European Community Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC)

Fourth Report by the United Kingdom under Article 17

on the implementation of the Directive
from January 2013 to December 2018

Supporting documentation for the
conservation status assessment for the habitat:

H3260 - Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation

NORTHERN IRELAND

IMPORTANT NOTE - PLEASE READ

- The information in this document is a country-level contribution to the UK Report on the conservation status of this habitat, submitted to the European Commission as part of the 2019 UK Reporting under Article 17 of the EU Habitats Directive.
- The 2019 Article 17 UK Approach document provides details on how this supporting information was used to produce the UK Report.
- The UK Report on the conservation status of this habitat is provided in a separate document.
- The reporting fields and options used are aligned to those set out in the European Commission guidance.
- Explanatory notes (where provided) by the country are included at the end. These provide an audit trail of relevant supporting information.
- Some of the reporting fields have been left blank because either: (i) there was insufficient information to complete the field; (ii) completion of the field was not obligatory; and/or (iii) the field was only relevant at UK-level (sections 10 Future prospects and 11 Conclusions).
- For technical reasons, the country-level future trends for Range, Area covered by habitat and Structure and functions are only available in a separate spreadsheet that contains all the country-level supporting information.
- The country-level reporting information for all habitats and species is also available in spreadsheet format.

Visit the JNCC website, https://jncc.gov.uk/article17, for further information on UK Article 17 reporting.

Report on the main results of the surveillance under Article 17 for Annex I habitat types (Annex D)

NATIONAL LEVEL

1. General information

1.1 Member State	**UK (Northern Ireland information only)**
1.2 Habitat code	**3260 - Water courses of plain to montane levels with the Ranunculion fluitant**

2. Maps

2.1 Year or period	2007-2017
2.3 Distribution map	Yes
2.3 Distribution map Method used	Based mainly on extrapolation from a limited amount of data
2.4 Additional maps	No

BIOGEOGRAPHICAL LEVEL

3. Biogeographical and marine regions

3.1 Biogeographical or marine region where the habitat occurs	**Atlantic (ATL)**
3.2 Sources of information	HATTON-ELLIS, T.,GRIEVE, N. & NEWMAND, J. 2003. Ecology of watercourses characterised by Ranunculion fluitantis and Callitricho-Batrachion vegetation. Conserving Natura 2000 rivers, Ecology series No 11. English Nature, Peterborough. JOINT NATURE CONSERVATION COMMITTEE. 2005. Common Standards Monitoring CSM. Joint Nature Conservation Committee, Peterborough Hwww.jncc.gov.uk/page-2217 Controlling Priority Invasive Species and Restoring Native Biodiversity (CIRB) Available at: http://www.qub.ac.uk/research-centres/cirb/ Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora. Available at: http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm Dawn Lynch (2012). Personal Communication, Length river in NI water bodies. Northern Ireland Environment Agency, Water Management Unit, Lisburn. Department of Environment Northern Ireland (2011) An Invasive Alien Species Strategy for Northern Ireland - Draft Strategy, A Consultation Document. Available at: http://www.doeni.gov.uk/invasive_alien_species_strategy_consultation_document.pdf Department of Environment Northern Ireland (2011) Guidance for run-of river hydropower schemes in Northern Ireland. Available at: http://www.doeni.gov.uk/niea/guidance__for_run-of_river_hydropower_schemes_in_northern_ireland__.pdf460kb_.pdfj02 Department of the Environment (2012) - Northern Ireland Statistics and Research Agency. Northern Ireland Environmental Statistics Report 2012 [online] Available at: http://www.doeni.gov.uk/niea/index/aboutniea/state_of_the_environment/niesr.htm Dodkins, I. (2007) River Foyle and Tributaries Condition Assessment Report 2007-Freshwater Features. Unpublished report to Northern Ireland Department of Environment, Belfast. Dodkins, I. and Rippey, B. (2006) Condition Assessment of the Owenkillew River in 2006. Unpublished report to Northern Ireland Department of Environment, Belfast.

