Significant Water Management Issues

South Down Local Management Area Action Plan and Update

December 2013

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South Down LMA Action Plan Update – December 2013

LMA Wide Actions

Action to be taken	Update
Raise awareness of catchment management issues by release of relevant press articles and web publication of Carlingford and Mourne CSG e-zine. Support local community events.	3 issues of the Carlingford and Mourne E-zine mailed to CSG contacts. E-zines can be accessed at: http://www.doeni.gov.uk/niea/water-home/wfd/public_partic_3/lma_e-newsletters.htm Attendance at Balmoral Show demonstrating the use of the River Basin Planning Web-mapper. NIEA had a strong presence at the Clipper Event in Derry 5th-8th July 2012 where we focused mainly on key marine issues. NIEA provided a stand at the Greenmount Centenary event, 16th & 17th June 2012 – focusing on river basin planning and water quality issues. NIEA provided the Horticulture 2012 event at Greenmount on 19th September 2012, where our main focus was pesticide awareness and water quality issues.
Highlight external funding opportunities for water management projects to local partners	Water Environment Community Awards, Water Quality Improvement Grant and Northern Ireland Environment Link's Challenge Grant promoted through CSG meeting, NIEA website and e-mail.
Organise two CSG meetings per year to provide an open forum for discussion on water issues and encourage involvement in developing and implementing the Strangford Management Area Plan	Presentations and Note of meetings can be found on: http://www.doeni.gov.uk/niea/water-home/wfd/public_partic_3/catchment_stakeholder_groups/carlingford_and_mourne.htm
Promote and encourage local projects through WATER Environment Community awards	Awards promoted through CSG meeting, NIEA website and e-mail. Environment Minister Alex Attwood presented a winning entry from South Down LMA. The Lecale Conservation Society received £1000 for their environmental improvement project on 26th May 2011. The project involved installing a tern raft and offer educational resources to the local community and schools.
Promote NIEA Water Pollution Hotline through advertising, promotion and signage	Official launch of new signage took place on 18th April 2011 by NIEA Chief Executive John McMillan. In attendance was Ian Kittle from Inler Anglers and Tracey Connelly the Countryside Access Officer at Castlereagh Borough Council. 5 signs erected at locations suggested by Shimna Angling Club, Dundrum Angling Club and DCAL Inland Fisheries on Moneycarragh, Shimna and Burren Rivers. Hotline number is promoted frequently on NIEA

	facebook page and NIEA Twitter website.
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 South Down LMA Action Plan.	NIEA staff attended Balmoral Show and demonstrated the use of the River Basin Planning Webmapper 2011, 2012 & 2013. *'Householder Awareness - Improving water quality in your local area'* leaflet has been developed jointly with Loughs Agency and NIW. Leaflet aims to raise awareness amongst householders on household issues e.g. septic tank maintenance & pesticide use. Leaflets distributed at events attended within the LMA and to local groups. NIEA WMU staff provided and supported a stand at the Greenmount Centenary event 16th & 17th June 2012 – demonstrated the recording of water invertebrates and the link to water quality & classification. NIEA provided the Horticulture 2012 event at Greenmount on 19th September 2012, where our main focus was pesticide awareness and water quality issues.
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. Farms are now selected for inspections under Cross Compliance using a combination of risk factors; these include soil type, hydrology, and water bodies not meeting their objectives.
Promote the control of invasive alien species on farmland	Promoted through the DARD Northern Ireland Countryside Management Scheme (NICMS).
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, DARD to raise awareness amongst landowners. The issues included in this were initially raised through implementation meetings e.g. gravel removal, river litter & plastic litter. Presentation to CAFRE student s on Water Framework Directive and water quality issues related to agriculture - April 2011. '*NIEA & Water Pollution - Improving water quality*' postcards produced to raise awareness on the role of the NIEA Regional Operation 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 Practise' 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 Plans in Action' article published in Farming Life October 2012.
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.
Targeted education, advice and regulatory action to prevent pollution and protect the water environment	NIEA incorporates the 'Reduce Reuse Recycle', 'Bag It and Bin It, 'Dirty Dozen', 'Stop and Think (Not Down The Sink)' messages in 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.
Develop leaflets and articles to promote effective farm nutrient and waste management	'Water Quality Plans in Action' article published in Farming Life October 2010. DARD Countryside Management Branch regularly produces information leaflets for farmers on Agri-Environment issues and the Nitrates Directive.

South Down LMA Action Plan Update – December 2013

Water Body Actions

Carry out river walks to assess sources of organic	River walks have been carried out in: Killough River, Burren River, Moneycarragh River, Carrigs River, Rathmullan Burn and Ardilea Burn
Collate existing information on location of aquatic (including river bank) invasive alien species	During the course of river walks and undertaken by NIEA any sightings or suspected sightings of invasive alien species are collated and reported to Invasive Species Ireland.
Conduct a water resource assessment to inform a review of abstraction licenses	Water Resource Assessment completed in January 2011 for all river water bodies within South Down LMA to ascertain water availability and water resource status.
Conduct LMA investigative surveys to assess benthic invertebrates	87 sites surveyed in: Burren River, Moneycarragh River, Carrigs River, Killough River, Tyrella River, Blackstaff River, Shimna River, Annalong River, Mullagh River, Kilkeel River and Ardilea Burn
Create an inventory of physical structures within the river channel and bank structures	An inter-agency River Restoration and Continuity Group has been set up to, amongst other things, collate and co-ordinate all aspects of river restoration and continuity issues
Assess sources of organic pollution from: Agriculture Industrial Discharges Northern Ireland Water Limited sewerage services	 NIEA's Agriculture Regulations Team undertake a series of planned and unplanned regulatory cross compliance visits to farms Compliance inspections have continued to be carried out for industrial discharges and IPPC regulated sites Compliance assessments are carried out at: Ardglass, Ballykinler and Kilkeel Visual Inspections carried out at: Maghera, Glassdrumman, Ardglass, Ballymartin, Blackrock, Killough, Silent Valley, Dundrum, Castlewellan and Drumaroad
Review Rivers Agency's maintenance program	Maintenance program reviewed to ascertain potential impacts on water body morphology conditions
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	LMA Cross Compliance inspections are carried out by WMU Agricultural Regulations Team. Farms are now selected for inspections under Cross Compliance using a combination of risk factors; these include soil type, hydrology, and water bodies not meeting their objectives.
Monitor fish populations	Monitoring of fish populations carried out at: Annalong River, Shimna River and Kilkeel River
Highlight location of *Spartina anglica* to Spartina Control Group and promote education and awareness leaflets dealing with Invasive species	During the course of river walks and field work undertaken by NIEA any sightings or suspected sightings of *Spartina* are reported to the *Spartina* Control Group.

