

# **3<sup>rd</sup> Cycle Draft Nanny Delvin Catchment Report (HA 08)**



**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 Nanny Delvin 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 3<sup>rd</sup> 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 2<sup>nd</sup> Cycle Areas for Action and a list of proposed 3<sup>rd</sup> 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.

<b>Water Framework Directive – key dates and terminology</b>	
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 <sup>nd</sup> 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 <sup>nd</sup> 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 <sup>rd</sup> 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 <sup>rd</sup> 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 3<sup>rd</sup> Cycle River Basin Management Plan. In addition, a comparative overview of the water quality in the Nanny Delvin catchment between Cycle 2 and Cycle 3 characterisation is provided along with a summary of the progress made in the 2<sup>nd</sup> Cycle Areas for Action. The recommended list for the 3<sup>rd</sup> Cycle Areas for Action is also provided.

To provide context, the Nanny Delvin catchment includes the area drained by the Rivers Nanny and Delvin and by all streams entering tidal water between Mornington Point and Sea Mount, Co. Dublin, draining a total area of 711km<sup>2</sup> (Figure 1). The largest urban centre in the catchment is Swords. The other main urban centres in this catchment are Donabate, Lusk, Skerries, Balbriggan, Stamullin, Laytown, Bettystown, Duleek, Ashbourne, Ratoath and Dunshaughlin. The total population of the catchment is approximately 159,230 with a population density of 224 people per km<sup>2</sup>.

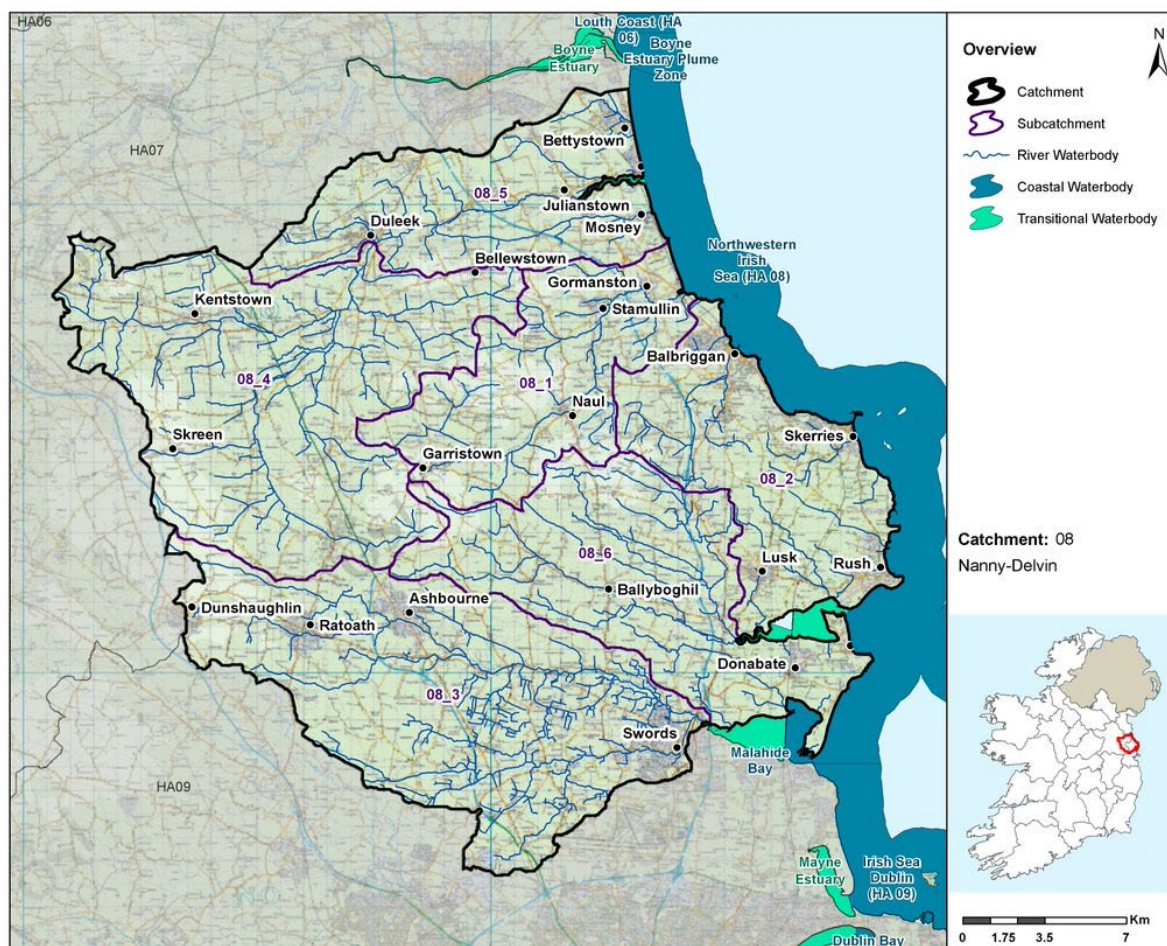


Figure 1: Overview of subcatchments in the Nanny Delvin catchment

The Nanny Delvin catchment is divided into 6 subcatchments (Figure 1) with 34 river waterbodies, 3 transitional, 3 coastal and 16 groundwater bodies. There are no lake waterbodies in the catchment (Figure 2).

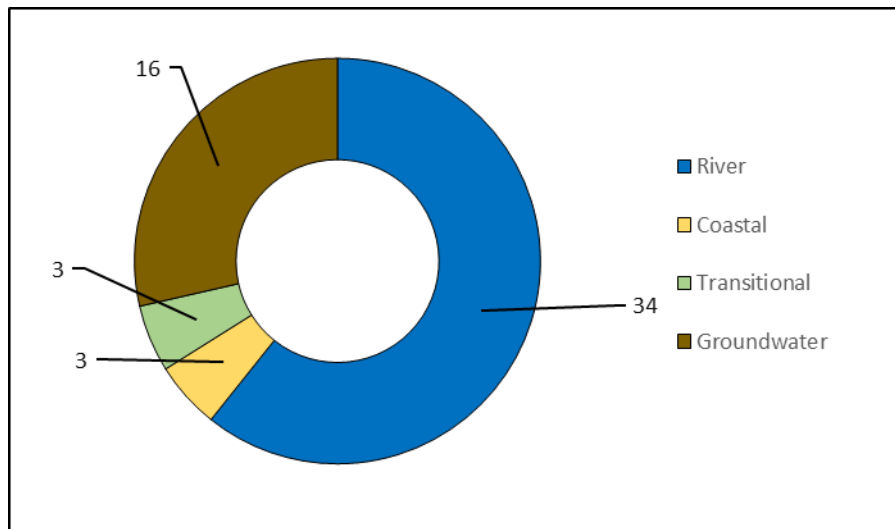


Figure 2: Waterbody types and numbers in the Nanny Delvin Catchment.

## 2 Waterbody Overview

### 2.1 Waterbody Status

- ◆ This assessment to inform the 3<sup>rd</sup> 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 is one waterbody achieving High Status (Northwestern Irish Sea (HA 08)), 15 achieving Good Status, 10 achieving Moderate Status, 17 at Poor Status and 1 Bad Status waterbody (Rogerstown Estuary). There are 12 waterbodies that do not have status assigned for Cycle 3. All waterbodies must achieve at least Good Ecological Status.
- ◆ There is 1 coastal waterbody (Northwestern Irish Sea (HA 08) that must achieve High Ecological Status (HES) in this catchment, and it is currently achieving its objective (Appendix 1).
- ◆ The number of waterbodies achieving High Status has increased from 0 to 1 between Cycle 2 and Cycle 3 (Figure 3 & Table 1). The number of Moderate Status waterbodies has increased from 6 to 10. There were reductions in Good Status waterbodies from 18 to 15, Poor Status waterbodies from 18 to 17 and there was 1 less unassigned waterbody in this cycle (from 13 to 12). Nanny (Meath)\_030 was previously unassigned but has been assigned Moderate Status in Cycle 3.



