

3rd Cycle Draft Upper Shannon Catchment Report (HA 26G)



Catchment Science & Management Unit

Environmental Protection Agency

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Preface

This document provides a summary of the water quality assessment outcomes for the Upper Shannon Catchment, which have been compiled and assessed by the EPA, with the assistance of the Local Authority Waters Programme (LAWPRO), local authorities and RPS consultants to inform the draft 3rd Cycle River Basin Management Plan. The information presented includes status and risk categories of all waterbodies, details on protected areas, significant issues, significant pressures, source load apportionment modelling and load reduction assessments for nutrients where applicable, an overview of the 2nd Cycle Areas for Action and a list of proposed 3rd Cycle Areas for Action. These characterisation assessments are largely based on information available to the end of 2018, including the WFD Status Assessment for 2013-2018. Protected Area assessments are based on water quality information up to 2018 for Natura 2000 and Salmonid Waters; 2019 for Drinking Water; and 2020 for Nutrient Sensitive Areas and Bathing Waters.

The purpose of this draft report is to provide an overview of the situation in the catchment, draw comparison between Cycle 2 and Cycle 3, and help support the draft River Basin Management Plan 2022-2027 consultation process. Once the consultation process is completed the report will be finalised to reflect any changes and comments made as a result of the consultation process.

Water Framework Directive – key dates and terminology	
Cycle 2 – EPA Characterisation and Assessment	Characterisation and assessment to inform the Cycle 2 RBMP was largely based on 2010-2015 WFD monitoring data.
Cycle 2 Catchment Assessments	Catchment Assessments based on the Cycle 2 characterisation and assessment were published in September 2018.
2 nd Cycle River Basin Management Plan (RBMP) 2018-2021	This plan was for WFD Cycle 2 which runs from 2016-2021. This RBMP was published late, with this plan covering 2018-2021.
2 nd Cycle Areas for Action	These 189 Areas for Action were selected under the RBMP 2018-2021
Cycle 3 -EPA Characterisation and Assessment	Cycle 3 runs from 2022-2027. Assessments to inform the Cycle 3 RBMP is largely based on 2013-2018 WFD monitoring data. This is the latest WFD monitoring assessment period for which all data are available.
Cycle 3 Catchment Assessments	Catchment Assessments based on the Cycle 3 characterisation and assessment were published in August 2021.
3 rd Cycle River Basin Management Plan 2022-2027	This draft RBMP is for WFD Cycle 3 which runs from 2022-2027. Public consultation on this plan by the DHLGH and LAWPRO is taking place in late 2021 and early 2022.
3 rd Cycle Recommended Areas for Action – Protection/ Restoration/Projects	These recommended Areas for Action have been identified in the draft RBMP 2022-2027 and feedback can be given in the public consultation on this plan. They fall into 3 categories – Areas for Protection, Areas for Restoration and Catchment Projects.

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1 Introduction

This report aims to provide an overview of the water quality status, risk, key issues and significant pressures for all waterbodies in the catchment based on the Characterisation Assessment undertaken for the 3rd Cycle River Basin Management Plan. In addition, a comparative overview of the water quality in the Upper Shannon catchment between Cycle 2 and Cycle 3 characterisation is provided along with a summary of the progress made in the 2nd Cycle Areas for Action. The recommended list for the 3rd Cycle Areas for Action is also provided.

To provide context, the Upper Shannon catchment covers an area of 383km² and is comprised of the catchment area from Athlone to Shannonbridge (Figure 1). The catchment is characterised by flat topography and expanses of poorly drained boggy and flood prone areas. The area of the catchment located northwest of Athlone is underlain by highly karstified rock with surface and groundwater drainage closely connected in this region. The Shannon flows into the catchment through Athlone, heading south before being joined from the west by the Cross River. This river drains the karstified part of the catchment from Lough Funshinagh to Athlone. Lough Funshinagh is located north of Curraghboy and does not have a surface outflow channel. Underground flow has been identified from this lake to the Cross River near Brideswell. Continuing south, the Shannon is then joined from the east by the westerly flowing Cloonbonny and Boor Rivers, which drain the eastern part of the catchment. The Shannon then veers southwest and is joined from the west by a series of small tributaries, the largest of which is the Ballydangan River, before flowing out of the catchment at Shannonbridge.

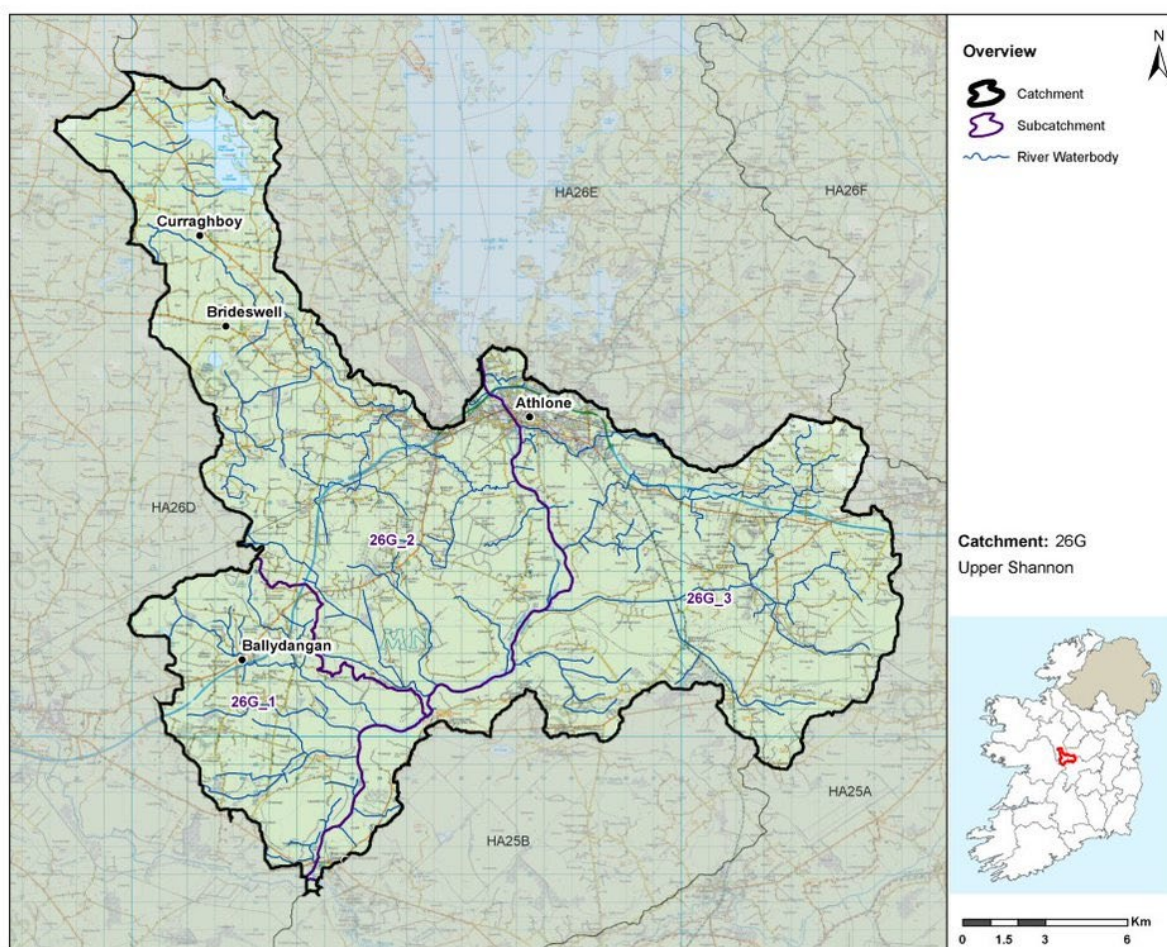


Figure 1: Overview of subcatchments in the Upper Shannon catchment

The Upper Shannon catchment is divided into three subcatchments (Figure 1) with 13 river waterbodies, one lake waterbody and 12 groundwater bodies (Figure 2).

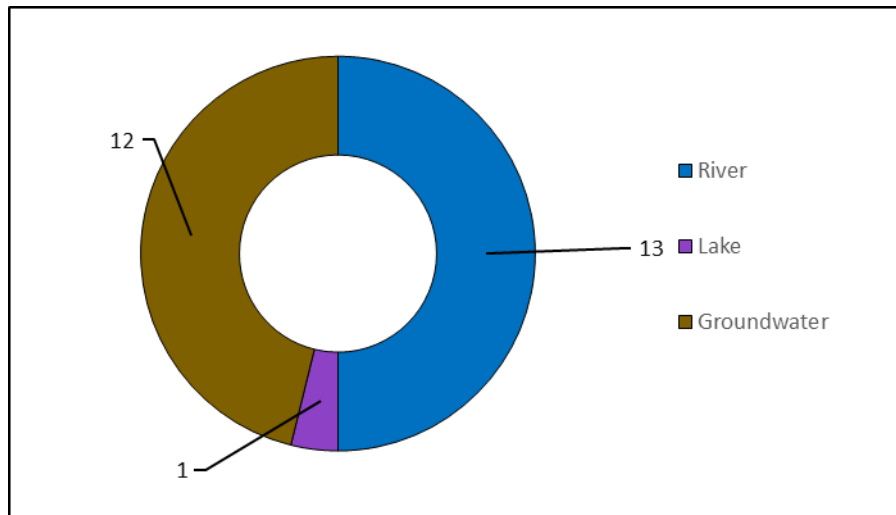


Figure 2: Waterbody types and numbers in the Upper Shannon Catchment.

2 Waterbody Overview

2.1 Waterbody Status

- ◆ This assessment to inform the 3rd Cycle RBMP is largely based on WFD monitoring data for the period 2013-2018, which is the latest WFD monitoring assessment period for which all data are available.
- ◆ For this assessment to inform Cycle 3, there are 16 waterbodies achieving Good Status, four achieving Moderate Status and three achieving Poor Status. There are no High Status waterbodies in the catchment. There are three waterbodies in the catchment that do not have Status assigned. All waterbodies must achieve at least Good Ecological status.
- ◆ There has neither been a decline nor increase with the number of waterbodies within each status category between Cycle 2 and Cycle 3 (Figure 3 & Table 1).

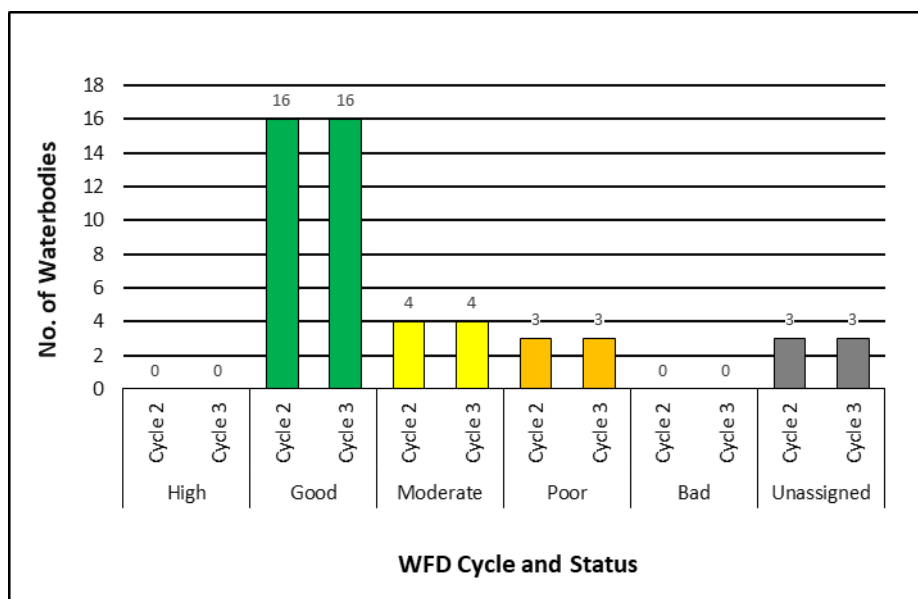


Figure 3: Waterbody Status Breakdown (All waterbodies)

Table 1: Waterbody Status Breakdown Table (All Waterbodies)

2013-2018 Status	River		Lake		Transitional		Coastal		Groundwater		Total	
	Cycle 2	Cycle 3	Cycle 2	Cycle 3	Cycle 2	Cycle 3	Cycle 2	Cycle 3	Cycle 2	Cycle 3	Cycle 2	Cycle 3
High	0	0	0	0	0	0	0	0	0	0	0	0
Good	4	3	0	1	0	0	0	0	12	12	16	16
Moderate	3	4	1	0	0	0	0	0	0	0	4	4
Poor	3	3	0	0	0	0	0	0	0	0	3	3
Bad	0	0	0	0	0	0	0	0	0	0	0	0
Un-assigned	3	3	0	0	0	0	0	0	0	0	3	3
Total	13	13	1	1	0	0	0	0	12	12	26	26

- ◆ Figure 4 illustrates the change in status between Cycle 2 (assessment based largely on 2010-2015 WFD Monitoring data) and Cycle 3 (assessment largely based on 2013-2018 WFD monitoring data).
- ◆ Over this period, one (4%) waterbody has improved (Ree lake waterbody) in status, 21 (91%) waterbodies have remained unchanged and one (4%) waterbody has declined (Cross (Roscommon)_030) in status.¹
- ◆ There is an overall no change in the status of the waterbodies across the catchment since the Cycle 2 assessment.