Invasive Species Ireland (2012) Available at: http://invasivespeciesireland.com/
Invasive Species Ireland. Invasive Species Action Plans [online] Available at: http://invasivespeciesireland.com/toolkit/isaps/
Joint Nature Conservation Committee. 2007. Second Report by the UK under Article 17 on the implementation of the Habitats Directive from January 2001 to December 2006. Peterborough: JNCC. Available from: www.jncc.gov.uk/article17
Northern Ireland Environment Agency (2004) Climate change indicators for Northern Ireland. Available at: http://climate.arm.ac.uk/publications/climate-change-NI.pdf
Northern Ireland Environment Agency (2008 - 2011) Overall River Waterbody Classification Results for 2008 - 2011. Water Management Unit unpublished data
Northern Ireland Environment Agency (2009) River Basin Management Plans Rationale for Water Framework Directive Freshwater Classification [online] Available at: http://www.doeni.gov.uk/niea/classification_freshwater.pdf
NIEA (2009) Summary River Basin Management Plans. Available at: http://www.doeni.gov.uk/niea/water-home/wfd.htm
Northern Ireland Environment Agency (2011) Northern Ireland Water Management Facts and Figures. ISBN 978-1-907053-29-0 [online] Available at: http://www.doeni.gov.uk/niea/water-home/water_facts_booklet.htm
Northern Ireland Environment Agency (2012) WFD Programme of measures [online] Available at: http://www.doeni.gov.uk/niea/ne-pom (Last updated: 29 March 2012)
Northern Ireland Environment Agency (2012) Water Quality - Rivers - River Basin Plan Interactive Map [online] Available at: http://maps.ehsni.gov.uk/wmuviewer/
Rivers Agency (2012) Rivers Conservation [online] Available at: http://www.dardni.gov.uk/riversagency/index/rivers-conservation.htm Rivers Agency (2008) Living with rivers and the sea report.Government's Response to the Independent Flood Management Policy Review. Available at: http://www.dardni.gov.uk/riversagency/living-with-rivers-and-the-sea.09.097_rivers_agency_-_living_with_rivers_and_the_sea_report_-_published_august_2008.pdf.pdf
State of the Environment Report for Northern Ireland (2008) Available at: http://www.doeni.gov.uk/niea/index/about-niea/state_of_the_environment/state_of_the_environment_report.htm
JOINT NATURE CONSERVATION COMMITTEE 2005. Common Standards Monitoring (CSM). Joint Nature Conservation Committee, Peterborough. www.jncc.gov.uk/page-2217
Second Report by the United Kingdom under Article 17 on the implementation of the Directive from January 2001 to December 2006
WILLIAMS, J.M. (ed.) 2006. Common Standards Monitoring for Designated Sites: First Six Year Report. Joint Nature Conservation Committee, Peterborough. http://www.jncc.gov.uk/page-3520
Third Report by the United Kingdom under Article 17 on the implementation of the Directive from January 2007 to December 2012. Printed on 06/11/2013 Page 5
JNCC Common Standards Monitoring Guidance for Freshwater Habitats and Species, Rivers and Lakes guidance updated September 2016 and March 2015 respectively, ISSN 1743-8160 jnccdefra.gov.uk/page - 2231
Air Pollution Information System (APIS). Http://.apis.ac.uk
Committee on Climate Change. 2017. UK Climate Change Risk Assessment (CCRAR) Evidence Report, Summary for Northern Ireland. Https://www.theecc.gov.uk
NORTHERN IRELAND ENVIRONMENT AGENCY. Nov 2014. Operational Policy

Report on the main results of the surveillance under Article 17 for Annex I habitat types (Annex D)

Guidance Note on Alignment of Environmental Standards for Assessment under Habitats Directive and Water Framework Directive. DO1/13/483427
Northern Ireland Environment Statistics Report. March 2016. Issue No 8
Department of Agriculture, Environment and Rural Affairs. Status of Rivers and Lakes, River Basin Management Plans. Https.//www.daera-ni.gov.uk/topocs/water/river-basin-management.

