

3rd Cycle Draft Barrow Catchment Report (HA 14)



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 Barrow 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 Barrow 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 Barrow catchment includes the area drained by the River Barrow upstream of the River Nore confluence and all streams entering tidal water between the Barrow railway bridge at Great Island and Ringwood, Co. Kilkenny, draining a total area of 3,025km² (Figure 1). The largest urban centre in the catchment is Carlow. The other main urban centres in this catchment are New Ross, Graiguenamanagh, Athy, Portlaoise, Mountmellick, Portarlinton, Monasterevin and Kildare. The total population of the catchment is approximately 188,117 with a population density of 62 people per km².

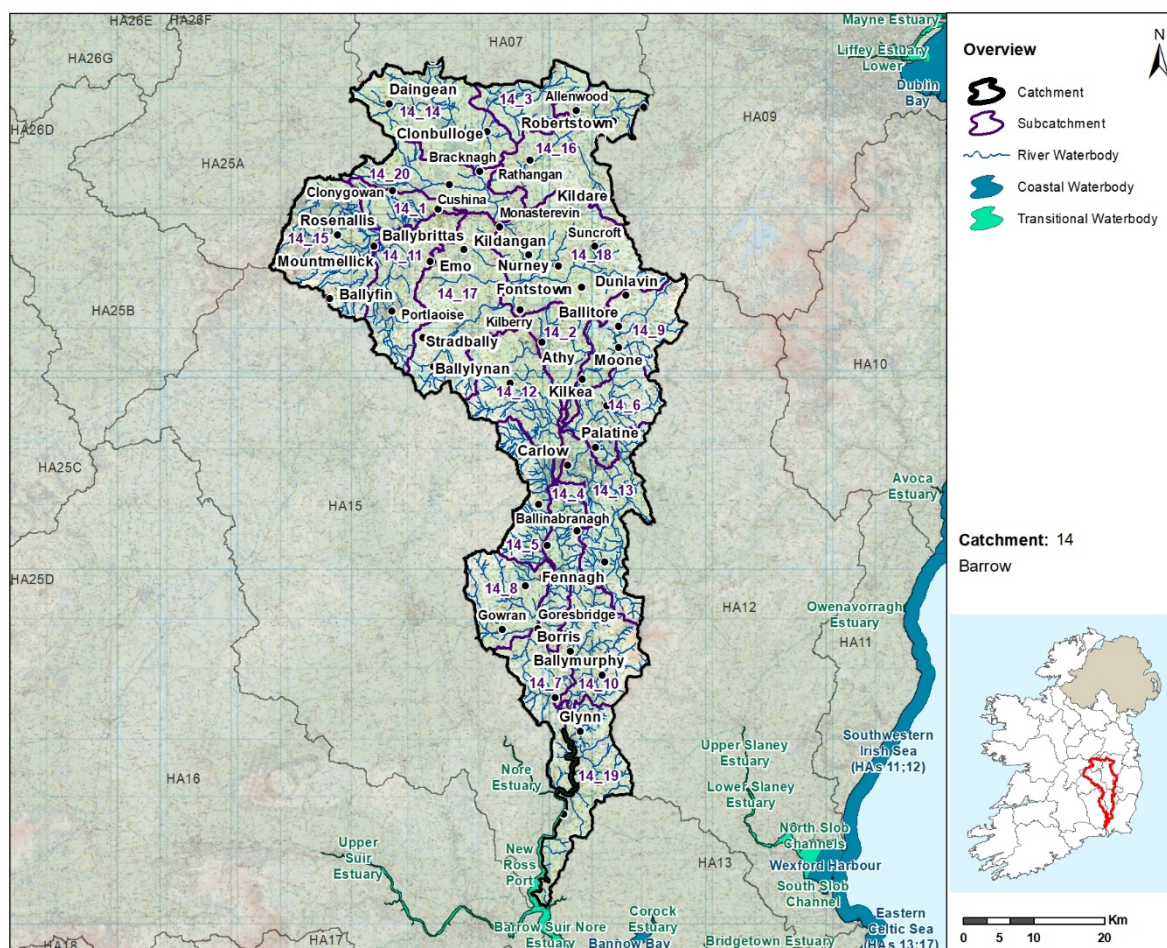


Figure 1: Overview of subcatchments in the Barrow catchment

The Barrow catchment is divided into 20 subcatchments (Figure 1) with 149 river waterbodies¹, six transitional waterbodies and 50 groundwater bodies (Figure 2).

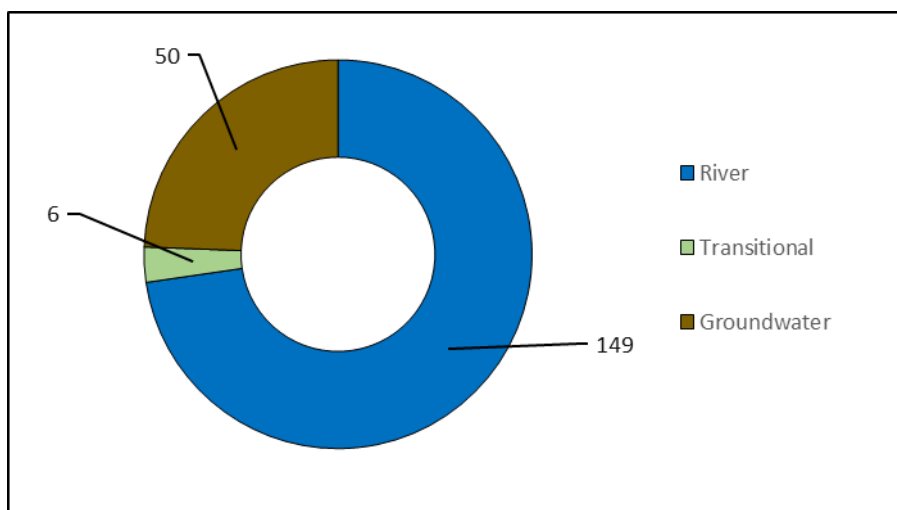


Figure 2: Waterbody types and numbers in the Barrow Catchment.

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 three waterbodies achieving High Status, 91 achieving Good Status, 51 achieving Moderate Status and 24 achieving Poor Status. There are 36 waterbodies that do not have status assigned for Cycle 3. All waterbodies must achieve at least Good Ecological Status.
- ◆ There are 11 river waterbodies that must achieve High Ecological Status (HES) in this catchment. These waterbodies are listed in Appendix 1. Of the 11 HES Environmental Objective waterbodies, one river waterbody is achieving High Status while six waterbodies are at Good Status, one waterbody at Moderate Status and one waterbody at Poor Status.
- ◆ There has been a reduction of nine waterbodies (one groundwater body and eight river waterbodies) achieving Good Status between Cycle 2 and Cycle 3. There has been an increase in one river waterbody achieving High Status (Enaghan Stream_010), three waterbodies (all 10 river waterbodies) achieving Moderate Status and five waterbodies (three river waterbodies and two groundwater bodies) achieving Poor Status (Figure 3 & Table 1). Additionally, a further waterbody was added and is currently unassigned.

¹ Four of these river waterbodies are artificial waterbodies. These are Grand Canal Barrow Line (Barrow), Grand Canal Milltown Feeder (Barrow), Grand Canal Main Line East (Barrow) and Grand Canal Main Line West (Barrow).

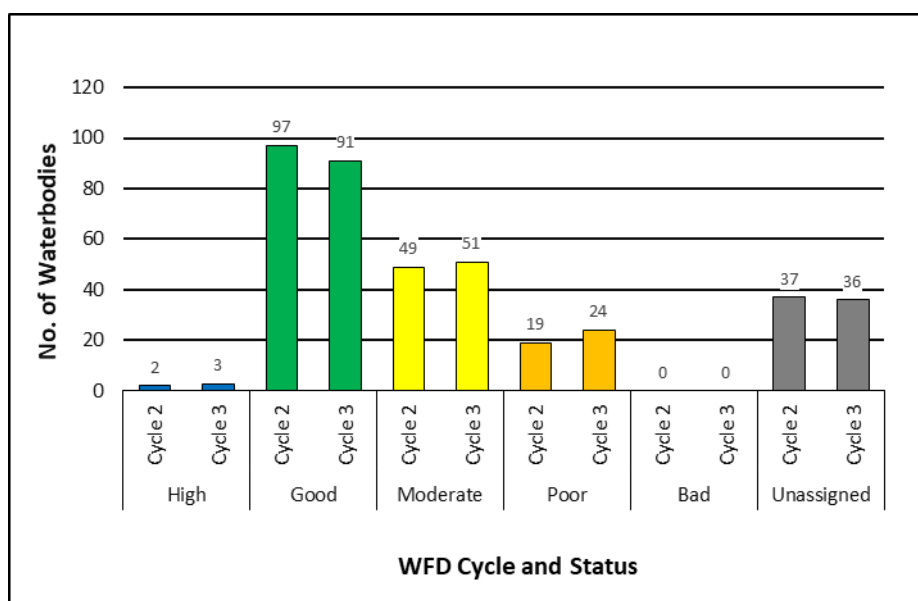


Figure 3: Waterbody Status Breakdown (All waterbodies)

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	2	3	0	0	0	0	0	0	0	0	2	3
Good	46	41	0	0	3	3	0	0	48	47	97	91
Moderate	46	48	0	0	3	3	0	0	0	0	49	51
Poor	18	21	0	0	0	0	0	0	1	3	19	24
Bad	0	0	0	0	0	0	0	0	0	0	0	0
Un-assigned	37	36	0	0	0	0	0	0	0	0	37	36
Total	149	149	0	0	6	6	0	0	49	50	204	205

- ◆ 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 12 (7%) waterbodies have improved in status, 134 (81%) waterbodies have remained unchanged and 20 (12%) waterbodies have declined in status.²
- ◆ There is an overall decline in the status of eight waterbodies across the catchment since the Cycle 2 assessment.

² Unassigned waterbodies have not been considered in this Status class change assessment and therefore are not represented in Figure 5. Percentage displayed in the Figure 5 are in relation to the total number of waterbodies with status assigned in both cycles, as opposed to total number of all waterbodies.

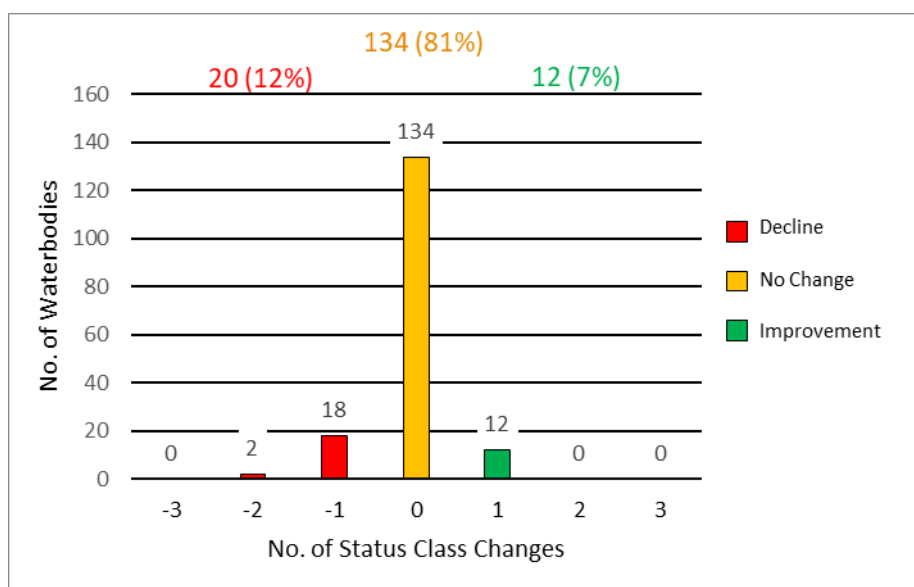


Figure 4: Status Class Changes between Cycle 2 and Cycle 3

2.2 Protected Areas

2.2.1 Drinking Water

- ◆ There are six surface waterbodies in the catchment identified as Drinking Water Protected Areas (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*.
- ◆ One river waterbody and two groundwater bodies in the catchment did not meet the DWPA objective in 2019:
 - Burren_060 (IE_SE_14B050500) river waterbody is the source for Carlow Town public water supply (0100PUB1001) which had pesticide (Metaldehyde) exceedances;
 - Ballingarry (IE_SE_G_009) groundwater body is the source for Dunmore GWS 1500PRI3049 group water scheme which had nitrate exceedance and;
 - Durrow (IE_SE_G_156) groundwater body is the source for Cullahill Group Water Scheme (1600PRI3001) which had nitrate exceedance.
- ◆ For more detailed information please see the EPA reports on drinking water quality in 2019 for [Public Supplies](#)³ and [Private Supplies](#)⁴.

2.2.2 Bathing Waters

- ◆ There are no bathing waters in or directly adjacent to the catchment identified under the Bathing Water Regulations 2008.

³<https://www.epa.ie/publications/compliance--enforcement/drinking-water/annual-drinking-water-reports/drinking-water-quality-in-public-supplies-2019.php>

⁴<https://www.epa.ie/publications/compliance--enforcement/drinking-water/annual-drinking-water-reports/focus-on-private-water-supplies-2019.php>

- ◆ For more detailed information please see the EPA report on [bathing water quality in 2020⁵](#).

2.2.3 Shellfish Areas

- ◆ There is one designated shellfish area in the catchment that intersects three waterbodies.
- ◆ The Marine Institute assessed the average dissolved concentrations for metals in shellfish waters for the period 2016-2019 and the microbial quality in shellfish flesh for 2018. This assessment was used to determine if the WFD protected area objective for shellfish areas was met.
- ◆ Details on the shellfish area and its associated waterbodies are summarised in Table 2.

Table 2: Designated shellfish areas in the catchment

Shellfish area		Water body intersection		Objective met?	
Name	Code	Name	Code	Yes	No
Waterford Harbour (Cheekpoint/Arthurstown/Creadan)	IEPA2_0056	Lower Suir Estuary (Little Island – Cheekpoint)	IE_SE_100_0500	✓	
		New Ross Point	IE_SE_100_0200		
		Barrow Suir Nore Estuary	IE_SE_100_0100		

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

⁵<https://www.epa.ie/publications/monitoring--assessment/freshwater--marine/bathing-water-quality-in-ireland-2020-.php>

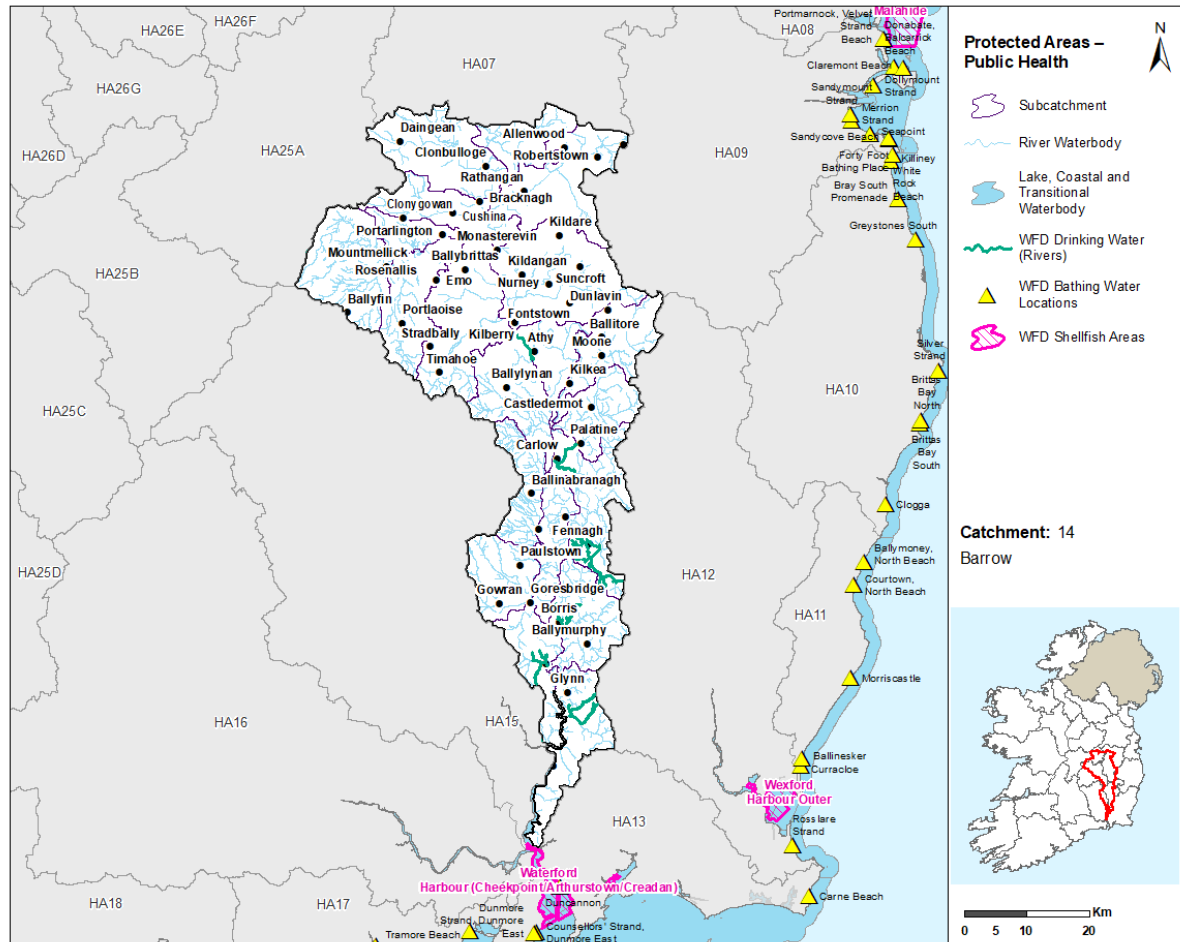


Figure 5: Protected Areas – Public Health

2.2.4 Natura 2000 Sites

- ◆ 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 10 SACs in this catchment, eight 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 3 below, information at a waterbody level can be viewed at [Catchments.ie](https://www.catchments.ie).⁶

Table 3: Natura 2000 Network Assessment Summary

Water Body Type	Total No.	Meeting the Requirements	Did not meet the Requirements	Unknown*
Rivers	64	15	30	19
Transitional & Coastal	6	3	3	0

**As the waterbody status was unassigned.*

- ◆ There are five river waterbodies with FWPM habitats, none of which had achieved the required macroinvertebrate standard as set out in the FWPM Regulations (one waterbody was not assessed).
- ◆ There are two groundwater bodies (IE_EA_G_074 & IE_SE_G_106) delineated and assessed as Groundwater Dependent Terrestrial Ecosystems for this catchment. Both associated groundwater bodies are at Good Status (2013-2018).
- ◆ Water dependent SACs/ SPAs (including FWPM SAC sub-catchments) in the catchment are illustrated in Figure 6.