Carryout Rapid Hydro morphology Assessment Technique (RHAT) survey to ground truth heavily modified designation	RHAT Surveys carried out in: Shimna River, Annalong River and Kilkeel River
Investigate impact of forestry operations in water bodies. Ascertain felling programme in the catchment and engage with forestry technical field staff/ private landowners to ensure measures are in place to mitigate risks from felling.	Met with Forestry personnel to highlight importance of water quality. Forestry Service follows industry guidelines re: water quality.
Investigate the feasibility for in-channel fishery habitat enhancement	Feasibility studies have been or will be carried out in: Shimna River
Continue to monitor to confirm evidence of trophic status of coastal waters	The Marine Strategy Framework Directive aims to achieve Good Environmental Status in Europe's Seas by 2020. NIEA and AFBI's joint 'State of the Seas' Report is largely structured around the new requirements of this directive. Chapter 6 of the 'State of the Seas' report was published in January 2011 contains the latest information on the trophic status of coastal waters around Northern Ireland. Trophic status is assessed by measuring the elements linked to enrichment by nutrients accompanied by an undesirable disturbance to plant or animal life. The report can be accessed at: http://www.doeni.gov.uk/niea/water-home/state_of_the_seas_ni_report.htm .
Develop Bathing Water profiles for Murlough, Newcastle and Tyrella	Bathing Water Profiles can be accessed at: http://www.doeni.gov.uk/niea/waterhome/quality/bathingqualityni/bathing_water_profiles.htm

Northern Ireland
Environment Agency

Action Plan 2010/2011

SOUTH DOWN
Local Management Area

Northern Ireland Environment Agency
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Map 1: South Down 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 South Down 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.

South Down Local Management Area

The South Down LMA (Map 1) is within the North Eastern River Basin District and covers an area of approximately 500 km^2. The area includes the eastern part of the Mourne Mountains, as well as the land area draining to Dundrum Bay and Killough Harbour. The main rivers that drain from the mountains are the Shimna and Burren Rivers at Newcastle, with the Kilkeel and Annalong Rivers to the south. The Carrigs, Moneycarragh and Blackstaff Rivers all drain into Dundrum Bay Inner which is important as a shellfish water and lies within the Murlough Special Area of Conservation. There are also a number of smaller coastal rivers that flow directly to the sea and a number of tributaries to the main rivers already named. Killough Harbour is also a shellfish water and is a Special Protected Area as it is an important habitat for Pale-Bellied Brant Goose. Dundrum Bay Outer includes the sea area that extends one nautical mile from the coastline between St. John's Point and Glassdrumman and contains the three designated bathing waters within this LMA.

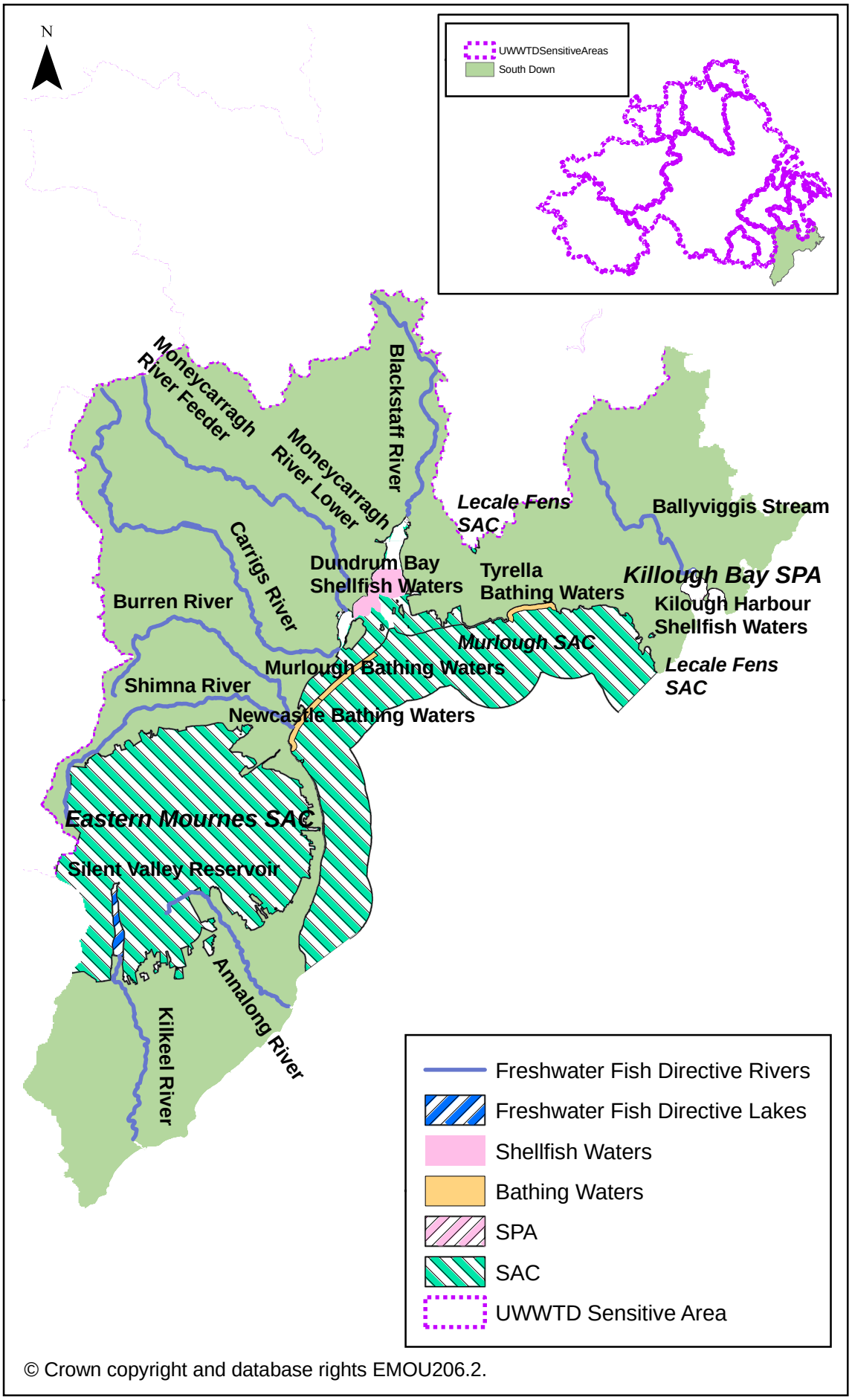
Protected areas in South Down LMA

The South Down 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 South Down LMA