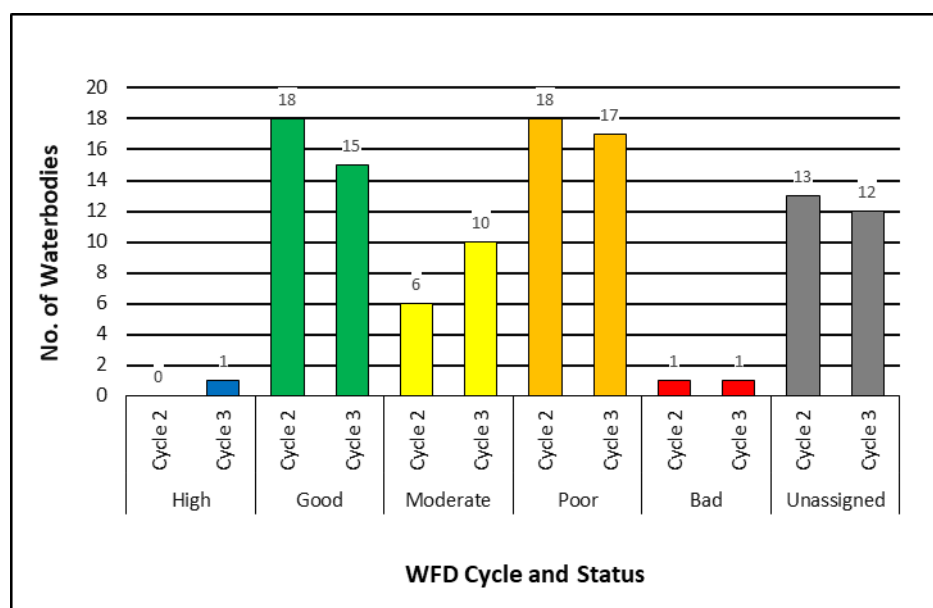


Figure 3: Waterbody Status Breakdown (All waterbodies)

Table 1: Waterbody Status Breakdown Table (All Waterbodies)

2013-2018 Status	River		Lake		Transitional		Coastal		Groundwater		Total	
	Cycle 2	Cycle 3	Cycle 2	Cycle 3	Cycle 2	Cycle 3	Cycle 2	Cycle 3	Cycle 2	Cycle 3	Cycle 2	Cycle 3
High	0	0	0	0	0	0	0	1	0	0	0	1
Good	3	1	0	0	0	0	1	0	14	14	18	15
Moderate	4	9	0	0	1	0	1	1	0	0	6	10
Poor	16	14	0	0	0	1	0	0	2	2	18	17
Bad	0	0	0	0	1	1	0	0	0	0	1	1
Un-assigned	11	10	0	0	1	1	1	1	0	0	13	12
<b>Total</b>	34	34	0	0	3	3	3	3	16	16	56	56

- ◆ 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 4 (9%) waterbodies (Ballough Stream\_020, Nanny (Meath)\_020, Ward\_020 & Northwestern Irish Sea (HA 08)) have improved in status, 36 (84%) waterbodies have remained unchanged and 3 (7%) waterbodies (Dunshaughlin Stream\_010, Ward\_030 & Broadmeadow Water) have declined in status.<sup>1</sup>
- ◆ There is an overall improvement in the status of 1 waterbody across the catchment since the Cycle 2 assesment.

<sup>1</sup> Unassigned waterbodies have not been considered in this Status class change assessment and therefore are not represented in Figure 5. Percentage displayed in Figure 4 are in relation to the total number of waterbodies with status assigned in both cycles, as opposed to total number of all waterbodies.



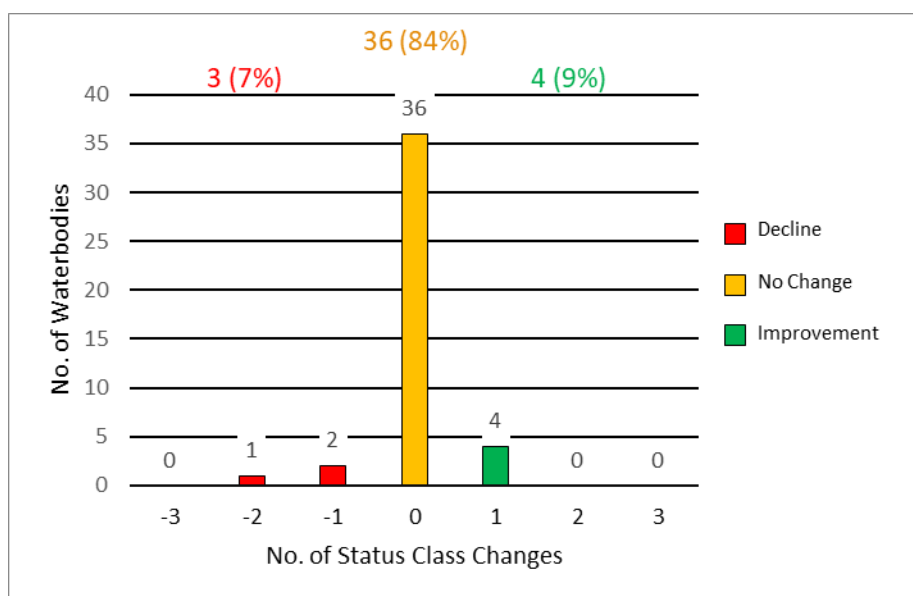


Figure 4: Status Class Changes between Cycle 2 and Cycle 3

## 2.2 Protected Areas

### 2.2.1 Drinking Water

- ◆ There are no 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*.
- ◆ For more detailed information please see the EPA reports on drinking water quality in 2019 for [Public Supplies](#)<sup>2</sup> and [Private Supplies](#)<sup>3</sup>.

### 2.2.2 Bathing Waters

- ◆ There are 8 bathing waters in or directly adjacent to the catchment identified under the Bathing Water Regulations 2008.
- ◆ 3 Bathing Waters had an Excellent classification for 2020, 3 had a Good classification, 1 was sufficient and 1 was Poor.
- ◆ For more detailed information please see the EPA report on [bathing water quality in 2020](#)<sup>4</sup>.

### 2.2.3 Shellfish Areas

- ◆ There are 2 designated shellfish area in the catchment.

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

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

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

- ◆ 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 waterbody is 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
Malahide	IEPA2_0057	North-western Irish Sea (HA 08)	IE_EA_020_0000	✓	
Balbriggan\Skerries	IEPA2_0063	North-western Irish Sea (HA 08)	IE_EA_020_0000	✓	

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

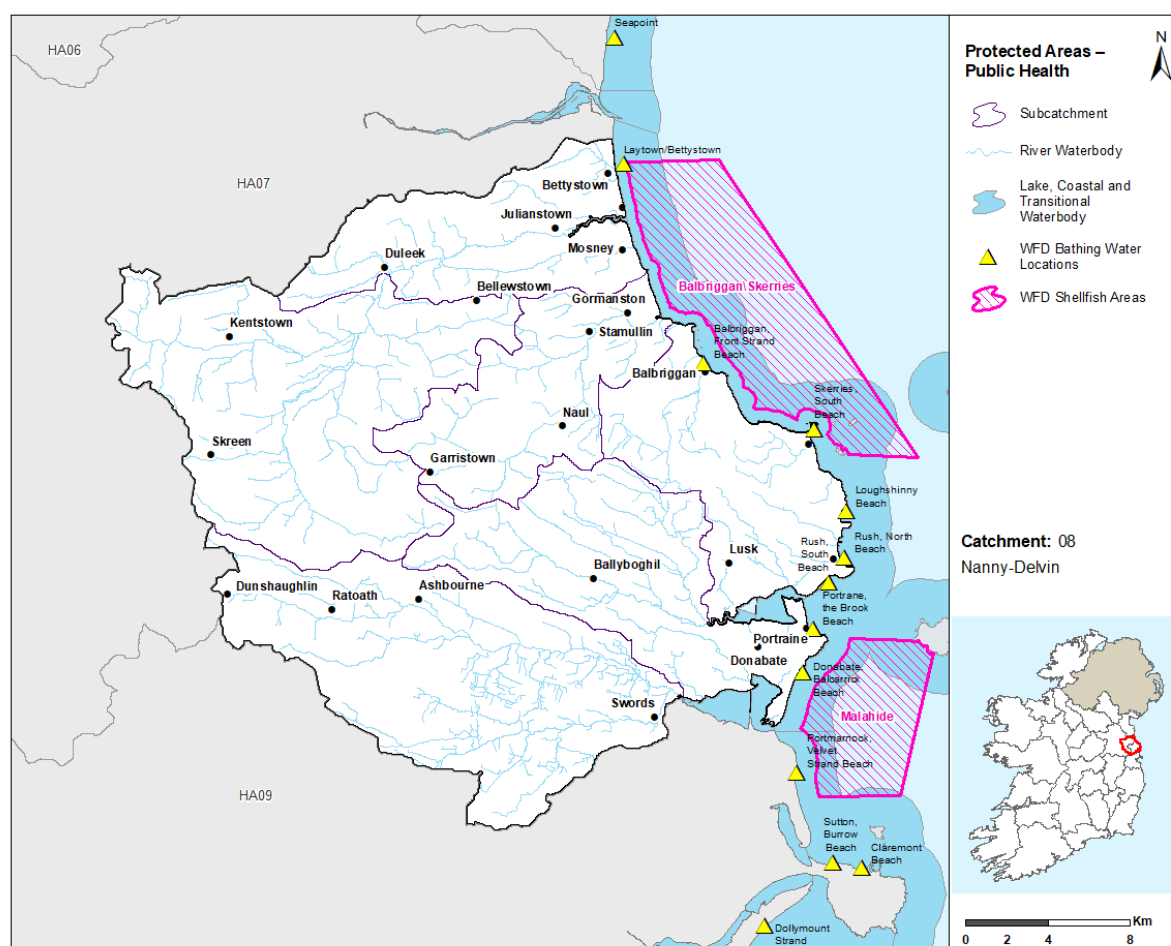


Figure 5: Protected Areas – Public Health

## 2.2.4 Natura 2000 Sites and Salmonid Waters

- ◆ Many of the habitats and species listed for protection in the Birds and Habitats Directives are water dependent. The Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) with water dependent habitats or species in this catchment are presented in Figure 6, along with

waterbodies designated as salmonid waters (S.I. No. 293 of 1988) and waterbodies with Fresh Water Pearl Mussel habitat, where identified.