¹ Unassigned waterbodies have not been considered in this Status class change assessment and therefore are not represented in Figure 4. Percentage displayed in the Figure 4 are in relation to the total number of waterbodies with status assigned in both cycles, as opposed to total number of all waterbodies.

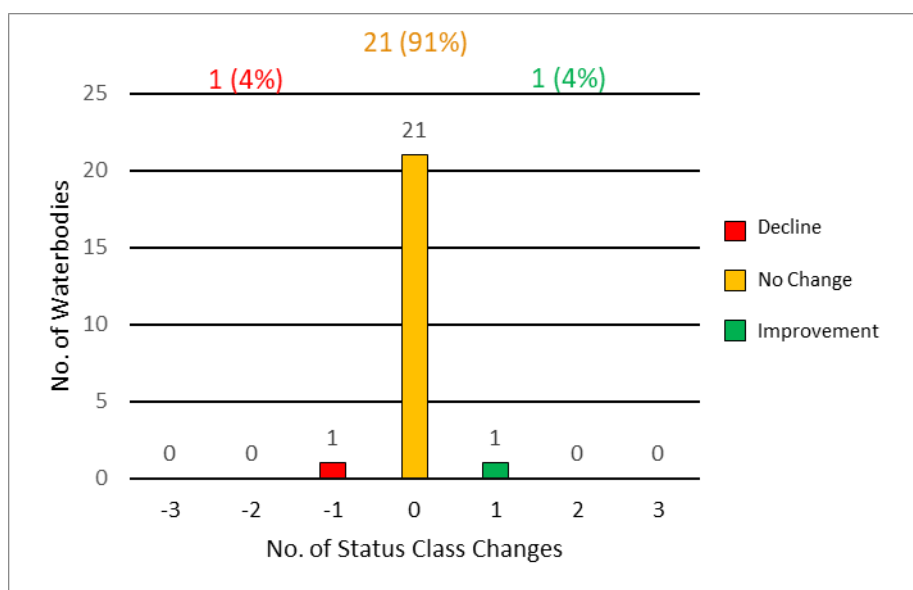


Figure 4: Status Class Changes between Cycle 2 and Cycle 3

2.2 Protected Areas

2.2.1 Drinking Water

- ◆ There is one surface waterbody (Shannon (Upper)_120) in the catchment identified as a Drinking Water Protected Area (DWPA) based on water abstraction data on the abstraction register and from other sources in 2018. All groundwater bodies nationally are identified as DWPA. DWPA layers can be viewed at <https://gis.epa.ie/EPAMaps/Water> - see *Protected Areas - Drinking Water*.
- ◆ The river waterbody met the DWPA objective in 2019.
- ◆ For more detailed information please see the EPA reports on drinking water quality in 2019 for [Public Supplies](#)² and [Private Supplies](#)³.

2.2.2 Bathing Waters

- ◆ There are no bathing waters in or directly adjacent to the catchment identified under the Bathing Water Regulations 2008.
- ◆ For more detailed information please see the EPA report on [bathing water quality in 2020](#)⁴.

2.2.3 Shellfish Areas

- ◆ There are no designated shellfish areas in the catchment.

²<https://www.epa.ie/publications/compliance--enforcement/drinking-water/annual-drinking-water-reports/drinking-water-quality-in-public-supplies-2019.php>

³<https://www.epa.ie/publications/compliance--enforcement/drinking-water/annual-drinking-water-reports/focus-on-private-water-supplies-2019.php>

⁴<https://www.epa.ie/publications/monitoring--assessment/freshwater--marine/bathing-water-quality-in-ireland-2020-.php>

The locations of Protected Areas associated with Public Health (Drinking Water, Bathing Water and Shellfish Areas, where applicable) are illustrated in Figure 5 below.

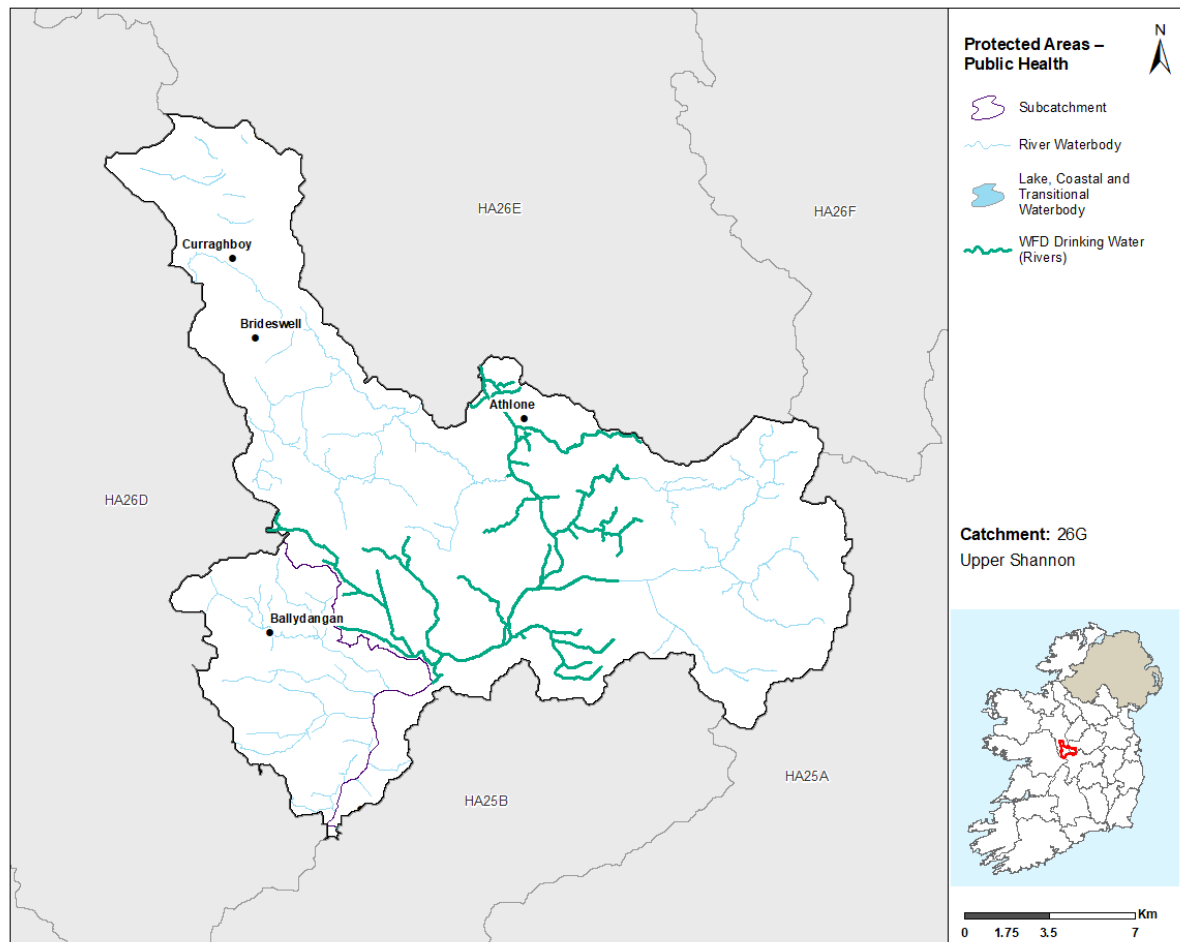


Figure 5: Protected Areas – Public Health

2.2.4 Natura 2000 Sites and Salmonid Waters

- ◆ Many of the habitats and species listed for protection in the Birds and Habitats Directives are water dependent. The Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) with water dependent habitats or species in this catchment are presented in Figure 6, along with waterbodies designated as salmonid waters (S.I. No. 293 of 1988) and waterbodies with Fresh Water Pearl Mussel habitat, where identified.
- ◆ There are eight SACs in this catchment, seven of which have water dependent habitats or species. The waterbodies within these SACs were assessed for associated water dependent habitats and species and if they met the supporting requirements for habitats and species using their 2013-2018 WFD status. For the purposes of the assessment, it was assumed that Good ecological status is adequate to meet the supporting conditions of all habitats and species with the exception of the Freshwater Pearl Mussel, which has additional requirements for supporting conditions set out in the Freshwater Pearl Mussel Regulations (S.I. No 296 of 2009) for macroinvertebrates, filamentous algae, phytobenthos, macrophytes and siltation.
- ◆ Specific water supporting conditions have not been identified for the dependent bird species in the SPAs and so waterbodies associated with SPAs are not included in this assessment.

Results of the overall assessment for this catchment are outlined in

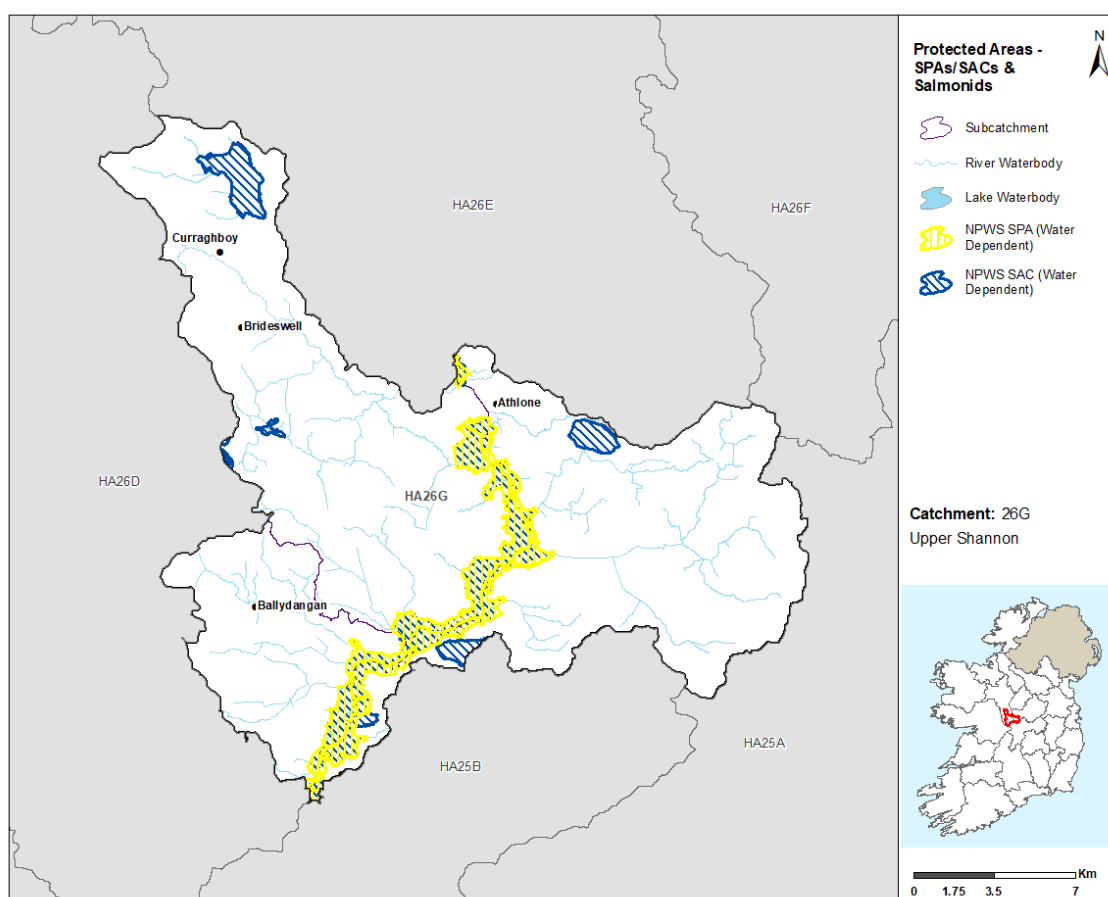
Table 2 below, information at a waterbody level can be viewed at [Catchments.ie](https://www.catchments.ie).⁵