4. Range

4.1 Surface area (in km²)	
4.2 Short-term trend Period	
4.3 Short-term trend Direction	Stable (0)
4.4 Short-term trend Magnitude	a) Minimum b) Maximum
4.5 Short-term trend Method used	
4.6 Long-term trend Period	1994-2018
4.7 Long-term trend Direction	Stable (0)
4.8 Long-term trend Magnitude	a) Minimum b) Maximum
4.9 Long-term trend Method used	Based mainly on extrapolation from a limited amount of data
4.10 Favourable reference range	a) Area (km²) b) Operator c) Unknown No d) Method
4.11 Change and reason for change in surface area of range	No change The change is mainly due to:
4.12 Additional information	

5. Area covered by habitat

5.1 Year or period	2013-2017		
5.2 Surface area (in km²)	a) Minimum	b) Maximum	c) Best single value
5.3 Type of estimate			
5.4 Surface area Method used	Insufficient or no data available		
5.5 Short-term trend Period	2007-2018		
5.6 Short-term trend Direction	Stable (0)		
5.7 Short-term trend Magnitude	a) Minimum	b) Maximum	c) Confidence interval
5.8 Short-term trend Method used	Based mainly on extrapolation from a limited amount of data		
5.9 Long-term trend Period	1994-2018		
5.10 Long-term trend Direction	Stable (0)		
5.11 Long-term trend Magnitude	a) Minimum	b) Maximum	c) Confidence interval
5.12 Long-term trend Method used	Based mainly on extrapolation from a limited amount of data		
5.13 Favourable reference area	a) Area (km²) b) Operator c) Unknown No d) Method		
5.14 Change and reason for change in surface area of range	No change The change is mainly due to:		

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5.15 Additional information

6. Structure and functions

6.1 Condition of habitat	a) Area in good condition (km^2)	Minimum	Maximum
	b) Area in not-good condition (km^2)	Minimum	Maximum
	c) Area where condition is not known (km^2)	Minimum	Maximum
6.2 Condition of habitat Method used	Insufficient or no data available		
6.3 Short-term trend of habitat area in good condition Period	2007-2018		
6.4 Short-term trend of habitat area in good condition Direction	Increasing (+)		
6.5 Short-term trend of habitat area in good condition Method used	Based mainly on extrapolation from a limited amount of data		
6.6 Typical species	Has the list of typical species changed in comparison to the previous reporting period?	No	
6.7 Typical species Method used			
6.8 Additional information			

7. Main pressures and threats

7.1 Characterisation of pressures/threats

Pressure	Ranking
Intensive grazing or overgrazing by livestock (A09)	M
Extraction of minerals (e.g. rock, metal ores, gravel, sand, shell) (C01)	M
Other invasive alien species (other then species of Union concern) (I02)	H
Mixed source pollution to surface and ground waters (limnic and terrestrial) (J01)	H
Abstraction from groundwater, surface water or mixed water (K01)	H
Modification of hydrological flow (K04)	H
Temperature changes (e.g. rise of temperature & extremes) due to climate change (N01)	M
Increases or changes in precipitation due to climate change (N03)	M
Conversion to forest from other land uses, or afforestation (excluding drainage) (B01)	M
Wind, wave and tidal power, including infrastructure (D01)	M

Threat	Ranking
Intensive grazing or overgrazing by livestock (A09)	M
Extraction of minerals (e.g. rock, metal ores, gravel, sand, shell) (C01)	M

Other invasive alien species (other then species of Union concern) (I02)	H
Mixed source pollution to surface and ground waters (limnic and terrestrial) (J01)	H
Abstraction from groundwater, surface water or mixed water (K01)	H
Modification of hydrological flow (K04)	H
Temperature changes (e.g. rise of temperature & extremes) due to climate change (N01)	M
Increases or changes in precipitation due to climate change (N03)	H
Conversion to forest from other land uses, or afforestation (excluding drainage) (B01)	M
Wind, wave and tidal power, including infrastructure (D01)	M