- ◆ There are 2 SACs in this catchment, both 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).<sup>5</sup>

Table 3: Natura 2000 Network Assessment Summary

Water Body Type	Total No.	Meeting the Requirements	Did not meet the Requirements	Unknown*
Transitional & Coastal	2	1	0	1

*\*As the waterbody status was unassigned.*

- ◆ There are no river waterbodies with FWPM habitats in the catchment.
- ◆ There are no groundwater bodies delineated and assessed as Groundwater Dependent Terrestrial Ecosystems for this catchment.
- ◆ Water dependent SACs/ SPAs (including FWPM SAC sub-catchments) and salmonid waters in the catchment are illustrated in Figure 6.

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

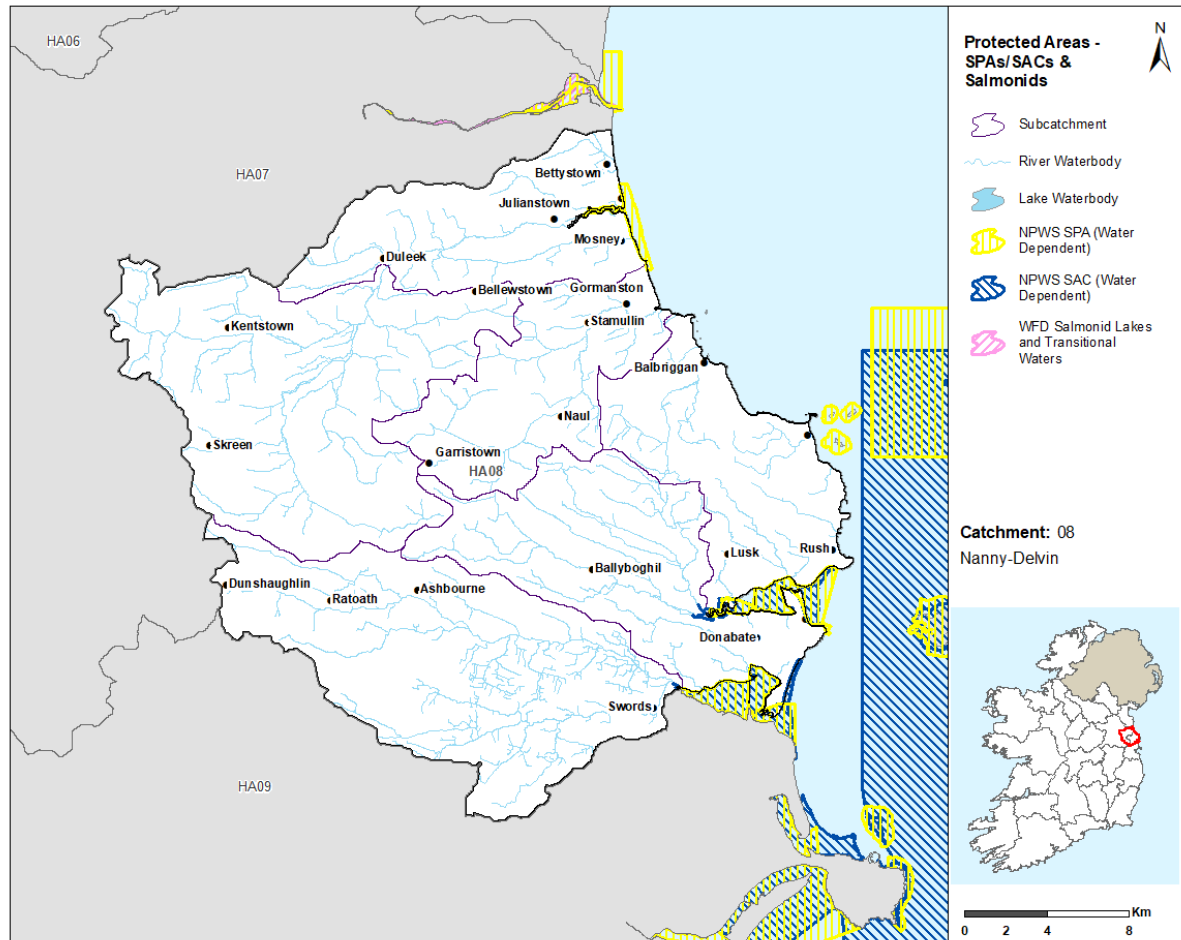


Figure 6: Water Dependent SPAs / SACs and Salmonid Waters

### 2.2.5 Nutrient Sensitive Areas

- ◆ There are no Nutrient Sensitive Areas (NSAs) in the catchment.

### 2.3 Heavily Modified Waterbodies

- ◆ Based on the 1<sup>st</sup> and 2<sup>nd</sup> RBMPs there is currently 1 designated heavily modified water body (HMWB) in the Nanny - Delvin Catchment (Broadmeadow Water) due to public transport infrastructure. It is classified as having Poor Ecological Potential in 2013-2018 (Cycle 3). There will be a consultation period on HMWBs for the 3<sup>rd</sup> Cycle RBMP and this will be completed for inclusion in the 3<sup>rd</sup> Cycle Final RBMP.

### 2.4 Artificial Waterbodies

- ◆ There are no artificial waterbodies (AWBs) present in the Nanny Delvin Catchment.

## 3 Waterbody Risk

### 3.1 Overview of Risk

- ◆ A waterbody that is *At Risk* means that either the waterbody is currently not achieving its Water Framework Directive (WFD) environmental objective of Good or High Ecological Status or that

there is an upward trend in nutrients or ammonia and if this trend continues the waterbody Status will decline by the end of Cycle 3 and will fail to meet its environmental objective.

- ◆ A waterbody can be considered as *Review* for the following three reasons:
  - The waterbody does not have status assigned to it yet, it is referred to as an unassigned waterbody, and therefore there is not enough evidence to determine if it is *At Risk* or *Not At Risk*.
  - The waterbody has shown some slight evidence or improvement, but more evidence is needed before it can be considered as *Not At Risk*.
  - Measures are planned or have already been implemented for the waterbody and no further measures should be applied until there is enough time to assess if these measures are working.
- ◆ A waterbody is *Not At Risk* when it is achieving its environmental objective of either High or Good Status and that there is no evidence indicating that there is a trend towards status decline.
- ◆ In total there are 56 waterbodies in the Nanny Delvin Catchment and 34 (61%) of these are currently *At Risk*, 9 (16%) in *Review* and 13 (23%) are *Not At Risk*.

### 3.2 Surface Waters

- ◆ For the 34 river waterbodies in the catchment, 28 (82%) are *At Risk*, 5 (15%) are in *Review* and 1 (3%) is *Not At Risk*.
- ◆ Of the 3 transitional waterbodies in the catchment, 2 (67%) are *At Risk* and 1 (33%) is in *Review*. Rogerstown Estuary & Broadmeadow Water are the transitional waterbodies are *At Risk*.
- ◆ Of the 3 coastal waterbodies in the catchment, 1 (33%) is *At Risk*, 1 (33%) is in *Review* and 1 (33%) is *Not At Risk*. Malahide Bay is the *At Risk* coastal waterbody.
- ◆ The largest proportion of *At Risk* waterbodies are found in rivers, accounting for 28 (82%) of 34 *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 3 *At Risk* waterbodies and an increase in 7 *Not At Risk* waterbodies which is reflected in a reduction of 10 *Review* waterbodies between Cycle 2 and Cycle 3.