⁶<https://www.catchments.ie/download/catchments-assessments-protected-areas-supporting-documents/>

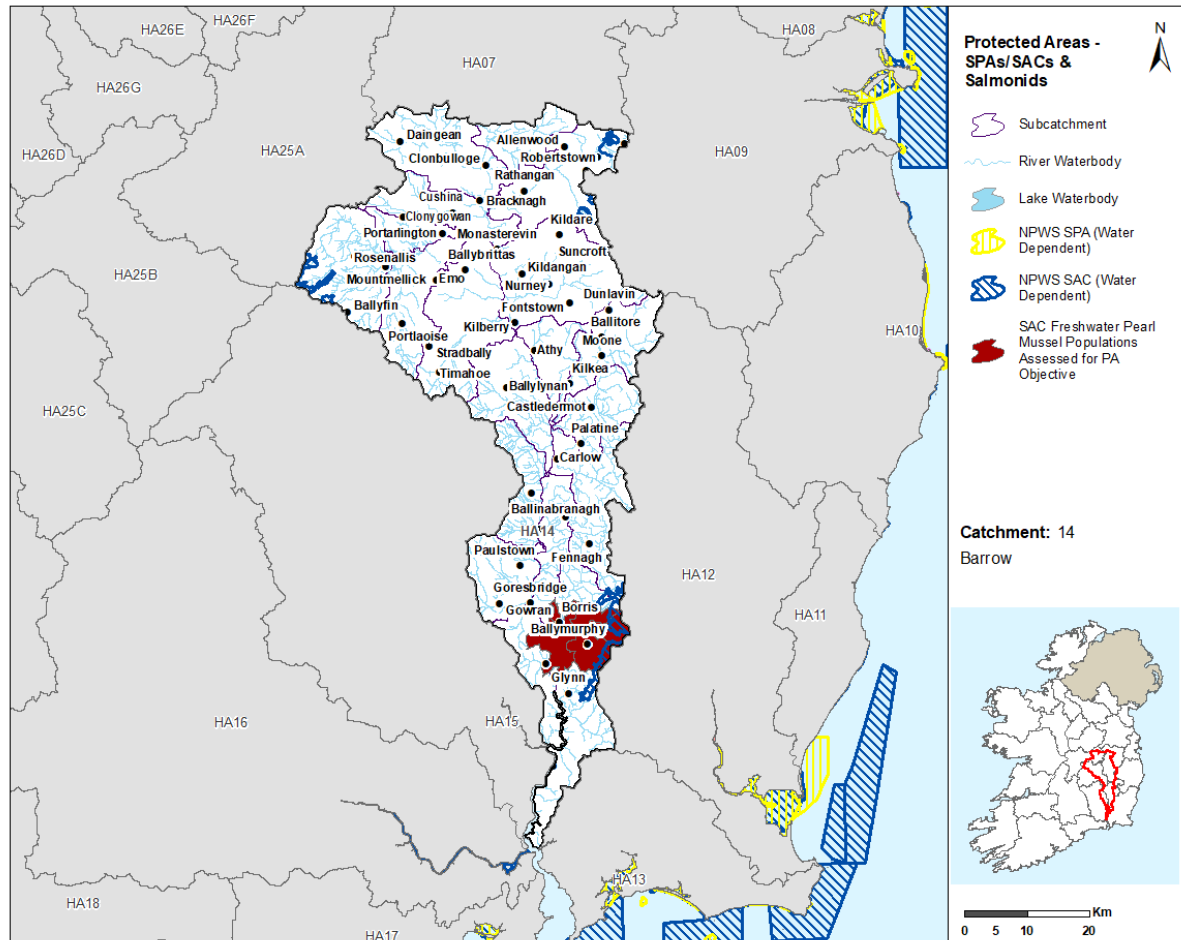


Figure 6: Water Dependent SPAs / SACs

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 are eight NSAs in the catchment and these are downstream of six urban wastewater agglomerations. The list of NSAs, associated agglomerations and intersecting waterbodies are provided in Table 4.
- ◆ NSA objectives are being met in all eight NSAs in the catchment.

Table 4: Nutrient sensitive areas in the catchment

Nutrient Sensitive Area	Agglomeration		Water body		Objective met?		Comment
	Name	Code	Name	Code	Yes	No	
Triogue (020 - 040)	Portlaoise	D0001-01	Triogue_020	IE_SE_14T010200	✓		Tertiary Treatment in place
			Triogue_030	IE_SE_14T010300			
			Triogue_040	IE_SE_14T010400			
Barrow (050-70)	Portlaoise	D0001-01	Barrow_050	IE_SE_14B010550	✓		Tertiary Treatment in place
			Barrow_060	IE_SE_14B010700			
			Barrow_070	IE_SE_14B010780			
Barrow (070-130)	Portarlington	DO158-01	Barrow_070	IE_SE_14B010780	✓		Tertiary Treatment in place
			Barrow_080	IE_SE_14B010900			
			Barrow_090	IE_SE_14B011000			
			Barrow_100	IE_SE_14B011130			
			Barrow_110	IE_SE_14B011300			
			Barrow_120	IE_SE_14B011500			
			Barrow_130	IE_SE_14B011600			
Barrow River (120-130)	Kildare Town	D0178-01	Barrow_120	IE_SE_14B011500	✓		Tertiary Treatment in place
			Barrow_130	IE_SE_14B011600			
Barrow River (140-160)	Athy	D0003-01	Barrow_140	IE_SE_14B011900	✓		Tertiary Treatment in place
			Barrow_150	IE_SE_14B012000			
			Barrow_160	IE_SE_14B012460			
Barrow River (160-180)	Carlow	D0028-01	Barrow_160	IE_SE_14B012460	✓		Tertiary Treatment in place
			Barrow_170	IE_SE_14B012600			
			Barrow_180	IE_SE_14B012700			
Barrow River (190-240)	Muinebheag & Leighlinbridge	D0090-01	Barrow_190	IE_SE_14B012820	✓		Tertiary Treatment in place
			Barrow_200	IE_SE_14B012920			
			Barrow_210	IE_SE_14B013100			
			Barrow_220	IE_SE_14B013300			
			Barrow_230	IE_SE_14B013514			
			Barrow_240	IE_SE_14B013600			
Upper Barrow Estuary	Muinebheag & Leighlinbridge	D0090-01	Upper Barrow Estuary	IE_SE_100_0300	✓		Tertiary Treatment in place

2.3 Heavily Modified Waterbodies

- ◆ Based on the 1st and 2nd RBMPs there is currently one designated heavily modified water body (HMWB) in the catchment (New Ross Port) due to port facilities. It is classified as having Moderate Ecological Potential with no change experienced since Cycle 2. 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

- ◆ In total, there are 4 artificial waterbodies in the Barrow Catchment. These waterbodies are Grand Canal Barrow Line (Barrow), Grand Canal Milltown Feeder (Barrow), Grand Canal Main Line East (Barrow) and Grand Canal Main Line West (Barrow).
- ◆ All four of the artificial waterbodies are currently at Good Status. Prior to Cycle 3, one waterbody (Grand Canal Barrow Line (Barrow)) was at Good Status, one waterbody (Grand Canal Milltown Feeder (Barrow)) was at Moderate Status and the remaining two waterbodies (Grand Canal Main Line East (Barrow) and Grand Canal Main Line West (Barrow)) were unassigned in Cycle 2.
- ◆ Improvements have occurred across three artificial waterbodies (Grand Canal Milltown Feeder (Barrow), Grand Canal Main Line East (Barrow) and Grand Canal Main Line West (Barrow)) between the Cycle 2 and Cycle 3.

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 205 waterbodies in the Barrow Catchment and 96 (47%) are currently *At Risk*, 52 (25%) in *Review* and 57 (28%) are *Not At Risk*.

3.2 Surface Waters

- ◆ For the 149 river waterbodies, 80 (54%) are *At Risk*, 36 (24%) are in *Review* and 33 (22%) are *Not At Risk*.
- ◆ For the six transitional waterbodies, five (83%) are *At Risk* and one (17%) is in *Review*. The Barrow Suir Nore Estuary, New Ross Port, Barrow Nore Estuary Upper, Nore Estuary and Lower Suir Estuary (Little Island – Cheekpoint) are the transitional waterbodies *At Risk*.

- ◆ The largest proportion of *At Risk* waterbodies are found in river waterbodies, accounting for 80 (83%) of 96 *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 34 *At Risk* waterbodies and a decrease in 11 *Review* waterbodies, and 18 *Not At Risk* waterbodies between Cycle 2 and Cycle 3.

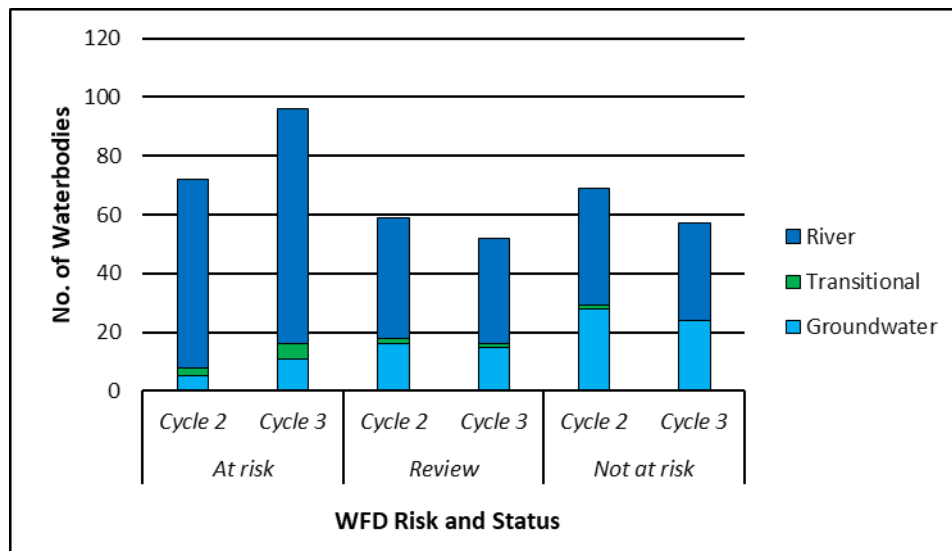


Figure 7: Number of waterbodies in each risk category

- ◆ 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.

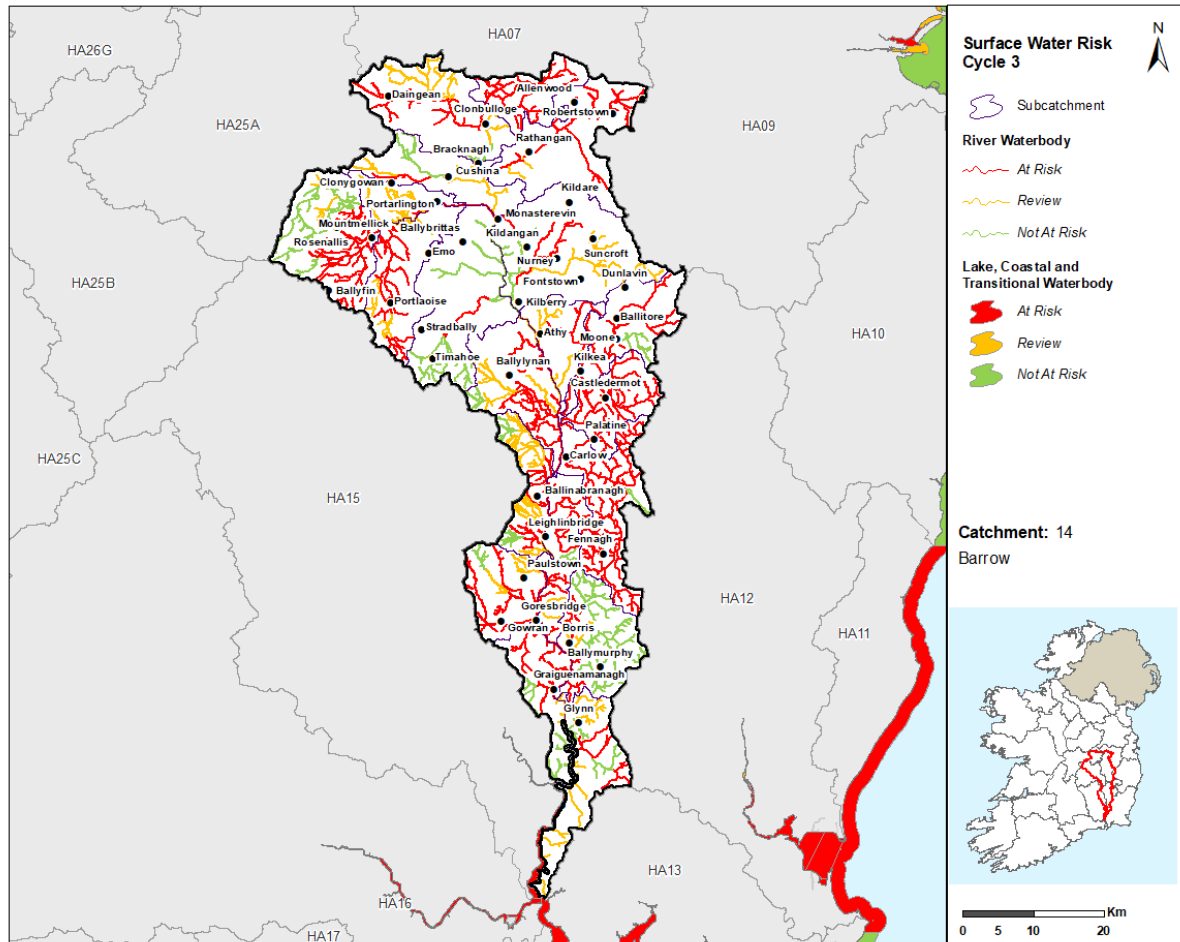


Figure 8: Surface Water Risk Cycle 3

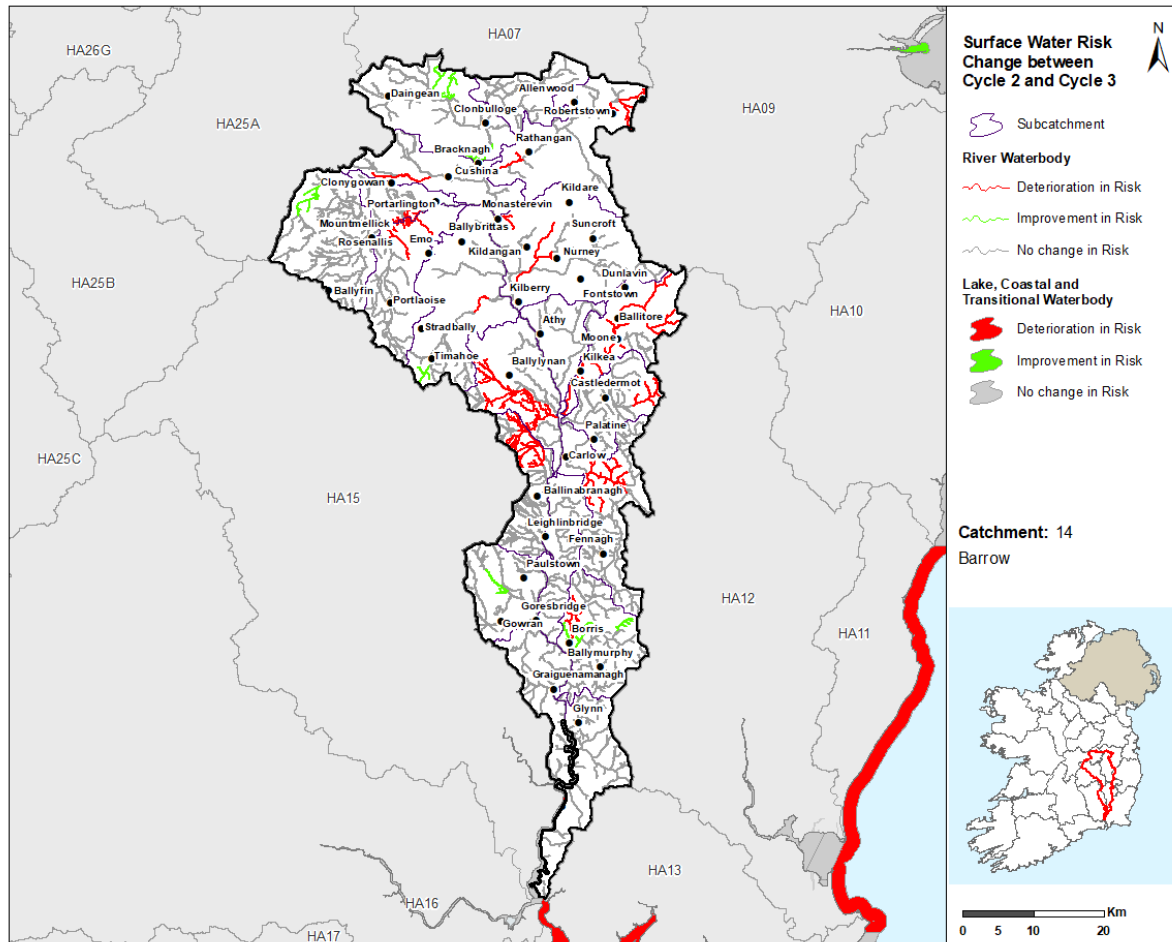


Figure 9: Surface Water Risk Change between Cycle 2 and Cycle 3

3.3 Groundwater

- ◆ For the 50 groundwater bodies, 11 (22%) are *At Risk*, 15 (30%) are in *Review* and 24 (48%) are *Not At Risk*.
- ◆ In Cycle 2 there were five groundwater bodies (Trim, Industrial Facility (P0274-01), Kilkenny, Thomastown, Durrow) *At Risk* in this catchment, 16 in *Review* and 28 *Not At Risk*.
- ◆ 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 Cycle 3 are shown in Figure 11.

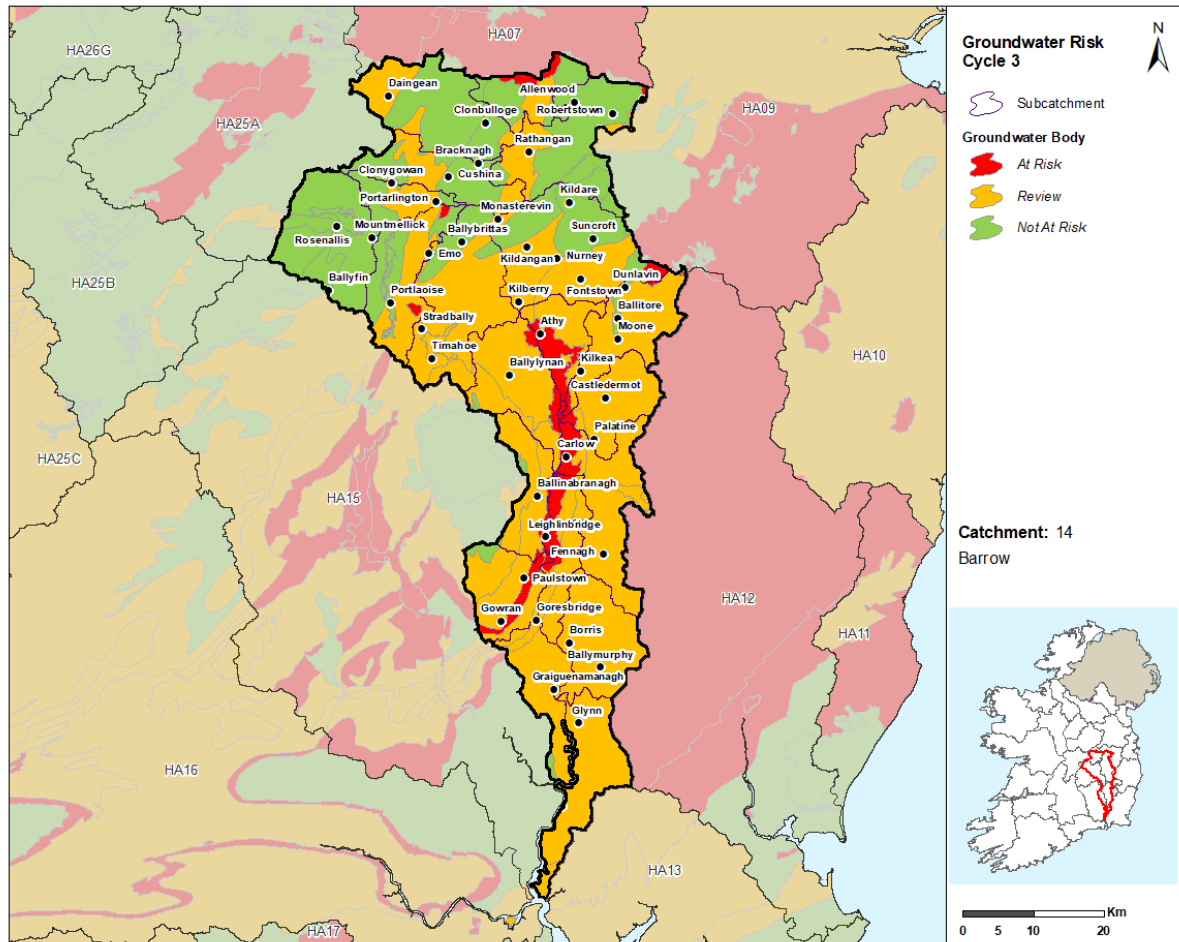


Figure 10: Cycle 3 Groundwater Body Risk

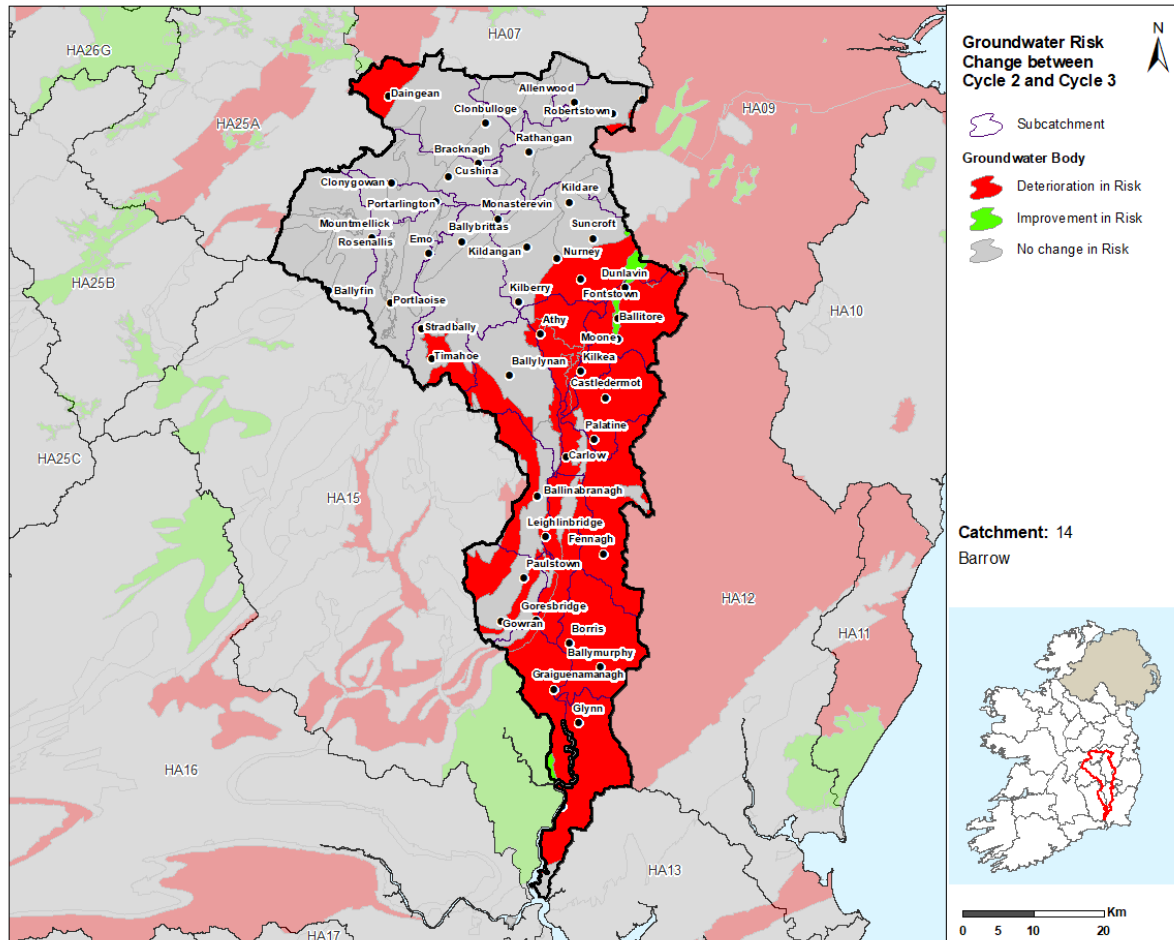


Figure 11: Groundwater Body Risk Change between Cycle 2 & Cycle 3

3.4 Heavily Modified Waterbodies

- ◆ The one designated heavily modified water body (HMWB) in the catchment (New Ross Port) is *At Risk* of not achieving its environmental objective, with no change experienced since Cycle 2. There may be changes to HMWB designation once the Cycle three HMWB assessment has been completed and consulted on for the 3rd Cycle Final RBMP.