Table 2: Natura 2000 Network Assessment Summary

Water Body Type	Total No.	Meeting the Requirements	Did not meet the Requirements	Unknown*
Rivers	1	0	0	0

*As the waterbody status was unassigned.

- ◆ There are no river waterbodies with FWPM habitats in the catchment.
- ◆ There is one groundwater body delineated and assessed as Groundwater Dependent Terrestrial Ecosystems for this catchment.
- ◆ Water dependent SACs/ SPAs in the catchment are illustrated in Figure 6.



⁵<https://www.catchments.ie/download/catchments-assessments-protected-areas-supporting-documents/>

Figure 6: Water Dependent SPAs / SACs

2.2.5 Nutrient Sensitive Areas

- ◆ The EPA carried out a review of Nutrient Sensitive Areas (NSAs) downstream of large urban waste water discharges in 2020. Once the regulations are in place, and nutrient sensitive areas have been identified, additional nutrient removal must be applied (if not already applied) to waste water treatment plants discharging to the sensitive area. If this treatment was in place the objective was deemed to have been met.
- ◆ There is one NSA in the catchment downstream of Athlone urban wastewater agglomeration. The NSA objectives are being met Table 3.

Table 3: Nutrient sensitive areas in the catchment

Nutrient Sensitive Area	Agglomeration		Water body		Objective met?		Comment
	Name	Code	Name	Code	Yes	No	
Shannon River Upper (120)	Athlone	D0007-01	Shannon (Upper) 120	IE_SH_26S021800	✓		Tertiary Treatment in place

2.3 Heavily Modified Waterbodies

- ◆ Based on the 1st and 2nd RBMPs there are currently no heavily modified water bodies (HMWBs) in the catchment. There will be a consultation period on HMWBs for the 3rd Cycle RBMP and this will be completed for inclusion in the 3rd Cycle Final RBMP.

2.4 Artificial Waterbodies

- ◆ There are no Artificial Waterbodies (AWBs) present in the Upper Shannon Catchment.

3 Waterbody Risk

3.1 Overview of Risk

- ◆ A waterbody that is *At Risk* means that either the waterbody is currently not achieving its Water Framework Directive (WFD) environmental objective of Good or High Ecological Status or that there is an upward trend in nutrients or ammonia and if this trend continues the waterbody Status will decline by the end of Cycle 3 and will fail to meet its environmental objective.
- ◆ A waterbody can be considered as *Review* for the following three reasons:
 - The waterbody does not have status assigned to it yet, it is referred to as an unassigned waterbody, and therefore there is not enough evidence to determine if it is *At Risk* or *Not At Risk*.
 - The waterbody has shown some slight evidence or improvement, but more evidence is needed before it can be considered as *Not At Risk*.
 - Measures are planned or have already been implemented for the waterbody and no further measures should be applied until there is enough time to assess if these measures are working.

- ◆ A waterbody is *Not At Risk* when it is achieving its environmental objective of either High or Good Status and that there is no evidence indicating that there is a trend towards status decline.
- ◆ In total, there are 26 waterbodies in the Upper Shannon Catchment and eight (31%) are currently *At Risk*, five (19%) in *Review* and 13 (50%) are *Not At Risk*.

3.2 Surface Waters

- ◆ For the 13 rivers waterbodies, seven (54%) are *At Risk*, three (23%) are in *Review* and three (23%) are *Not At Risk*.
- ◆ The only lake waterbody in the catchment (Ree) is *Not At Risk*.
- ◆ The largest proportion of *At Risk* waterbodies are found in river waterbodies, accounting for seven (88%) of the eight *At Risk* waterbodies. Figure 7 gives an overview of the breakdown of risk across waterbody types for both Cycle 2 and Cycle 3.
- ◆ Overall, there is an increase in one *At Risk* waterbody, three *Not At Risk* waterbodies and a decline of four *Review* waterbodies between Cycle 2 and Cycle 3.

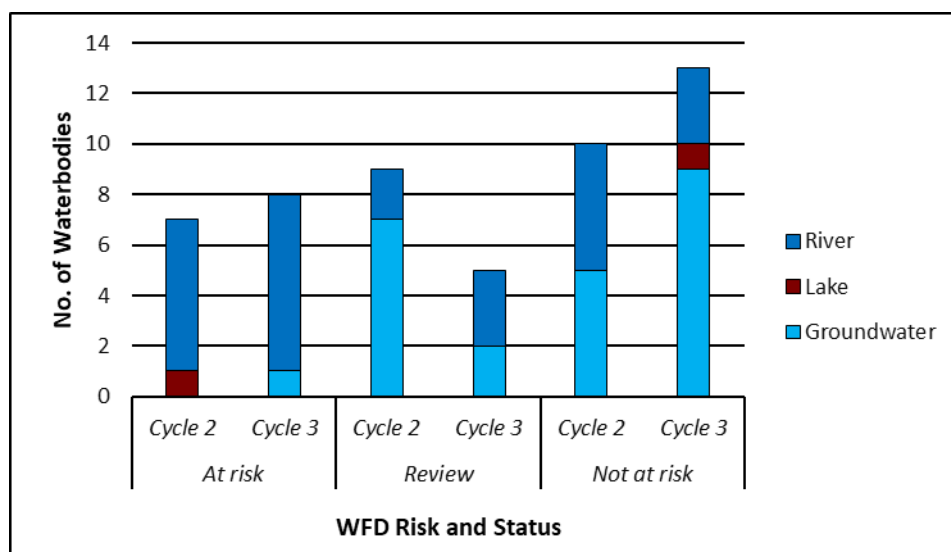


Figure 7: Number of waterbodies in each risk category

- ◆ The location of the *At Risk*, *Review* and *Not At Risk* surface waterbodies for Cycle 3 are shown in Figure 8 while the surface waterbodies that have experienced a change in risk between Cycle 2 and Cycle 3 are shown in Figure 9.