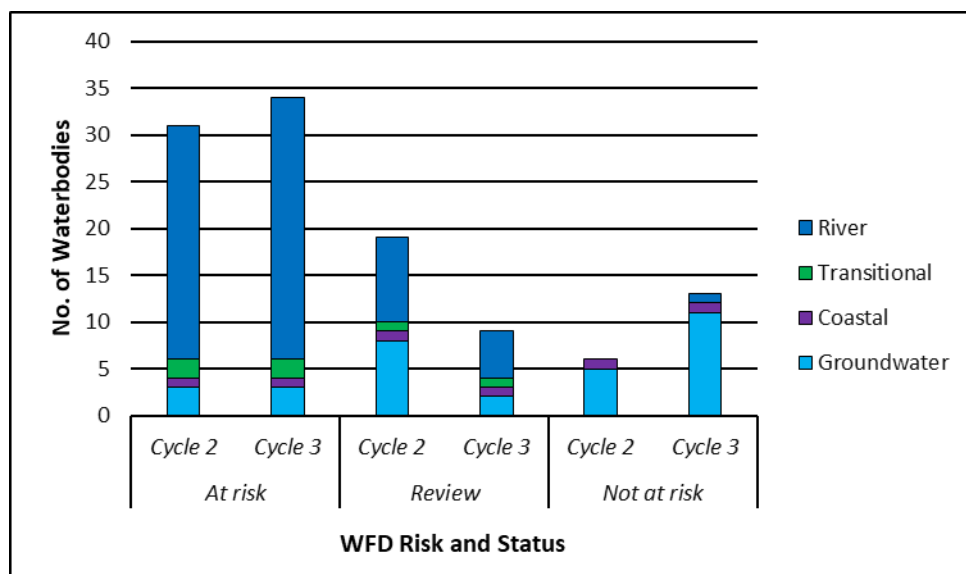


Figure 7: Number of waterbodies in each risk category

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

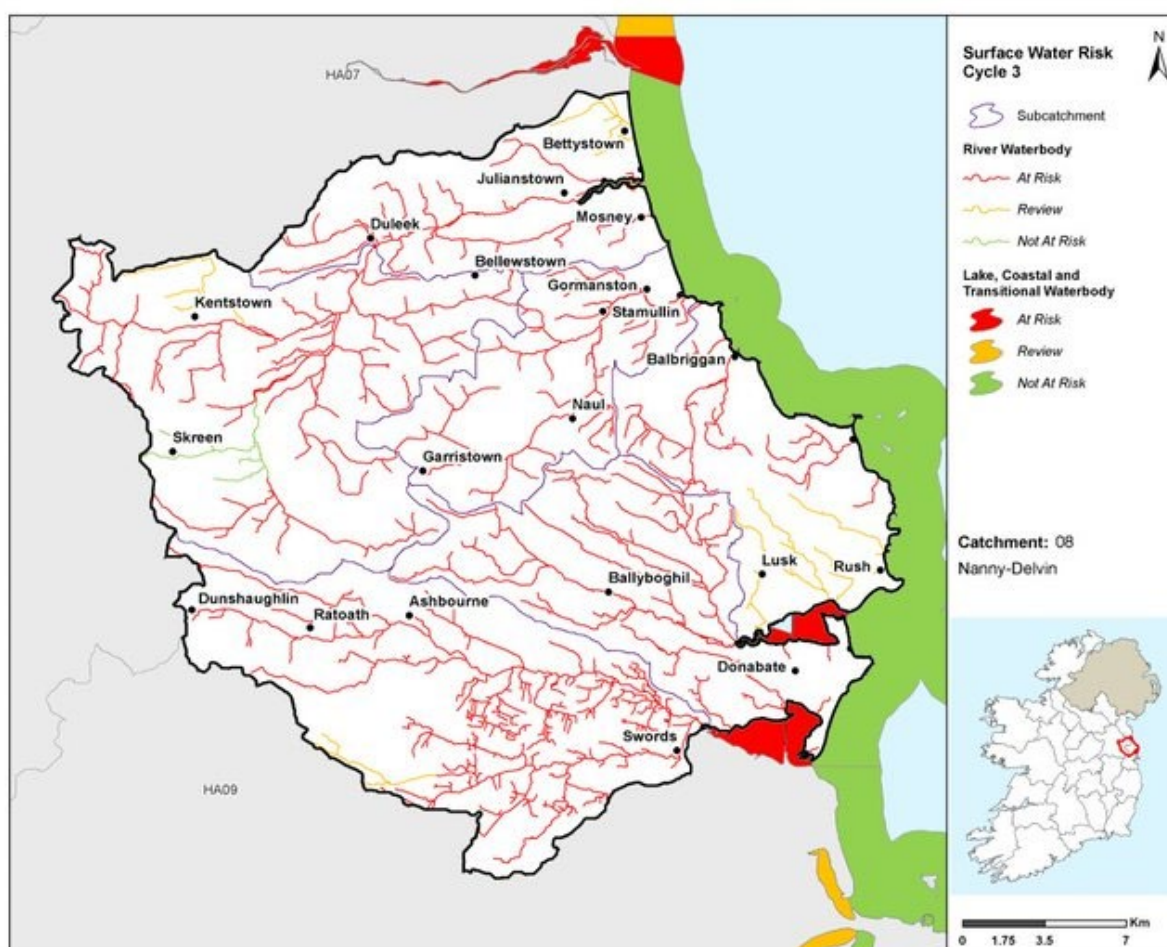


Figure 8: Surface Water Risk Cycle 3



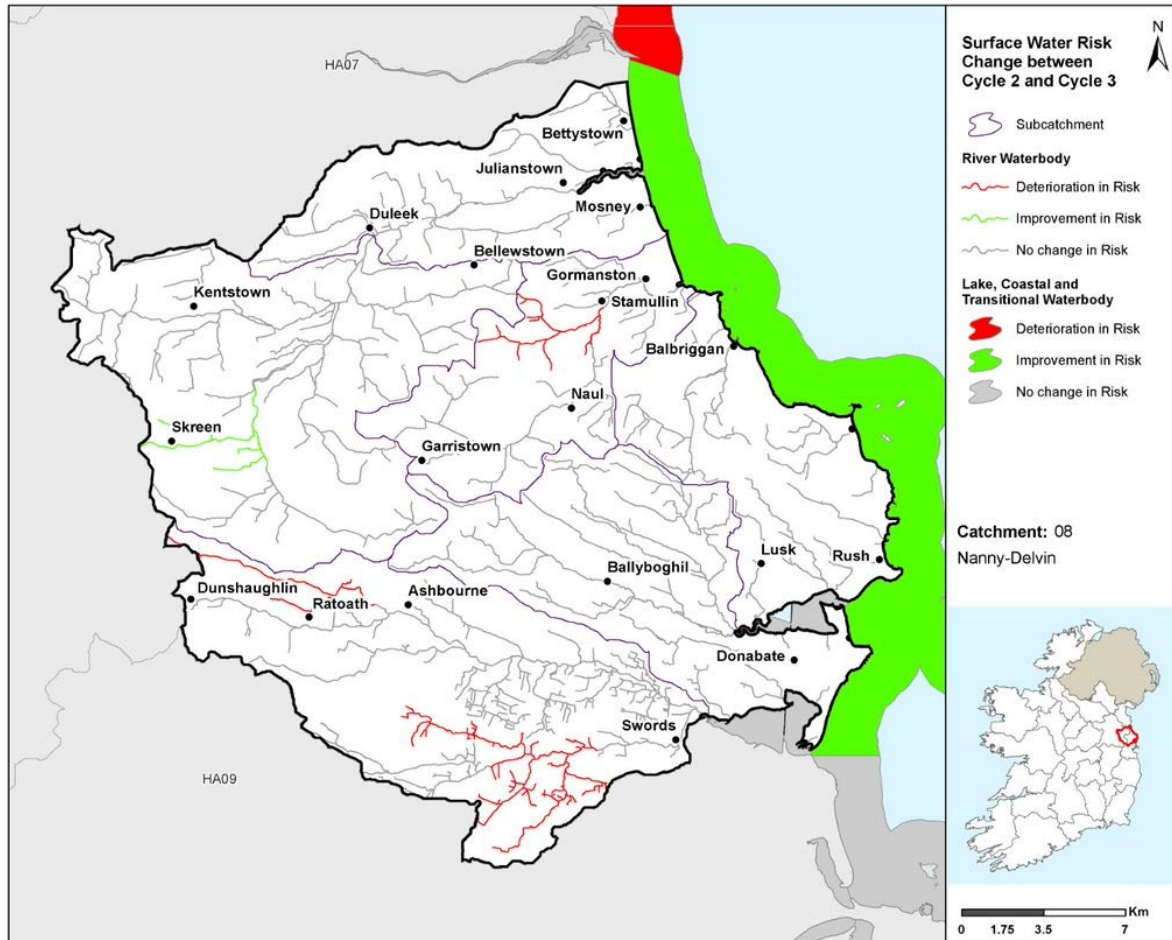


Figure 9: Surface Water Risk Change between Cycle 2 and Cycle 3

### 3.3 Groundwater

- ◆ For the 16 groundwater bodies, 3 (19%) are *At Risk*, 2 (13%) are in *Review* and 11 (69%) are *Not At Risk*. Trim, Bettystown & Industrial Facility (P0014-03) are the *At Risk* groundwater bodies and were also *At Risk* in Cycle 2.
- ◆ In Cycle 2 there were 3 groundwater bodies *At Risk* in this catchment, 8 in *Review* and 5 *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 3 are shown in Figure 11.