7.2 Sources of information

7.3 Additional information

8. Conservation measures

8.1 Status of measures	a) Are measures needed?	Yes
	b) Indicate the status of measures	Measures identified and taken
8.2 Main purpose of the measures taken		Restore the habitat of the species (related to 'Habitat for the species')
8.3 Location of the measures taken		Both inside and outside Natura 2000
8.4 Response to the measures		Medium-term results (within the next two reporting periods, 2019-2030)
8.5 List of main conservation measures		

Reduce impact of mixed source pollution (CJ01)
Adapt/change forest management and exploitation practices (CB05)
Adapt/manage exploitation of energy resources (CC02)
Manage water abstraction for resource extraction and energy production (CC13)
Management, control or eradication of established invasive alien species of Union concern (CI02)
Implement climate change adaptation measures (CN02)
Adapt mowing, grazing and other equivalent agricultural activities (CA05)

8.6 Additional information

9. Future prospects

9.1 Future prospects of parameters	a) Range
	b) Area
	c) Structure and functions
9.2 Additional information	

10. Conclusions

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10.1. Range	
10.2. Area	
10.3. Specific structure and functions (incl. typical species)	
10.4. Future prospects	
10.5 Overall assessment of Conservation Status	
10.6 Overall trend in Conservation Status	
10.7 Change and reasons for change in conservation status and conservation status trend	a) Overall assessment of conservation status No change The change is mainly due to: b) Overall trend in conservation status No change The change is mainly due to:
10.8 Additional information	

11. Natura 2000 (pSCIs, SCIs, SACs) coverage for Annex I habitat types

11.1 Surface area of the habitat type inside the pSCIs, SCIs and SACs network (in km² in biogeographical/ marine region)	a) Minimum b) Maximum c) Best single value
11.2 Type of estimate	
11.3 Surface area of the habitat type inside the network Method used	Insufficient or no data available
11.4 Short-term trend of habitat area in good condition within the network Direction	Stable (0)
11.5 Short-term trend of habitat area in good condition within network Method used	Complete survey or a statistically robust estimate
11.6 Additional information	