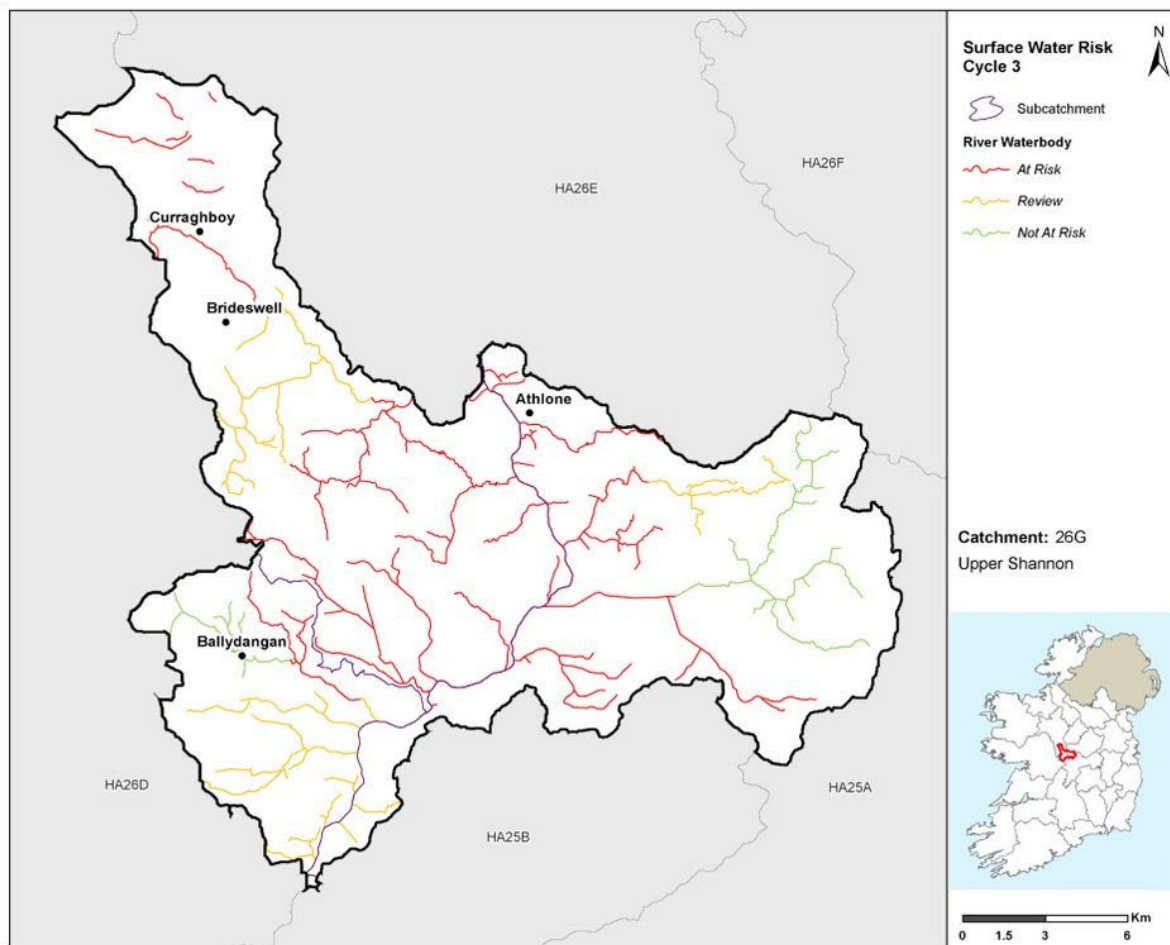


Figure 8: Surface Water Risk Cycle 3

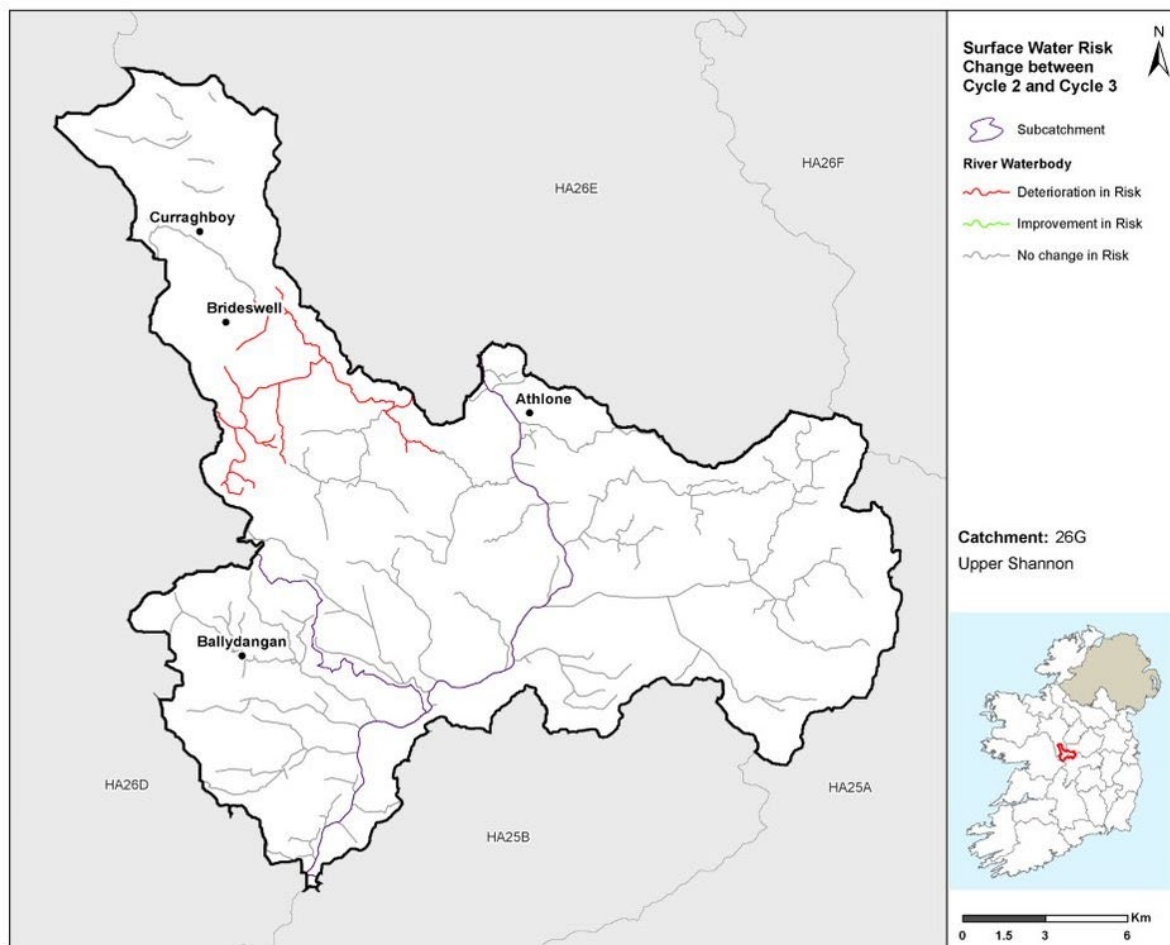


Figure 9: Surface Water Risk Change between Cycle 2 and Cycle 3

3.3 Groundwater

- ◆ For the 12 groundwater bodies, one (8%) is *At Risk* (GWDTE-Fin Lough Fen (SAC000571)), two (17%) are in *Review* and nine (75%) are *Not At Risk*.
- ◆ In Cycle 2, there were seven groundwater bodies in *Review* and five *Not At Risk* in this catchment.
- ◆ The location of the *At Risk*, *Review* and *Not At Risk* groundwater bodies for Cycle 3 are shown in Figure 10 while the groundwater bodies that have experienced a change in risk between Cycle 2 and 3 are shown in Figure 11.

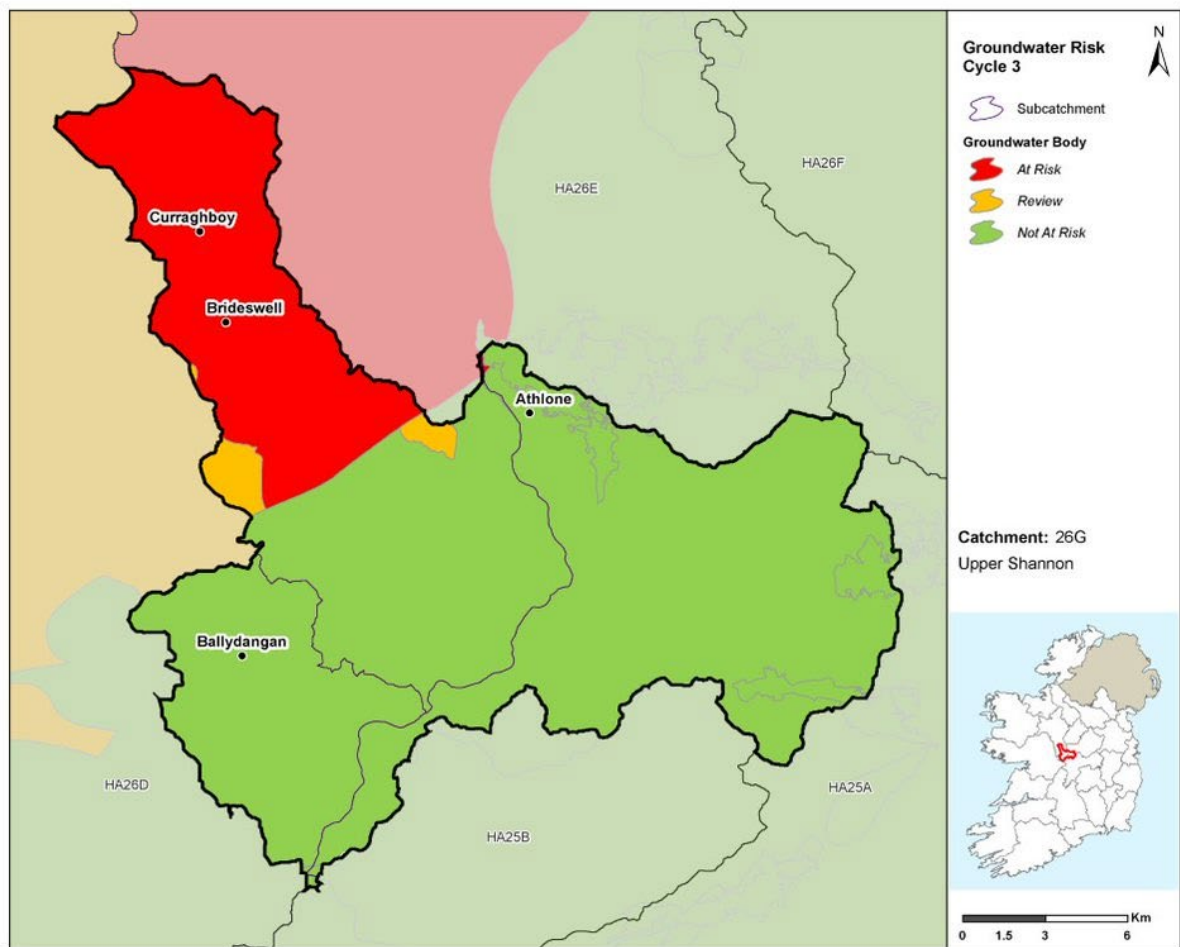


Figure 10: Cycle 3 Groundwater Body Risk

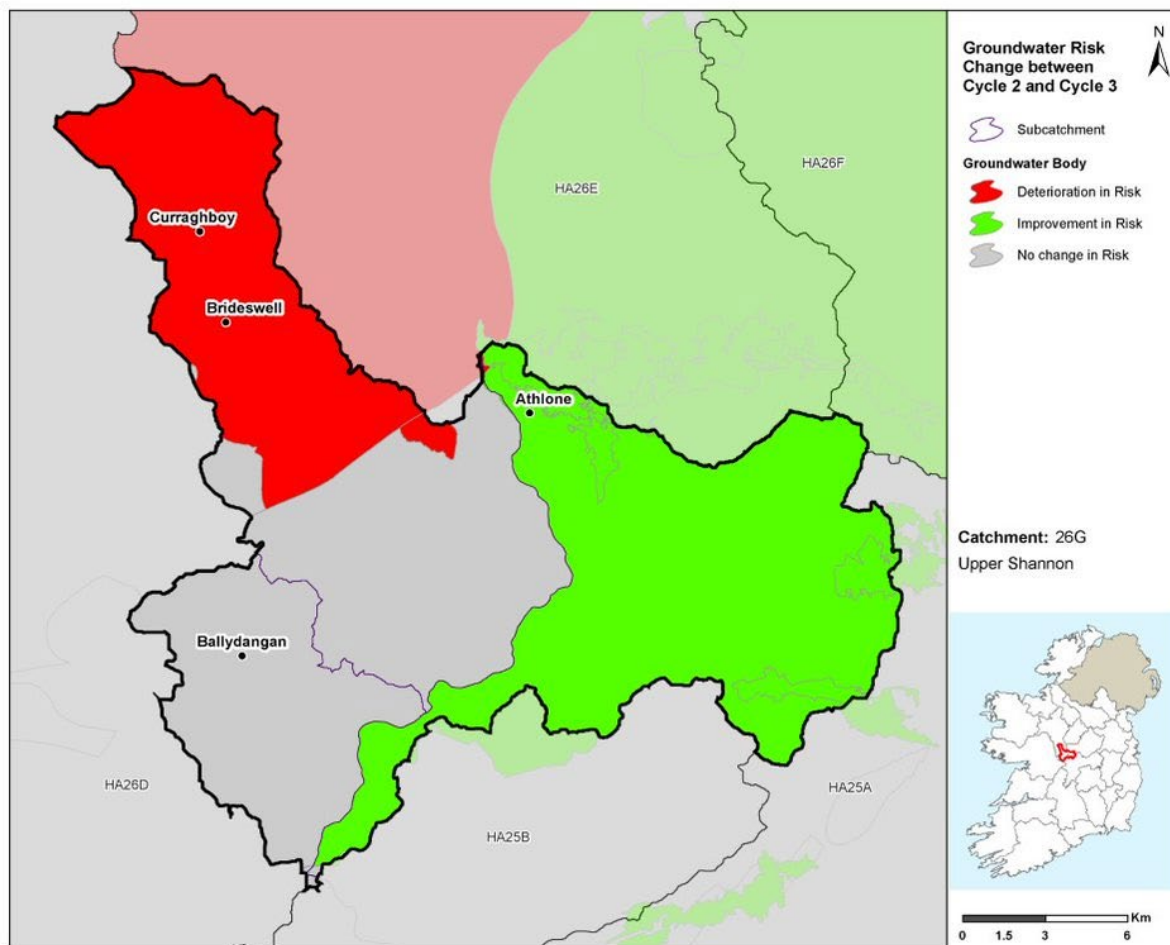


Figure 11: Groundwater Body Risk Change between Cycle 2 & Cycle 3

3.4 Heavily Modified Waterbodies

- ◆ There are currently no heavily modified water bodies (HMWBs) in the catchment. There may be changes to HMWB designation once the Cycle 3 HMWB assessment has been completed and consulted on for the 3rd Cycle Final RBMP.