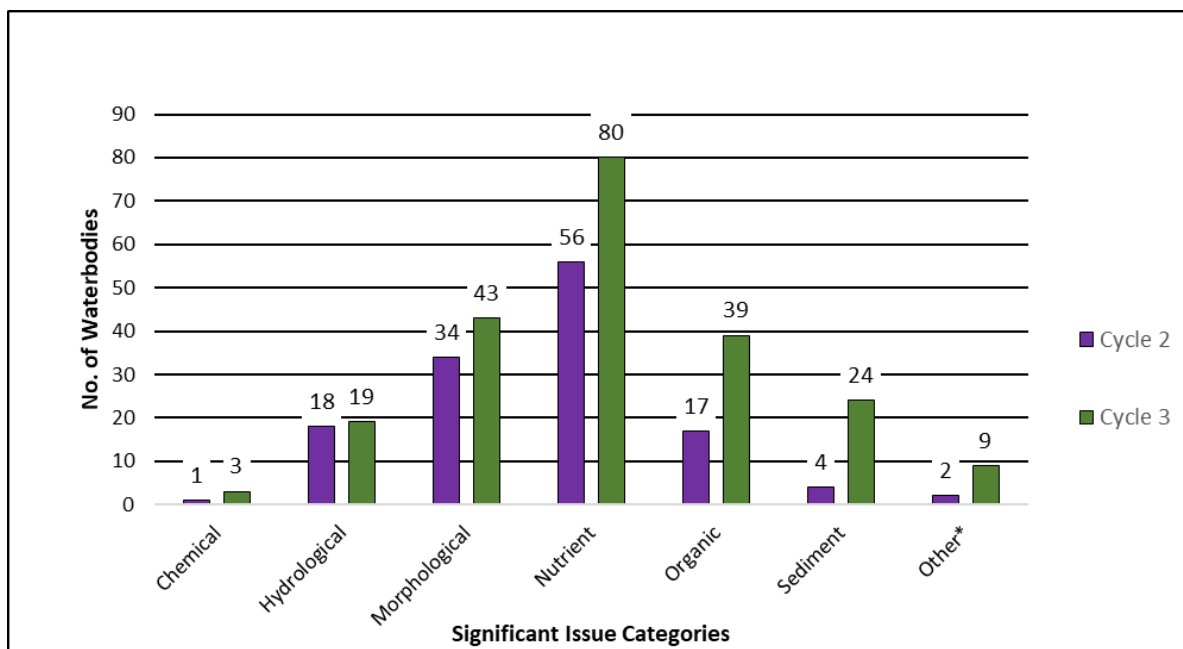
3.5 Artificial Waterbodies

- ◆ In total there are four artificial waterbodies in the Barrow Catchment and three (75%) of these are currently in *Review* and one (25%) is *Not At Risk*.
- ◆ The waterbody in *Review* is the Grand Canal Main Line East (Barrow), while the remaining three waterbodies Grand Canal Milltown Feeder (Barrow), Grand Canal Barrow Line (Barrow) and Grand Canal Main Line West (Barrow) are all in *Review*.

4 Significant Issues in *At Risk* Waterbodies

4.1 All Waterbodies

- ◆ Excess nutrients and morphological impacts remain the most prevalent issues in the Barrow catchment (Figure 12) impacting 80 and 43 waterbodies respectively, in Cycle 3. Organic issues are impacting 39 waterbodies, sediment issues are impacting 24 and hydrological issues are impacting 19 waterbodies and chemical pollution is impacting three waterbodies.
 - For river waterbodies, the main significant issues are nutrient (66), morphological (43) and organic (36)
 - For transitional waterbodies, the main significant issues are nutrient (5) and organic (3)
- ◆ Between Cycle 2 and Cycle 3 the number of waterbodies with nutrients issues have increased by 24 from 56 to 80, while the number of waterbodies impacted by morphological issues has increased by nine from 34 to 43 waterbodies.
- ◆ The numbers of waterbodies with organic and sediment issues have increased from 17 and four respectively in Cycle 2 to 39 and 24 in Cycle 3.
- ◆ The number of waterbodies impacted by hydrological issues has increased from 18 in Cycle 2 to 19 in Cycle 3. The number of waterbodies impacted by chemical pollution has increased from one to three in the same period.

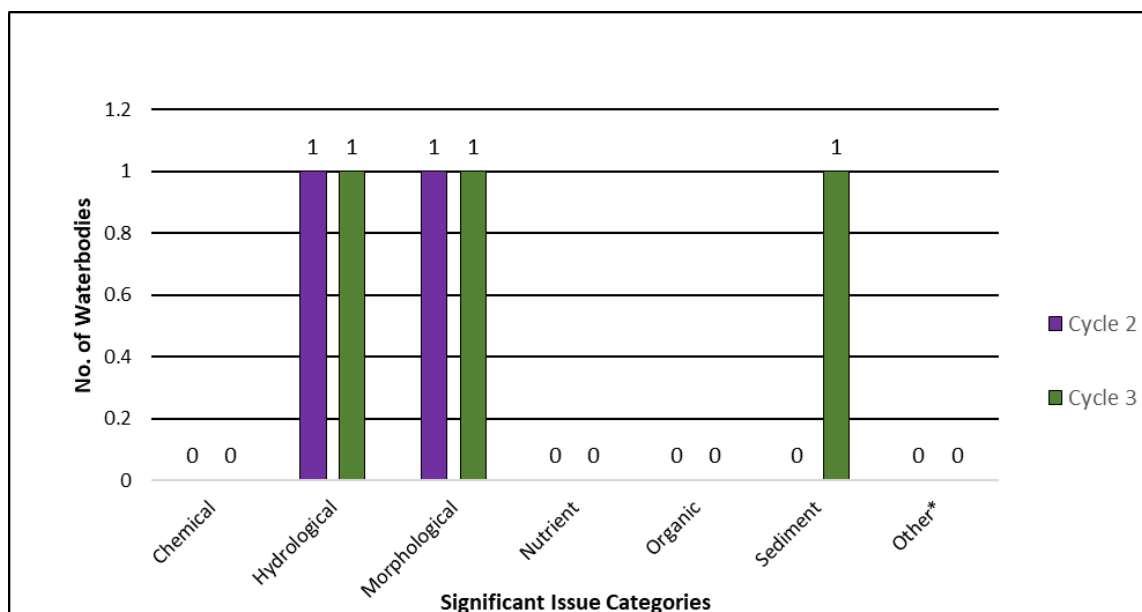


*Other - Acidification, saline intrusion, elevated temperature, litter, microbiological pollution and unknown impacts have all been grouped into the "Other" issues category for the purpose of this report

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

4.2 High Status Objective Waterbodies

- ◆ In Cycle 3 there is one *At Risk* waterbody (Burren_010) with High Status Objective. Sediment hydrological issues and morphological issues have been deemed significant for 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

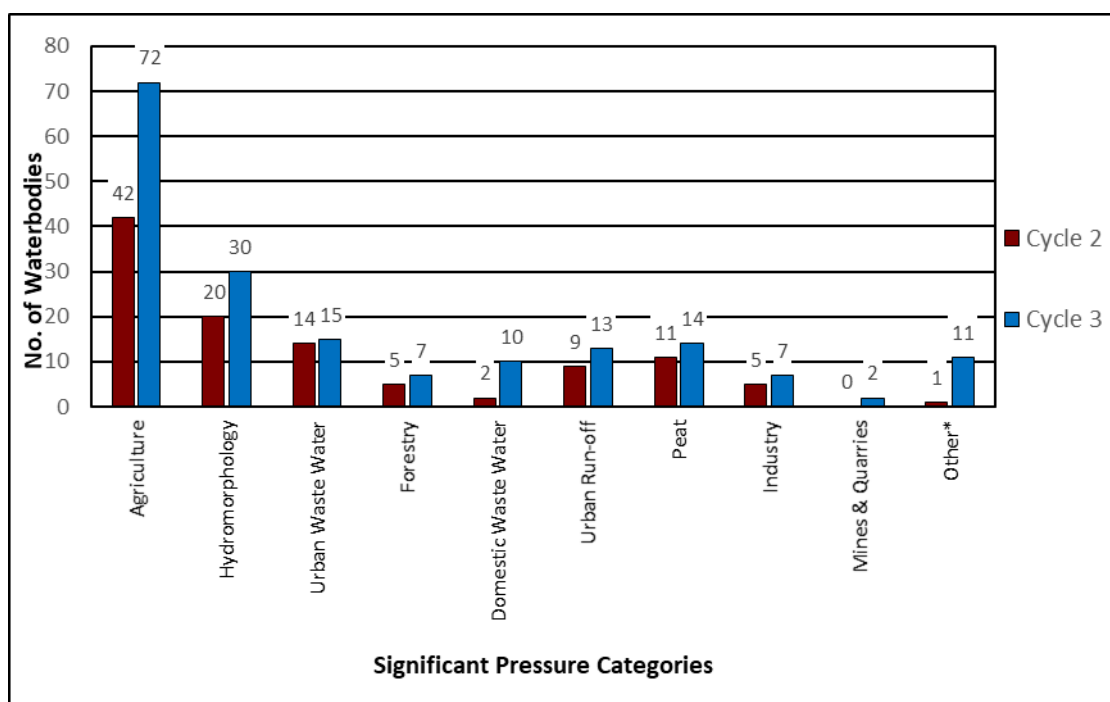
Figure 13: Significant Issues in *At Risk* High Status Objective Waterbodies

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 14 shows a breakdown of the number of *At Risk* waterbodies in each significant pressure category.
- ◆ The significant pressures affecting the greatest number of waterbodies is agriculture. Followed by hydromorphology, urban waste water, peat, urban run-off, domestic waste water, other⁷, industry, forestry and mines and quarries.
- ◆ When comparing Cycle 2 and Cycle 3 the biggest changes are:
 - an increase of 30 waterbodies where agriculture is a significant pressure from 42 waterbodies in Cycle 2 to 72 waterbodies in Cycle 3 and;
 - an increase of 10 waterbodies where hydromorphological pressures are impacting, from 20 in Cycle 2 to 30 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.

⁷ 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



*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 14: Significant Pressure (All At Risk Waterbodies)

5.1.1 Pressure Type

5.1.1.1 Agriculture

- ◆ Agriculture is a significant pressure in 62 river waterbodies, five transitional waterbodies and five groundwater bodies. The issues related to farming in this catchment include diffuse phosphorus loss to surface water from, for example, direct discharges; or runoff from yards, roadways or other compacted surfaces, or runoff from poorly draining soils. High PIP for surface water nitrates was noted in arable and pasture lands, sediment is also a problem from land drainage works, bank erosion from animal access or stream.

5.1.1.2 Hydromorphology

- ◆ Hydromorphological pressures are significant in 30 river waterbodies. 26 waterbodies are subject to extensive modification due to channelisation. Three waterbodies (Burren_060, Duiske_020 & Figile_010) are impacted by embankments. The presence of barriers may be also impacting the hydromorphological conditions of six river waterbodies. Bank erosion has been noted in Figile_010 river waterbody. Four waterbodies (Barrow_050, Lerr_020, Powerstown_010 & Slate_070) are impacted by land drainage issues within Powerstown_10, Slate_070 and Barrow_040.

5.1.1.3 Urban waste water treatment plants

- ◆ Urban Waste Water Treatment Plants have been highlighted as a significant pressure in 15 At Risk waterbodies; details are given in Table 6. Out of the 16 agglomerations identified as pressures, Mountmellick is the only one included on Irish Water’s current Capital investment Programme (2020-2024), however, a number of agglomerations, including Porarlinton, Portlaoise, Coill Dubh and Ballitore have undergone upgrades since 2015.

Table 6. Waste Water Treatment Plants identified as Significant Pressures in At Risk waterbodies and expected completion dates for associated upgrade works, where applicable.

Facility name	Facility Type	Waterbody	2013-18 Ecological Status	Irish Water's Expected CIP Completion Date ⁸
Portarlinton D0158	> 10,000 p.e.	Barrow_080	Moderate	N/A
Portlaoise D0001	> 10,000 p.e.	Triogue_020	Poor	N/A
Daingean D0226	1,001 to 2,000 p.e.	Daingean_020	Poor	N/A
Mountmellick D0152	2,001 to 10,000 p.e.	Owenass_020	Moderate	2024
Coill Dubh D0242	1,001 to 2,000 p.e.	Slate_020	Poor	N/A
Rathangan D0175	Combined Sewer Overflow	Slate_070	Moderate	N/A
Derrinturn D0244	1,001 to 2,000 p.e.	Figile_010	Poor	N/A
Nurney A0080	< 500 p.e.	Ballynaboley Stream_010	Poor	N/A
Monasterevin D0177	Combined Sewer Overflow	Barrow_100	Unassigned	N/A
Tinryland WWTP A0099	< 500 p.e.	Burren_050	Moderate	N/A
Ballinkillen WWTP A0094	< 500 p.e.	Black(Borris)_020	Moderate	N/A
Cloneygowan A0167	< 500 p.e.	Cushina_020	Poor	N/A
Kileen A0153	< 500 p.e.	Douglas(Laois)_030	Moderate	N/A
Coolanagh A0136	< 500 p.e.	Douglas(Laois)_030	Moderate	N/A
Ballitore A0129	< 500 p.e.	Greese_030	Moderate	N/A
Castleroe West A0127	< 500 p.e.	Greese_060	Good	N/A

- ◆ Since Cycle 3, five waterbodies previously impacted in Cycle 2 are no longer *At Risk* from urban waste water pressures. The agglomerations that are no longer pressures since the previous cycle:
 - Athy (D0003)
 - Borris (D0248)
 - Stradbally (D0292)
 - Goresbridge (D0529)
 - Muinebheag and Leighlinbridge (D0090)
 - Old Leighlin (A0096)
- ◆ Additionally, the following agglomerations have been added to the list of significant pressures in Cycle 3:
 - Monasterevin D0177

⁸ Based on Irish Water's Capital Investment Programme (2020-2024) as of February 2021 and may be subject to change.

- Tinryland WWTP A0099
- Ballinkillen WWTP A0094
- Cloneygowan A0167
- Kileen A0153
- Coolanagh A0136
- Ballitore A0129
- Castleroe West A0127
- Rathangan D0175
- Portlaoise D0001

5.1.1.4 *Peat*

- ◆ Peat and peat extraction have been identified as significant pressures in 14 river waterbodies (Figure 15d). Excessive sedimentation and elevated nutrient concentrations, notably ammonia, are the significant issues. In Daingean_010, _020 and _030 the siltation is so heavy that the river waterbodies require regular dredging to maintain it. Since Cycle 2, the Barrow_050, Cushina_020, Slate_010 and Slate_070 have been identified as waterbodies impacted by peat.

5.1.1.5 *Urban run-off*

- ◆ Diffuse urban pressures, caused by misconnections, leaking sewers and runoff from paved and unpaved areas, have been identified as a significant pressure in 12 river waterbodies as well as Barrow Nore Estuary Upper transitional waterbody. Elevated concentrations of phosphates and ammonia are the significant issues. Mountain (Carlow)_030 flows through the village of Borris; Triogue_020 and Triogue_030 are impacted by Portlaoise; Burren_060 and Barrow_160 are impacted by Carlow town; the monitoring station for Barrow_210 is just downstream of Goresbridge; Leighlinbridge is located in the lower reaches of Barrow_180; Slate_060 is impacted by Rathangan; Duiske_020 is impacted by diffuse urban pressure from Graiguenamanagh; Lerr_020 flows through Castledermot; Barrow_100 inserts Monasterevin; Barrow Nore Estuary Upper is impacted by New Ross and Barrow_090 is under urban run-off pressures from upstream Portarlinton.

5.1.1.6 *Domestic waste water*

- ◆ Domestic waste water has been identified as a significant pressure in nine river waterbodies and one groundwater body (Trim). In the river waterbodies affected, this is due to the presence of significant numbers of domestic waste water treatment systems, areas of poorly draining soils, single house discharges close to monitoring station and malfunctioning communal system discharge sites. The groundwater body is being impacted by several *At Risk* surface waterbodies, which are contributing to the waterbody's phosphate conditions.

5.1.1.7 *Other*

- ◆ *Aquaculture*
There is a fish farm located on Pollmounty_010 river waterbody that is having an impact. Moderate siltation was noted in 2014, with potential for filtration issues at the fish farm (Figure 19).
- ◆ *Invasive species*
Invasive species have been identified as a significant pressure in two river waterbodies. IFI noted that Barrow_090 is impacted by an invasive species affecting fish life in this waterbody. Barrow_140 is impacted by *Potamopyrgus* (New Zealand mud snail).
- ◆ *Unknown anthropogenic*
The significant pressures impacting four river waterbodies (Barrow_230, Triogue_030, Ballynaboley Stream_010 and Tully Stream_010) and four groundwater bodies (Athboy, Kilcullen, Ballyglass and Goresbridge North) are unknown.

5.1.1.8 Industry

- ◆ Industry has been identified as a significant pressure in five river waterbodies (Figure 17). An industrial facility was identified as a significant pressure impacting Tully Stream_010 and Tully Stream_020, and other discharges impact Barrow_210, Greese_030 and Figile_010. Nutrient and organic pollution are the predominant issues associated with these industrial discharges.
- ◆ Micam Limited and Laois Sawmills Limited have been identified as a significant pressure on Industrial Facility (P0247-01) and Industrial Facility (P0322-01) groundwater bodies respectively.