Protected Area Type	Location
Waters used for the abstraction of drinking water (drinking water protected areas)	There are 4 drinking water protected rivers There is 1 drinking water protected lake There is 1 drinking water protected groundwater
Areas designed to protect economically significant aquatic species	
Freshwater Fish Directive (78/659/EEC)	There are 106 km of rivers and 0.8km^2 of lakes identified under the Freshwater Fish Directive, all designated as salmonid
Shellfish Waters Directive (79/923/EC)	There are 2 designated shellfish waters; Dundrum Bay and Killough Harbour
Bathing Waters	
These are bathing waters identified under the Bathing Water Directive (76/160/EEC)	There are 3 identified bathing waters; Murlough, Tyrella and Newcastle
Nutrient Sensitive Areas	
Areas designated as sensitive under the Urban Waste Water Treatment Directive (91/271/EEC) and the	The Newcastle bathing water is designated under Annex IIA (c) of the Urban Wastewater Treatment Directive as it fails to meet the standards of the Bathing Waters Directive
Nitrates Directive (91/676/EEC)	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)	There are 3 water dependent Special Areas of Conservation (SAC); Murlough, Eastern Mournes and Lecale Fens
Birds Directive (79/409/EEC)	There is 1 water dependent Special Protection Area (SPA); Killough Bay

Map 2: South Down Protected Areas

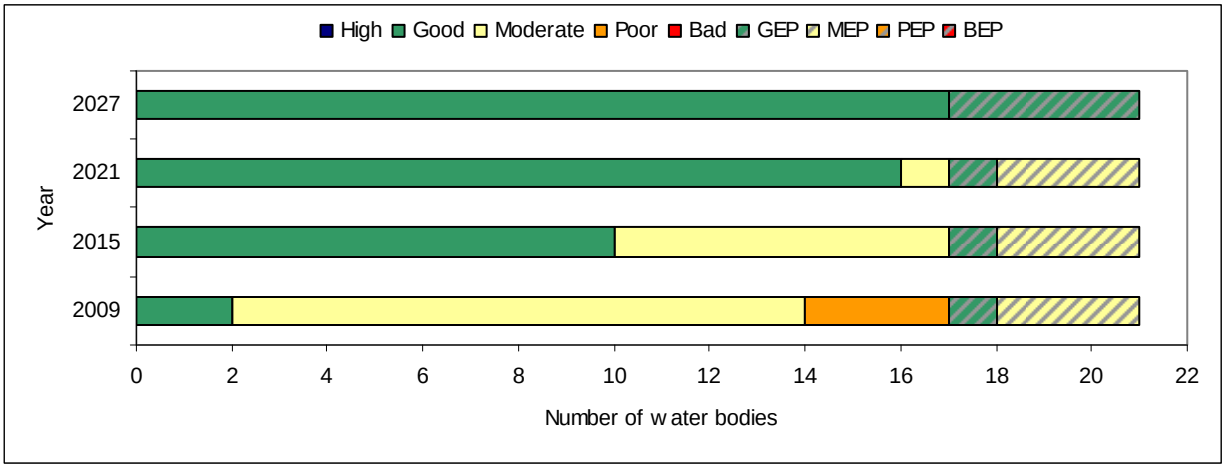


What improvements do we plan to achieve?

Surface Waters

The current status (as published in December 2009) and environmental objectives for surface waters (rivers, lakes and coastal waters) are shown in Figure 1. We aim to achieve good status or better in 47.6% and good ecological potential (GEP) (for heavily modified water bodies) in 4.8% 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 South Down LMA



Groundwater

There is one groundwater body within the South Down LMA; Downpatrick. 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 South Down 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 South Down 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	UKGBNI1NE050505068	Killough River	Moderate	Good	9
2	UKGBNI1NE050505069	Killough River	Moderate	Good	11
3	UKGBNI1NE050505037	Killough River	Moderate	Good	13
4	UKGBNI1NE050505062	Tyrella Burn	Poor	Moderate	15
5	UKGBNI1NE050505052	Blackstaff River Upper	Moderate	Moderate	17
6	UKGBNI1NE050505061	Blackstaff River	Moderate	Moderate	19
7	UKGBNI1NE050505060	Ardilea Burn	Poor	Moderate	21
8	UKGBNI1NE050505067	Moneycarragh River	Moderate	Good	23
9	UKGBNI1NE050505059	Moneycarragh River Tributary	Moderate	Good	25
10	UKGBNI1NE050505063	Moneycarragh River	Moderate	Good	27
11	UKGBNI1NE050505113	Carrigs River	Poor	Moderate	29
12	UKGBNI1NE050505111	Burren River	Moderate	Moderate	31
13	UKGBNI1NE050505110	Shimna River	MEP	MEP	33
14	UKGBNI1NE050505114	Kilkeel River	MEP	MEP	35
15	UKGBNI3NE0019	Silent Valley Reservoir	GEP	GEP	37
16	UKGBNI1NE050505036	Annalong River	MEP	MEP	39
17	UKGBNI1NE050505044	Mullagh River	Moderate	Good	41
18	UKGBNI1NE050505097	Aughrim River	Good	Good	43
19	UKGBNI1NE050505035	Tullybrannigan River	Good	Good	45
20	UKGBNI6NE160	Dundrum Bay Inner	Moderate	Good	47
21	UKGBNI6NE150	Dundrum Bay Outer	Moderate	Moderate	49

Map 3: South Down Status

Generic Actions applied throughout the Local Management Area.

Action to be taken	Action to be taken by	Make operational by	Water body types
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
Highlight external funding opportunities for water management projects to local partners	DOE NIEA	ongoing	All
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
Promote and encourage local projects through WATER Environment Community awards	DOE NIEA	2010	All
Promote the NIEA Water Pollution Hotline through increased advertising, promotion and waterside signage.	DOE NIEA	ongoing	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
Benthic invertebrates, Macrophytes, Morphological conditions, Dissolved oxygen, Diatoms, Phosphate, pH, Copper, Zinc, Dissolved inorganic nitrogen, Ammonia, Hydrology, Fish	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	Ongoing	Rivers
	Encourage riparian zone management with an aim to improve biodiversity and minimise sedimentation through practical management measures on farms.	DARD Countryside Management Branch	2010	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	Ongoing	All
	Review the relevance of the nutrient budget in the context of the South Down LMA.	DOE NIEA	2012	All
	Targeted education, advice and regulatory action to prevent pollution and protect the water environment.	DOE NIEA, DARD	2011	All
	Develop leaflets and articles to promote effective farm nutrient and waste management.	DOE NIEA, DARD Countryside Management Branch	2010	All
	Complete the phosphorus nutrient budget work for Northern Ireland.	AFBI	2011	All