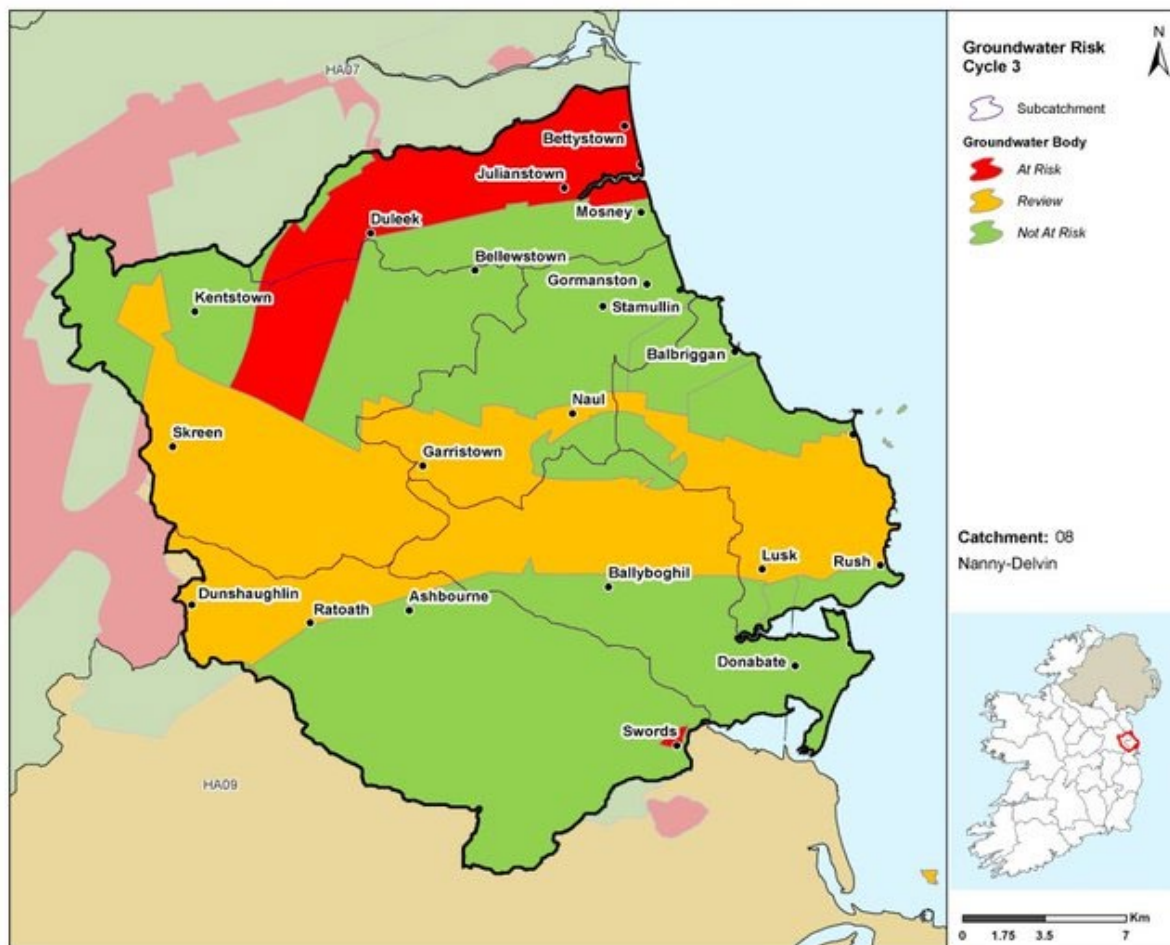


Figure 10: Cycle 3 Groundwater Body Risk

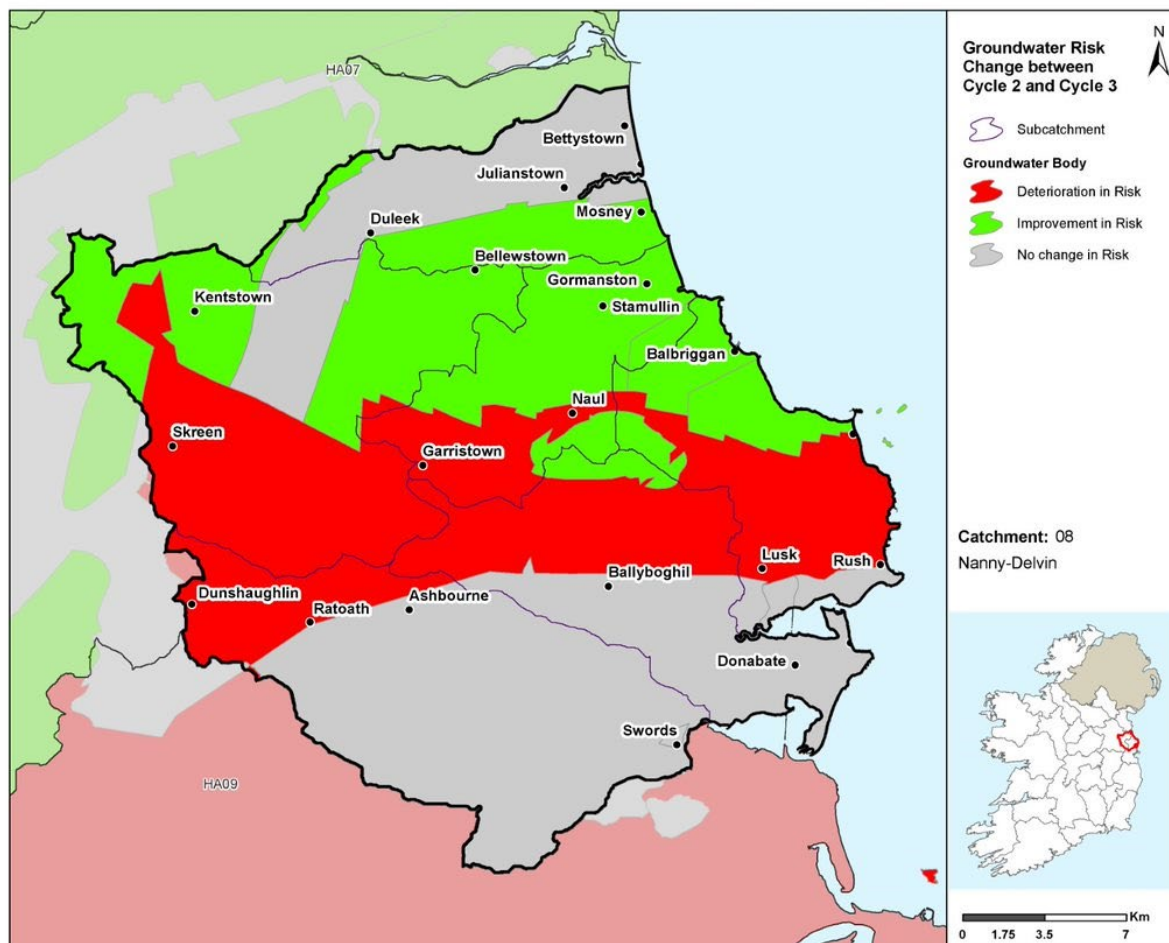


Figure 11: Groundwater Body Risk Change between Cycle 2 & Cycle 3

### 3.4 Heavily Modified Waterbodies

- ◆ The designated heavily modified water body (HMWB) in the Nanny - Delvin Catchment (Broadmeadow Water) is currently *At Risk* of not meeting its environmental objective in Cycle 3. There will be a consultation period on HMWBs for the 3<sup>rd</sup> Cycle RBMP and this will be completed for inclusion in the 3<sup>rd</sup> Cycle Final RBMP.

### 3.5 Artificial Waterbodies

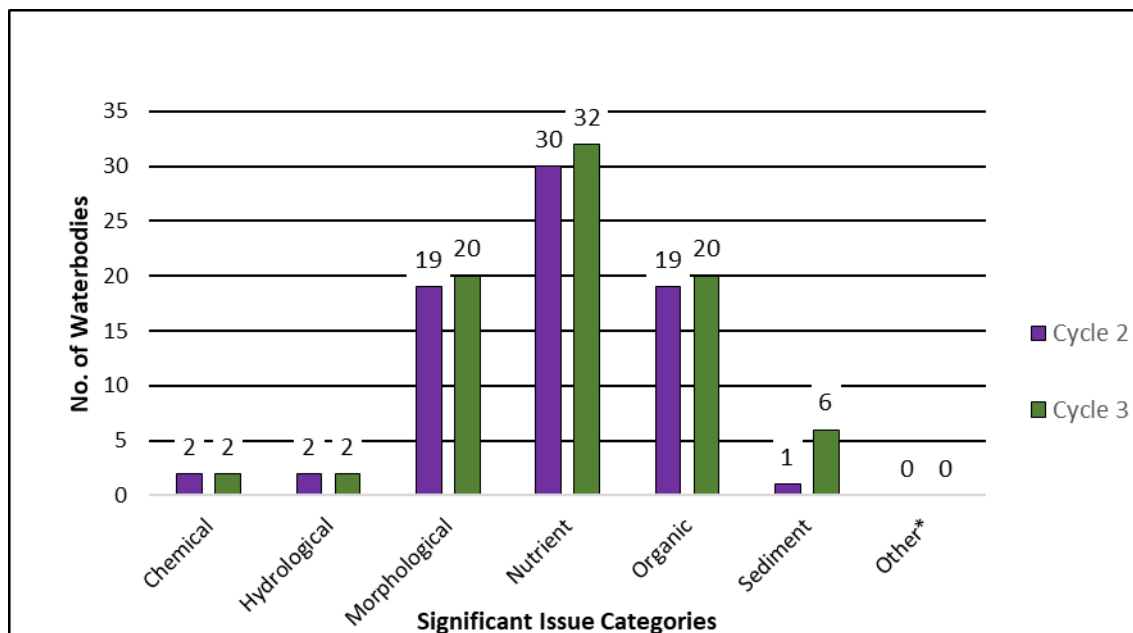
- ◆ There are no artificial waterbodies (AWBs) present in the Nanny Delvin Catchment.

## 4 Significant Issues in *At Risk* Waterbodies

### 4.1 All Waterbodies

- ◆ Excess nutrients remain the most prevalent issue in the Nanny Delvin Catchment (Figure 12) impacting 32 waterbodies in Cycle 3. Organic pollution is impacting 20 waterbodies, morphological impacts are affecting 2, sediment issues are impacting 6 waterbodies chemical and hydrological issues are each impacting 2 waterbodies.