3.5 Artificial Waterbodies

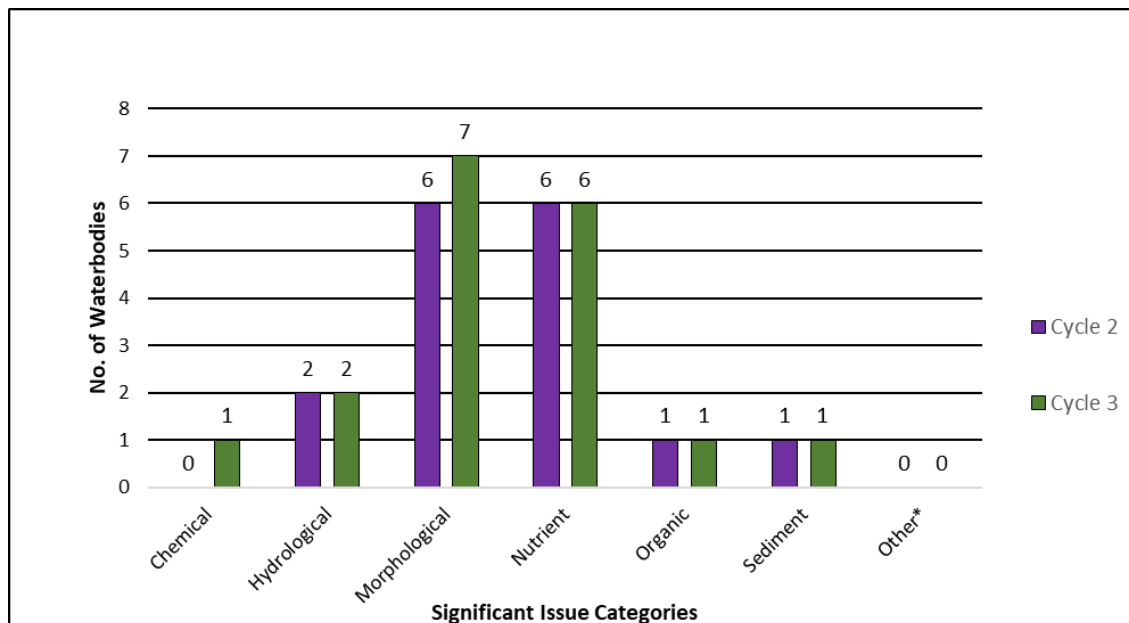
- ◆ There are no Artificial Waterbodies (AWBs) present in the Upper Shannon Catchment.

4 Significant Issues in *At Risk* Waterbodies

4.1 All Waterbodies

- ◆ Morphological impacts and excess nutrients remain the most prevalent issues in the Upper Shannon catchment (Figure 12) with each impacting seven and six waterbodies in Cycle 3. Hydrological issues are impacting two waterbodies while sediment pollution, chemical pollution and organic pollution are impacting one waterbody each.
 - For river waterbodies, the main significant issues are morphological impacts (7), nutrient pollution (6), hydrological (2), organic pollution (1) and sediment impacts (1).

- For the one *At Risk* groundwater body (Funshinagh), the significant issue is chemical pollution.
- ◆ Between Cycle 2 and Cycle 3, the number of waterbodies with morphological and chemical issues have both increased by one waterbody.
- ◆ The remaining significant issues from Cycle 2, hydrological, organic, nutrient and sediment issues have all remained unchanged impacting the same number of waterbodies between Cycle 2 and Cycle 3.



*Other - Acidification, saline intrusion, elevated temperature, litter, microbiological pollution and unknown impacts have all been grouped into the "Other" issues category for the purpose of this report

Figure 12: Significant Issues across all *At Risk* WBs between Cycle 2 and Cycle 3

4.2 High Status Objective Waterbodies

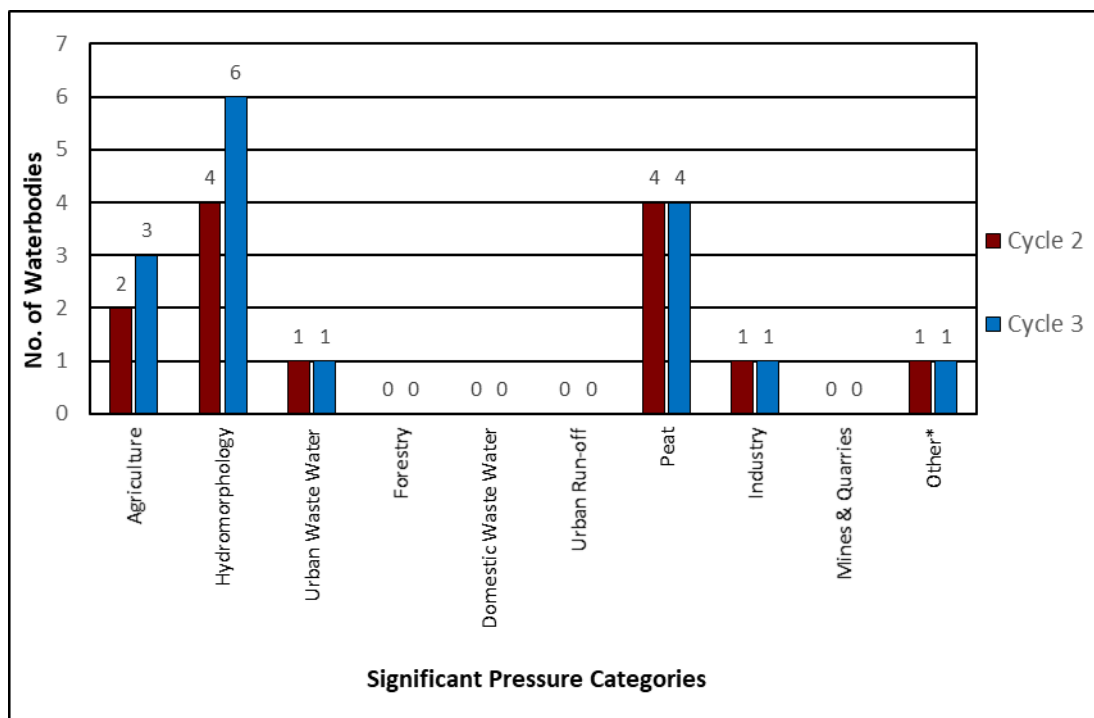
- ◆ The Upper Shannon Catchment currently has no High Status Objective waterbodies assigned.

5 Significant pressures in *At Risk* Waterbodies

5.1 All Waterbodies

- ◆ Where waterbodies have been classed as *At Risk*, significant pressures have been identified.
- ◆ Figure 13 shows a breakdown of the number of *At Risk* waterbodies in each significant pressure category.
- ◆ The significant pressure affecting the greatest number of waterbodies is hydromorphology, followed by agriculture, peat, urban waste water and industry.
- ◆ When comparing Cycle 2 and Cycle 3, the biggest change is an increase of two waterbodies where hydromorphology is a significant pressure from four waterbodies in Cycle 2 to six waterbodies in Cycle 3.

- ◆ The increase in hydromorphology significant pressures is likely to be associated with more detailed assessment by the EPA based on the recently developed Morphological Quality Index tool and associated increasing awareness of hydromorphology rather than new significant hydromorphology pressures since Cycle 2.



*Other – abstractions, aquaculture, atmospheric, anthropogenic pressures, historically polluted sites, waste, water treatment and invasive species have all been grouped into the “Other” pressure category for the purpose of this report

Figure 13: Significant Pressure (All At Risk Waterbodies)

5.1.1 Pressure Type

5.1.1.1 Hydromorphology

- ◆ Six river waterbodies within the Shannon [Upper] (SC26G_2), Shannon [Lower] (SC26G_1) and Shannon [Lower] (SC26G_3) subcatchments are subject to extensive modification which has led to habitat degradation. A weir exists within a river waterbody (Mihanboy_010) shared with subcatchments Shannon [Upper] (SC26G_2) and Shannon [Lower] (SC26G_3) and it may be impacting both fish habitat and hydromorphological conditions.

5.1.1.2 Agriculture

- ◆ Agriculture is a significant pressure in Cross (Roscommon)_010, Cross (Roscommon)_030, Boor_020 river waterbodies and Funshinagh groundwater body (Figure 10). The issues related to farming in this catchment are predominantly due to nutrient release with sediment issues from animal access or stream crossings identified as an additional issue in Corr (Roscommon)_030. Chemical pollution however is the issue in the Funshinagh groundwater as a result of pesticide use.

5.1.1.3 Peat

- ◆ Peat drainage and extraction has been identified as a significant pressure in four river waterbodies (Cross (Roscommon)_040, Mihanboy_010, Shannon (Upper)_120 and Boor_020). This has resulted in increased sediment loads, which alters habitats, morphology and hydrology.

5.1.1.4 Urban Waste Water

- ◆ As in Cycle 2, Urban Waste Water Treatment Agglomerations have been identified as a significant pressure in one *At Risk* waterbody (Cross (Roscommon)_030) in Cycle 3. The Monksland agglomeration is not scheduled to be upgraded under the current Irish Water Capital Investment Programme (2020-2024).

Table 4: Urban Waste Water Treatment Agglomerations identified as significant pressures in *At Risk* waterbodies in Cycle 3

Facility name	Facility Type	Waterbody	2013-18 Ecological Status	Irish Water's Expected CIP Completion Date ⁶
Monksland Wastewater Treatment Works D0042	Agglomeration PE of 1,001 to 2,000	Cross (Roscommon)_030	Moderate	N/A

5.1.1.5 Industry

- ◆ An EPA licenced facility, Bord na Mona Energy Limited (Blackwater), has been identified as a significant pressure impacting Ballydangan_020. Nutrient pollution and altered habitat due to morphological changes are the significant issues associated with the IPC.

Table 5: Breakdown of Cycle 3 Industry Significant Pressures in the Upper Shannon Catchment

Waterbody Code	Waterbody Name	Waterbody Type	Emission Type	Name	Impact
IE_SH_26B140200	BALLYDANGAN_020	River	IPC	Bord na Mona Energy Limited (Blackwater)	Nutrient & altered habitat due to morphological changes

Figure 14 – Figure 16 illustrates the locations of waterbodies for the three most common pressures in order of prevalence (hydromorphology, peat and agriculture) within the catchment in Cycle 3.

⁶ Based on Irish Water's Capital Investment Programme (2020-2024) as of February 2021 and may be subject to change.

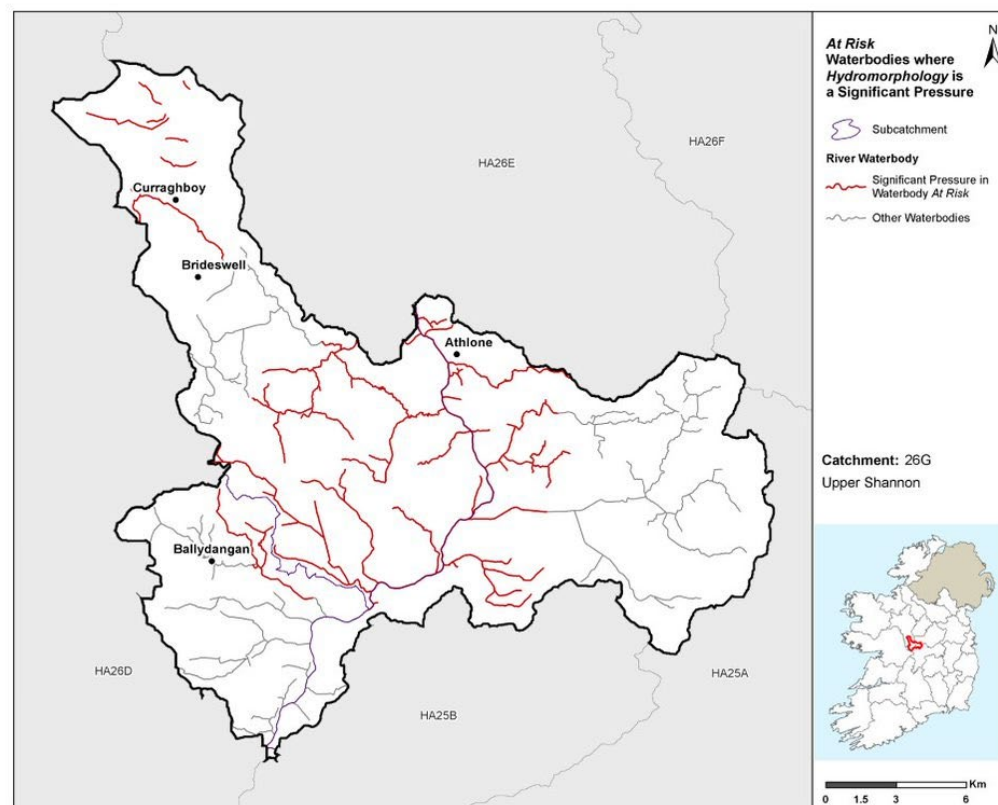


Figure 14: Locations of Waterbodies where Hydromorphology is a Significant Pressure