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

Waterbody Code	Waterbody Name	Waterbody Type	Emission Type	Name	Impact
IE_SE_14B013100	BARROW_210	River	Section 4	N/A*	Nutrient & Organic
IE_SE_14F010061	FIGILE_010	River	Section 4	N/A*	Nutrient & Organic
IE_SE_14G040200	GREESE_030	River	Section 4	N/A*	Nutrient
IE_SE_14T020200	TULLY STREAM_010	River	IE	Kildare Chilling Company	Nutrient & Organic
IE_SE_14T020409	TULLY STREAM_020	River	IE	Kildare Chilling Company	Nutrient & Organic
IE_SE_G_005	Industrial Facility (P0274-01)	Groundwater	IPC	Micam Limited	Chemical pollution. Diminution of quality of associated surface waters for chemical reasons.
IE_SE_G_180	Industrial Facility (P0322-01)	Groundwater	IPC	Laois Sawmills Limited	Chemical pollution (with Chromium being the main issue)

*Name of facility not provided during characterisation

5.1.1.9 Forestry

- ◆ Forestry has been identified as a significant pressure in six river waterbodies as well as the Kilcullen groundwater body (Figure 16). This issues primarily arises because of clearfelling and associated sediment release but also include excess nutrients through surface water and groundwater pathways.

5.1.1.10 Mines & quarries

Quarries have remained a significant pressure in two river waterbodies (Graney (Lerr)_010 and Powerstown_010). The significant issues are a combination of sediment release and nutrient pollution. Heavy siltation was noted in the Powerstown_010 in 2017, further to this an unauthorised discharge was discovered in 2020 which has since ceased. Heavy siltation was also noted in Graney (Lerr)_010, and nutrient enrichment.

Figure 15 – Figure 18 illustrates the locations of waterbodies for the four most common pressures in order of prevalence (Agriculture, Hydromorphology, Urban waste water and peat) within the catchment in Cycle 3.

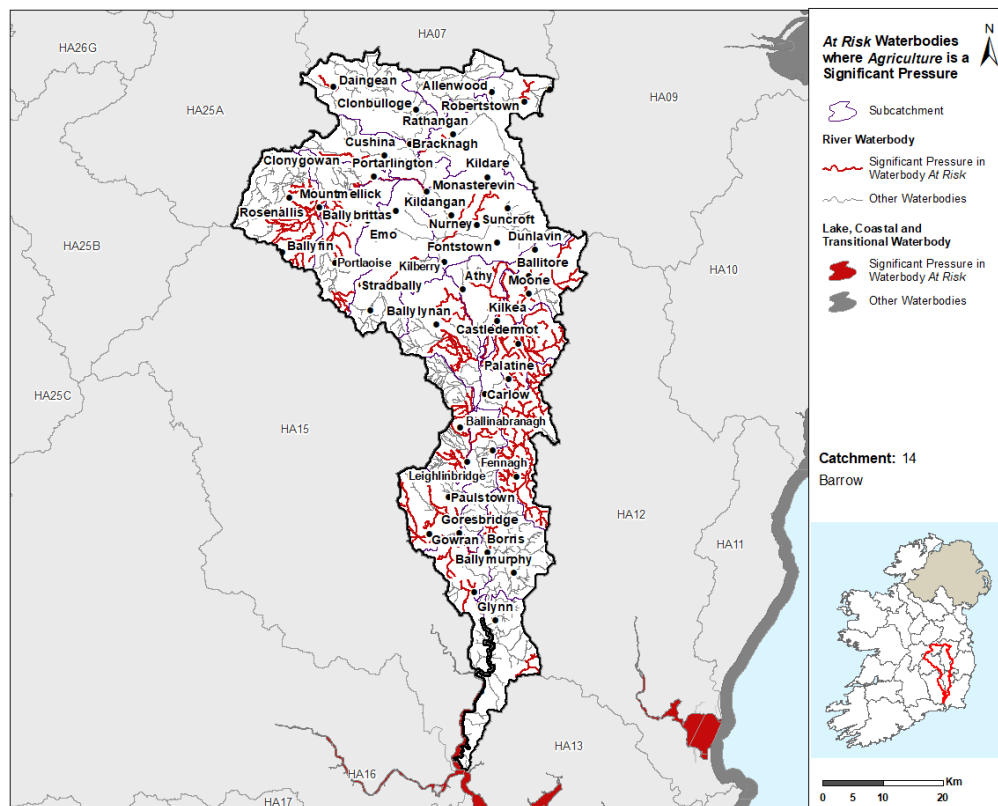


Figure 15: Locations of Waterbodies where Agriculture is a Significant Pressure

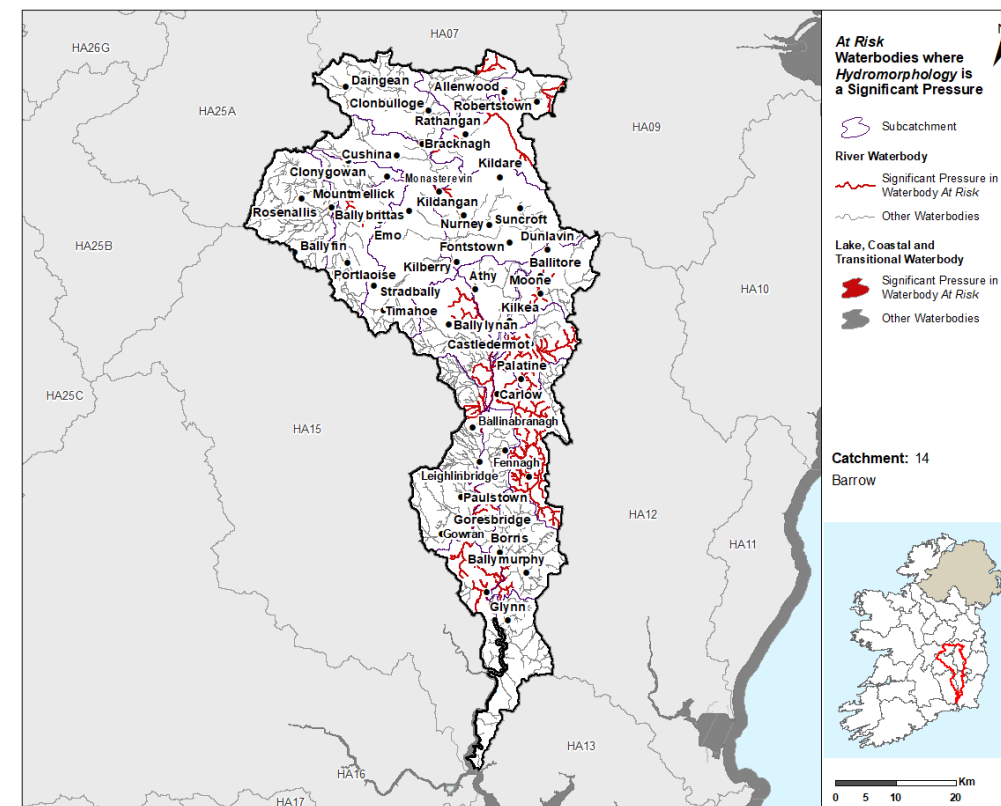


Figure 16: Locations of Waterbodies where Hydromorphology is a Significant Pressure

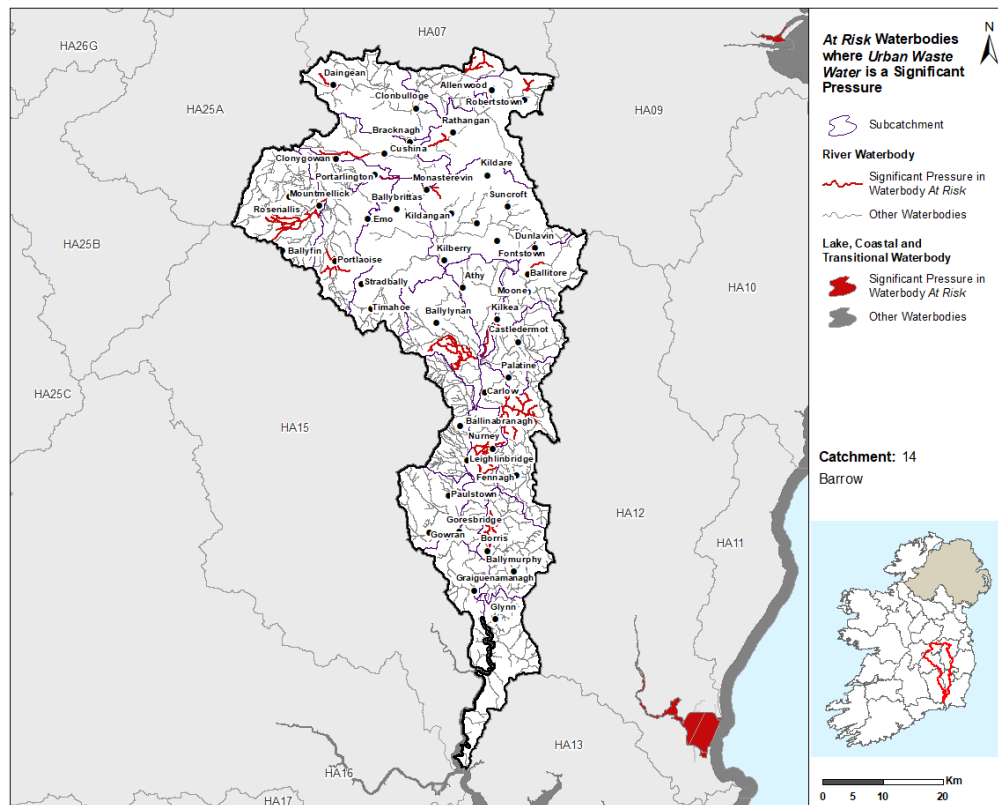


Figure 17: Locations of Waterbodies where Urban Waste Water is a Significant Pressure

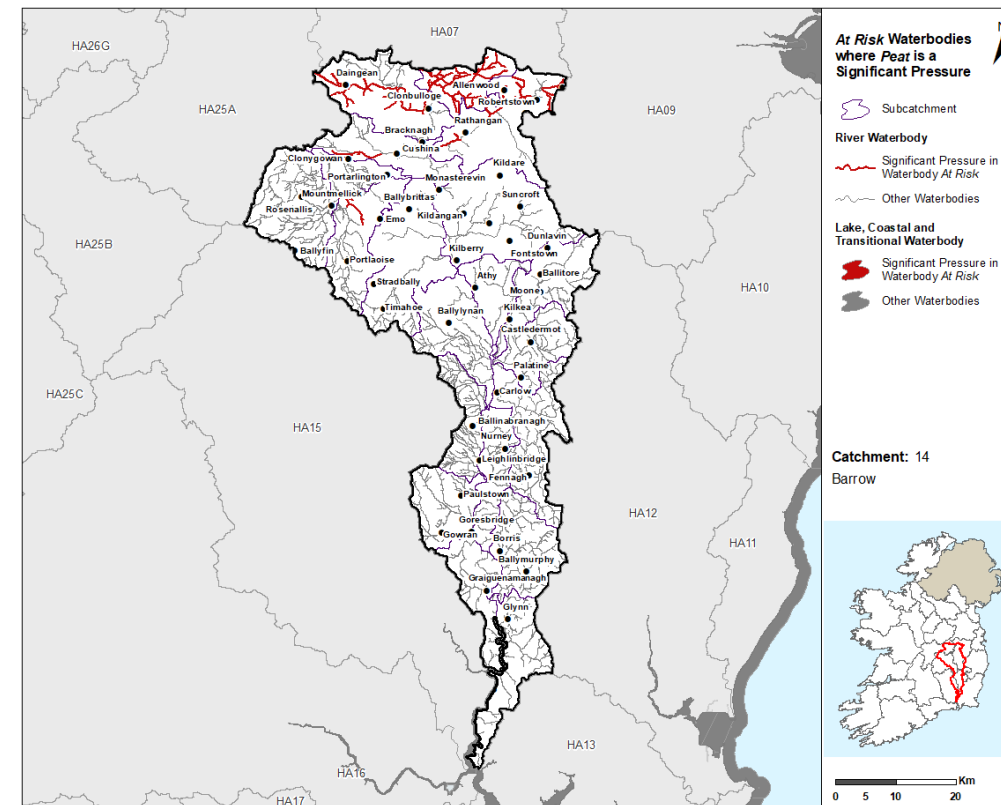
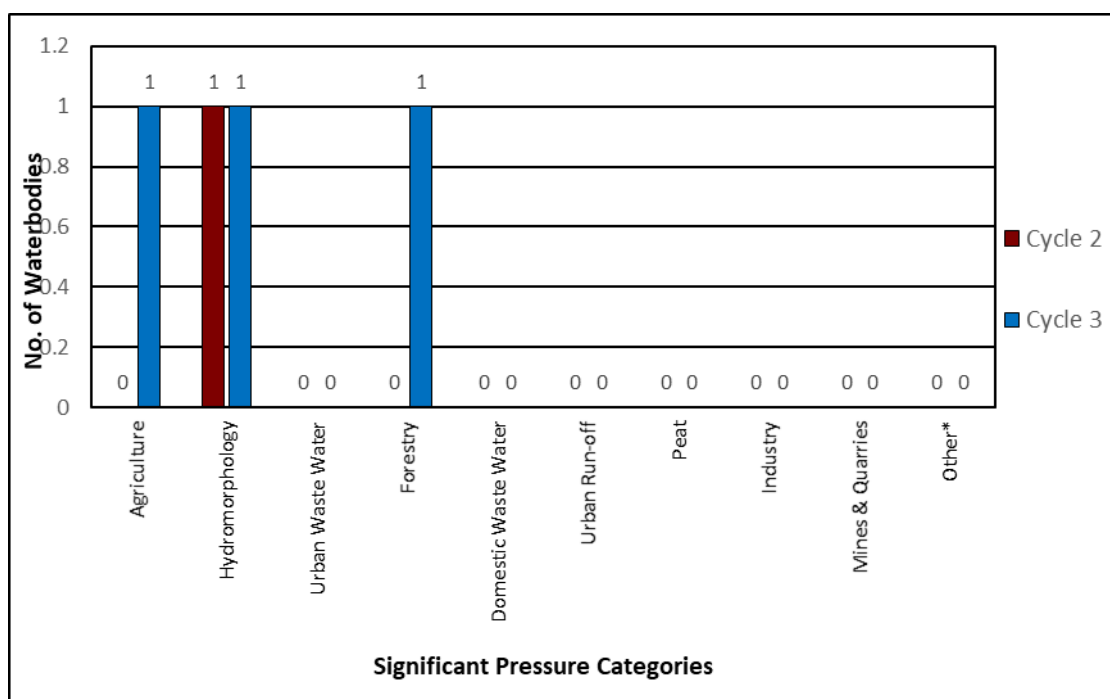


Figure 18: Locations of Waterbodies where Peat is a Significant Pressure

5.2 High Status Objective Waterbodies

- ◆ Agriculture, hydromorphology and forestry are all impacting only *At Risk* waterbody (Burren_010) with High Status Objective.



*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 19: Significant Pressure in *At Risk* High Status Objective Waterbodies

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 and arable land is responsible for 64% and 28% of the nitrogen load respectively while land in pasture, discharges from urban waste water, forestry and arable land contribute 33%, 23%, 13% and 12% of the phosphorus loadings for the catchment respectively (Figure 17).

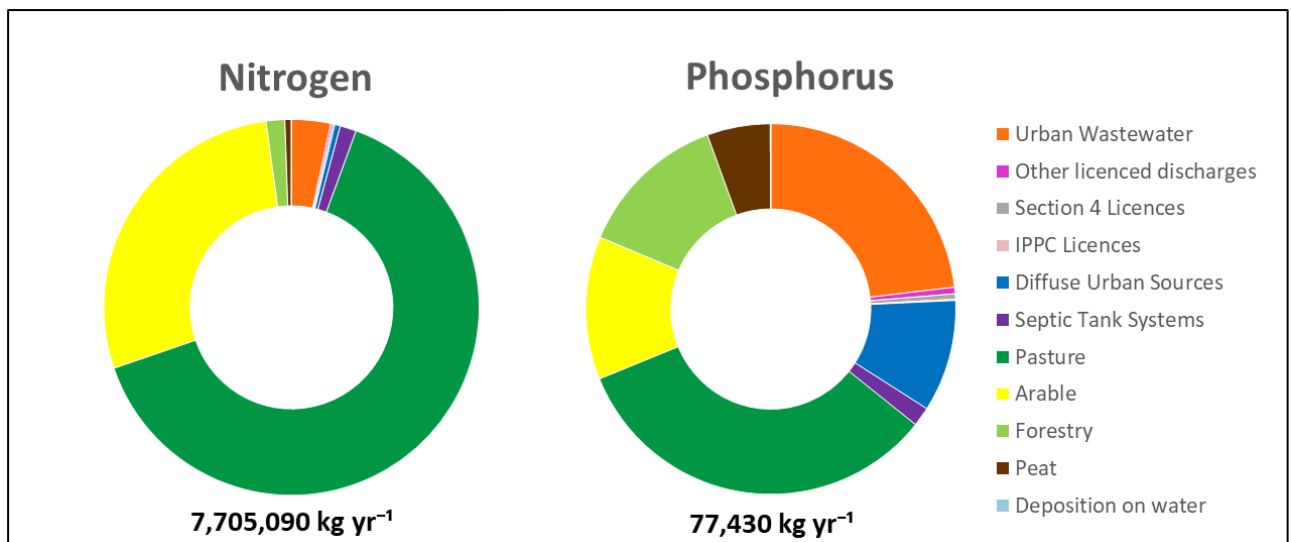


Figure 20: Estimated Proportions of N & P from Each Sector in the Barrow Catchment

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. The assessment report can be found at <https://www.catchments.ie/assessment-of-the-catchments-that-need-reductions-in-nitrogen-concentrations-to-achieve-water-quality-objectives>.
- ◆ The N reduction required in the Barrow Catchment is considered to be very high and ranges from 2000-5000 t N/yr.
- ◆ Source load apportionment modelling indicates that the main sources of N in the catchment are 64% pasture, 28% arable, 3% Urban waste water and 4% from miscellaneous sources.

7.2 Phosphorous / Sediment Load Reduction

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

Figure 21 highlights areas where agricultural measures for nitrogen, sediment and phosphorus should be targeted. Waterbodies with orange fill are areas where nitrogen measures should be targeted, waterbodies with blue fill are areas where sediment or phosphorus should be targeted and waterbodies with orange and blue hatching highlight areas where multiple measures (phosphorus /sediment and nitrogen) are required. Pollution Impact Potential mapping for both phosphorus and nitrogen in the catchment are provided in Appendix 2.

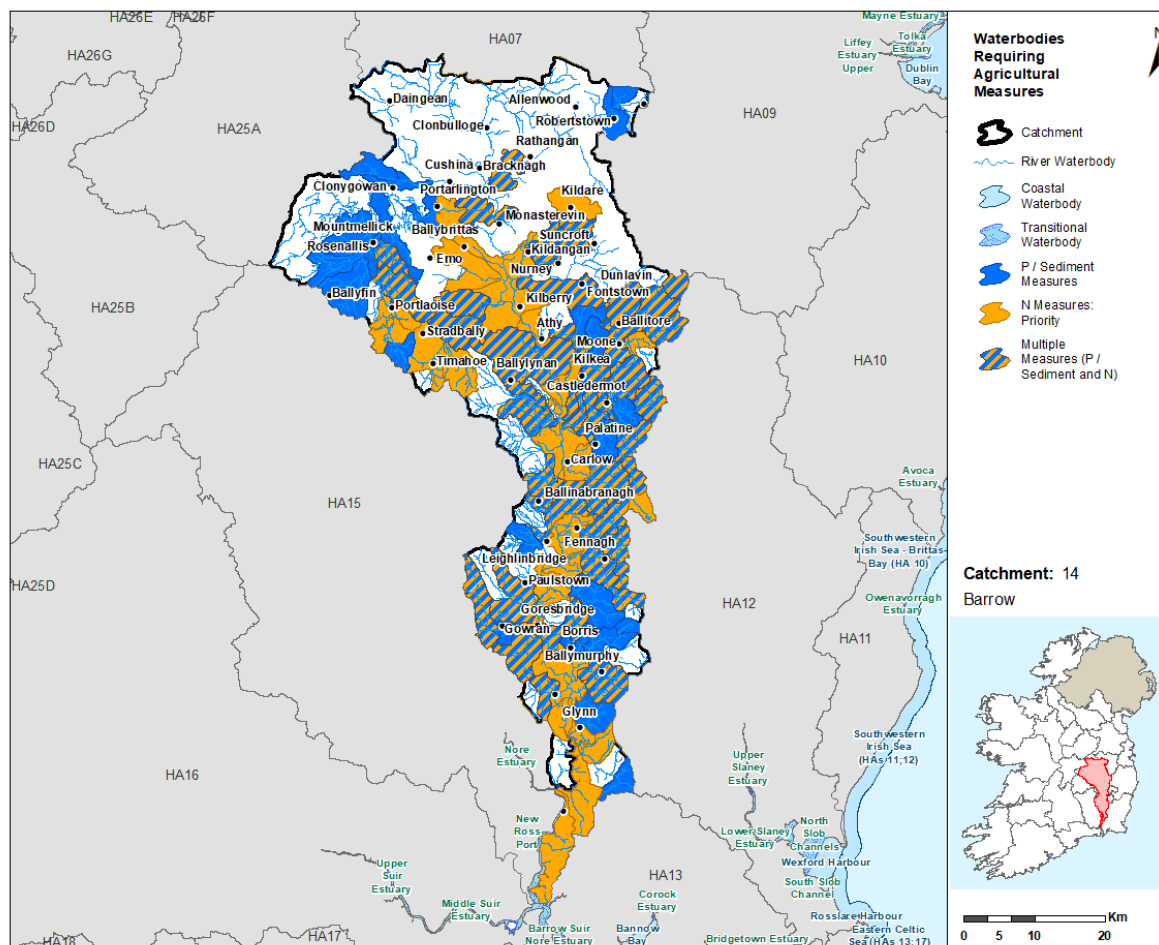


Figure 21: Waterbodies where Agricultural Measures should be Targeted

8 2nd Cycle Areas for Action

8.1 Area for Action Overview

- ◆ There were six Areas for Action, comprising of 20 waterbodies, selected for further characterisation and action in the catchment for the 2nd Cycle River Basin Management Plan. The Areas for Action in the catchment are listed in Table 1 and shown in Figure 22. LAWPRO, in conjunction with affected local authorities, stakeholders from the Midlands and East Regional Operational Committee and South East Regional Operational Committee, have been working in these areas since 2017.