- For rivers, the main significant issues are nutrient pollution (27), morphological impacts (20), organic pollution (18), sediment (6), hydrological impacts (2) and chemical pollution (1).
  - For transitional waterbodies the significant issues are nutrient (2) and organic pollution (1).
  - For coastal waterbodies the significant issues are nutrient (1) and organic pollution (1).
  - For groundwater bodies the significant issues are nutrient (2) and chemical pollution (1).
- ◆ Between Cycle 2 and Cycle 3 the number of waterbodies with sediment issues increased by 5, from 1 to 6. The number of nutrients issues have increased by 2, from 30 to 32. The numbers of waterbodies impacted by morphological issues and organic pollution have each increased by 1, from 19 to 20.
  - ◆ The numbers of waterbodies with chemical pollution and hydrological issues have each remained at 2 between Cycle 2 and Cycle 3.



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

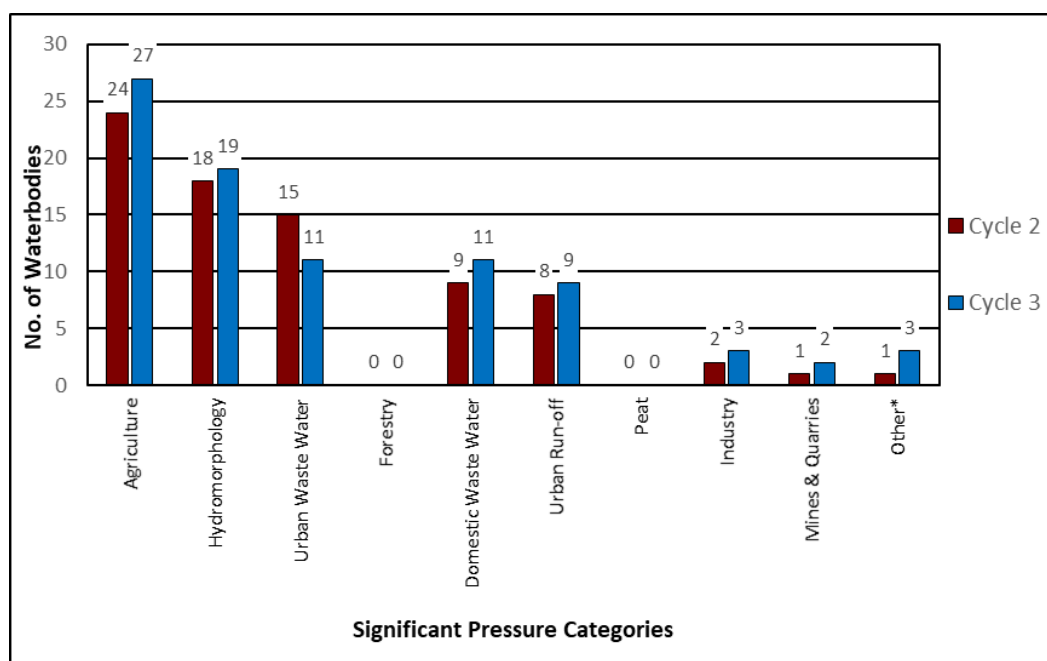
Figure 12: Significant Issues across all *At Risk* WBs between Cycle 2 and Cycle 3

## 5 Significant pressures in *At Risk* Waterbodies

### 5.1 All Waterbodies

- ◆ Where waterbodies have been classed as *At Risk*, significant pressures have been identified.
- ◆ Figure 13 shows a breakdown of the number of *At Risk* waterbodies in each significant pressure category.

- ◆ The significant pressure affecting the greatest number of waterbodies is agriculture, followed by hydromorphology, urban waste water, domestic waste water, urban run-off, industry, other<sup>6</sup> and mines & quarries.
- ◆ When comparing Cycle 2 and Cycle 3 the biggest change is an increase of 3 waterbodies where agriculture is a significant pressure from 24 waterbodies in Cycle 2 to 27 waterbodies in Cycle 3.



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

Figure 13: Significant Pressure (All At Risk Waterbodies)

### 5.1.1 Pressure Type

#### 5.1.1.1 Agriculture

- ◆ Agriculture is a significant pressure in 24 river waterbodies, 1 transitional waterbody (Rogerstown Estuary) and 2 groundwater bodies (Trim & Bettystown) in Cycle 3. Phosphorus loss to surface waters from, for example, direct discharges; or runoff from yards, roadways or other compacted surfaces, or runoff from poorly draining soils remains an issue since Cycle 2. High nitrates concentrations have been identified many in waterbodies across the catchment in Cycle 3, which has contributed to an increase in the number of waterbodies impacted by nutrient pollution from agricultural sources. Sediment can also be a problem from land drainage works, bank erosion from animal access or stream crossings.

#### 5.1.1.2 Hydromorphology

- ◆ Hydromorphology is a significant pressure in 19 river waterbodies. Channelisation is the dominant hydromorphology subcategory in the catchment with 18 river waterbodies within the catchment subject to extensive modification mainly due to drainage schemes. In addition to channelization, land drainage was identified as an impact on Ward\_020 river waterbody. Dams, barriers, lock and

<sup>6</sup> 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

weirs were identified as the pressure subcategory in Delvin\_020 river waterbodies due to a significant artificial barrier in the river downstream of the Naul urban area.

#### 5.1.1.3 Urban waste water

- ◆ Urban waste water agglomerations have been identified as a significant pressure in 9 *At Risk* river waterbodies as well as Malahide Bay coastal waterbody and Broadmeadow Water transitional waterbody (
- ◆ Table 4).

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

Facility name	Facility Type	Waterbody	2013-18 Ecological Status	Irish Water's Expected CIP Completion Date <sup>7</sup>
Malahide D0021	Agglomeration PE > 10,000	Malahide Bay	Moderate	N/A
Swords D0024	Agglomeration PE > 10,000	Broadmeadow Water	Poor	N/A
Oldtown A0106	Agglomeration PE < 500	BALLYBOGHIL_010	Poor	N/A
Ringsend D0034	Combined Sewer Overflows	BROADMEADOW_010	Poor	2022
Ringsend D0034	Combined Sewer Overflows	BROADMEADOW_020	Poor	2022
Colecot Cottages A0107	Agglomeration PE < 500	BALLOUGH STREAM_020	Moderate	N/A
Stamullen D0262	Agglomeration PE of 2,001 to 10,000	DELVIN_040	Poor	2023
Kentstown D0479	Agglomeration PE of 500 to 1,000	NANNY (MEATH)_010	Poor	N/A
Kentstown D0479	Agglomeration PE of 500 to 1,000	NANNY (MEATH)_020	Moderate	N/A
Ringsend D0034	Combined Sewer Overflows	WARD_020	Moderate	2024
Ringsend D0034	Combined Sewer Overflows	WARD_030	Moderate	2024

- ◆ Urban waste water significant pressures impacted 4 less waterbodies than in Cycle 2 (a decrease from 15 to 11 waterbodies impacted). The following Agglomerations were listed as pressures in Cycle 2 but are not on the list of significant pressures in Cycle 3.
  - Ardcah (A0017)
  - Skreen (A0055)
  - Garristown (A0110)
  - Portrane, Donabate, Rush, Lusk (D0114)

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<sup>7</sup> Based on Irish Water's Capital Investment Programme (2020-2024) as of February 2021 and may be subject to change.

#### 5.1.1.4 Domestic waste water

- ◆ Domestic waste water has been identified as a significant pressure in 8 river waterbodies and 2 transitional waterbodies (Rogerstown and Broadmeadow estuaries). This is due to a concentration of domestic waste water treatment systems in close proximity to the waterbodies. The significant issue is excess nutrients entering surface waters. Furthermore, some of these locations are in areas of high susceptibility to nitrate transport via sub-surface pathways.

#### 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 9 river waterbodies impacted by Ratoath, Ringsend, Balbriggan, Mosney, Skerries, Dunshaughlin, Donabate and Swords urban areas. Elevated concentrations of phosphates and ammonia are the significant issues.

#### 5.1.1.6 Other significant pressures

- ◆ *Other Anthropogenic Pressures - Golf Courses*

There are 2 golf courses within the Ward\_030 river waterbody that have been identified as contributors to the nutrient load in the river.

##### *Waste - Illegal Dumping*

There is an unauthorised landfill which has been identified as a potentially significant pressure on Hurley\_030, with nutrient and organic pollution issues attributed to the facility.

##### *Unknown*

There pressure

#### 5.1.1.7 Industry

- ◆ Industry has been identified as a significant pressure in 2 river waterbodies and 1 groundwater body. These point source discharges, causing nutrient and organic issues, arise from industrial discharges (Table 5).

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

Waterbody Code	Waterbody Name	Waterbody Type	Emission Type	Name	Impact
IE_EA_08D010300	DELVIN_030	River	Section 4	N/A*	Organic
IE_EA_08N010400	NANNY (MEATH)_030	River	Section 4	N/A*	Nutrient & Organic
IE_EA_G_062	Industrial Facility (P0014-03)	Groundwater	IPC	Sk Biotek Ireland Limited	Chemical pollution & Diminution of quality of associated surface waters for chemical reasons

\*Name of facility not provided during characterisation

#### 5.1.1.8 Mines & Quarries

- ◆ A quarry (Clashford Recovery) was identified as a potentially significant pressure in Delvin\_020 waterbody in Cycle 2. The significant impacts are unknown and require further investigation. A stock pile of clay beside waterbody was noted during the Cycle 2 characterisation and is likely a source of sediment issues. Abstraction for an unnamed quarry was identified as a significant pressure in Bettystown groundwater body with abstraction exceeding available groundwater resource (lowering the water table) as the issue.