12. Complementary information

12.1 Justification of % thresholds for trends	
12.2 Other relevant information	

Distribution Map

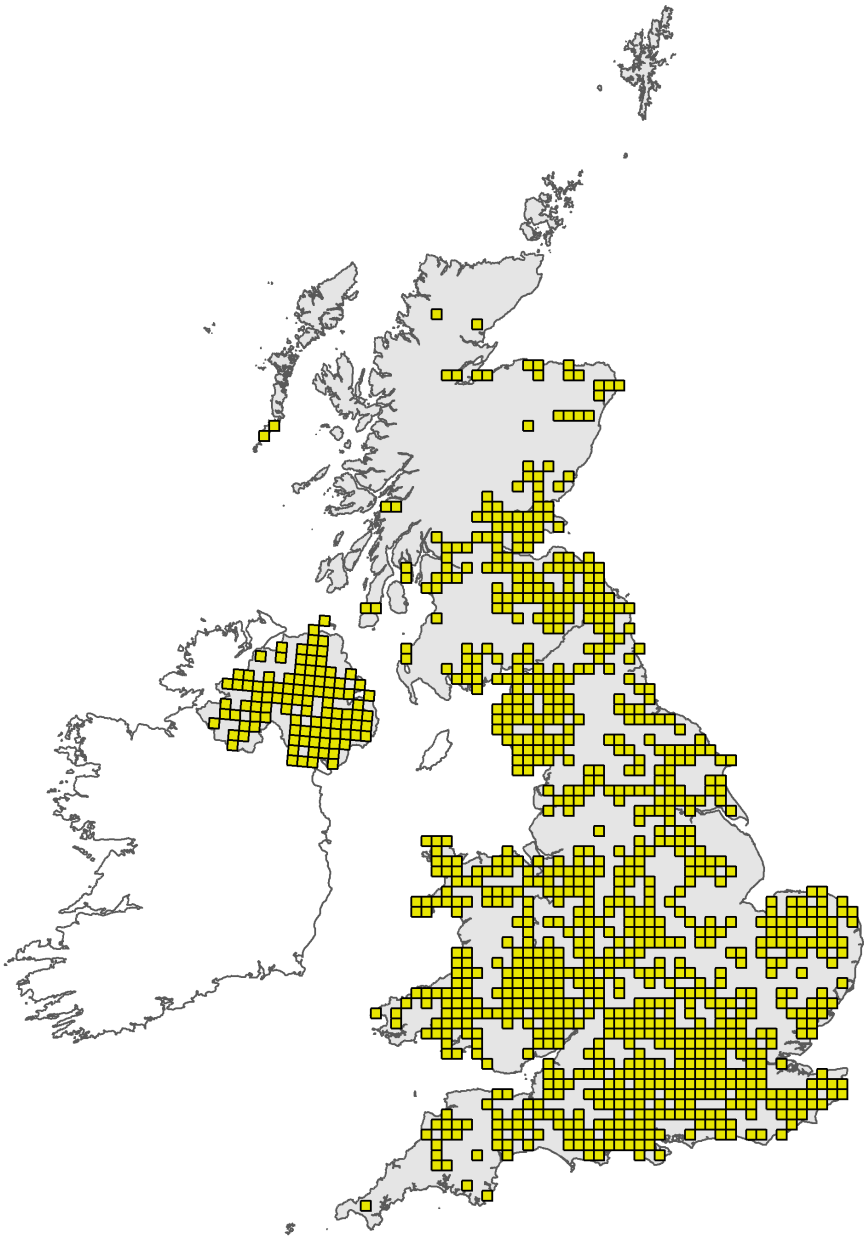

Figure 1: UK distribution map for H3260 - Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

The 10km grid square distribution map is based on available habitat records which are considered to be representative of the distribution within the current reporting period. For further details see the 2019 Article17 UK Approach document.

Range Map

Figure 2: UK range map for H3260 - Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

The range map has been produced by applying a bespoke range mapping tool for Article 17 reporting (produced by JNCC) to the 10km grid square distribution map presented in Figure 1. The alpha value for this habitat was 25km. For further details see the 2019 Article 17 UK Approach document.

Explanatory Notes

Habitat code: 3260

Field label	Note
2.3 Distribution map; Method used	The definition for the H3260 habitat resource is very broad. The habitat occurs in suitable catchments wherever drainage pathways converge to create river channels, from incised upland valleys to lowland floodplains. Ranunculus cover does not characterise the whole H3260 resource, as some communities falling under the H3260 definition contain no Ranunculus species. The habitat broadly covers the entirety of its potential range, since river habitat cannot be fully lost from a catchment but becomes degraded through a range of anthropogenic pressures.

Habitat code: 3260 Region code: ATL

Field label	Note
4.3 Short term trend; Direction	Based on the previous range of H3260 habitat in Northern Ireland as stated in second Article 17 report on H3260 habitat (JNCC 2007). The habitat occurs in suitable catchments wherever drainage pathways converge to create river channels, from incised upland valleys to lowland floodplains. The habitat broadly covers the entirety of its potential range, since river habitat cannot be fully lost from a catchment but becomes degraded through a range of anthropogenic pressures.
4.5 Short term trend; Method used	Based on surveys by NIEA staff (both Natural Environment Division and Water Management Branch).
4.9 Long term trend; Method used	Based on surveys by NIEA staff (both Natural Environment Division and Water Management Branch).
5.2 Surface area	Only the length (in km) of H3260 is known and not the area (in km2) In the previous Article 17 report the total length of river in the 575 NI river water bodies was calculated to be 16,130km. 55 of the 575 river water bodies were identified as being heavily modified and the total length of river in these 55 is 2,188km. Therefore total length of NI Rivers (excluding heavily modified water bodies) was given as 13,942km. For the current Article 17 report the total length has being recalculated down to 14,336km while the number of HMWD has being reduced to 40 with a combined length of 1,259km. The total length of NI Rivers (excluding heavily modified water bodies) is now 13,076km. For the current report HMWB can be described as unfavourable. These water bodies may still be capable of recovering, but would need consistent long term effort and investment. There has been a historical decline in area, due to reductions in river length from land drainage activities and flood risk management, there has been no significant change in area over the short-term and long-term trend periods specified in this reporting round. There have been no recent major drainage schemes or habitat loss due to impetus from legislation such as WFD legislation to maintain and improve river habitats in a sensitive manner. Key issues for this habitat relate to habitat structure and function rather than changes in habitat area. Water Management Unit (NIEA) river shape file based on the 1:50000 OSNI maps where initially used to determine the length of rivers in NI (NIEA WMU 2012, personal communication).
5.3 Type of estimate	See 5.2