Mountain	2	14_10	Carlow	• Two waterbodies are failing to meet protected area objectives for Freshwater Pearl Mussel (19 of 27 catchments of S.I. 296 2009). • Important fish habitat. • Recently formed community group. • Strong local tidy towns. • Native oak woodland at downstream end of the Mountain river. • Woodland riparian scheme to improve riparian zone around the native woodland. • Teagasc EIP looking at sheep farming practices. • Building on completed and ongoing works by Blackstairs farming group. • One deteriorated waterbody. • One potential 'quick win'.
Graney-Lerr	6	14_6	Kildare Carlow (upper reaches of Palatine stream_	• Potential pilot project to examine nitrate sources from tillage. • Addressing a large portion of the eastern Barrow catchment. • Important Salmon run on this river waterbody. • Castledermot tidy towns are very active, an interested community group.
Athy stream	3	14_2 14_12	Kildare Laois	• Potential pilot project to examine high nitrates and siltation from tillage (Athy_020). • Protected area objectives not met (Crayfish). • Athy_010 declined between 10-12 and 13-15. • One potential 'quick win'.
Duiske	2	14_7	Kilkenny	• Would bring entire subcatchment to Good Status. • The Catchment Flood Risk and Management Plan (CFRAM) identified this river waterbody as potential for Natural Water Retention Measures (NWRM). • Two deteriorated waterbodies. • One potential 'quick win'.
Portarlinton	2	14_1 14_17	Laois Kildare (Barrow_090 only) Offaly	• Building on the 2017 upgrade of Portarlinton Agglomeration (Barrow_080). • One deteriorated waterbody (Barrow_090). • Protected area objectives not met (Crayfish and salmonids) for two waterbodies (Barrow_080 and Barrow_090). • Community interest. • One potential 'quick win'

8.2 Status Change in 2nd Cycle Areas for Action

- ◆ For Cycle 3, of the 20 waterbodies in the 2nd Cycle Areas for Action, there are two waterbodies at Good Status, 13 waterbodies at Moderate Status, four waterbodies at Poor Status and one waterbody where status has not been assigned.

- ◆ There is an overall improvement in the status of seven of the 2nd cycle Areas for Action waterbodies across the catchment.⁹
- ◆ Of the 19 waterbodies within the 2nd Cycle Areas for Action which had status assigned, 12 experienced no change in status between Cycle 2 and Cycle 3, four waterbodies experienced an improvement and three were subject to deterioration in status (Figure 23). Four of the waterbody improvements are across Athy Stream, Burren, Graney-Lerr and Mountain (Carlow) Areas for Action. The three waterbodies which experienced a decline were in Athy Stream, Graney-Lerr & River Duiske and Powerstream Areas for Action.

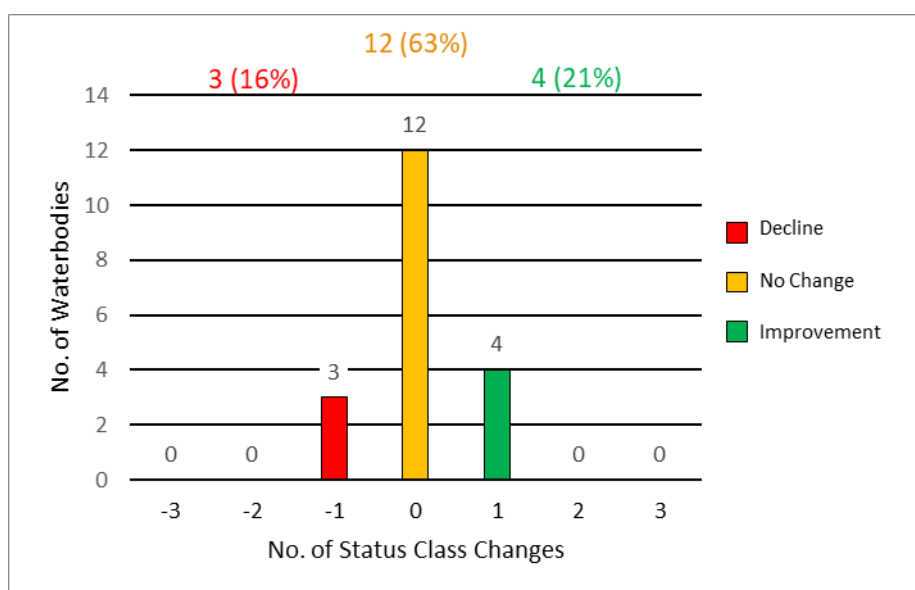


Figure 23: 2nd Cycle Area for Action Waterbody Status Class Changes between Cycle 2 and Cycle 3

8.3 Waterbody Risk in 2nd Cycle Areas for Action

- ◆ For the 20 waterbodies in the 2nd Cycle Areas for Action, 18 (90%) are *At Risk*, one (5%) is in *Review* and one (5%) is *Not At Risk*.
- ◆ All 18 *At Risk* waterbodies are river waterbodies. Figure 24 gives an overview of the breakdown of risk across waterbody types for both Cycle 2 and Cycle 3 in 2nd Cycle Areas for Action.
- ◆ Overall, there is no change in *At Risk* waterbodies in 2nd Cycle Areas for Action between Cycle 2 and Cycle 3.

⁹ Status class change cannot be calculated for waterbodies where status has not been assigned in either cycle 2 or 3 and therefore these waterbodies are not represented in Figure 18. Percentage displayed in the chart below are in relation to the total number of waterbodies with status assigned in both cycles, as opposed to total number of all waterbodies.

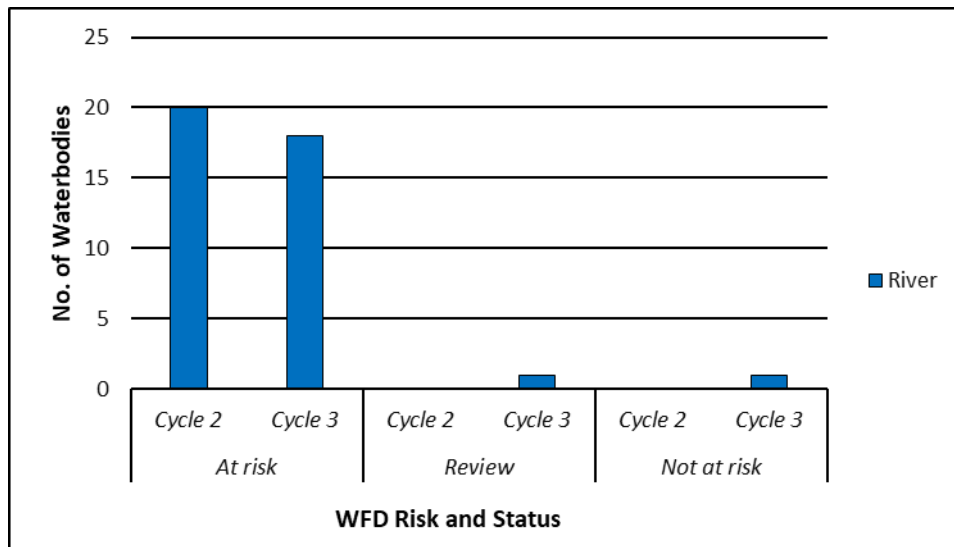
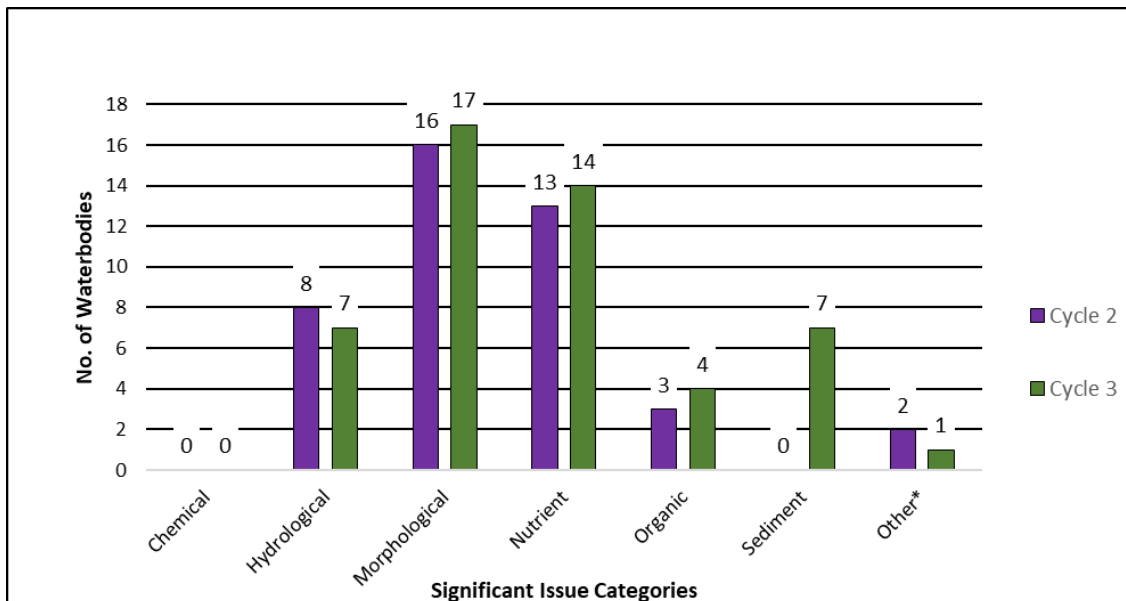


Figure 24: Number of waterbodies in each risk category in 2nd Cycle Areas for Action

8.4 Significant Issues in 2nd Cycle Areas for Action

- ◆ Based on the EPA assessment for Cycle 3, the significant issues in the 2nd Cycle Areas for Action are morphology and nutrients, impacting 17 and 14 waterbodies respectively (Figure 25). This is followed by hydrological issues which are impacting seven waterbodies and sediment and organic impacts, impacting seven and four waterbodies respectively.
- ◆ The numbers of 2nd Cycle Areas for Action waterbodies associated with each of the significant issues categories has increased between Cycle 2 and Cycle 3 except for hydrological issues and other issues which have each decreased by one waterbody.

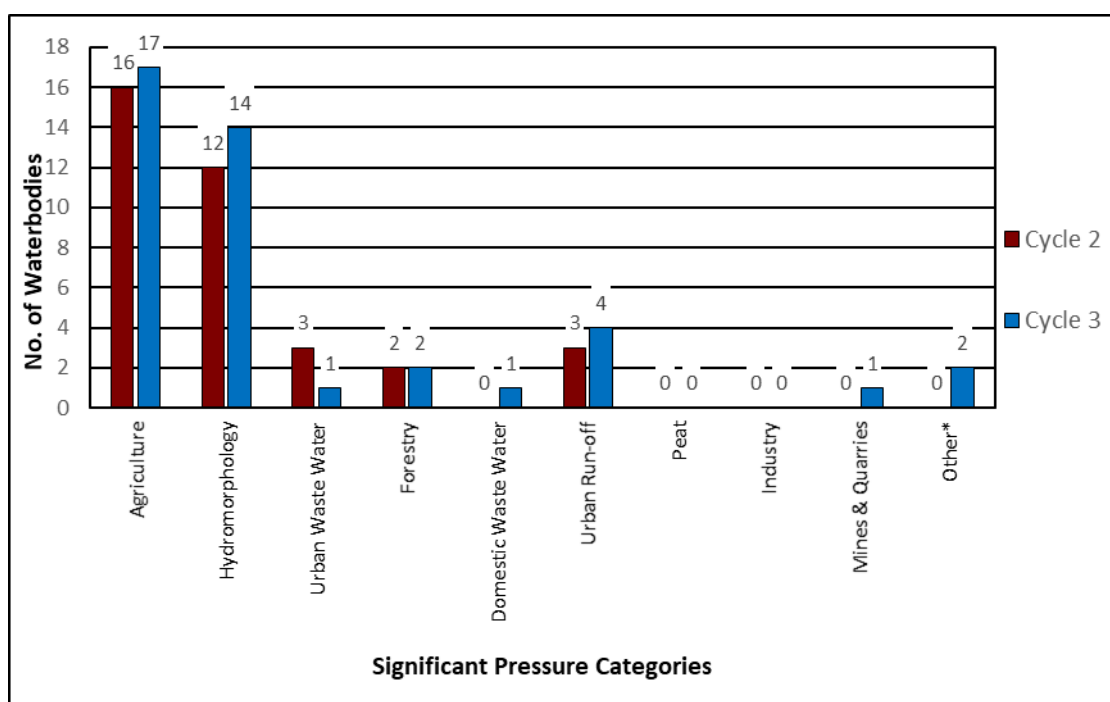


*Other - Acidification, saline intrusion, elevated temperature, litter, microbiological pollution and unknown impacts have all been grouped into the "Other" issues category for the purpose of this report

Figure 25: Significant Issues across all 2nd Cycle Areas for Action Waterbodies

8.5 Significant Pressure in 2nd Cycle Areas for Action

- ◆ For Cycle 3, in 2nd Cycle Areas for Action waterbodies in the catchment the dominant significant pressures are:
 - Agriculture - 17 waterbodies are impacted compared to 16 impacted in Cycle 2.
 - Hydromorphology – 14 waterbodies are impacted compared to 12 impacted in Cycle 2.
 - Urban run-off - four waterbodies are impacted compared to three impacted in Cycle 2.
 - Forestry – two waterbodies remain impacted by forestry in Cycle 3.
 - Urban Waste Water – one waterbody (Barrow_080) is impacted by Portarlinton (D0158) agglomeration in Cycle 3:
 - Domestic waste water and mines and quarries – both are a significant pressure in one waterbody compared to no waterbodies impacted in Cycle 2.
- ◆ When comparing the significant pressures in the 2nd Cycle Areas for Action between Cycle 2 and three there has been an increase in all significant pressure categories in the catchment with the exception of urban run-off which reduced by one waterbody and forestry which has remained the same.



*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 26: Significant Pressures in 2nd Cycle Area for Action Waterbodies

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 26 Areas for Action, comprising of 106 waterbodies, recommended for further characterisation and action in the catchment for the 3rd Cycle River Basin Management Plan. 69 of the 106 waterbodies in the 3rd Cycle Recommended Areas for Action are *At Risk*, 20 are in *Review* and 17 are *Not At Risk*. The 26 Recommended Areas for Action consist of four Areas for Protection, 21 Areas for Restoration, one Catchment Project. LAWPRO are the proposed lead organisation in 14 Recommended Areas for Action, NFGWS are the proposed lead on three Recommended Areas for Action, GSI, NFGWS and TCD are the proposed lead on one Recommended Area for Action and the remaining eight Recommended Areas for Action proposed leads are distributed within the responsible county councils (Carlow and Kildare County Councils are responsible for three Recommended Areas for Action each, while Offlay and Laois County Council for one each). The Areas for Action in the catchment are listed in Table 7 and shown in Figure 27. The reason for selecting for each waterbody in a Recommended Area for Action is provided in Appendix 3.

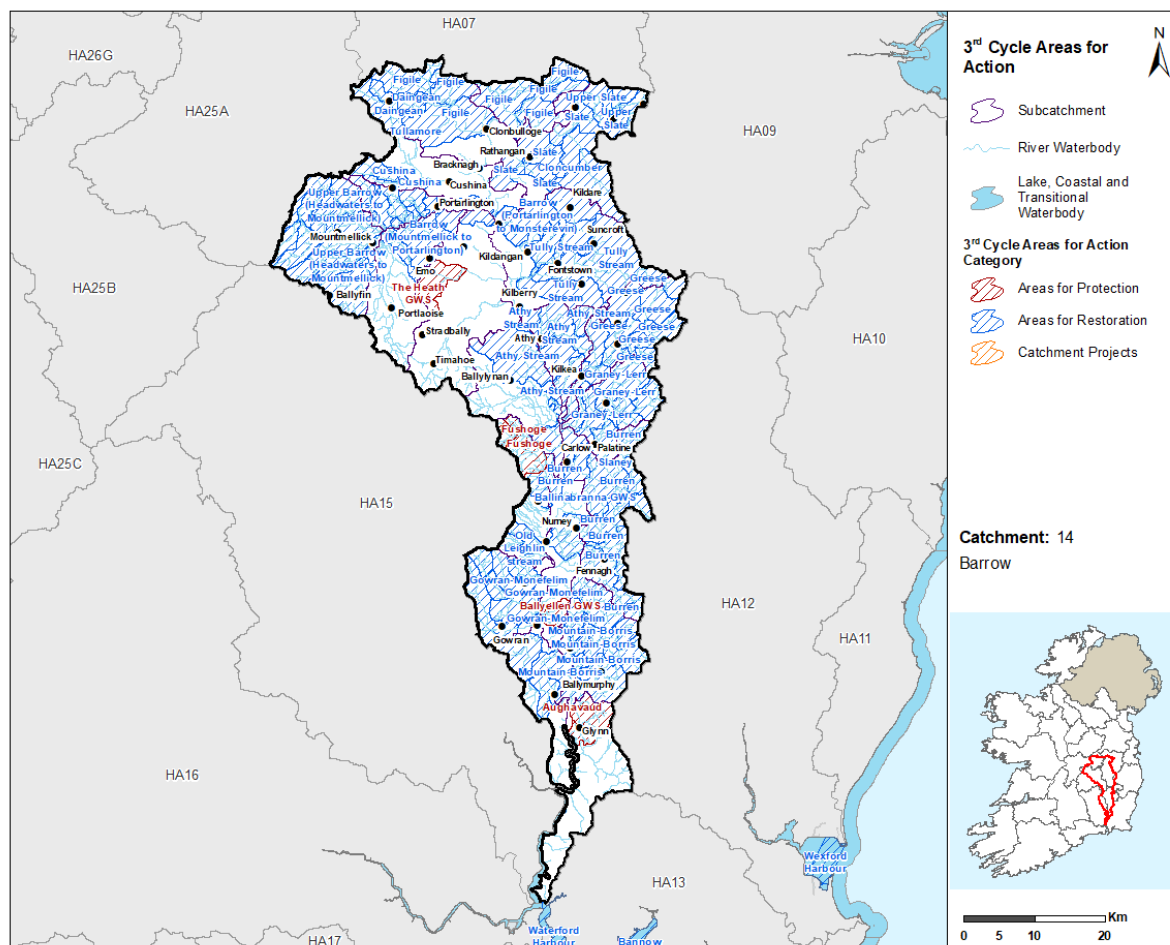


Figure 27: 3rd Cycle Recommended Areas for Action Locations

Table 7: 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
Figile	7	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
Burren	10	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
Aughavaud	2	Protection	LA Areas for Protection Local Authorities	Carlow County Council
Mountain-Borris	8	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
Athy Stream	6	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
Upper Barrow (Headwaters to Mountmellick)	10	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO

3rd Cycle Recommended Areas for Action	Number of Waterbodies	Recommended Areas for Action Category	Recommended Areas for Action Sub-category	Lead Organisation
Barrow (Mountmellick to Portarlinton)	7	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
Barrow (Portarlinton to Monsterevin)	2	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
Ballinabranna GWS	1	Restoration	Public Health Areas for Restoration NFGWS, IW, HSE, LAs, SFPA	NFGWS
Greese	10	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
Ballynaboley	1	Restoration	LA Areas for Restoration Local Authorities	Carlow County Council
Cushina	2	Restoration	LA Areas for Restoration Local Authorities	Offaly County Council
Cloncumber	2	Restoration	LA Areas for Restoration Local Authorities	Kildare County Council
Powerstown - Duiske	2	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
The Heath GWS	1	Protection	Public Health Areas for Protection NFGWS, IW, HSE, LAs, SFPA	NFGWS
Daingean	3	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
Fushoge	2	Protection	LA Areas for Protection Local Authorities	Laois County Council
Gowran-Monefelim	6	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
Graney-Lerr	7	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
Ballyellen GWS	1	Protection	Public Health Areas for Protection NFGWS, IW, HSE, LAs, SFPA	NFGWS
Tully Stream	5	Restoration	LA Areas for Restoration Local Authorities	Kildare County Council
Old Leighlin stream	1	Restoration	LA Areas for Restoration Local Authorities	Carlow County Council

3rd Cycle Recommended Areas for Action	Number of Waterbodies	Recommended Areas for Action Category	Recommended Areas for Action Sub-category	Lead Organisation
Slate	4	Restoration	LA Areas for Restoration Local Authorities	Kildare County Council
Upper Slate	4	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
Waterford Harbour	1	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
Durrow Groundwater	1	Catchment Projects	Public Body Research	GSI and NFGWS and TCD
Figile	7	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
Burren	10	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
Aughavaud	2	Protection	LA Areas for Protection Local Authorities	Carlow County Council

10 Catchment Summary

- Of the 149 river waterbodies, 80 are *At Risk* of not meeting their WFD objectives.
- Five out of six transitional waterbodies are *At Risk* of not meeting their WFD objectives.
- There are 11 *At Risk* groundwater bodies out of 50.
- There has been an overall deterioration across the catchment with 96 waterbodies *At Risk* in Cycle 3 compared to 72 waterbodies *At Risk* in Cycle 2.
- The main impacts and pressures driving the change between Cycle 2 and Cycle 3 are increases in waterbodies impacted by nutrient and sediment. The increase in hydromorphological impacts is likely to be associated with a stronger evidence base and increasing awareness of hydromorphology rather than new significant hydromorphology pressures since Cycle 2.
- Agriculture and hydromorphology are the main pressures impacting 72 and 30 waterbodies respectively.
- All 20 Cycle 2 Area for Action waterbodies were *At Risk* in Cycle 2 and 18 of those waterbodies are *At Risk* in Cycle 3.
- There are 26 Recommended Areas for Action for Cycle 3. They comprise of 106 waterbodies with 69 waterbodies *At Risk*, 20 in *Review* and 17 *Not At Risk*.