Water body name:	Killough River
Water body identification code:	UKGBNI1NE050505068
Catchment stakeholder group:	Strangford & Lecale
Local management area:	South Down
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Alkalinity >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
Macrophytes:	Moderate
Dissolved oxygen:	High
Soluble reactive phosphorus:	High
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	High

Hydrological regime:	High

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/north_eastern_rbp/ne-riverslakes.htm

Water body name: Killough River (1) #
Water body identification code: UKGBNI1NE050505068
2009 status: Moderate
2015 Objective: Good
Upstream water bodies:
Downstream water body: Killough River (UKGBNI1NE050505037)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates, Macrophytes	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	Collate existing information on location of aquatic (including river bank) invasive alien species.	DOE NIEA, angling clubs	Ongoing
	3	Conduct a water resource assessment to inform a review of abstraction licenses.	DOE NIEA	2010
	4	Conduct LMA investigative surveys to assess benthic invertebrates.	DOE NIEA	2011
	5	Create an inventory of river channel and bank physical structures.	DOE NIEA, angling clubs	Ongoing
	6	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, DARD	2011
	7	Investigate the cause of invertebrate suppression in Killough Harbour SPA and designated shellfish water from the inflowing Killough River including river catchment survey.	DOE NIEA	2011
	8	Review River's Agency maintenance program.	DOE NIEA	2011
	9	Visual inspection of WWTWs <250 PE to inform future upgrades (Ballynagross WWTW).	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:	Killough River
Water body identification code:	UKGBNI1NE050505069
Catchment stakeholder group:	Strangford & Lecale
Local management area:	South Down
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Alkalinity >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
Macrophytes:	Moderate
Dissolved oxygen:	Good
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.doeni.gov.uk/niea/water-home/wfd/north_eastern_rbp/ne-riverslakes.htm

Water body name: Killough River (2) #
Water body identification code: UKGBNI1NE050505069
2009 status: Moderate
2015 Objective: Good
Upstream water bodies:
Downstream water body: Killough River (UKGBNI1NE050505037)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates, Macrophytes, Morphology	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	Carry out river walks to determine and address sources of organic pollution affecting benthic invertebrates.	DOE NIEA	2011
	3	Collate existing information on location of aquatic (including river bank) invasive alien species.	DOE NIEA, angling clubs	Ongoing
	4	Conduct a water resource assessment to inform a review of abstraction licenses.	DOE NIEA	2010
	5	Conduct LMA investigative surveys to assess benthic invertebrates.	DOE NIEA	2011
	6	Create an inventory of river channel and bank physical structures.	DOE NIEA, angling clubs	Ongoing
	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, DARD	2010
	8	Review industrial consent compliance at discharging sites within catchment.	DOE NIEA	2011
	9	Review River's Agency maintenance program.	DOE NIEA, angling clubs	Ongoing
	10	Visual inspection of WWTWs <250 PE to inform future upgrades (Ballee WWTW).	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:	Killough River
Water body identification code:	UKGBNI1NE050505037
Catchment stakeholder group:	Strangford & Lecale
Local management area:	South Down
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Alkalinity >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
Macrophytes:	Moderate
Dissolved oxygen:	Good
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.doeni.gov.uk/niea/water-home/wfd/north_eastern_rbp/ne-riverslakes.htm

Water body name: Killough River (3) #
Water body identification code: UKGBNI1NE050505037
2009 status: Moderate
2015 Objective: Good
Upstream water bodies: Killough River (UKGBNI1NE050505069)
Killough River (UKGBNI1NE050505068)
Downstream water body: Ards Peninsula (UKGBNI6NE110)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates, Macrophytes	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	Collate existing information on location of aquatic (including river bank) invasive alien species.	DOE NIEA, angling clubs	Ongoing
	3	Conduct a water resource assessment to inform a review of abstraction licenses.	DOE NIEA	2010
	4	Conduct LMA investigative surveys to assess benthic invertebrates.	DOE NIEA	2011
	5	Create an inventory of river channel and bank physical structures.	DOE NIEA, angling clubs	Ongoing
	6	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, DARD	2010
	7	Review industrial consent compliance at discharging sites within catchment.	DOE NIEA	2011
	8	Review River's Agency maintenance program.	DOE NIEA, angling clubs	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:	Tyrella Burn
Water body identification code:	UKGBNI1NE050505062
Catchment stakeholder group:	Strangford & Lecale
Local management area:	South Down
2015 Objective:	Moderate Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Alkalinity >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
Macrophytes:	Moderate
Dissolved oxygen:	Poor
Soluble reactive phosphorus:	High
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	High

Hydrological regime:	High

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/north_eastern_rbp/ne-riverslakes.htm

Water body name: Tyrella Burn (4) #
Water body identification code: UKGBNI1NE050505062
2009 status: Poor
2015 Objective: Moderate
Upstream water bodies:
Downstream water body: Dundrum Bay Outer (UKGBNI6NE150)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates, Macrophytes, Dissolved Oxygen	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	Carry out river walks to determine and address sources of organic pollution affecting benthic invertebrates.	DOE NIEA	2011
	3	Collate existing information on location of aquatic (including river bank) invasive alien species.	DOE NIEA, angling clubs	Ongoing
	4	Conduct a water resource assessment to inform a review of abstraction licenses.	DOE NIEA	2010
	5	Conduct LMA investigative surveys to assess benthic invertebrates.	DOE NIEA	2011
	6	Conduct river walk survey to investigate possible sources of pollution. Investigate extent and distribution of on-site wastewater treatment systems within catchment.	DOE NIEA	2011
	7	Create an inventory of river channel and bank physical structures.	DOE NIEA, angling clubs	Ongoing
	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, DARD	2010
	9	Review River's Agency maintenance program.	DOE NIEA, angling clubs	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:	Blackstaff River upper
Water body identification code:	UKGBNI1NE050505052
Catchment stakeholder group:	Carlingford & Mourne
Local management area:	South Down
2015 Objective:	Moderate 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:	Good
Macrophytes:	Moderate
Phytobenthos:	Moderate
Dissolved oxygen:	Poor
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	Moderate
Temperature*:	High

Hydrological regime:	High
Morphological conditions:	Moderate

Dissolved copper:	Good
Phenol:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/north_eastern_rbp/ne-riverslakes.htm