5.4 Surface area; Method used	The definition for the H3260 habitat resource is very broad and includes water courses of plain to montane levels and the presence of Ranunculus. The habitat occurs in suitable catchments wherever drainage pathways converge to create river channels, from incised upland valleys to lowland floodplains. Ranunculus cover does not characterise the whole H3260 resource, as some communities falling under the H3260 definition contain no Ranunculus species. There are no comprehensive data available for the area of this habitat type in the UK. In Northern Ireland, it is a widespread habitat within an extensive river network. It was not possible to produce the area of H3260 habitat. Instead we have given the length of rivers in NI where this habitat type could occur. The total length of river in the 575 NI river water bodies is 14,336. 40 of the 575 river water bodies are currently identified as being heavily modified and the total length of river in these 40 is 1,259km. The total length of NI Rivers (excluding heavily modified water bodies) is 13,076km. For the current report HMWB can be described as unfavourable. These water bodies may still be capable of recovering, but would need consistent long term effort and investment.
5.6 Short term trend; Direction	There has been a historical decline in area, due to reductions in river length from land drainage activities and flood risk management, there has been no significant change in area over the short-term period specified in this reporting round. There have been no major drainage schemes or habitat loss due to impetus from WFD legislation to maintain and improve river habitats in a sensitive manner. Rivers Agency adopts an integrated river management approach which aims to achieve both nature conservation and flood risk management objectives.The influence of the WFD legislation and measures in relation to river habitat improvement are not evident in the short-term time scale. Key issues for this habitat relate to habitat condition rather than changes in habitat area. (See River Agency references in 2.2). (Also see NIEA WFD Programme of Measures and Local Management Area Action Plans in 2.2).
5.8 Short term trend; Method used	There has been a historical decline in area, due to reductions in river length from land drainage activities and flood risk management, there has been no significant change in area over the short-term period specified in this reporting round. There have been no major drainage schemes or habitat loss due to impetus from WFD legislation to maintain and improve river habitats in a sensitive manner. Rivers Agency adopts an integrated river management approach which aims to achieve both nature conservation and flood risk management objectives.The influence of the WFD legislation and measures in relation to river habitat improvement are not evident in the short-term time scale. Key issues for this habitat relate to habitat condition rather than changes in habitat area. (See River Agency references in 2.2). (Also see NIEA WFD Programme of Measures and Local Management Area Action Plans in 2.2).
5.9 Long term trend; Period	See 5.2
5.10 Long term trend; Direction	See 5.2
5.11 Long term trend; Magnitude	See 5.6
5.12 Long term trend; Method used	See 5.2