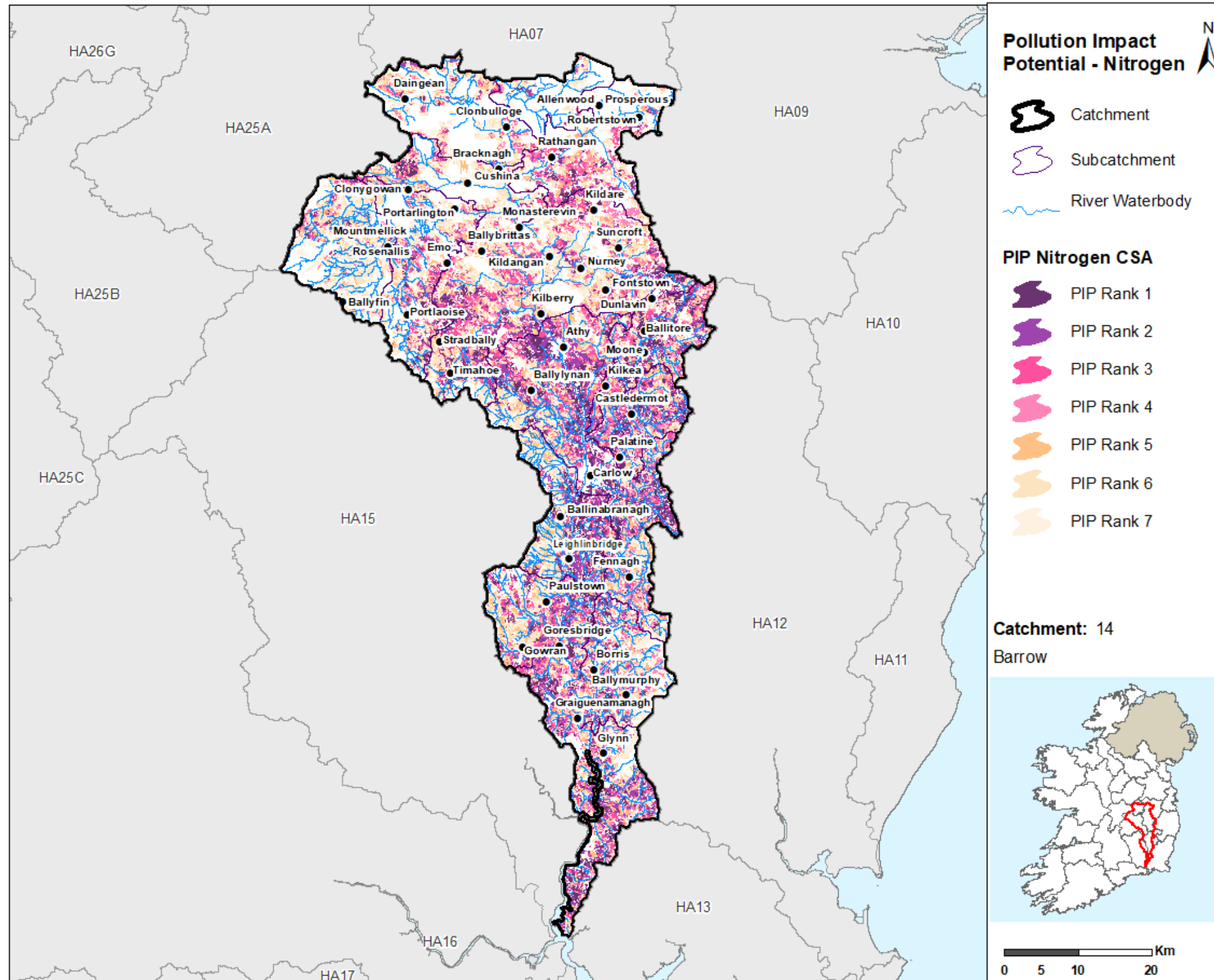
Appendix 1

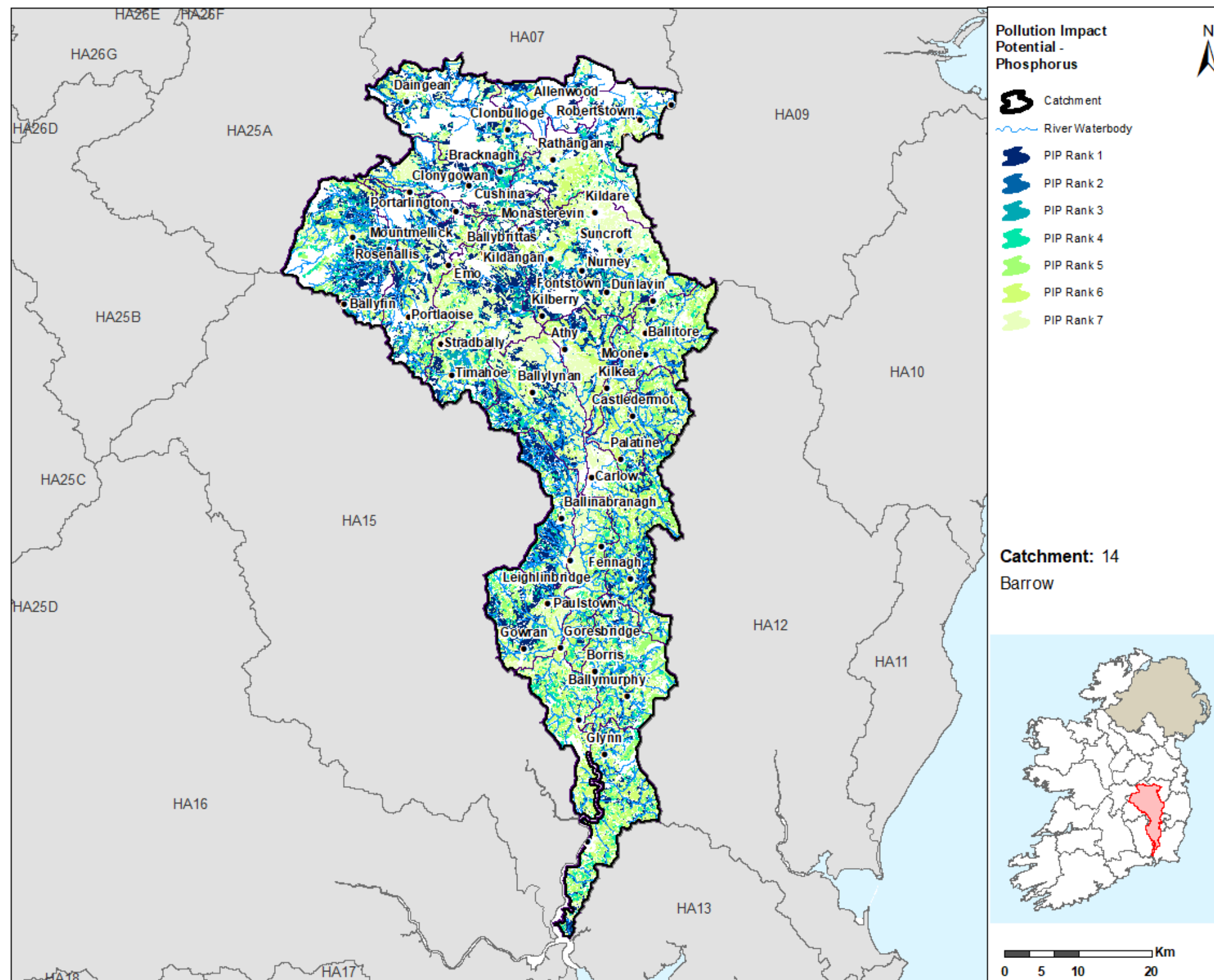
High ecological status objective waterbodies

Waterbody Name	Waterbody Type	Waterbody Code	Status 2013-2018
BARROW_010	River	IE_SE_14B010060	High
BURREN_010	River	IE_SE_14B050020	Good

Appendix 2

Pollution Impact Potential Mapping





Appendix 3

Summary information on all waterbodies in the Barrow 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 Area for Action Name	Recommended Area for Action (reasons for selection)
	IE_14_AWB_GCBL	Grand Canal Barrow Line (Barrow)	River		Review	Good	Good	No			
	IE_14_AWB_GCMF	Grand Canal Milltown Feeder (Barrow)	River		Review	Moderate	Good	No			
	IE_14_AWB_GCMLE	Grand Canal Main Line East (Barrow)	River		Not at risk	Unassigned	Good	No			
	IE_14_AWB_GCMLW	Grand Canal Main Line West (Barrow)	River		Review	Unassigned	Good	No			
14_3	IE_SE_14A010840	Abbeylough_010	River	At risk	At risk	Unassigned	Unassigned	No	Peat	Figile	new proposed PAA At risk WB Unassigned
14_13	IE_SE_14A020100	AGHALONA_010	River	At risk	At risk	Moderate	Moderate	No	Ag	Burren	LAWPRO: Subcatchment of Existing PAA Carlow CC: Elevated OP & TN, addressmultiple pressures, Sub-catchment scale with Burren_050
14_13	IE_SE_14A020200	AGHALONA_020	River	At risk	At risk	Moderate	Moderate	No	Ag	Burren	LAWPRO: Subcatchment of Existing PAA Carlow CC: Elevated OP & TN, addressmultiple pressures, Sub-catchment scale with Burren_050
14_19	IE_SE_14A040400	AUGHAVAUD_010	River	Review	Review	Unassigned	Unassigned	No		Aughavaud	CW: Support NFGWS protect measures NPWS: SAC NFGWS: St Mullins Parish GWS, surface water abstraction
14_19	IE_SE_14A040600	AUGHAVAUD_020	River	Not at risk	Not at risk	Good	Good	No		Aughavaud	CW: Support NFGWS protect measures NPWS: SAC
14_10	IE_SE_14A050500	AUGHNABRISKY_010	River	Not at risk	Not at risk	Good	Good	No		Mountain-Borris	LAWPRO: Subcatchment of existing PAA NPWS: River Barrow & Nore SAC white clawed crayfish, estuaries
14_2	IE_SE_14A060200	ATHY STREAM_010	River	At risk	At risk	Poor	Moderate	No	Ag	Athy Stream	existing PAA; Ag - poor drainage Beyond 2027 IFI research IFI inspections of the Athy Stream suggest that degraded hydro-morphological conditions are a significant issue impacting upon this catchment and that there is potential for habitat restoration in this system.
14_2	IE_SE_14A060400	ATHY STREAM_020	River	At risk	At risk	Moderate	Moderate	No	Ag	Athy Stream	existing PAA; Ag significant pressure

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 Area for Action Name	Recommended Area for Action (reasons for selection)
											2027 EO IFI research IFI inspections of the Athy Stream suggest that degraded hydro-morphological conditions are a significant issue impacting upon this catchment and that there is potential for habitat restoration in this system.
14_2	IE_SE_14A060600	ATHY STREAM_030	River	Review	Review	Unassigned	Unassigned	No		Athy Stream	Unassigned WB IFI research IFI inspections of the Athy Stream suggest that degraded hydro-morphological conditions are a significant issue impacting upon this catchment and that there is potential for habitat restoration in this system.
14_19	IE_SE_14A070300	AUGHNACREW_010	River	At risk	At risk	Moderate	Moderate	No	Ag, DWW		
14_19	IE_SE_14A070500	AUGHNACREW_020	River	Not at risk	Not at risk	Good	Good	No			
14_15	IE_SE_14B010060	BARROW_010	River	Not at risk	Not at risk	High	High	Yes		Upper Barrow (Headwaters to Mountmellick)	protect complete sub-catchment IFI research
14_15	IE_SE_14B010200	BARROW_020	River	Review	Not at risk	Good	Good	No		Upper Barrow (Headwaters to Mountmellick)	To complete sub-catchment SAC ONM IFI research
14_15	IE_SE_14B010300	BARROW_030	River	Not at risk	Not at risk	Good	Good	No		Upper Barrow (Headwaters to Mountmellick)	To complete sub-catchment SAC ONM IFI research
14_15	IE_SE_14B010500	BARROW_040	River	At risk	At risk	Moderate	Moderate	No	Ag	Upper Barrow (Headwaters to Mountmellick)	new PAA Ag significant pressure 2027 EO SAC ONM 1. Nutrient Sensitive Area 2. Upgrade works are being undertaken in Portlaoise, Rathdowney, Mountrath and Mountmellick (10 million investment in sewer networks).Moderate status, this status is driven by macroinvertebrates and Moderate ortho P concentrations. Pressures include Agriculture (significant) and forestry (not

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 Area for Action Name	Recommended Area for Action (reasons for selection)
											significant) Flows into the Barrow_050 which is unassigned. IFI research
14_1, 14_11	IE_SE_14B010550	BARROW_050	River	Review	At risk	Unassigned	Unassigned	No	Ag, For, Hymo, Peat	Barrow (Mountmellick to Portarlinton)	Expand PAA Forstry, Hymo, Ag and Peat significant pressures 2027 EO IFI IFI index catchment, The Barrow River in the vicinity of Dunrally Bridge on County Laois/Kildare border is heavily clogged by an over-abundance of weed growth. IFI suspect that the main reason for this relates to hydro-morphological damage by previous dredging and widening by the Barrow Drainage Board. We ask if a project that might consider measures along a short stretch of this section of channel to improve flows/fisheries habitat. NPWS IE0002162 - River Barrow and River Nore SAC Austropotamobius pallipes Estuaries
14_1, 14_11	IE_SE_14B010700	BARROW_060	River	Not at risk	Review	Good	Good	No		Barrow (Mountmellick to Portarlinton)	Expand PAA Protected Aea ONM IFI Research IFI index catchment NPWS IE0002162 - River Barrow and River Nore SAC Austropotamobius pallipes Estuaries
14_1, 14_11	IE_SE_14B010780	BARROW_070	River	Not at risk	At risk	Good	Good	No	Ag	Barrow (Mountmellick to Portarlinton)	Expand PAA Good status watching brief - At risk WB Protected Area ONM Ag significant pressures

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 Area for Action Name	Recommended Area for Action (reasons for selection)
											2027 EO IFI research IFI index catchment NPWS IE0002162 - River Barrow and River Nore SAC Austropotamobius pallipes Estuaries
14_1, 14_11	IE_SE_14B010900	BARROW_080	River	At risk	At risk	Moderate	Moderate	No	Ag, UWW	Barrow (Mountmellick to Portarlinton)	Existing PAA - need to expand upstream to address issues in this WB. IFI IFI index catchment, The Barrow River in the vicinity of Dunrally Bridge on County Laois/Kildare border is heavily clogged by an over-abundance of weed growth. IFI suspect that the main reason for this relates to hydro-morphological damage by previous dredging and widening by the Barrow Drainage Board. We ask if a project that might consider measures along a short stretch of this section of channel to improve flows/fisheries habitat. NPWS IE0002162 - River Barrow and River Nore SAC Austropotamobius pallipes Estuaries
14_17, 14_20	IE_SE_14B011000	BARROW_090	River	At risk	At risk	Poor	Poor	No	Ag, DWW, Hymo, Other, UR	Barrow (Portarlinton to Monsterevin)	existing PAA - expand to characterise downstream WB. DWWTS significant pressures SAC ONM 2027 EO NPWS IE0002162 - River Barrow and River Nore SAC Austropotamobius pallipes Estuaries

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 Area for Action Name	Recommended Area for Action (reasons for selection)
14_17, 14_18	IE_SE_14B011130	BARROW_100	River	Not at risk	At risk	Unassigned	Unassigned	No	Hymo, UR, UWW	Barrow (Portarlinton to Monsterevin)	Expand existing PAA UWW significant pressure 2027 EO IFI IFI index catchment, The Barrow River in the vicinity of Dunrally Bridge on County Laois/Kildare border is heavily clogged by an over-abundance of weed growth. IFI suspect that the main reason for this relates to hydro-morphological damage by previous dredging and widening by the Barrow Drainage Board. We ask if a project that might consider measures along a short stretch of this section of channel to improve flows/fisheries habitat. NPWS IE0002162 - River Barrow and River Nore SAC Austropotamobius pallipes Estuaries
14_17, 14_18	IE_SE_14B011300	BARROW_110	River	Not at risk	Not at risk	Good	Good	No			
14_17, 14_18	IE_SE_14B011500	BARROW_120	River	Not at risk	Not at risk	Good	Good	No			
14_12, 14_2	IE_SE_14B011600	BARROW_130	River	Review	Review	Unassigned	Unassigned	No		Athy Stream	NPWS IE0002162 - River Barrow and River Nore SAC Austropotamobius pallipes Estuaries IFI IFI index catchment, The Barrow River in the vicinity of Dunrally Bridge on County Laois/Kildare border is heavily clogged by an over-abundance of weed growth. IFI suspect that the main reason for this relates to hydro-morphological damage by previous dredging and widening by the Barrow Drainage Board. We ask if a project that might consider measures along a short stretch of this section of channel to improve flows/fisheries habitat.