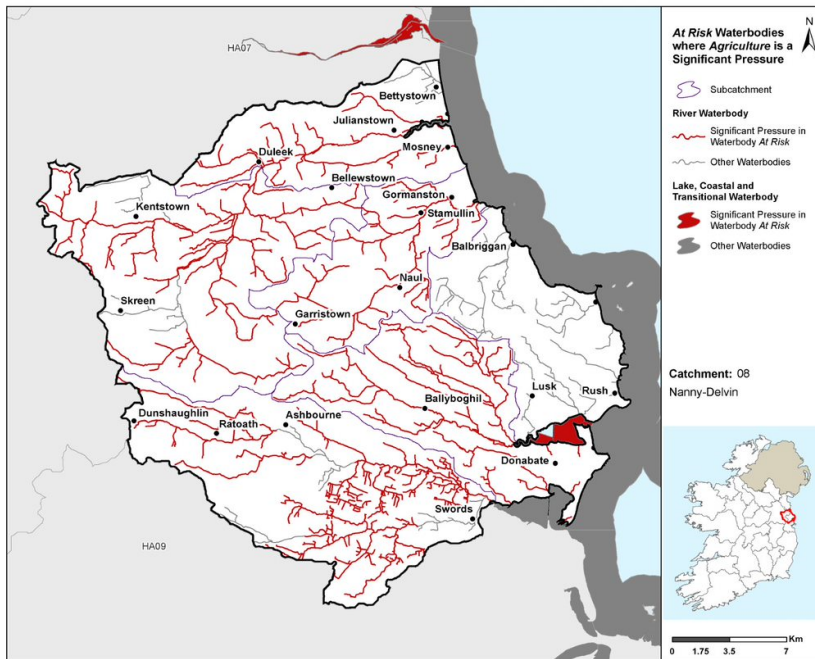


Figure 14a – 14e illustrates the locations of waterbodies for the 5 most common pressures in order of prevalence (agriculture, hydromorphology, urban waste water, domestic waste water and urban run-off) within the catchment in Cycle 3.



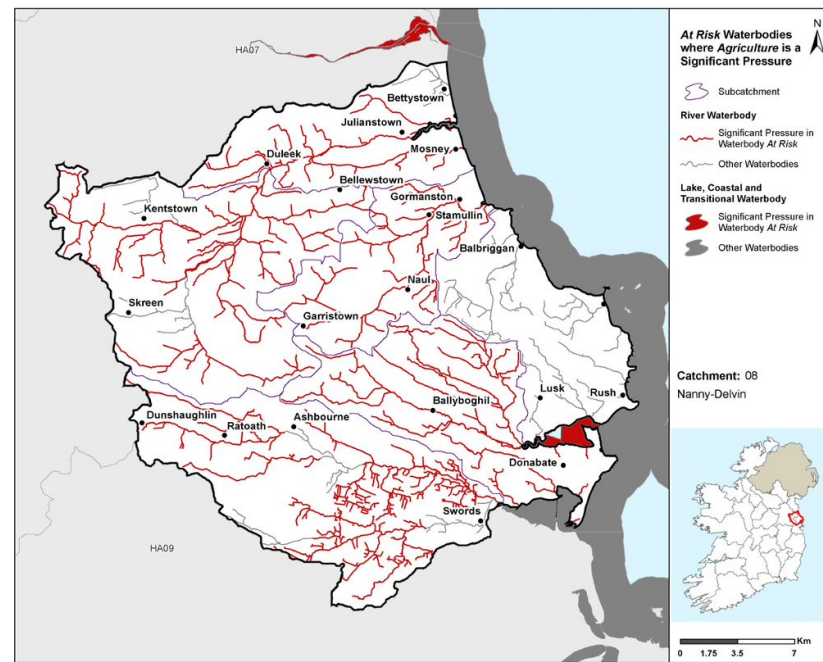


Figure 14: Locations of Waterbodies where Agriculture is a Significant Pressure

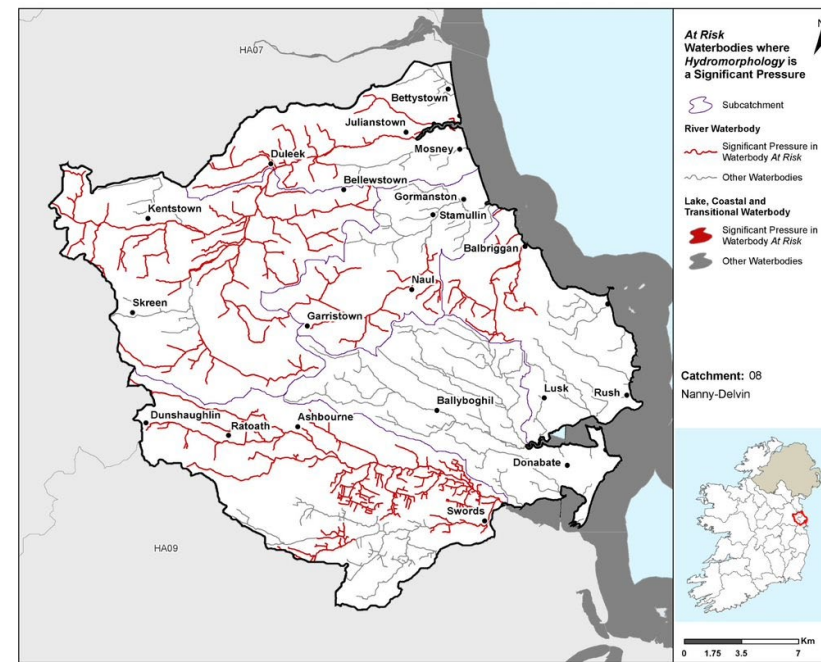


Figure 15: Locations of Waterbodies where Hydromorphology is a Significant Pressure

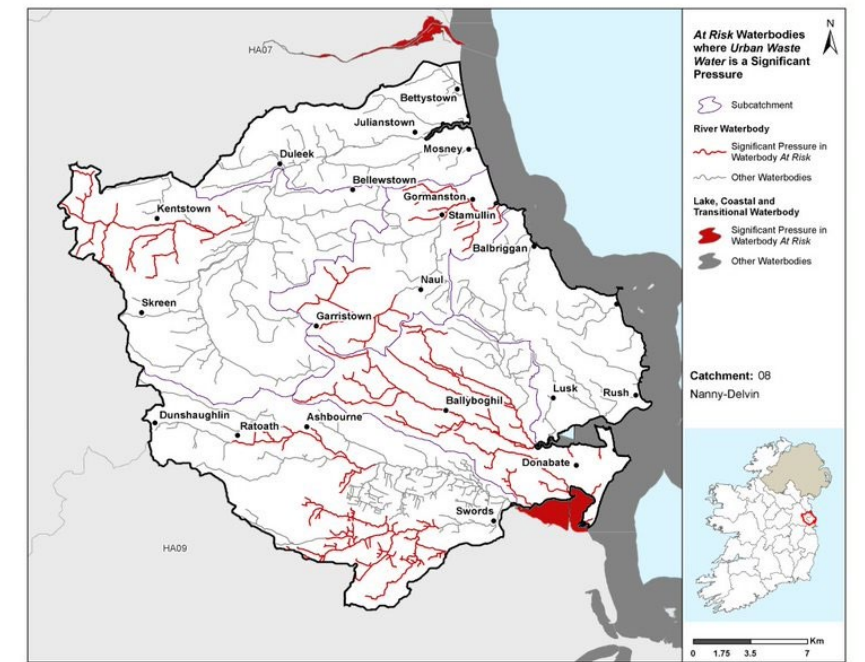


Figure 16: Locations of Waterbodies where Urban Waste Water is a Significant Pressure

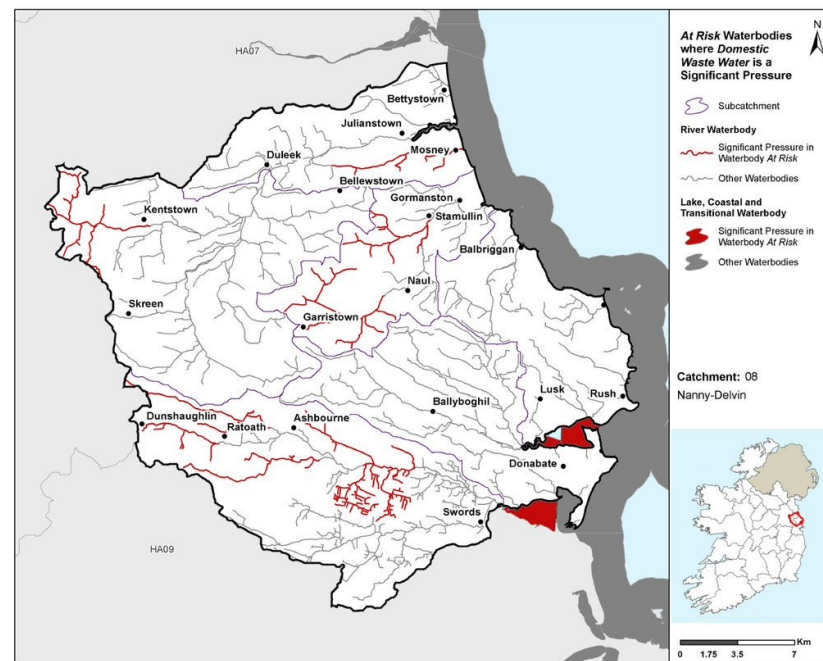


Figure 17: Locations of Waterbodies where Domestic Waste Water is a Significant Pressure