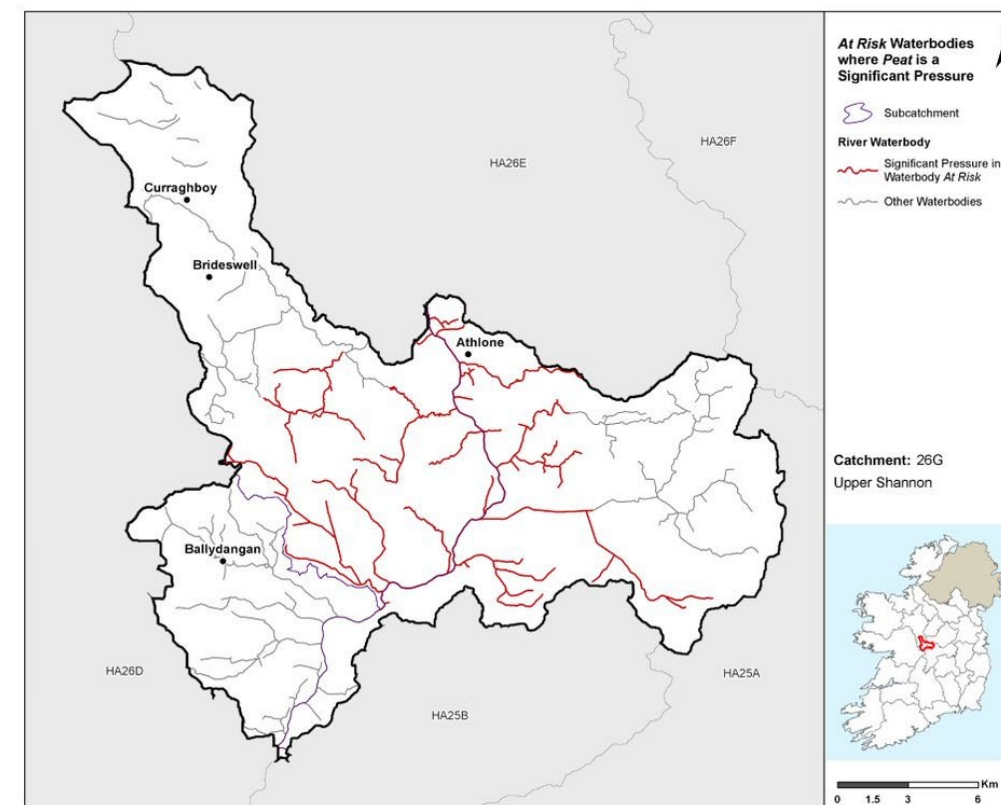


Figure 15: Locations of Waterbodies where Peat is a Significant Pressure

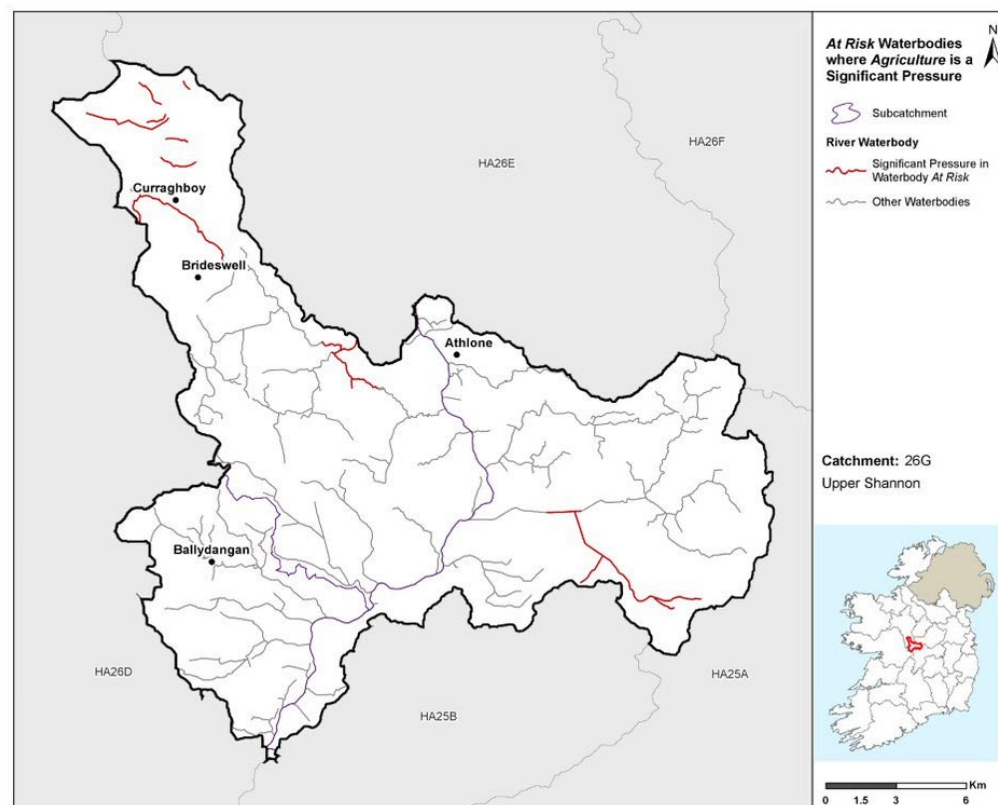


Figure 16: Locations of Waterbodies where Agriculture is a Significant Pressure

5.2 High Status Objective Waterbodies

- ◆ As stated in Section 4.2, the Upper Shannon Catchment currently has no High Status Objective waterbodies assigned.

6 Source Load Apportionment Modelling (SLAM)

- ◆ The EPA has developed Source Load Apportionment Models (SLAM) for both P and N which estimate the proportion of the phosphorus and nitrogen inputs, respectively, to waters in each catchment that comes from each sector.
- ◆ The main data inputs for the model for agriculture are the 2018 land parcel (LPIS) and animal (AIMs) data from the Department of Agriculture Food and the Marine. The Urban Waste Water (UWW) data comes from Irish Water's discharge monitoring data. The model also calculates the inputs from a range of other sectors, including for example, forestry, septic tanks, peat, urban runoff and atmospheric deposition.
- ◆ In the catchment pasture is responsible for 85% of the nitrogen load while land in pasture, discharges from urban waste water and peat contribute 36%, 24% and 21% of the phosphorus loadings for the catchment respectively (Figure 17).

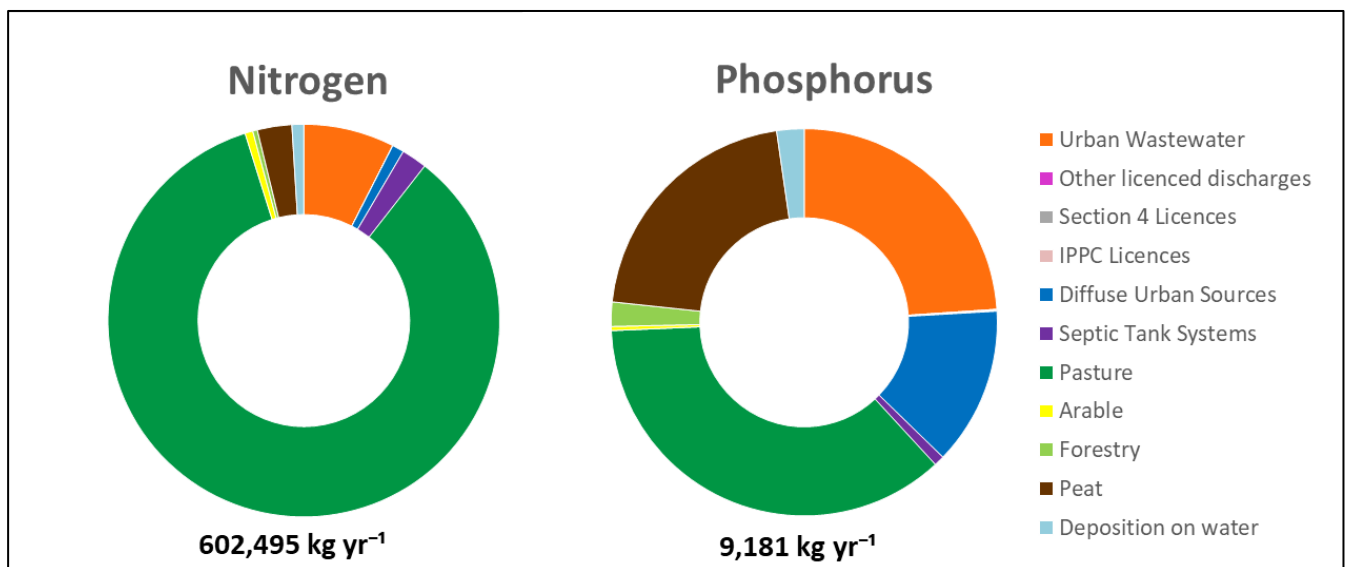


Figure 17: Estimated Proportions of N & P from Each Sector in the Upper Shannon Catchment

7 Load Reduction Assessment

7.1 Nitrogen Load Reduction

- ◆ An assessment was undertaken to determine if nitrogen reductions in rivers, streams and lakes are required for Transitional and Coastal (TRACs) waterbodies to achieve their WFD environmental objective. The outcome of the assessment indicated that 10 of the 46 catchments require N reductions in our inland waters to restore some TRAC waterbodies. Nitrogen load reduction to meet TRAC WFD objectives are not required in the Upper Shannon Catchment.

7.2 Phosphorus / Sediment Load Reduction

- ◆ Further modelling work is required to determine if and what P load reductions are required.

Figure 18 highlights areas where agricultural measures sediment and phosphorus should be targeted. Waterbodies with blue fill are areas where sediment or phosphorus should be targeted. Pollution Impact Potential mapping for both phosphorus and nitrogen in the catchment are provided in Appendix 1.