Water body name: Blackstaff River upper (5) #
Water body identification code: UKGBNI1NE050505052
2009 status: Moderate
2015 Objective: Moderate
Upstream water bodies:
Downstream water body: Blackstaff River (UKGBNI1NE050505061)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Macrophytes, Diatoms, Dissolved oxygen, Morphological conditions	1	Collate existing information on location of aquatic (including river bank) invasive alien species.	DOE NIEA, angling clubs	Ongoing
	2	Compliance assessment of WWTW >250 PE to inform future upgrades (Loughinisland) and target for downstream biological survey.	DOE NIEA, NIWL	2011
	3	Conduct a water resource assessment to inform a review of abstraction licenses.	DOE NIEA	2010
	4	Conduct LMA investigative surveys to assess benthic invertebrates.	DOE NIEA	2011
	5	Create an inventory of river channel and bank physical structures.	DOE NIEA, angling clubs	Ongoing
	6	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, DARD	2010
	7	Review discharge compliance of IPPC regulated quarry site and survey for downstream impacts.	DOE NIEA	2011
	8	Review River's Agency maintenance program.	DOE NIEA, angling clubs	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:	Blackstaff River
Water body identification code:	UKGBNI1NE050505061
Catchment stakeholder group:	Carlingford & Mourne
Local management area:	South Down
2015 Objective:	Moderate 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:	Good
Macrophytes:	Moderate
Fish:	Good
Phytobenthos:	Moderate
Dissolved oxygen:	Poor
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	Moderate
Temperature*:	High

Hydrological regime:	High

Chloroform (trichloromethane):	Good
Dissolved copper:	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.doeni.gov.uk/niea/water-home/wfd/north_eastern_rbp/ne-riverslakes.htm

Water body name: Blackstaff River (6) #
Water body identification code: UKGBNI1NE050505061
2009 status: Moderate
2015 Objective: Moderate
Upstream water bodies: Blackstaff River upper (UKGBNI1NE050505052)
Downstream water body: Dundrum Bay Inner (UKGBNI6NE160)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Macrophytes, Diatoms, Dissolved Oxygen	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	Collate existing information on location of aquatic (including river bank) invasive alien species.	DOE NIEA, angling clubs	Ongoing
	3	Conduct a water resource assessment to inform a review of abstraction licenses.	DOE NIEA	2010
	4	Conduct LMA investigative surveys to assess benthic invertebrates.	DOE NIEA	2011
	5	Create an inventory of river channel and bank physical structures.	DOE NIEA, angling clubs	Ongoing
	6	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, DARD	2010
	7	Monitor fish populations at Tullymurry Bridge.	DCAL	2010
	8	Review discharge consent compliance and downstream impacts by river survey of private sewage effluent discharges within catchment.	DOE NIEA	2011
	9	Review River's Agency maintenance program.	DOE NIEA, angling clubs	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:	Ardilea Burn
Water body identification code:	UKGBNI1NE050505060
Catchment stakeholder group:	Carlingford & Mourne
Local management area:	South Down
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
Macrophytes:	Good
Dissolved oxygen:	High
Soluble reactive phosphorus:	Moderate
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	Good

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.doeni.gov.uk/niea/water-home/wfd/north_eastern_rbp/ne-riverslakes.htm

Water body name: Ardilea Burn (7) #
Water body identification code: UKGBNI1NE050505060
2009 status: Poor
2015 Objective: Moderate
Upstream water bodies:
Downstream water body: Dundrum Bay Inner (UKGBNI6NE160)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates, Phosphate	1	Assess sources of organic pollution including agriculture, NIWL intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA	2011
	2	Collate existing information on location of aquatic (including river bank) invasive alien species.	DOE NIEA, angling clubs	Ongoing
	3	Conduct a water resource assessment to inform a review of abstraction licenses.	DOE NIEA	2010
	4	Conduct LMA investigative surveys to assess benthic invertebrates.	DOE NIEA	2011
	5	Create an inventory of river channel and bank physical structures.	DOE NIEA, angling clubs	Ongoing
	6	Investigate recent water body phosphorus monitoring and target biological monitoring downstream of Clough WWTW and Seaforde TSPS.	DOE NIEA, NIWL	2011
	7	Review River's Agency maintenance program.	DOE NIEA, angling clubs	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:	Moneycarragh River
Water body identification code:	UKGBNI1NE050505067
Catchment stakeholder group:	Carlingford & Mourne
Local management area:	South Down
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:	Medium)

Benthic invertebrates:	Moderate
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.doeni.gov.uk/niea/water-home/wfd/north_eastern_rbp/ne-riverslakes.htm

Water body name: Moneycarragh River (8) #
Water body identification code: UKGBNI1NE050505067
2009 status: Moderate
2015 Objective: Good
Upstream water bodies:
Downstream water body: Moneycarragh River (UKGBNI1NE050505063)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates	1	Collate existing information on location of aquatic (including river bank) invasive alien species.	DOE NIEA, angling clubs	Ongoing
	2	Conduct a water resource assessment to inform a review of abstraction licenses.	DOE NIEA	2010
	3	Conduct LMA investigative surveys to assess benthic invertebrates.	DOE NIEA	2011
	4	Create an inventory of river channel and bank physical structures.	DOE NIEA, angling clubs	Ongoing
	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, DARD	2010
	6	Review River's Agency maintenance program.	DOE NIEA	2011
	7	Visual inspection of WWTWs <250 PE to inform future upgrades (Drumaroad WWTW)	DOE NIEA	2011
	8	Carry out a river walk on tributary upstream of Drumaroad to determine and address sources of organic pollution affecting benthic invertebrates.	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:	Moneycarragh River tributary
Water body identification code:	UKGBNI1NE050505059
Catchment stakeholder group:	Carlingford & Mourne
Local management area:	South Down
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:	Medium)

Benthic invertebrates:	Moderate
Macrophytes:	Good
Dissolved oxygen:	High
Soluble reactive phosphorus:	High
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.doeni.gov.uk/niea/water-home/wfd/north_eastern_rbp/ne-riverslakes.htm

Water body name: Moneycarragh River tributary (9) #
Water body identification code: UKGBNI1NE050505059
2009 status: Moderate
2015 Objective: Good
Upstream water bodies:
Downstream water body: Moneycarragh River (UKGBNI1NE050505063)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates	1	Collate existing information on location of aquatic (including river bank) invasive alien species.	DOE NIEA, angling clubs	Ongoing
	2	Conduct a water resource assessment to inform a review of abstraction licenses.	DOE NIEA	2010
	3	Conduct LMA investigative surveys to assess benthic invertebrates.	DOE NIEA	2011
	4	Create an inventory of river channel and bank physical structures.	DOE NIEA, angling clubs	Ongoing
	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, DARD	2010
	6	Review River's Agency maintenance program.	DOE NIEA, angling clubs	Ongoing
	7	Carry out a river walk on tributary at Seeconnel to determine and address sources of organic pollution affecting benthic invertebrates.	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:	Moneycarragh River
Water body identification code:	UKGBNI1NE050505063
Catchment stakeholder group:	Carlingford & Mourne
Local management area:	South Down
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:	Medium)

Benthic invertebrates:	Moderate
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.doeni.gov.uk/niea/water-home/wfd/north_eastern_rbp/ne-riverslakes.htm