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 Area for Action Name	Recommended Area for Action (reasons for selection)
14_12, 14_2	IE_SE_14B011900	BARROW_140	River	At risk	At risk	Moderate	Poor	No	Ag, Hymo, Other	Athy Stream	See M&E spreadsheet NPWS: River Barrow & R Nore SAC white clawed crayfish & estuaries
14_12, 14_2	IE_SE_14B012000	BARROW_150	River	Review	Review	Unassigned	Unassigned	No		Athy Stream	See M&E spreadsheet NPWS: River Barrow & R Nore SAC white clawed crayfish & estuaries
14_12, 14_13	IE_SE_14B012460	BARROW_160	River	At risk	At risk	Moderate	Moderate	No	Hymo, UR	Burren	LAWPRO: Subcatchment of Existing PAA NPWS: River Barrow & Nore SAC white clawed crayfish, estuaries
14_4, 14_5	IE_SE_14B012600	BARROW_170	River	At risk	At risk	Moderate	Moderate	No	Ag, Hymo	Ballinabranna GWS	IFI: Index catchment NPWS: R Barrow & R Nore SAC White clawed crayfish NFGWS: Group Water Scheme groundwater abstraction sources proposed for inclusion as an Area for Acton (3rd Cycle)
14_4, 14_5	IE_SE_14B012700	BARROW_180	River	At risk	At risk	Moderate	Moderate	No	Ag, UR		
14_4, 14_5	IE_SE_14B012820	BARROW_190	River	Review	Review	Unassigned	Unassigned	No			
14_4, 14_8	IE_SE_14B012920	BARROW_200	River	Not at risk	Not at risk	Good	Good	No			
14_4, 14_8	IE_SE_14B013100	BARROW_210	River	At risk	At risk	Poor	Poor	No	Hymo, Ind, UR		
14_4, 14_7	IE_SE_14B013300	BARROW_220	River	At risk	At risk	Moderate	Moderate	No	Ag		
14_10, 14_7	IE_SE_14B013514	BARROW_230	River	At risk	At risk	Poor	Poor	No	Hymo, Other	Mountain-Borris	IFI: Catchment project/ Research (not detailed) NPWS: River Barrow & Nore SAC white clawed crayfish, estuaries
14_19, 14_7	IE_SE_14B013600	BARROW_240	River	Review	Review	Unassigned	Unassigned	No			
14_15	IE_SE_14B031000	BLACKWATER (LAOIS)_010	River	At risk	At risk	Moderate	Moderate	No	Ag	Upper Barrow (Headwaters to Mountmellick)	restore to complete sub-catchment SAC ONM
14_9	IE_SE_14B040100	BOTHOGUE_010	River	Not at risk	Not at risk	Good	Good	No		Greese	Not at Risk - protect Headwaters KE propose for WW Suggest WCC consider to include waterbody for protection as upstream of Bothogue_020 LAWPRO propose to complete Greese subcatchment
14_9	IE_SE_14B040300	BOTHOGUE_020	River	Not at risk	Not at risk	Good	Good	No		Greese	KE Biological rating has remained unchanged (Q4) in 2014 and 2017. Build on work by KCC in protecting

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 Area for Action Name	Recommended Area for Action (reasons for selection)
											waterbody LAWPRO propose to complete Greese subcatchment
14_13	IE_SE_14B050020	BURREN_010	River	At risk	At risk	Good	Good	Yes	Ag, For, Hymo	Burren	LAWPRO: Existing PAA Carlow CC: At risk Blue dot catchment
14_13	IE_SE_14B050110	BURREN_020	River	At risk	At risk	Moderate	Moderate	No	Ag, Hymo	Burren	LAWPRO: Existing PAA
14_13	IE_SE_14B050200	BURREN_030	River	At risk	At risk	Moderate	Moderate	No	Ag, Hymo	Burren	LAWPRO: Existing PAA
14_13	IE_SE_14B050310	BURREN_040	River	At risk	At risk	Moderate	Moderate	No	Ag, Hymo	Burren	LAWPRO: Existing PAA
14_13	IE_SE_14B050400	BURREN_050	River	Not at risk	At risk	Good	Moderate	No	Ag, Hymo, UWW	Burren	LAWPRO: Subcatchment of Existing PAA Carlow CC: Build on existing programmes, address multiple pressures, deterioration.
14_13	IE_SE_14B050500	BURREN_060	River	At risk	At risk	Poor	Moderate	No	Hymo, UR	Burren	LAWPRO: Existing PAA IW: EPA Pesticide Act & Watch list: Watch
14_10	IE_SE_14B060700	BLACK (BORRIS)_010	River	Not at risk	Not at risk	Good	Good	No		Mountain-Borris	LAWPRO: Subcatchment of existing PAA IFI: Dinin/Blackwater (Black (Borris)) is a large trib of Mountain & Barrow rivers. Complete absense of salmon u/s of large weir. Project to remove weir would facilitate passage of fish u/s. NFGWS: Group Water Scheme groundwater abstraction sources proposed for inclusion as an Area for Acton (3rd Cycle) Ballyloughan GWS
14_10	IE_SE_14B061380	BLACK (BORRIS)_020	River	Not at risk	At risk	Good	Moderate	No	Ag, UWW	Mountain-Borris	LAWPRO: Subcatchment of existing PAA Carlow CC: Elevated TON, upward trend in all nutrients IFI: Dinin/Blackwater (Black (Borris)) is a large trib of Mountain & Barrow rivers. Complete absense of salmon u/s of large weir. Project to remove weir would facilitate passage of fish u/s.
14_4	IE_SE_14B080700	BALLYNABOLEY STREAM_010	River	At risk	At risk	Moderate	Poor	No	Other, UWW	Ballynaboley	Carlow CC: Proposed for Carlow to carry out characterisation u/s of wwtp which has been identified as sole pressure
14_9	IE_SE_14B100300	BURTOWN STREAM_010	River	At risk	At risk	Unassigned	Unassigned	No	Ag	Greese	Ag significant pressure 2027 EO KE propose for LAWPRO Potential to build on the IM and

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 Area for Action Name	Recommended Area for Action (reasons for selection)
											catchment Assessment carried out by Kcc in 2019. Unassigned waterbody
14_10	IE_SE_14B210500	Ballyroughan Little_010	River	Not at risk	Not at risk	Good	Good	No		Mountain-Borris	LAWPRO: Subcatchment of existing PAA NPWS: River Barrow & Nore SAC white clawed crayfish, estuaries
14_17	IE_SE_14C020600	CROOKED (STRADBALLY)_010	River	Not at risk	Not at risk	Good	Good	No			
14_20	IE_SE_14C040050	CUSHINA_010	River	Review	Review	Moderate	Unassigned	No		Cushina	1 . Headwaters
14_20	IE_SE_14C040080	CUSHINA_020	River	Not at risk	At risk	Good	Poor	No	Ag, DWW, Peat, UWW	Cushina	1. Cloneygowan WWTP Sig. Pressure e
14_20	IE_SE_14C040100	CUSHINA_030	River	Not at risk	Not at risk	Good	Good	No			
14_1	IE_SE_14C150500	COTTONERS BROOK_010	River	Review	Review	Unassigned	Unassigned	No		Barrow (Mountmellick to Portarlinton)	Expand PAA Unassigned feed in Barrow_050
14_16	IE_SE_14C170200	CLONCUMBER STREAM_010	River	At risk	At risk	Poor	Moderate	No	Hymo	Cloncumber	Waterbody for investigation by KCC. Biological rating (Q3-4) in 2017. Potential to improve in 3rd cycle. Include Cloncumber_020 for completeness. NPWS IE0000396 - Pollardstown Fen SAC Calcareous fens with Cladium mariscus and species of the Caricion davallianae
14_16	IE_SE_14C170250	CLONCUMBER STREAM_020	River	At risk	At risk	Unassigned	Unassigned	No	Hymo	Cloncumber	Waterbody for investigation by KCC. Potential to improve in 3rd cycle.
14_1	IE_SE_14C510940	CLONYGOWAN_010	River	Review	Review	Unassigned	Unassigned	No		Barrow (Mountmellick to Portarlinton)	Expand PAA Unassigned WB flowing into Barrow_060.
14_12	IE_SE_14D030040	DOUGLAS (LAOIS)_010	River	Not at risk	Not at risk	High	High	No			
14_12	IE_SE_14D030100	DOUGLAS (LAOIS)_020	River	Not at risk	Review	Good	Good	No			
14_12	IE_SE_14D030300	DOUGLAS (LAOIS)_030	River	Review	At risk	Good	Moderate	No	Ag, UWW		
14_7	IE_SE_14D040100	DUISKE_010	River	Not at risk	Not at risk	Good	Good	No			
14_7	IE_SE_14D040200	DUISKE_020	River	At risk	At risk	Moderate	Moderate	No	Ag, Hymo, UR	Powerstown - Duiske	IFI: one of the best salmonid spawning and nursery streams on the barrow, under pressure from abstraction and diffuse agriculture LAWPRO: existing PAA NPWS: River Barrow & Nore SAC white clawed crayfish, estuaries
14_17	IE_SE_14D050200	DUNRALLY STREAM_010	River	Not at risk	Not at risk	Good	Good	No		The Heath GWS	NFGWS: Group Water Scheme groundwater abstraction sources

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 Area for Action Name	Recommended Area for Action (reasons for selection)
											proposed for inclusion as an Area for Acton (3rd Cycle)
14_17	IE_SE_14D050400	DUNRALLY STREAM_020	River	Not at risk	Not at risk	Good	Good	No			
14_14	IE_SE_14D060100	DAINGEAN_010	River	At risk	At risk	Poor	Poor	No	Peat	Daingean	Peat significant pressure 2027 EO OY Proposed for LAWPRO 1. Headwaters to Figile/Barrow, 2. Hydromorphology
14_14	IE_SE_14D060200	DAINGEAN_020	River	At risk	At risk	Poor	Poor	No	Ag, Peat, UWW	Daingean	UWW, Peat significant pressures 2027 EO OY Proposed for LAWPRO 1. Headwaters to Figile/Barrow, 2. Hydromorphology
14_14	IE_SE_14D060400	DAINGEAN_030	River	At risk	At risk	Poor	Poor	No	Peat	Daingean	Peat significant pressure 2027 EO OY Proposed for LAWPRO 1. Headwaters to Figile/Barrow, 2. Hydromorphology Feeds into the Figile_040. NFGWS - Mount Lucas GWS
14_15	IE_SE_14D070500	DRUMMOND STREAM_010	River	Review	Review	Unassigned	Unassigned	No		Upper Barrow (Headwaters to Mountmellick)	unassigned to complete sub-catchment
14_14	IE_SE_14E010100	ESKER STREAM_010	River	Review	Review	Unassigned	Unassigned	No		Figile	Feeds in to Figile_040
14_14	IE_SE_14E010200	ESKER STREAM_020	River	At risk	Review	Moderate	Good	No		Figile	Feeds in to Figile_040
14_20	IE_SE_14E020300	ENAGHAN STREAM_010	River	Not at risk	Not at risk	Good	High	No			
14_3	IE_SE_14F010061	FIGILE_010	River	At risk	At risk	Poor	Poor	No	Hymo, Ind, Peat, UWW	Figile	new proposed PAA "At risk" waterbodies not included
14_3	IE_SE_14F010100	FIGILE_020	River	At risk	At risk	Moderate	Moderate	No	Peat	Figile	new proposed PAA "At risk" waterbodies not included
14_3	IE_SE_14F010200	FIGILE_030	River	At risk	At risk	Moderate	Moderate	No	Peat	Figile	new proposed PAA "At risk" waterbodies not included
14_14	IE_SE_14F010300	FIGILE_040	River	At risk	At risk	Moderate	Moderate	No	Peat	Figile	"At risk" waterbodies not included
14_14	IE_SE_14F010400	FIGILE_050	River	Review	Review	Good	Good	No			
14_14	IE_SE_14F010500	FIGILE_060	River	Review	Not at risk	Good	Good	No			
14_20	IE_SE_14F010510	FIGILE_070	River	Review	Review	Unassigned	Unassigned	No			
14_20	IE_SE_14F010600	FIGILE_080	River	Review	Review	Unassigned	Unassigned	No			
14_5	IE_SE_14F030050	FUSHOGE_010	River	Not at risk	Not at risk	Good	Good	No		Fushoge	Laois CC: Proposed for Laois
14_5	IE_SE_14F030250	FUSHOGE_020	River	Not at risk	Review	Good	Good	No		Fushoge	Laois CC: Proposed for Laois

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 Area for Action Name	Recommended Area for Action (reasons for selection)
14_15	IE_SE_14G020300	GLENLAHAN_010	River	Not at risk	Not at risk	Good	Good	No		Upper Barrow (Headwaters to Mountmellick)	protect to complete sub-catchment
14_8	IE_SE_14G030100	GOWRAN_010	River	At risk	At risk	Moderate	Moderate	No	Ag	Gowran-Monefelim	At Risk wb - not proposed
14_8	IE_SE_14G030220	GOWRAN_020	River	At risk	At risk	Moderate	Moderate	No	Ag, DWW	Gowran-Monefelim	At Risk wb - not proposed
14_9	IE_SE_14G040070	GREESE_010	River	Review	At risk	Poor	Poor	No	Ag, DWW	Greese	Ag and DWW significant pressures 2027 EO KE propose for LAWPRO Potential for LAWPRO to build on the IM and Catchment Assessment work carried out by KCC in 2019. Collaboration with Wicklow CoCo required in relation to Agriculture issues at monitoring station. Biological rating deteriorated from Q4 in 2014 to Q3-4 in 2017. This coincides with the relocation of the discharge point from Dunlavin WWTP. Potential for LAWPRO to build on the IM and Catchment Assessment work carried out by KCC in 2019. Collaboration with IW in realtion to monitoring station. WW propose for LAWPRO Small catchment with serious Agri Pressures. NFGWS - Gormanstown / Dunlavin GWS IFI The Greese is the most important salmon tributary of the Barrow system, with excellent trout fishing on the Greese also. Fish passage and hydro-morphological issues exist throughout the catchment with the complete absence of all fish in the upper reaches at Dunlavin because of a barrier.
14_9	IE_SE_14G040100	GREESE_020	River	Not at risk	At risk	Good	Moderate	No	Ag	Greese	KE propose for LAWPRO Biological rating deteriorated from Q4 in 2014 to Q3-4 in 2017. This coincides with the relocation of the discharge

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 Area for Action Name	Recommended Area for Action (reasons for selection)
											point from Dunlavin WWTP.Potential for LAWPRO to build on the IM and Catchment Assessment work carried out by KCC in 2019. Collaboration with IW in relation to monitoring station. WW propose for LAWPRO Q dropped back to M. Dunlavin WWTP performs very well but discharges irregularly. 2 farms carrying out works upstream. Hope for improvement. Kildare Co Co looking for more work on the farms in Greese_10 to help. IFI The Greese is the most important salmon tributary of the Barrow system, with excellent trout fishing on the Greese also. Fish passage and hydro-morphological issues exist throughout the catchment with the complete absence of all fish in the upper reaches at Dunlavin because of a barrier.
14_9	IE_SE_14G040200	GREESE_030	River	Review	At risk	Moderate	Poor	No	Ag, DWW, Hymo, Ind, UWW	Greese	KE propose for LAWPRO Potential for LAWPRO to build on the IM and Catchment Assessment work carried out by KCC in 2019. Collaboration with IW (Ballitore) and EPA (Glanbia) required. Intensive Agriculture (dairy) upstream NFGWS - Narraghmore GWS IFI The Greese is the most important salmon tributary of the Barrow system, with excellent trout fishing on the Greese also. Fish passage and hydro-morphological issues exist throughout the catchment with the complete absence of all fish in the upper reaches at Dunlavin because of a barrier.
14_9	IE_SE_14G040350	GREESE_040	River	Review	At risk	Moderate	Moderate	No	Ag, DWW, Hymo	Greese	Ag, DWWTS, hymo significant pressures 2027 EO KE proposed for LAWPRO

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											Potential for LAWPRO to build on the IM and Catchment Assessment work carried out by KCC in 2019. Collaboration with IW (Ballitore) and EPA (Glanbia) required. Intensive Agriculture (dairy, beef & tillage upstream). IFI The Greese is the most important salmon tributary of the Barrow system, with excellent trout fishing on the Greese also. Fish passage and hydro-morphological issues exist throughout the catchment with the complete absence of all fish in the upper reaches at Dunlavin because of a barrier.
14_9	IE_SE_14G040400	GREESE_050	River	Review	At risk	Moderate	Moderate	No	Ag	Greese	Ag significant pressure 2027 EO KE proposed for LAWPRO Potential for LAWPRO to build on the IM and Catchment Assessment work carried out by KCC in 2019. Collaboration with IW (Kilkea). Intensive Agriculture (tillage) upstream. IFI The Greese is the most important salmon tributary of the Barrow system, with excellent trout fishing on the Greese also. Fish passage and hydro-morphological issues exist throughout the catchment with the complete absence of all fish in the upper reaches at Dunlavin because of a barrier.
14_9	IE_SE_14G040600	GREESE_060	River	Not at risk	At risk	Good	Moderate	No	Ag, UWW	Greese	Ag, UWW significant pressure SAC ONM 2027 EO KE propose for LAWPRO Potential for LAWPRO to build on the IM and Catchment Assessment work carried out by KCC in 2019.

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											Collaboration with IW (Kilkea & Castleroe). Cattle access point at monitoring station. IFI The Greese is the most important salmon tributary of the Barrow system, with excellent trout fishing on the Greese also. Fish passage and hydro-morphological issues exist throughout the catchment with the complete absence of all fish in the upper reaches at Dunlavin because of a barrier.
14_9	IE_SE_14G060100	GRANGECON STREAM_010	River	Review	At risk	Good	Good	No	Ag	Greese	Ag, UWW significna tpresures 2027 EO WW propose for WW Protect to assist Kildare Co Co improve Greese_20 LAWPRO propose to take on to complete Subcatchment if take on Greese as PAA
14_6	IE_SE_14G070200	GRANEY (LERR)_010	River	Not at risk	At risk	Good	Moderate	No	Ag, Hymo, M+Q	Graney-Lerr	LAWPRO: Subcatchment of existing PAA
14_6	IE_SE_14G070310	GRANEY (LERR)_020	River	At risk	At risk	Moderate	Poor	No	Ag, Hymo	Graney-Lerr	LAWPRO: Existing PAA
14_12	IE_SE_14G110800	GUILLIE_010	River	Review	Review	Unassigned	Unassigned	No			
14_19	IE_SE_14H090690	HERMITAGE_010	River	Review	Review	Unassigned	Unassigned	No			
14_19	IE_SE_14H110730	Hill Camlin_010	River	Review	Review	Unassigned	Unassigned	No			
14_4	IE_SE_14H170950	Hillfort Ballinkillin_010	River	Review	Review	Unassigned	Unassigned	No		Ballyellen GWS	NFGWS: Public Health Area for Restoation / Protection Unassigned
14_12	IE_SE_14K040200	KILLEEN STREAM (DOUGLAS)_010	River	At risk	At risk	Unassigned	Unassigned	No	Ag, DWW		
14_11	IE_SE_14K060600	KYLEGROVE STREAM_010	River	Review	Review	Unassigned	Unassigned	No			
14_1	IE_SE_14K220850	KILKEERAN_010	River	Review	Review	Unassigned	Unassigned	No		Barrow (Mountmellick to Portarlinton)	Expand PAA Unassigned waterbody flowing into the Barrow_070. NFGWS - Killeigh GWS
14_16	IE_SE_14K240670	KILNANTOGE_LOWER_010	River	Review	Review	Unassigned	Unassigned	No			
14_18	IE_SE_14K270950	KILDOON_010	River	Review	Review	Unassigned	Unassigned	No		Tully Stream	Significant tributary of Tully and IM ongoing

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											NPWS IE0002162 - River Barrow and River Nore SAC Austropotamobius pallipes Estuaries
14_6	IE_SE_14L010080	LERR_010	River	At risk	At risk	Moderate	Moderate	No	Ag	Graney-Lerr	LAWPRO: Existing PAA NPWS: River Barrow and R Nore SAC white clawed crayfish
14_6	IE_SE_14L010155	LERR_020	River	At risk	At risk	Poor	Moderate	No	Ag, Hymo, UR	Graney-Lerr	LAWPRO: Existing PAA NPWS: River Barrow and R Nore SAC white clawed crayfish
14_6	IE_SE_14L010250	LERR_030	River	At risk	At risk	Moderate	Moderate	No	Ag, Hymo	Graney-Lerr	LAWPRO: Existing PAA NPWS: River Barrow and R Nore SAC white clawed crayfish
14_6	IE_SE_14L010300	LERR_040	River	At risk	At risk	Moderate	Moderate	No	Ag, Hymo	Graney-Lerr	LAWPRO: Existing PAA NPWS: River Barrow and R Nore SAC white clawed crayfish
14_10	IE_SE_14M010020	MOUNTAIN (CARLOW)_010	River	At risk	Not at risk	Moderate	Good	No		Mountain-Borris	LAWPRO: Existing PAA
14_10	IE_SE_14M010070	MOUNTAIN (CARLOW)_020	River	Not at risk	Not at risk	Good	Good	No		Mountain-Borris	LAWPRO: Subcatchment of existing PAA NPWS: River Barrow & Nore SAC white clawed crayfish, estuaries
14_10	IE_SE_14M010160	MOUNTAIN (CARLOW)_030	River	At risk	Review	Unassigned	Unassigned	No		Mountain-Borris	LAWPRO: Existing PAA NPWS: River Barrow & Nore SAC white clawed crayfish, estuaries
14_8	IE_SE_14M030100	MONEFELIM_010	River	Not at risk	Not at risk	Good	Good	No		Gowran-Monefelim	NFGWS: Group Water Scheme groundwater abstraction sources proposed for inclusion as an Area for Acton (3rd Cycle)
14_8	IE_SE_14M030600	MONEFELIM_020	River	At risk	Review	Moderate	Good	No		Gowran-Monefelim	At Risk wb - not proposed
14_8	IE_SE_14M031000	MONEFELIM_030	River	At risk	At risk	Moderate	Moderate	No	Ag, DWW	Gowran-Monefelim	NPWS: River Barrow & R Nore SAC white clawed crayfish & estuaries
14_8	IE_SE_14M240860	MOANMORE_010	River	Review	Review	Unassigned	Unassigned	No		Gowran-Monefelim	NPWS: River Barrow & R Nore SAC white clawed crayfish & estuaries
14_15	IE_SE_14O010050	OWENASS_010	River	Not at risk	Not at risk	Good	Good	No		Upper Barrow (Headwaters to Mountmellick)	To complete subcatchment IFI Research IFI hope to work with the OPW to remove a large dam on the Owenass River in County Laois. The dam is a derelict structure and in full ownership of the OPW. It represents a complete barrier to fish passage with significant