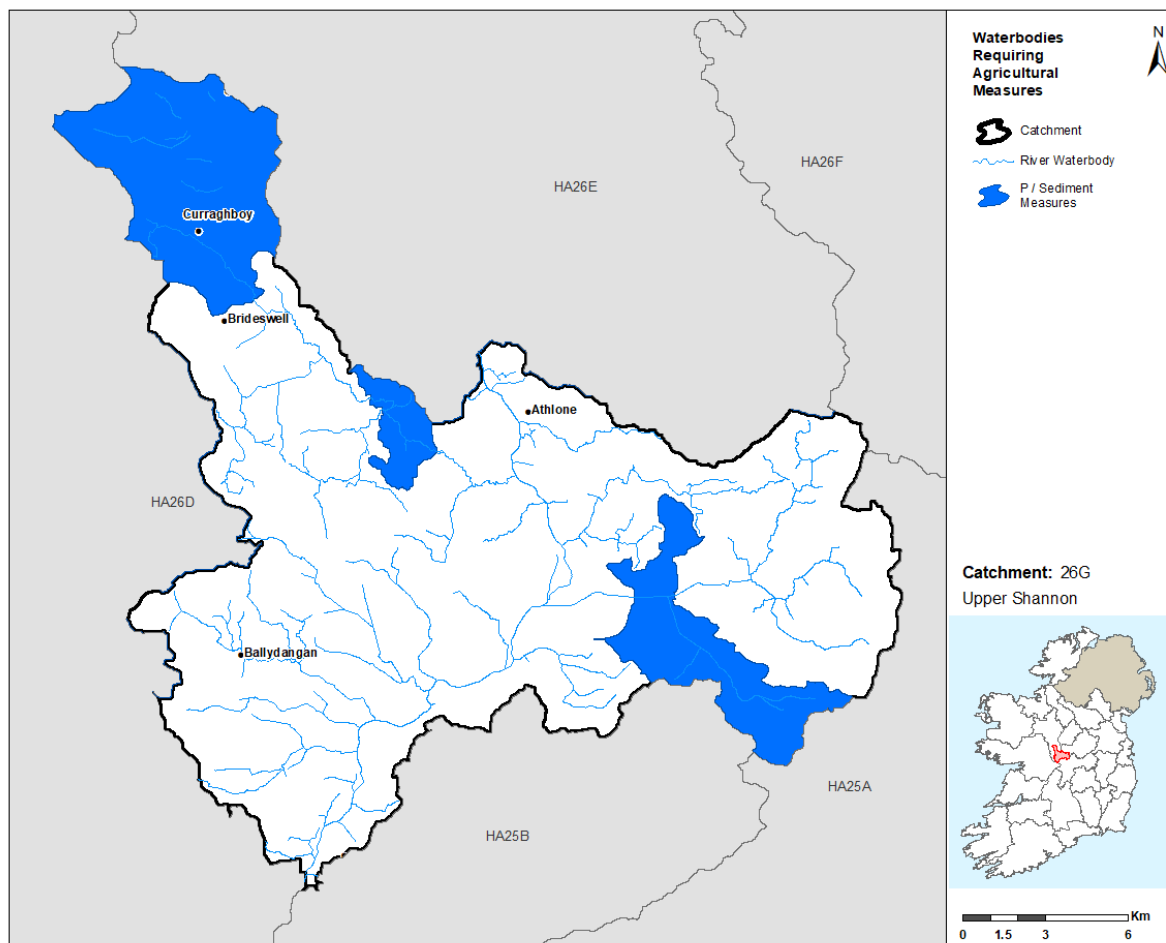


Figure 18: Waterbodies where Agricultural Measures should be Targeted

8 2nd Cycle Areas for Action

8.1 Area for Action Overview

- ◆ There were no recommended Areas for Action for this catchment in Cycle 2.

9 3rd Cycle Recommended Areas for Action

9.1 Recommended Areas for Action Overview

- ◆ For the 3rd Cycle Draft River Basin Management Plan Areas for Action have been extended out to not only include Prioritised Areas for Action undertaken by LAWPRO which focussed on restoring waterbodies, but to also include restoration work undertaken by all agencies under Areas for Restoration. In addition, protection work is included under Areas for Protection and research, pilot schemes and community initiatives are included under Catchment Projects. The aim of the 3rd Cycle Plan is to capture all activity that is working to restore, improve and/or protect waterbodies.
- ◆ The Recommended 3rd Cycle Areas for Action list will be included in the Draft River Basin Management Plan and will be finalised after the consultation period.
- ◆ There are four Areas for Action, comprising of nine waterbodies, recommended for further characterisation and action in the catchment for the 3rd Cycle River Basin Management Plan. Six of the nine waterbodies in the 3rd Cycle in the Upper Shannon Catchment are *At Risk*, two are in *Review* and one is *Not At Risk*. The four Recommended Areas for Action consist of three Areas for Restoration and one Catchment Project. LAWPRO are the proposed lead organisation in two Recommended Areas for Action, Offlay County Council are the proposed lead on one Recommended Area for Action and GSI are the proposed lead on the remaining Recommended Area for Action. The Recommended Areas for Action in the catchment are listed in Table 6 and shown in Figure 19. The reason for selecting for each waterbody in a Recommended Area for Action is provided in Appendix 2.

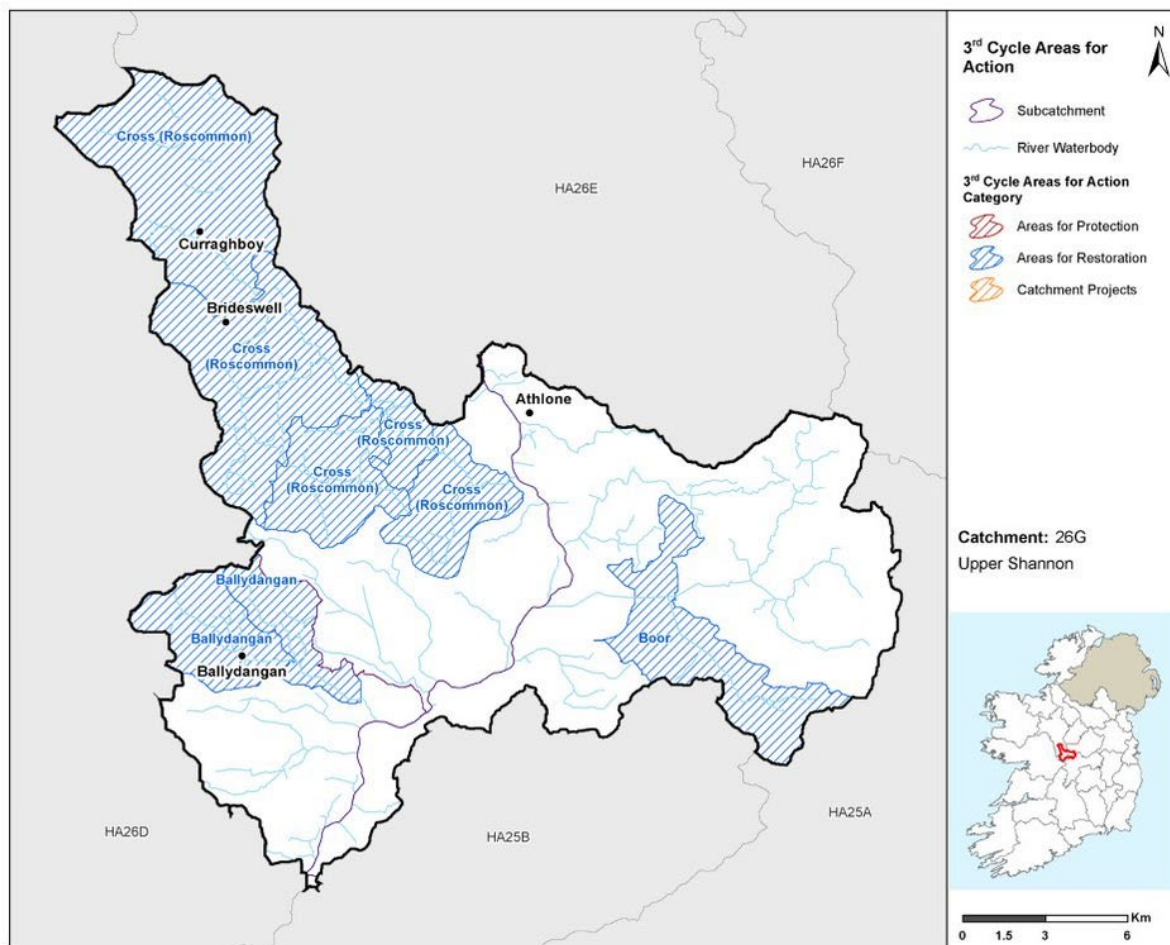


Figure 19: 3rd Cycle Recommended Areas for Action Locations

Table 6: 3rd Cycle Recommended Areas for Action Breakdown

3rd Cycle Recommended Areas for Action	Number of Waterbodies	Recommended Areas for Action Category	Recommended Areas for Action Sub-category	Lead Organisation
Boor	1	Restoration	LA Areas for Restoration Local Authorities	Offaly County Council
Ballydangan	2	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
Cross (Roscommon)	5	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
Suck South GWB	1	Catchment Projects	Public Body Research	GSI