Water body name: Moneycarragh River (10) #
Water body identification code: UKGBNI1NE050505063
2009 status: Moderate
2015 Objective: Good
Upstream water bodies: Moneycarragh River (UKGBNI1NE050505067) Moneycarragh River Tributary (UKGBNI1NE050505059)
Downstream water body: Dundrum Bay Inner (UKGBNI6NE160)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic inverterbrates	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	Collate existing information on location of aquatic (including river bank) invasive alien species.	DOE NIEA, angling clubs	Ongoing
	3	Conduct a water resource assessment to inform a review of abstraction licenses.	DOE NIEA	2010
	4	Conduct LMA investigative surveys to assess benthic invertebrates.	DOE NIEA	2011
	5	Create an inventory of river channel and bank physical structures.	DOE NIEA, angling clubs	Ongoing
	6	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, DARD	2010
	7	Review compliance of consented discharges and licensed abstractions within water body.	DOE NIEA	2011
	8	Review River's Agency maintenance program.	DOE NIEA, angling clubs	Ongoing
	9	Upgrades to sewer network to address issues with urban intermittent discharges.	NIWL	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:	Carrigs River
Water body identification code:	UKGBNI1NE050505113
Catchment stakeholder group:	Carlingford & Mourne
Local management area:	South Down
2015 Objective:	Moderate 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:	Poor
(Confidence in overall status:	Low)

Benthic invertebrates:	Poor
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.doeni.gov.uk/niea/water-home/wfd/north_eastern_rbp/ne-riverslakes.htm

Water body name: Carrigs River (11) #
Water body identification code: UKGBNI1NE050505113
2009 status: Poor
2015 Objective: Moderate
Upstream water bodies:
Downstream water body: Dundrum Bay Inner (UKGBNI6NE160)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates, Morphological conditions	1	Areas around Dundrum to be surveyed for Spartina angelica and sprayed if required.	DOE NIEA	2010
	2	Carry out a river walk downstream of Annsborough and adjacent to Clarkhill Wood to determine and address sources of organic pollution affecting benthic invertebrates.	DOE NIEA	2011
	3	Collate existing information on location of aquatic (including river bank) invasive alien species.	DOE NIEA, angling clubs	Ongoing
	4	Conduct a water resource assessment to inform a review of abstraction licenses.	DOE NIEA	2010
	5	Conduct LMA investigative surveys to assess benthic invertebrates.	DOE NIEA	2011
	6	Create an inventory of river channel and bank physical structures.	DOE NIEA, angling clubs	Ongoing
	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, DARD	2010
	8	Investigate recent water body phosphorus monitoring and target biological monitoring downstream of Annsborough WWTW.	DOE NIEA, NIWL	2011
	9	Investigate recent water body phosphorus monitoring and target biological monitoring downstream of Maghera WWTW.	DOE NIEA, NIWL	2011
	10	Review discharge compliance and abstraction licence compliance at sites within the water body.	DOE NIEA	2011
	11	Review River's Agency maintenance program.	DOE NIEA, angling clubs	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:	Burren River
Water body identification code:	UKGBNI1NE050505111
Catchment stakeholder group:	Carlingford & Mourne
Local management area:	South Down
2015 Objective:	Moderate Status
2021 Objective:	Moderate 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:	Low)

Benthic invertebrates:	Moderate
Dissolved oxygen:	High
Soluble reactive phosphorus:	Poor
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.doeni.gov.uk/niea/water-home/wfd/north_eastern_rbp/ne-riverslakes.htm

Water body name: Burren River (12) #
Water body identification code: UKGBNI1NE050505111
2009 status: Moderate
2015 Objective: Moderate
Upstream water bodies:
Downstream water body: Shimna River (UKGBNI1NE050505110)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates, Phosphate	1	Assess sources of organic pollution including agriculture, NIWL intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA	2011
	2	Collate existing information on location of aquatic (including river bank) invasive alien species.	DOE NIEA, angling clubs	Ongoing
	3	Conduct a water resource assessment and target investigative study on heavily modified water body with a view to reviewing abstraction licenses if necessary.	DOE NIEA	2010
	4	Conduct LMA investigative surveys to assess benthic invertebrates.	DOE NIEA	2011
	5	Create an inventory of river channel and bank physical structures.	DOE NIEA, angling clubs	Ongoing
	6	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, DARD	2010
	7	Review recent water body phosphorus monitoring downstream of Castlwellan and Annsborough WWTW and target for biological monitoring.	DOE NIEA	2011
	8	Review River's Agency maintenance program.	DOE NIEA, angling clubs	Ongoing
	9	Upgrades to sewer network to address issues with urban intermittent discharges.	NIWL	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:	Shimna River
Water body identification code:	UKGBNI1NE050505110
	This is a heavily modified water body.
Catchment stakeholder group:	Carlingford & Mourne
Local management area:	South Down
2015 Objective:	Moderate ecological potential
2021 Objective:	Moderate 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:	High)

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

Hydrological regime:	Bad

Chloroform (trichloromethane):	Good
Dissolved copper:	Failing to achieve good
Carbon tetrachloride:	Good
1,2-Dichloroethane:	Good
Phenol:	Good
Tetrachloroethylene:	Good
Trichloroethylene:	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.doeni.gov.uk/niea/water-home/wfd/north_eastern_rbp/ne-heavily-modified.htm

Water body name: Shimna River (13) #
Water body identification code: UKGBNI1NE050505110
2009 status: Moderate Ecological Potential
2015 Objective: Moderate Ecological Potential
Upstream water bodies:
Downstream water body: Dundrum Bay Outer (UKGBNI6NE150)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
pH, Copper, Zinc, Hydrology	1	Carry out Rapid Hydromorphology Assessment Technique (RHAT) survey to ground truth heavily modified water body designation.	DOE NIEA	2011
	2	Collate existing information on location of aquatic (including river bank) invasive alien species.	DOE NIEA, angling clubs	Ongoing
	3	Conduct a water resource assessment and target investigative study on heavily modified water body with a view to reviewing abstraction licenses if necessary.	DOE NIEA	2010
	4	Conduct LMA investigative surveys to assess benthic invertebrates.	DOE NIEA	2011
	5	Create an inventory of river channel and bank physical structures.	DOE NIEA, angling clubs	Ongoing
	6	Investigate impact of forestry operations in Tollymore Forest. Ascertain felling programme in the catchment and engage with forestry technical field staff / private landowners to ensure measures are in place to mitigate risks from felling.	DOE NIEA, Forest Service	2011
	7	Investigate possible sources of copper and zinc to surface waters.	DOE NIEA	2011
	8	Monitor fish populations at Ivy Bridge, Tollymore.	DCAL	2010
	9	Review River's Agency maintenance program.	DOE NIEA, angling clubs	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:	Kilkeel River
Water body identification code:	UKGBNI1NE050505114
	This is a heavily modified water body.
Catchment stakeholder group:	Carlingford & Mourne
Local management area:	South Down
2015 Objective:	Moderate ecological potential
2021 Objective:	Moderate 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
Fish:	Bad
Dissolved oxygen:	High
Soluble reactive phosphorus:	Good
pH:	Moderate
Ammonia:	High
Biochemical oxygen demand*:	High
Temperature*:	High