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											salmon spawning concentrated immediately downstream of this structure and the complete absence of salmon upstream.
14_15	IE_SE_14O010300	OWENASS_020	River	At risk	At risk	Moderate	Moderate	No	Ag, UWW	Upper Barrow (Headwaters to Mountmellick)	To complete sub catchment SAC ONM IFI Research IFI hope to work with the OPW to remove a large dam on the Owenass River in County Laois. The dam is a derelict structure and in full ownership of the OPW. It represents a complete barrier to fish passage with significant salmon spawning concentrated immediately downstream of this structure and the complete absence of salmon upstream.
14_5	IE_SE_14O020500	OLD LEIGHLIN STREAM_010	River	Not at risk	Not at risk	Good	Good	No			
14_5	IE_SE_14O020700	OLD LEIGHLIN STREAM_020	River	At risk	At risk	Moderate	Moderate	No	Ag	Old Leighlin stream	CW: Proposed in 2nd cycle, WWTP Pressure, Carlow CC propose to lead AFA Restoration NPWS: R Barrow & R Nore SAC White clawed crayfish
14_7	IE_SE_14P020400	POWERSTOWN_010	River	At risk	At risk	Moderate	Poor	No	Ag, For, Hymo, M+Q	Powerstown - Duiske	LAWPRO: Existing PAA
14_19	IE_SE_14P030300	POLLMOUNTY_010	River	At risk	At risk	Moderate	Moderate	No	For, Other		
14_6	IE_SE_14P040200	PALATINE STREAM_010	River	At risk	At risk	Moderate	Moderate	No	Ag, Hymo	Graney-Lerr	LAWPRO: Existing PAA
14_15	IE_SE_14P200000	PIGEONHOUSE_010	River	Review	Review	Unassigned	Unassigned	No		Upper Barrow (Headwaters to Mountmellick)	unassigned to complete sub-catchment
14_16	IE_SE_14R170990	RATHANGAN_DEMESNE_010	River	Review	Review	Unassigned	Unassigned	No		Slate	
14_13	IE_SE_14R330970	ROSCAT_010	River	Not at risk	Not at risk	Unassigned	Unassigned	No		Burren	LAWPRO: Subcatchment of Existing PAA
14_5	IE_SE_14R430830	RATHORNAN_010	River	Review	Review	Unassigned	Unassigned	No			
14_16	IE_SE_14S010000	SLATE_010	River	Review	At risk	Unassigned	Unassigned	No	Hymo, Peat, UR	Upper Slate	NFGWS -Bracknagh GWS
14_16	IE_SE_14S010020	SLATE_020	River	At risk	At risk	Poor	Poor	No	Ag, UWW	Upper Slate	"At risk" waterbodies not included
14_16	IE_SE_14S010036	SLATE_030	River	Review	At risk	Unassigned	Unassigned	No	Ag, For	Upper Slate	At risk WB Unassigned
14_16	IE_SE_14S010050	SLATE_040	River	At risk	At risk	Poor	Poor	No	Peat	Upper Slate	"At risk" waterbodies not included
14_16	IE_SE_14S010100	SLATE_050	River	At risk	At risk	Moderate	Moderate	No	Hymo, Peat	Slate	EPA Between waterbodies that require restoration

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14_16	IE_SE_14S010210	SLATE_060	River	At risk	At risk	Moderate	Moderate	No	UR	Slate	Biological rating has remained unchanged (Q4) in 2014 and 2017. Build on work by KCC in protecting waterbody. Any issues in relation to WWTP'S and channelisation/drainage will need to be addressed by IW/KCC in Slate_010, 020, 030, 040, 050.
14_16	IE_SE_14S010300	SLATE_070	River	Not at risk	At risk	Good	Moderate	No	Ag, Hymo, Peat, UWW	Slate	Cross county WB, assess impacts
14_17	IE_SE_14S020030	STRADBALLY (LAOIS)_010	River	At risk	Not at risk	Moderate	Good	No			
14_17	IE_SE_14S020100	STRADBALLY (LAOIS)_020	River	Not at risk	Not at risk	Good	Good	No			
14_17	IE_SE_14S020350	STRADBALLY (LAOIS)_030	River	At risk	At risk	Moderate	Moderate	No	Ag		
14_17	IE_SE_14S020400	STRADBALLY (LAOIS)_040	River	Review	At risk	Good	Moderate	No	Ag		
14_11	IE_SE_14T010100	TRIOGUE_010	River	Review	Review	Good	Good	No			
14_11	IE_SE_14T010200	TRIOGUE_020	River	At risk	At risk	Poor	Poor	No	UR, UWW		
14_11	IE_SE_14T010300	TRIOGUE_030	River	At risk	At risk	Poor	Poor	No	Ag, Other, UR		
14_11	IE_SE_14T010400	TRIOGUE_040	River	At risk	At risk	Moderate	Poor	No	Ag		
14_18	IE_SE_14T020200	TULLY STREAM_010	River	At risk	At risk	Poor	Poor	No	Ind, Other	Tully Stream	EPA/IW need to resolve point discharge in Tully_010 which impacts downstream waterbodies. IFI The Tully Stream is a tributary of the Barrow in County Kildare, which has been subject to consistent unsatisfactory. Similar sized watercourses nearby hold excellent populations of juvenile salmon and IFI have concerns that degraded hydro-morphological conditions and discharges from a meat plant in the upper reaches may be contributing to the unsatisfactory conditions and to low salmon recruitment here.
14_18	IE_SE_14T020409	TULLY STREAM_020	River	At risk	At risk	Poor	Poor	No	Ag, Ind	Tully Stream	EPA/IW need to resolve point discharge in Tully_010 which impacts downstream waterbodies. IFI The Tully Stream is a tributary of the Barrow in County Kildare, which has been subject to consistent unsatisfactory. Similar sized watercourses nearby hold excellent

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											populations of juvenile salmon and IFI have concerns that degraded hydro-morphological conditions and discharges from a meat plant in the upper reaches may be contributing to the unsatisfactory conditions and to low salmon recruitment here.
14_18	IE_SE_14T020500	TULLY STREAM_030	River	Review	At risk	Good	Moderate	No	Ag	Tully Stream	EPA/IW need to resolve point discharge in Tully_010 which impacts downstream waterbodies. IFI The Tully Stream is a tributary of the Barrow in County Kildare, which has been subject to consistent unsatisfactory. Similar sized watercourses nearby hold excellent populations of juvenile salmon and IFI have concerns that degraded hydro-morphological conditions and discharges from a meat plant in the upper reaches may be contributing to the unsatisfactory conditions and to low salmon recruitment here.
14_18	IE_SE_14T020600	TULLY STREAM_040	River	Review	At risk	Good	Moderate	No	Ag	Tully Stream	Biological rating deteriorated from Q4 in 2014 to Q3-4 in 2017. Upstream station at Br W Cherrymills House (RS14T020500) is Q4. KCC to carry out catchment assessment on stretch between the two stations to determine issues causing decline in status. IFI The Tully Stream is a tributary of the Barrow in County Kildare, which has been subject to consistent unsatisfactory. Similar sized watercourses nearby hold excellent populations of juvenile salmon and IFI have concerns that degraded hydro-morphological conditions and discharges from a meat plant in the upper reaches may be contributing to the unsatisfactory conditions and to low salmon recruitment here.

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											NPWS IE0002162 - River Barrow and River Nore SAC Austropotamobius pallipes Estuaries
14_11	IE_SE_14T450060	TRIB TRIOGUE CUSH BRIDGE_010	River	At risk	At risk	Moderate	Moderate	No	Ag, For		
14_7	IE_SE_14U080790	Upper Carranroe_010	River	Not at risk	Not at risk	Unassigned	Unassigned	No			
13_3, 14_19, 16_19, 17_2	IE_SE_100_0100	Barrow Suir Nore Estuary	Transitional	Not at risk	At risk	Good	Moderate	No	Ag	Waterford Harbour	Waterford CC: Multiple pressures, Major high profile local interest and complaints of mass die off of mussels, Backing of EPA licensing section Wexford CC proposed for prioritisation IFI: Research IFI Index catchment BIM: Shellfish PA, Norovirus impacts, concern re sodium hypochlorite use (point source), important inshore fisheries
14_19, 15_18	IE_SE_100_0200	New Ross Port	Transitional	At risk	At risk	Moderate	Moderate	No	Ag		
14_19, 14_7, 15_17, 15_18	IE_SE_100_0250	Barrow Nore Estuary Upper	Transitional	Review	At risk	Good	Moderate	No	Ag, UR		
14_19, 14_7, 15_17, 15_18	IE_SE_100_0300	Upper Barrow Estuary	Transitional	Review	Review	Good	Good	No			
14_19, 14_7, 15_17, 15_18, 15_20	IE_SE_100_0400	Nore Estuary	Transitional	At risk	At risk	Moderate	Good	No	Ag		
14_19, 15_18, 16_19, 16_29	IE_SE_100_0500	Lower Suir Estuary (Little Island - Cheekpoint)	Transitional	At risk	At risk	Moderate	Good	No	Ag		
07_11, 07_12, 07_13, 07_14, 07_18, 07_2, 07_3, 07_4, 07_7, 07_8, 07_9, 14_14, 25A_10, 25A_3, 25A_7, 26F_6, 26F_7, 26F_9	IE_EA_G_001	Athboy	Groundwater	Review	At risk	Good	Good	No	Ag		
07_1, 07_11, 07_12, 07_13, 07_15, 07_16, 07_17, 07_18, 07_19, 07_2, 07_20, 07_3, 07_4, 07_6, 07_9, 08_3,	IE_EA_G_002	Trim	Groundwater	At risk	At risk	Good	Good	No	Ag, DWW, Other		

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08_4, 08_5, 09_10, 09_3, 09_7, 09_9, 14_14, 14_16, 14_3											
09_11, 09_12, 09_13, 09_14, 09_15, 09_16, 09_2, 09_6, 09_8, 10_10, 10_5, 10_6, 10_7, 12_12, 14_18, 14_9	IE_EA_G_003	Kilcullen	Groundwater	Not at risk	At risk	Good	Good	No	Ag, For, Other		
07_20, 07_6, 08_3, 09_1, 09_10, 09_11, 09_14, 09_15, 09_16, 09_17, 09_3, 09_4, 09_5, 09_6, 09_7, 09_9, 14_16	IE_EA_G_008	Dublin	Groundwater	Not at risk	Review	Good	Good	No			
09_11, 09_2, 09_6, 09_7, 14_16, 14_18	IE_EA_G_017	Curragh Gravels East	Groundwater	Not at risk	Not at risk	Good	Good	No			
09_11, 12_12, 14_9	IE_EA_G_046	Gormanstown Gravels	Groundwater	Review	Not at risk	Good	Good	No			
07_11, 14_14, 25A_3	IE_EA_G_074	GWDTE-Raheenmore Bog (SAC000582)	Groundwater	Review	Not at risk	Good	Good	No			
12_14, 12_2, 13_1, 13_3, 13_5, 14_19	IE_SE_G_001	Adamstown	Groundwater	Review	Review	Good	Good	No			
14_1, 14_11	IE_SE_G_005	Industrial Facility (P0274-01)	Groundwater	At risk	At risk	Poor	Poor	No	Ind		
14_11, 14_12, 14_17, 14_8, 15_10, 15_11, 15_12, 15_15, 15_19, 15_21, 15_3, 15_4, 15_5, 15_6, 15_7, 15_8,	IE_SE_G_009	Ballingarry	Groundwater	Review	Review	Good	Good	No			

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16_21, 16_24, 16_6											
09_11, 09_8, 10_10, 10_2, 10_3, 11_2, 11_3, 12_1, 12_10, 12_11, 12_12, 12_13, 12_14, 12_16, 12_3, 12_6, 12_7, 12_8, 12_9, 13_5, 14_10, 14_13, 14_19, 14_6, 14_9	IE_SE_G_011	Ballyglass	Groundwater	Review	At risk	Good	Good	No	Ag, Other		
14_7, 14_8, 15_11, 15_17, 15_19, 15_2, 15_20, 15_4, 16_24	IE_SE_G_021	Bennettsbridge	Groundwater	Review	Review	Good	Good	No			
14_13	IE_SE_G_023	Burren Valley Gravels	Groundwater	Review	Review	Good	Good	No			
14_15, 15_1, 15_13, 15_9, 25A_12, 25A_6, 25B_3, 25B_6	IE_SE_G_027	Camross	Groundwater	Not at risk	Not at risk	Good	Good	No			
14_12, 14_5, 14_8, 15_12, 15_3, 15_7, 15_8	IE_SE_G_034	Castlecomer	Groundwater	Not at risk	Not at risk	Good	Good	No			
14_8, 15_17, 15_4, 15_6	IE_SE_G_038	Clifden	Groundwater	Not at risk	Not at risk	Good	Good	No			
14_15, 15_1, 15_10, 25A_6	IE_SE_G_039	Clonaslee	Groundwater	Not at risk	Not at risk	Good	Good	No			
14_15, 15_1, 15_10, 15_13, 15_9, 25B_6	IE_SE_G_047	Coolrain	Groundwater	Not at risk	Not at risk	Good	Good	No			
07_4, 14_1, 14_11, 14_14, 14_16, 14_17, 14_20, 14_3	IE_SE_G_048	Cushina	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 Area for Action Name	Recommended Area for Action (reasons for selection)
07_11, 14_14, 25A_3, 25A_4	IE_SE_G_049	Daingean	Groundwater	Not at risk	Review	Good	Good	No			
14_7, 15_17, 15_18, 15_20, 16_29	IE_SE_G_076	Inistioge	Groundwater	Review	Not at risk	Good	Good	No			
07_6, 09_11, 09_7, 14_16, 14_17, 14_18, 14_3	IE_SE_G_077	Kildare	Groundwater	Not at risk	Not at risk	Good	Good	No			
14_8, 15_11, 15_19, 15_4, 15_5, 15_6, 16_24	IE_SE_G_078	Kilkenny	Groundwater	At risk	At risk	Good	Good	No	Ag, Other		
14_12, 14_5, 15_12, 15_3, 15_7	IE_SE_G_104	Newtown	Groundwater	Not at risk	Not at risk	Good	Good	No			
09_11, 14_16, 14_18	IE_SE_G_106	GWDTE-Pollardstown Fen (SAC000396)	Groundwater	Not at risk	Not at risk	Good	Good	No			
14_1, 14_11, 14_15, 14_20, 15_10, 25A_4, 25A_6	IE_SE_G_107	Portlaoise	Groundwater	Not at risk	Not at risk	Good	Good	No			
14_11, 14_15, 15_1, 15_10, 15_13, 15_14, 15_15, 15_16, 15_9, 16_21, 16_22, 25B_6	IE_SE_G_114	Rathdowney	Groundwater	Review	Review	Good	Good	No			
07_11, 07_4, 14_14, 14_20, 14_3, 25A_4	IE_SE_G_116	Rhode	Groundwater	Not at risk	Not at risk	Good	Good	No			
14_15, 15_1, 15_9, 25A_6	IE_SE_G_118	Rosenallis	Groundwater	Not at risk	Not at risk	Good	Good	No			
14_12, 14_17, 14_5, 14_8, 15_12, 15_3, 15_4, 15_7, 15_8	IE_SE_G_124	Shanragh	Groundwater	Not at risk	Review	Good	Good	No			
09_11, 14_16, 14_18	IE_SE_G_133	Curragh Gravels West	Groundwater	Not at risk	Not at risk	Good	Good	No			
14_7, 15_11, 15_17, 15_19, 15_2, 15_20, 16_15, 16_24, 16_29	IE_SE_G_135	Thomastown	Groundwater	At risk	At risk	Good	Good	No	Ag		

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14_17	IE_SE_G_144	Timahoe Gravels	Groundwater	Not at risk	Review	Good	Good	No			
09_11, 12_12, 12_14, 12_16, 12_7, 12_8, 13_1, 13_3, 13_5, 14_10, 14_13, 14_18, 14_19, 14_2, 14_4, 14_6, 14_7, 14_9, 15_17	IE_SE_G_152	New Ross	Groundwater	Not at risk	Review	Good	Good	No			
07_4, 14_1, 14_11, 14_12, 14_14, 14_16, 14_17, 14_18, 14_2, 14_20, 14_3, 15_10, 15_7, 25A_4	IE_SE_G_153	Bagenalstown Upper	Groundwater	Review	Review	Good	Good	No			
14_11, 15_10, 15_15, 15_16, 15_21, 15_6, 15_7, 15_8, 16_21	IE_SE_G_156	Durrow	Groundwater	At risk	At risk	Good	Poor	No	Ag	Durrow Groundwater	GSI: The GWB has deteriorated in status due to the increasing groundwater nitrate concentrations exceeding the drinking water standard. Groundwater nitrate concentrations are increasing in the SE. So this type of deterioration may be observed in the future. Deteriorated waterbody; drinking water impacts; GWB has deteriorated in status due to qualitative pressures. Build on existing programmes and community group initiatives. GSI are involved in research (together with NFGWS and TCD) into the pressures in GWS in this GWB A PAA status would allow this already existing work to be highlighted via the WFD process.
14_12, 14_13, 14_4, 14_5, 14_6, 14_7, 14_8, 15_17, 15_4	IE_SE_G_157	Bagenalstown Lower	Groundwater	Review	Review	Good	Good	No			
14_7, 15_11, 15_17, 15_19,	IE_SE_G_159	Clifden South	Groundwater	Not at risk	Review	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 Area for Action Name	Recommended Area for Action (reasons for selection)
15_2, 15_20, 16_24											
14_12, 14_13, 14_2, 14_4, 14_5, 14_6, 14_8, 14_9	IE_SE_G_160	Athy-Bagnelstown Gravels	Groundwater	Not at risk	At risk	Good	Good	No	Ag		
14_4, 14_5, 14_8, 15_4	IE_SE_G_165	Goresbridge North	Groundwater	Review	At risk	Good	Good	No	Ag		
14_4, 14_7, 14_8, 15_17	IE_SE_G_166	Goresbridge South	Groundwater	Not at risk	Review	Good	Good	No			
09_11, 14_18, 14_9	IE_SE_G_167	Usk Gravels	Groundwater	Review	Not at risk	Good	Good	No			
14_15	IE_SE_G_169	Rosenallis Gravels	Groundwater	Not at risk	Not at risk	Good	Good	No			
14_11	IE_SE_G_170	Portlaoise-Mountmellick Gravels	Groundwater	Not at risk	Not at risk	Good	Good	No			
14_9	IE_SE_G_173	Narraghmore Gravels	Groundwater	Review	Not at risk	Good	Good	No			
09_11, 14_18	IE_SE_G_177	Historic Waste Facility (S22-02443)	Groundwater	Review	Not at risk	Good	Good	No			
0	IE_SE_G_180	Industrial Facility (P0322-01)	Groundwater		At risk	0	Poor	No	Ind		
14_15, 25A_12, 25A_6, 25B_3	IE_SH_G_066	Clonaslee West	Groundwater	Not at risk	Review	Good	Good	No			
07_11, 14_14, 14_15, 14_20, 25A_11, 25A_12, 25A_2, 25A_3, 25A_4, 25A_5, 25A_6, 25B_1, 25B_3	IE_SH_G_103	Geashill	Groundwater	Not at risk	Not at risk	Good	Good	No			
14_15, 15_9, 25A_12, 25A_6, 25B_3	IE_SH_G_210	Slieve Bloom North	Groundwater	Not at risk	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.

