measures are in place to mitigate risks from felling	DOE NIEA, DARD Forest Service	2011
	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
		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:	Burn Gushet River
Water body identification code:	UKGBNI1NE040404054
	This is a heavily modified water body.
Catchment stakeholder group:	Bush & Glens
Local management area:	Bush
2015 Objective:	Moderate ecological potential
2021 Objective:	Good ecological potential
2027 Objective:	Good ecological potential
The type of this water body is:	Altitude <80m, alkalinity 100-200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current ecological potential:	Poor
(Confidence in ecological potential:	Low)

Benthic invertebrates:	Poor
Dissolved oxygen:	Bad
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	Good
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-heavily-modified.htm

Water body name: Burn Gushet River (15) #
Water body identification code: UKGBNI1NE040404054
2009 status: Poor Ecological Potential
2015 Objective: Moderate Ecological Potential
Upstream water bodies: Burn Gushet River (UKGBNI1NE040404053)
Burn Gushet River (UKGBNI1NE040404055)
Downstream water body: River Bush Lower (UKGBNI1NE040404042)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic Invertebrates, Dissolved Oxygen	1	Assess sources of organic pollution including agriculture and septic tanks (domestic and private)	DOE NIEA	2010
	2	Target education, advice and regulatory action to prevent pollution and protect the water environment	DOE NIEA	2011
	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 Garry Wood. Ascertain felling programme in the catchment and engage with forestry technical field staff to ensure measures are in place to mitigate risks from felling	DOE NIEA, DARD Forest Service	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:	River Bush lower
Water body identification code:	UKGBNI1NE040404042
Catchment stakeholder group:	Bush & Glens
Local management area:	Bush
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 100-200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Moderate
(Confidence in overall status:	Low)

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

Hydrological regime:	High
Morphological conditions:	Moderate

Benzene:	Good
Chloroform (trichloromethane):	Good
Dissolved copper:	Good
Carbon tetrachloride:	Good
Total DDT:	Good
Diazinon:	Good
1,2-Dichloroethane:	Good
Endosulphan:	Good
g-HCH (Lindane):	Good
Hexachlorobenzene:	Good
Hexachlorobutadiene:	Good
Napthalene:	Good
Pentachlorophenol:	Good
Phenol:	Good
Tetrachloroethylene:	Good
Trichloroethylene:	Good
Trifluralin:	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: River Bush Lower (16) #
Water body identification code: UKGBNI1NE040404042
2009 status: Moderate
2015 Objective: Good
Upstream water bodies: River Bush Stranocum (UKGBNI1NE040404051) Burn Gushet River (UKGBNI1NE040404054)
Downstream water body:

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic Invertebrates	1	Assess sources of organic pollution including agriculture, WWTW, and septic tanks (domestic and private)	DOE NIEA	2010
	2	Carry out a visual inspection of Ballyrock, Castlenagree, Priestland, Priestland Road and Derrykeighan WWTW to inform future upgrades	DOE NIEA	2011
	3	Carry out compliance assessment of Bushmills WWTW to inform future upgrades	DOE NIEA	2011
	4	Target education, advice and regulatory action to prevent pollution and protect the water environment	DOE NIEA	2011
	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	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:	Dunseverick River
Water body identification code:	UKGBNI1NE040403034
Catchment stakeholder group:	Bush & Glens
Local management area:	Bush
2015 Objective:	Moderate Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 100-200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Poor
(Confidence in overall status:	Low)

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

Hydrological regime:	High

* 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: Dunseverick River (17) #
Water body identification code: UKGBNI1NE040403034
2009 status: Poor
2015 Objective: Moderate
Upstream water bodies:
Downstream water body:

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic Invertebrates	1	Assess sources of organic pollution including agriculture, WWTW and septic tanks (domestic and private)	DOE NIEA	2010
	2	Target education, advice and regulatory action to prevent pollution and protect the water environment	DOE NIEA	2011
	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
		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:	North Coast
Water body identification code:	UKGBNI6NE010
Catchment stakeholder group:	Bush and Glens
Local management area:	Bush
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Euhaline, mesotidal, exposed
2005 risk assessment:	1a - At risk
Current overall status:	Good

Benthic invertebrates:	High
Macroalgae:	High
Hydromorphology:	High
General conditions:	Good
Dissolved oxygen:	High
Dissolved inorganic nitrogen:	Good
Alien species:	High

For more information on the classification process see: http://www.ni-environment.gov.uk/water-home/wfd/neagh_bann_rbp/neagh-coastal.htm

Water body name: North Coast (18) #
Water body identification code: UKGBNI6NE010
2009 status: Good
2015 Objective: Good
Upstream water bodies:
Downstream water body:

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
	1	Develop bathing water profiles for Portballintrae (Salmon Rock), Portstewart, Portrush (Whiterocks), Portrush (Mill) West, and Portrush (Curran) East Bathing Waters	DOE NIEA	2011
	2	Investigate sources of faecal coliforms in riverine inputs to Portrush (Curran) East Bathing Water	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.

Abbreviations

Term	Explanation
AFBI	Agri-Food and Biosciences Institute
DARD	Department of Agriculture and Rural Development
DCAL	Department of Culture, Arts and Leisure
DOE	Department of the Environment
EP	Ecological Potential – the status of a heavily modified water body measured against the maximum ecological quality it could achieve given the constraints imposed upon it by those heavily modified characteristics necessary for its use. There are 4 classes for the status of heavily modified water bodies: good ecological potential or better (GEP), moderate ecological potential (MEP), poor ecological potential (PEP) and bad ecological potential (BEP).
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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