6.1 Condition of habitat	The total length of river in the 575 NI river water bodies is 14,336. 40 of the 575 river water bodies are currently identified as being heavily modified and the total length of river in these 40 is 1,259km. The total length of NI Rivers (excluding heavily modified water bodies) is 13,076km. For the current report HMWB can be described as unfavourable. From this minimum length is estimated as 13,076km and maximum length is estimated as 14,336km. Based on 2015 WFD monitoring results 5,637km or 39% of Northern Ireland Rivers where classed as good or better. This equates to 33% of the NI river water bodies. The 5,630km would be the maximum length of H3260 that could be in good condition, although this is an overestimation given that not all the 5630km would equate to this Annex 1 river type.
6.2 Condition of habitat; Method used	See 6.1
6.4 Short term trend of habitat area in good condition; Direction	A review of the Good or better river water body classes achieved in 2009 and 2015 show an improvement in water quality which would equate to an increase in the length of H3260 rivers achieving good condition.
6.5 Short term trend of habitat area in good condition; Method used	Review of the the three NI River Basin Management Plans
7.1 Characterisation of pressures/ threats	Water pollution - The majority of river catchments in Northern Ireland are intensively farmed, resulting in increases in the nutrient loading through point and diffuse pollution of surface and groundwater. The increase in aerial nitrogen deposition (APIS) resulting from agricultural activity is now identified as a major threat to all habitats in Northern Ireland. Sewage - The impact of point source pollution from domestic dwellings, particularly septic tanks is recognised as having a detrimental impact on most freshwater systems. Blanket bog integrity - in the upper parts of the catchment, many H3260 rivers flow across areas of blanket bogs and may be strongly influenced by the condition of the surrounding peatlands. Therefore, any adverse impacts on the peatland - such as intensive grazing, mechanical removal of peat, burning and construction of wind farms - which have the potential to induce changes in hydraulic condition in addition to increased sediment loading, may have a negative effect on H3260. Hence pollution is from multiple sources and reported under J01 Mixed source pollution to surface and ground waters (limnic and terrestrial). Alien species - The continual spread of invasive aliens is now recognised as a major threat to the freshwater environment. Climate Change - The impact of climate change in the short term is not apparent, however if the predicted changes in temperature and rainfall patterns occur along with extreme weather events there will potentially impact on the structure and function of many freshwater systems to a greater or lesser degree.

8.2 Main purpose of the measures taken	There are two major elements to the current measures being undertaken to restore structure and function. The first is the ongoing commitment to the Water Framework directive (WFD) and carried out through River Basin Management, a key element in implementing the WFD, taking an integrated approach to the protection, improvement and sustainable use of the water environment. It applies to groundwater and to all surface water bodies, including rivers, lakes, transitional (estuarine) and coastal waters out to one nautical mile. In 2009 the first set of River Basin Management Plans (RBMP) as required by the Water Framework Directive were published for each River Basin District within Northern Ireland. The Plan identified where our water environment is in good or excellent conditions and set out objectives for improvement or prevention of deterioration. As required by WFD, the Plans are to be reviewed and updated every 6 years. In 2015 the second set of Plans were published providing an overview of changes and progress that have been made. Northern Ireland has 571 surface and groundwater bodies - 496 surface and 75 groundwater. The 2015 classification results indicate 36.78% are at good or better status. By 2021 with objectives set we aim to increase this to 69.8% with 99.1% at good or better status by 2027. The second is the initiation of the development of Conservation Management Plans on Natura 2000 sites, with a target of 95% completion by December 2020. This project will be undertaken partly through the Rural Development Programme (RDP) - Northern Ireland which will support the development of plans for some Natura 2000 sites, with plans for other sites being primarily funded through INTERREG VA. These plans will include all six SAC rivers.
9.1 Future prospects of parameters	There are a number of factors which cannot be assessed with any degree of certainty. They include: the effectiveness of the SAC management plans currently being developed, the future impact of aerial nitrogen deposition, climate change and the effectiveness of the EU directives following Brexit, primarily the WFD and HD.
11.1 Surface area of the habitat type inside the pSCIs, SCIs and SACs network	'Only the length (in km) of H3260 is known and not the area (in km2)'
11.3 Surface area of the habitat type inside the network; Method used	Based on surveys by NIEA staff (both Natural Environment Division and Water Management Branch).
11.5 Short term trend of habitat area in good condition within the network; Method used	Based on surveys by NIEA staff (both Natural Environment Division and Water Management Branch).