Hydrological regime:	Bad

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.doeni.gov.uk/niea/water-home/wfd/north_eastern_rbp/ne-heavily-modified.htm

Water body name: Kilkeel River (14) #
Water body identification code: UKGBNI1NE050505114
2009 status: Moderate Ecological Potential
2015 Objective: Moderate Ecological Potential
Upstream water bodies:
Downstream water body: Mourne Coast (UKGBNI6NB020)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Fish, pH, Hydrology	1	Carry out Rapid Hydromorphology Assessment Technique (RHAT) survey to ground truth heavily modified water body designation.	DOE NIEA	2011
	2	Collate existing information on location of aquatic (including river bank) invasive alien species.	DOE NIEA, angling clubs	Ongoing
	3	Conduct a water resource assessment and target investigative study on heavily modified water body with a view to reviewing abstraction licenses if necessary.	DOE NIEA	2010
	4	Conduct LMA investigative surveys to assess benthic invertebrates.	DOE NIEA	2011
	5	Create an inventory of river channel and bank physical structures.	DOE NIEA, angling clubs	Ongoing
	6	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, DARD	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	Investigate impact of forestry operations in Silent Valley. Ascertain felling programme in the catchment and engage with forestry technical field staff / private landowners to ensure measures are in place to mitigate risks from felling.	DOE NIEA, Forest Service	2011
	9	Investigate potential causes of pH disturbances in catchment.	DOE NIEA	2011
	10	Monitor fish populations in Ben Crom river upstream of Silent Valley reservoir.	DCAL	2010
	11	Review River's Agency maintenance program.	DOE NIEA, angling clubs	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:	Silent Valley Reservoir
Water body identification code:	UKGBNI3NE0019
	This is a heavily modified water body.
Catchment stakeholder group:	Carlingford
Local management area:	South Down
2015 Objective:	Good ecological potential
2021 Objective:	Good ecological potential
2027 Objective:	Good ecological potential
The type of this water body is:	<200m, siliceous, peat, >50ha
2005 risk assessment:	1a - At risk
Current ecological potential:	Good or better
(Confidence in ecological potential:	High)

Macrophytes:	High
Phytoplankton:	High
Dissolved oxygen:	High
Total phosphorus:	Good

Hydrological regime:	Good

Atrazine:	Good
Chlorfenvinphos:	Good
Chlorpyriphos:	Good
Diazinon:	Good
Simazine:	Good

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/north_eastern_rbp/ne-heavily-modified.htm

Water body name: Silent Valley Reservoir (15) #
Water body identification code: UKGBNI3NE0019
2009 status: Good Ecological Potential or better
2015 Objective: Good Ecological Potential or better
Upstream water bodies: Kilkeel River (UKGBNI1NE050505114)
Downstream water body: Kilkeel River (UKGBNI1NE050505114)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
	1	Collate existing information on location of aquatic (including river bank) invasive alien species.	DOE NIEA, angling clubs	Ongoing
	2	Conduct a water resource assessment and target investigative study on heavily modified water body with a view to reviewing abstraction licenses if necessary.	DOE NIEA	2010
	3	Create an inventory of river channel and bank physical structures.	DOE NIEA, angling clubs	Ongoing
	4	Monitor fish populations at Silent Valley reservoir dam wall.	DCAL	2010
	5	Review River's Agency maintenance program.	DOE NIEA, angling clubs	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:	Annalong River
Water body identification code:	UKGBNI1NE050505036
	This is a heavily modified water body.
Catchment stakeholder group:	Carlingford & Mourne
Local management area:	South Down
2015 Objective:	Moderate ecological potential
2021 Objective:	Moderate 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:	Medium)

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

Hydrological regime:	Bad

Chloroform (trichloromethane):	Good
Dissolved copper:	Failing to achieve good
Carbon tetrachloride:	Good
1,2-Dichloroethane:	Good
Phenol:	Good
Tetrachloroethylene:	Good
Trichloroethylene:	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.doeni.gov.uk/niea/water-home/wfd/north_eastern_rbp/ne-heavily-modified.htm

Water body name: Annalong River (16) #
Water body identification code: UKGBNI1NE050505036
2009 status: Moderate Ecological Potential
2015 Objective: Moderate Ecological Potential
Upstream water bodies:
Downstream water body: Mourne Coast (UKGBNI6NB020)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates, Copper, Zinc, Hydrology	1	Carry out a river walk downstream of Dunnywater bridge to determine and address sources of organic pollution affecting benthic invertebrates.	DOE NIEA	2011
	2	Carry out Rapid Hydromorphology Assessment Technique (RHAT) survey to ground truth heavily modified water body designation.	DOE NIEA	2011
	3	Collate existing information on location of aquatic (including river bank) invasive alien species.	DOE NIEA, angling clubs	Ongoing
	4	Conduct a water resource assessment and target investigative study on heavily modified water body with a view to reviewing abstraction licenses if necessary.	DOE NIEA	2010
	5	Conduct LMA investigative surveys to assess benthic invertebrates.	DOE NIEA	2011
	6	Create an inventory of river channel and bank physical structures.	DOE NIEA, angling clubs	Ongoing
	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, DARD	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	Investigate impact of forestry operations in Annalong Wood. Ascertain felling programme in the catchment and engage with forestry technical field staff / private landowners to ensure measures are in place to mitigate risks from felling.	DOE NIEA, Forest Service	2011
	10	Investigate possible sources of copper and zinc to surface waters.	DOE NIEA	2011
	11	Review River's Agency maintenance program.	DOE NIEA, angling clubs	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:	Mullagh River
Water body identification code:	UKGBNI1NE050505044
Catchment stakeholder group:	Carlingford & Mourne
Local management area:	South Down
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:	Medium)

Benthic invertebrates:	Moderate
Macrophytes:	High
Dissolved oxygen:	High
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	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.doeni.gov.uk/niea/water-home/wfd/north_eastern_rbp/ne-riverslakes.htm