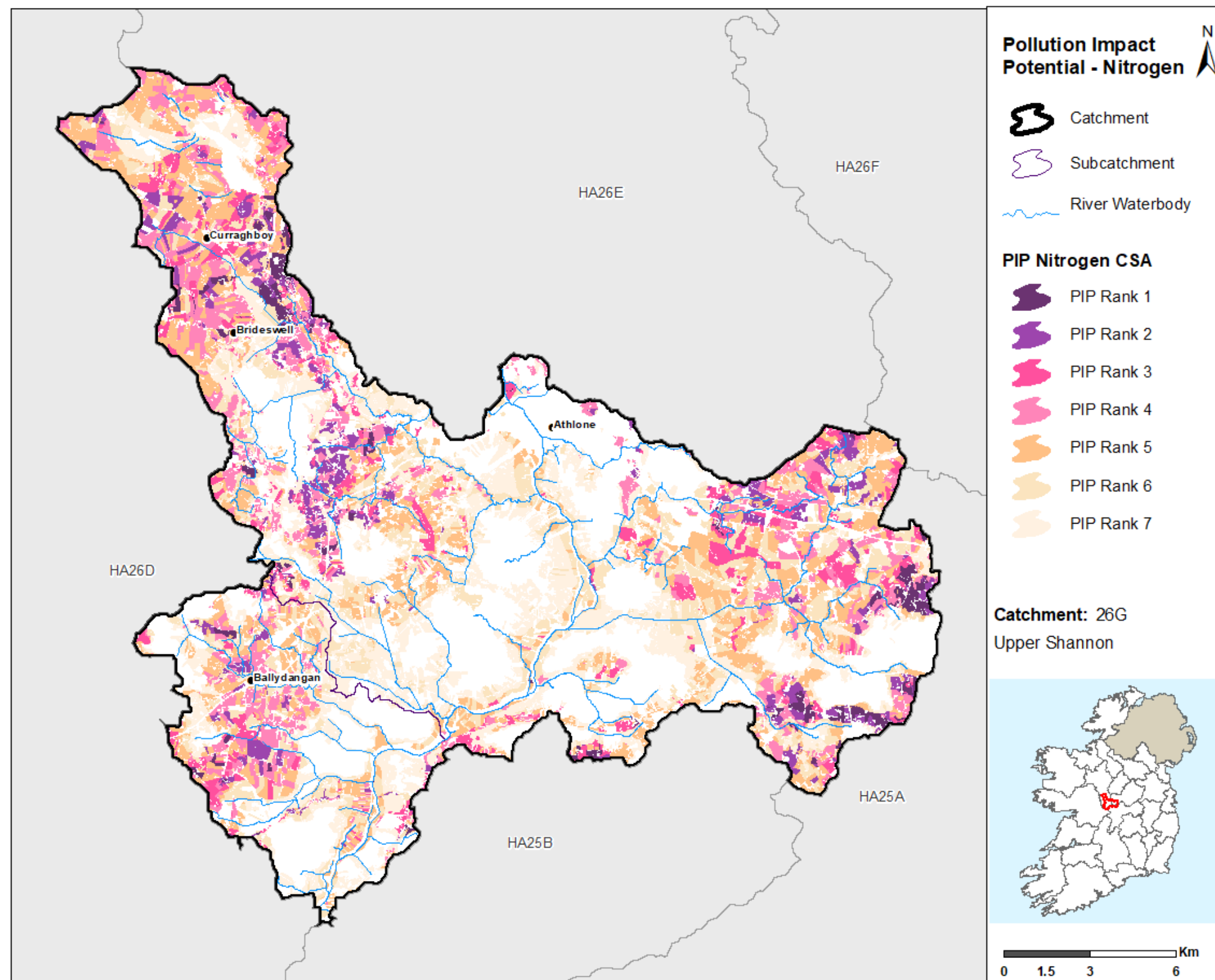
10 Catchment Summary

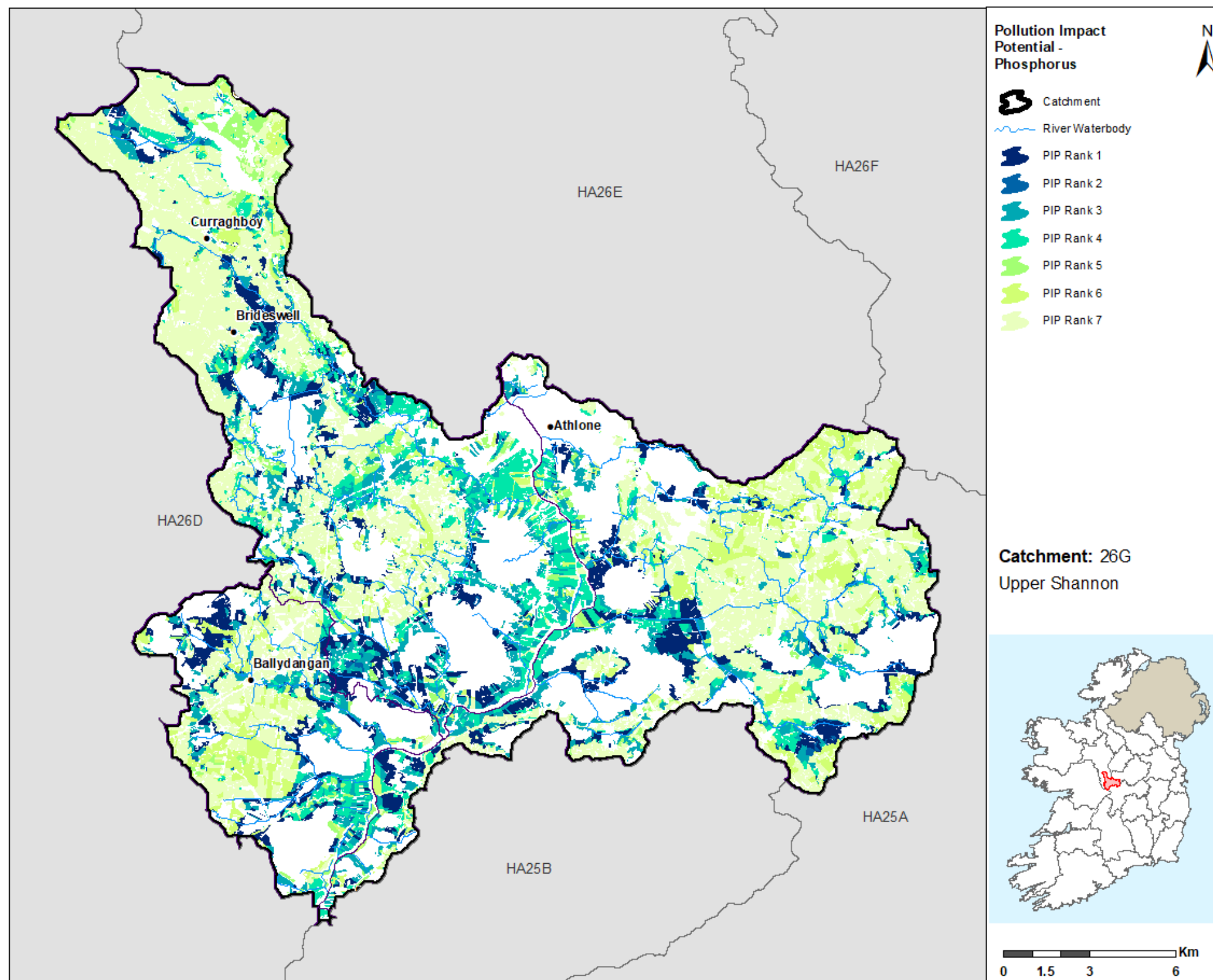
- Of the 13 river waterbodies, seven are *At Risk* of not meeting their WFD objectives.
- One out of 12 groundwater bodies (Funshinagh) is *At Risk*.

- There are eight waterbodies *At Risk* in Cycle 3 compared to seven waterbodies *At Risk* in Cycle 2.
- The main significant issues are from morphological impacts, followed by nutrient pollution, hydrological impacts, organic pollution, sediment and chemical issues.
- The main significant pressures are hydromorphological pressures followed by peat, agriculture, urban waste water and industry.
- There were no recommended Areas for Action for this catchment in Cycle 2.
- There are four 3rd Cycle Recommended Areas for Action for Cycle 3. They comprise of nine waterbodies with six waterbodies *At Risk*, two in *Review* and one *Not At Risk*.

Appendix 1

Pollution Impact Potential Mapping





Appendix 2

Summary information on all waterbodies in the Upper Shannon Catchment

Subcatchment Code	Waterbody Code	Waterbody Name	Waterbody Type	Risk 10-15	Risk 13-18	Status 10-15	Status 13-18	High Ecological Status Objective Waterbody	Significant Pressures	Recommended Areas for Action Name	Recommended Areas for Action (reasons for selection)
26G_3	IE_SH_26B071100	BOOR_010	River	Not at risk	Not at risk	Good	Good	No			
26G_3	IE_SH_26B071200	BOOR_020	River	At risk	At risk	Moderate	Moderate	No	Ag, Peat	Boor	1. Cross county WB, assess impacts
26G_1	IE_SH_26B140100	BALLYDANGAN_010	River	Not at risk	Not at risk	Good	Good	No		Ballydangan	
26G_1	IE_SH_26B140200	BALLYDANGAN_020	River	At risk	At risk	Poor	Poor	No	Hymo, Ind	Ballydangan	
26G_2	IE_SH_26C100060	CROSS (ROSCOMMON)_010	River	At risk	At risk	Poor	Poor	No	Ag, Hymo	Cross (Roscommon)	Headwater. This waterbody is at Poor Status and must reach Good Status. The Inland Fisheries Ireland undertook some rehabilitation works in this waterbody some years ago, which could be built upon in the 3rd cycle. Lough Funshinagh GWB.
26G_2	IE_SH_26C100200	CROSS (ROSCOMMON)_020	River	Not at risk	Review	Good	Good	No		Cross (Roscommon)	Include to complete SC.
26G_2	IE_SH_26C100300	CROSS (ROSCOMMON)_030	River	Not at risk	At risk	Good	Moderate	No	Ag, Hymo, UWW	Cross (Roscommon)	Expand original proposal to include this AR WB & complete SC.
26G_2	IE_SH_26C100400	CROSS (ROSCOMMON)_040	River	At risk	At risk	Moderate	Moderate	No	Hymo, Peat	Cross (Roscommon)	Expand original proposal to include this AR WB & complete SC.
26G_3	IE_SH_26C260570	CLONMORE_010	River	Not at risk	Not at risk	Unassigned	Unassigned	No			
26G_3	IE_SH_26C460200	CLOONBONNY STREAM_010	River	Review	Review	Unassigned	Unassigned	No			
26G_2	IE_SH_26M040200	MIHANBOY_010	River	At risk	At risk	Moderate	Moderate	No	Hymo, Peat	Cross (Roscommon)	Expand original proposal to include this AR WB & complete SC.
26G_2, 26G_3	IE_SH_26S021800	SHANNON (Upper)_120	River	At risk	At risk	Poor	Poor	No	Hymo, Peat		
26G_1, 26G_3	IE_SH_26S021920	SHANNON (Upper)_130	River	Review	Review	Unassigned	Unassigned	No			
26C_1, 26C_8, 26E_1, 26E_2, 26E_3, 26E_5, 26E_6, 26G_3	IE_SH_26_750a	Ree	Lake	At risk	Not at risk	Moderate	Good	No			
26D_5, 26E_6, 26G_1, 26G_2, 26G_3	IE_SH_G_014	Athlone West	Groundwater	Not at risk	Not at risk	Good	Good	No			
26E_6, 26G_2	IE_SH_G_018	Industrial Facility (P0110-01)	Groundwater	Not at risk	Review	Good	Good	No			
25B_4, 25C_12, 26D_2, 26D_3, 26D_5, 26G_1, 26G_3, 29_5, 29_9	IE_SH_G_019	Aughrim	Groundwater	Not at risk	Not at risk	Good	Good	No			

Subcatchment Code	Waterbody Code	Waterbody Name	Waterbody Type	Risk 10-15	Risk 13-18	Status 10-15	Status 13-18	High Ecological Status Objective Waterbody	Significant Pressures	Recommended Areas for Action Name	Recommended Areas for Action (reasons for selection)
25B_2, 26G_3	IE_SH_G_060	GWDTE-Fin Lough Fen (SAC000571)	Groundwater	Review	Not at risk	Good	Good	No			
26C_1, 26C_12, 26C_7, 26C_8, 26C_9, 26D_5, 26D_6, 26D_7, 26E_1, 26E_2, 26E_3, 26E_5, 26E_6, 26G_2, 26G_3	IE_SH_G_091	Funshinagh	Groundwater	Review	At risk	Good	Good	No	Ag		
07_10, 07_12, 07_13, 07_7, 07_9, 25A_10, 25A_8, 25A_9, 25B_2, 26C_1, 26C_6, 26C_7, 26E_1, 26E_4, 26E_6, 26F_1, 26F_10, 26F_2, 26F_3, 26F_4, 26F_5, 26F_6, 26F_7, 26F_8, 26F_9, 26G_1, 26G_2, 26G_3, 36_18, 36_8, 36_9	IE_SH_G_110	Inny	Groundwater	Review	Not at risk	Good	Good	No			
26B_1, 26C_12, 26D_1, 26D_10, 26D_11, 26D_2, 26D_3, 26D_4, 26D_5, 26D_6, 26D_7, 26D_8, 26D_9, 26E_2, 26E_3, 26E_5, 26G_1, 26G_2, 29_5, 30_10, 30_12, 30_19, 30_8	IE_SH_G_225	Suck South	Groundwater	Review	Review	Good	Good	No		Suck South GWB	<p>This GWB is in Review as it is hydrologically linked to surface waters that are not meeting water quality objectives where it is considered likely that groundwater is a contributing source of phosphorus. So this type of deterioration may be observed in the future.</p> <p>Also there are numerous groundwater fed drinking water sources with water quality issues in the area.</p> <p>GSI are involved in karst mapping and flood monitoring within this GWB. A PAA status would allow this already existing work to be highlighted via the WFD process.</p> <p>Risk of GWB deteriorating; Public health areas for restoration.</p>

Subcatchment Code	Waterbody Code	Waterbody Name	Waterbody Type	Risk 10-15	Risk 13-18	Status 10-15	Status 13-18	High Ecological Status Objective Waterbody	Significant Pressures	Recommended Areas for Action Name	Recommended Areas for Action (reasons for selection)
											Build on existing programmes and community group initiatives.
25B_1, 25B_2, 25B_4, 25B_5, 25C_10, 25C_12, 25C_3, 25C_6, 25C_7, 25C_8, 26D_3, 26G_1, 26G_3, 29_1, 29_7, 29_8, 29_9	IE_SH_G_236	Tynagh	Groundwater	Not at risk	Not at risk	Good	Good	No			
07_11, 07_2, 07_9, 25A_1, 25A_10, 25A_11, 25A_2, 25A_3, 25A_5, 25A_7, 25A_8, 25A_9, 25B_1, 25B_2, 25B_4, 26F_1, 26F_2, 26F_4, 26F_5, 26G_1, 26G_3	IE_SH_G_240	Clara	Groundwater	Not at risk	Not at risk	Good	Good	No			
26E_4, 26E_6, 26F_5, 26G_3	IE_SH_G_246	Athlone Gravels	Groundwater	Review	Not at risk	Good	Good	No			
25A_8, 25A_9, 26G_3	IE_SH_G_255	Gageborough-Brosna Gravels Group 2	Groundwater	Review	Not at risk	Good	Good	No			
25A_8, 26G_3	IE_SH_G_258	Boor Gravels	Groundwater	Review	Not at risk	Good	Good	No			

Ag: Agriculture

M+Q: Mines and Quarries

DWW: Domestic Waste Water

Peat: Peat Drainage and Extraction

For: Forestry

UR: Urban Run-off

Hymo: Hydromorphology

UWW: Urban Waste Water

Ind: Industry

Note: Significant Pressures for Review waterbodies have not been included as they will need to be confirmed as part of an Investigative Assessment.