Water body name: Mullagh River (17) #
Water body identification code: UKGBNI1NE050505044
2009 status: Moderate
2015 Objective: Good
Upstream water bodies:
Downstream water body: Mourne Coast (UKGBNI6NB020)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates, Morphological conditions	1	Carry out a river walk to determine and address sources of organic pollution affecting benthic invertebrates and resulting in observed sewage fungus.	DOE NIEA	2011
	2	Collate existing information on location of aquatic (including river bank) invasive alien species.	DOE NIEA, angling clubs	Ongoing
	3	Conduct a water resource assessment to inform a review of abstraction licenses.	DOE NIEA	2010
	4	Conduct LMA investigative surveys to assess benthic invertebrates.	DOE NIEA	2011
	5	Create an inventory of river channel and bank physical structures.	DOE NIEA, angling clubs	Ongoing
	6	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
	7	Review River's Agency maintenance program.	DOE NIEA, angling clubs	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:	Aughrim River
Water body identification code:	UKGBNI1NE050505097
Catchment stakeholder group:	Carlingford & Mourne
Local management area:	South Down
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:	Good
(Confidence in overall status:	Low)

Benthic invertebrates:	Good
Dissolved oxygen:	High
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	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.doeni.gov.uk/niea/water-home/wfd/north_eastern_rbp/ne-riverslakes.htm

Water body name: Aughrim River (18) #
Water body identification code: UKGBNI1NE050505097
2009 status: Good
2015 Objective: Good
Upstream water bodies:
Downstream water body: Kilkeel River (UKGBNI1NE050505114)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
	1	Collate existing information on location of aquatic (including river bank) invasive alien species.	DOE NIEA, angling clubs	Ongoing
	2	Conduct a water resource assessment to inform a review of abstraction licenses.	DOE NIEA	2010
	3	Conduct LMA investigative surveys to assess benthic invertebrates.	DOE NIEA	2011
	4	Create an inventory of river channel and bank physical structures.	DOE NIEA, angling clubs	Ongoing
	5	Maintain current regulatory controls, monitoring existing measures in order to maintain the good status of this waterbody.	All	Ongoing
	6	Review River's Agency maintenance program.	DOE NIEA, angling clubs	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:	Tullybrannigan River
Water body identification code:	UKGBNI1NE050505035
Catchment stakeholder group:	Carlingford & Mourne
Local management area:	South Down
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:	Low)

Dissolved oxygen:	High
Soluble reactive phosphorus:	High
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	High

Hydrological regime:	High
Morphological conditions:	Good

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/north_eastern_rbp/ne-riverslakes.htm

Water body name: Tullybrannigan River (19) #
Water body identification code: UKGBNI1NE050505035
2009 status: Good
2015 Objective: Good
Upstream water bodies:
Downstream water body: Shimna River (UKGBNI1NE050505110)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
	1	Collate existing information on location of aquatic (including river bank) invasive alien species.	DOE NIEA, angling clubs	Ongoing
	2	Conduct a water resource assessment to inform a review of abstraction licenses.	DOE NIEA	2010
	3	Conduct LMA investigative surveys to assess benthic invertebrates.	DOE NIEA	2011
	4	Create an inventory of river channel and bank physical structures.	DOE NIEA, angling clubs	Ongoing
	5	Investigate feasibility and practicality of implementing morphological mitigation measures as recommended.	DOE NIEA	2011
	6	Maintain current regulatory controls, monitoring existing measures in order to maintain the good status of this waterbody	All	Ongoing
	7	Review River's Agency maintenance program.	DOE NIEA, angling clubs	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:	Dundrum Bay Inner
Water body identification code:	UKGBNI6NE160
Catchment stakeholder group:	Carlingford
Local management area:	South Down
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Euhaline, mesotidal, sheltered
2005 risk assessment:	1a - At risk
Current overall status:	Moderate

Benthic invertebrates:	Good
Phytoplankton:	Good
Hydromorphology:	Good
General conditions:	Moderate
Dissolved oxygen:	High
Dissolved inorganic nitrogen:	Moderate
Alien species:	High
Specific pollutants:	Fail
Priority hazardous substances:	Pass

For more information on the classification process see:
http://www.doeni.gov.uk/niea/ne-coastal.htm

Water body name: Dundrum Bay Inner (20) #
Water body identification code: UKGBNI6NE160
2009 status: Moderate
2015 Objective: Moderate
Upstream water bodies: Ardilea Burn (UKGBNI1NE050505060) Blackstaff River (UKGBNI1NE050505061) Moneycarragh River (UKGBNI1NE050505063) Carrigs River (UKGBNI1NE050505113)
Downstream water body: Dundrum Bay Outer (UKGBNI6NE150)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Dissolved inorganic nitrogen, Ammonia	1	Continue monitoring to confirm evidence of trophic status.	DOE NIEA	Ongoing
	2	Areas around Dundrum to be surveyed for Spartina angelica and sprayed if required.	DOE NIEA	2010
	3	Collate existing information on location of aquatic invasive alien species.	DOE NIEA	Ongoing
	4	Compliance assessment of WWTW >250 PE to inform future upgrades (Clough, Annsborough).	DOE NIEA, NIWL	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:	Dundrum Bay Outer
Water body identification code:	UKGBNI6NE150
Catchment stakeholder group:	Carlingford
Local management area:	South Down
2015 Objective:	Moderate Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Euhaline, mesotidal, moderately exposed
2005 risk assessment:	1a - At risk
Current overall status:	Moderate

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

For more information on the classification process see:
http://www.doeni.gov.uk/niea/ne-coastal.htm

Water body name: Dundrum Bay Outer (21) #
Water body identification code: UKGBNI6NE150
2009 status: Moderate
2015 Objective: Good
Upstream water bodies: Dundrum Bay Inner (UKGBNI6NE160)
Downstream water body:

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Dissolved Inorganic Nitrogen	1	Continue monitoring to confirm evidence of trophic status.	DOE NIEA	Ongoing
	2	Collate existing information on location of aquatic invasive alien species.	DOE NIEA	Ongoing
	3	Compliance assessment of WWTW >250 PE to inform future upgrades (Clough, Annsborough, Newcastle, Ballykinler).	DOE NIEA, NIWL	2011
	4	Develop a profile of the Murlough designated bathing water	DOE NIEA	2011
	5	Develop a profile of the Newcastle designated bathing water	DOE NIEA	2011
	6	Develop a profile of the Tyrella designated bathing water	DOE NIEA	2011
	7	Upgrade of sewage effluent treatment at Newcastle WWTW to meet the requirements of the Newcastle designated bathing water standards.	NIWL	2014
		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
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
NIWL	Northern Ireland Water Limited
WWTW	Waste Water Treatment Works

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

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Northern Ireland Environment Agency
Water Management Unit
17 Antrim Road
Lisburn
BT28 3AL
T. (028) 9262 3004
www.ni-environment.gov.uk

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

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