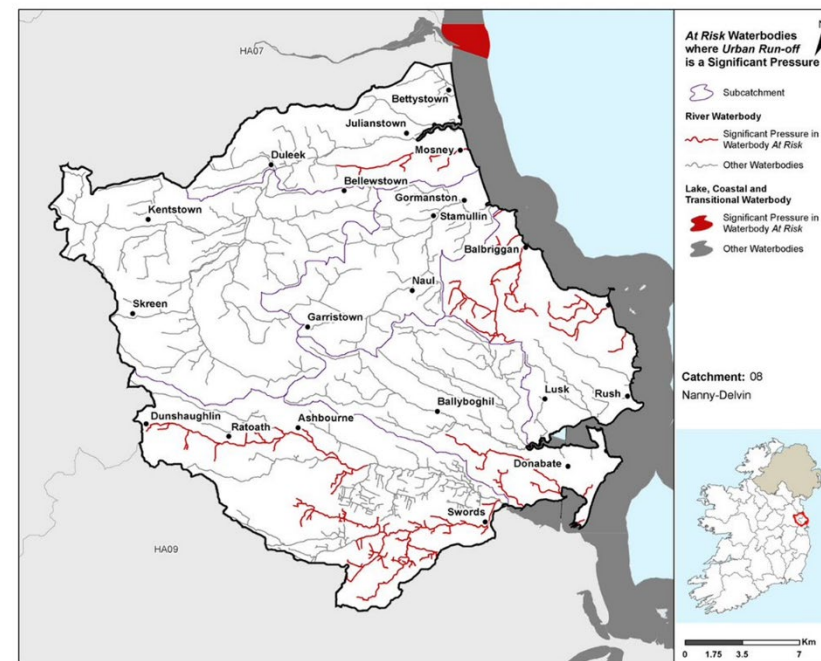


Figure 18: Locations of Waterbodies where Urban Run-off is a Significant Pressure

## 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 46% and 36% of the nitrogen load respectively while discharges from urban waste water, arable land, diffuse sources and pastures contribute 49%, 18%, 15% and 12% of the phosphorus loadings for the catchment respectively (Figure 17).

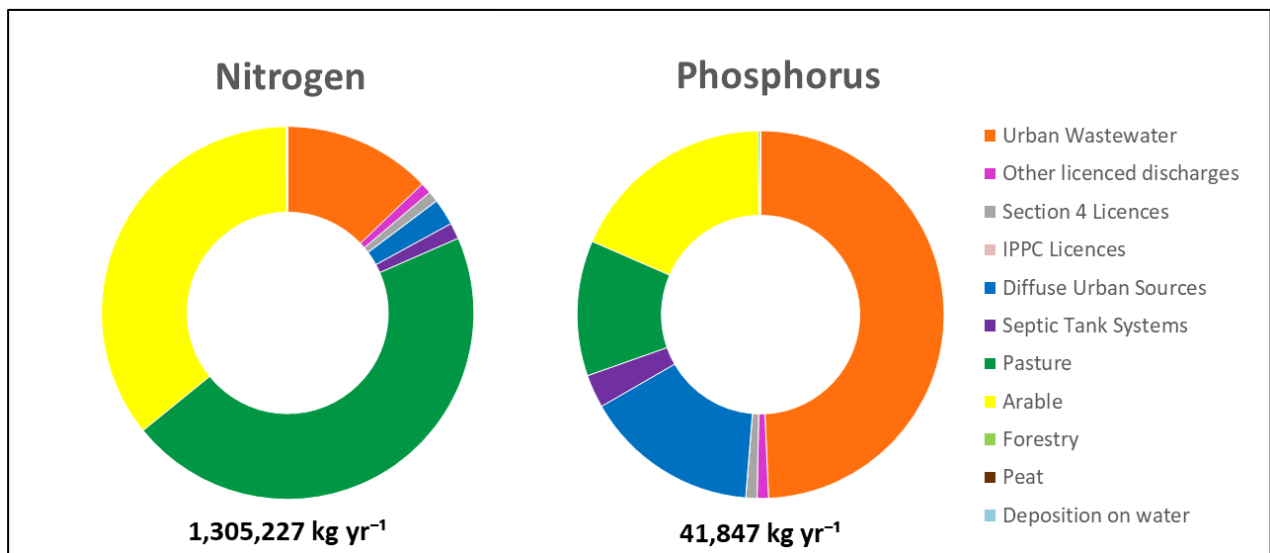


Figure 19: Estimated Proportions of N & P from Each Sector in the Nanny Delvin Catchment

## 7 Load Reduction Assessment

### 7.1 Nitrogen Load Reduction

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

### 7.2 Phosphorus / Sediment Load Reduction

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

Figure 20 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.

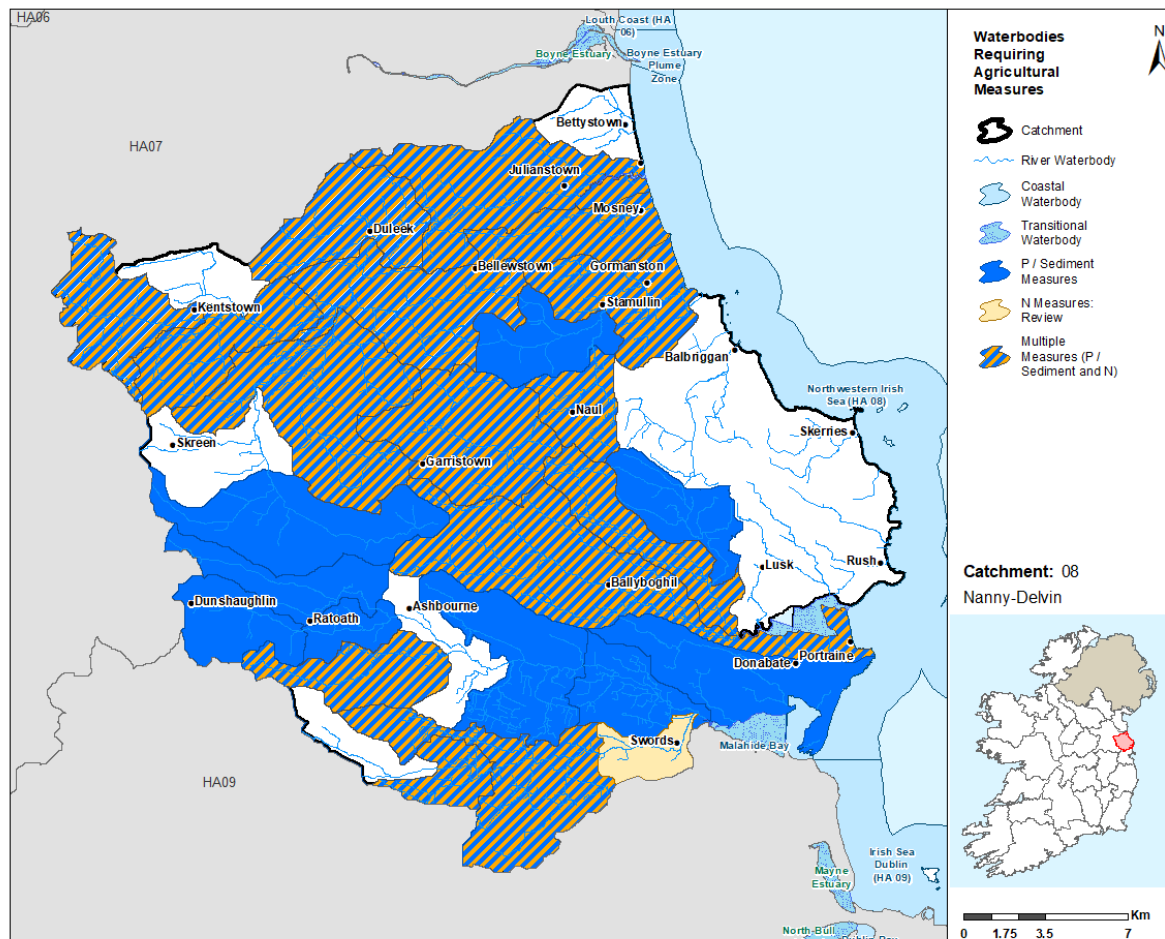


Figure 20: Waterbodies where Agricultural Measures should be Targeted

## 8 2<sup>nd</sup> Cycle Areas for Action

### 8.1 Area for Action Overview

- ◆ There were 3 Areas for Action, comprising of 8 waterbodies, selected for further characterisation and action in the catchment for the 2<sup>nd</sup> Cycle River Basin Management Plan. The Areas for Action in the catchment are listed in Table 6 and shown in Figure 21. LAWPRO, in conjunction with local authorities and stakeholders from the Midlands and Eastern Regional Operational Committee, have been working in these areas since 2018.



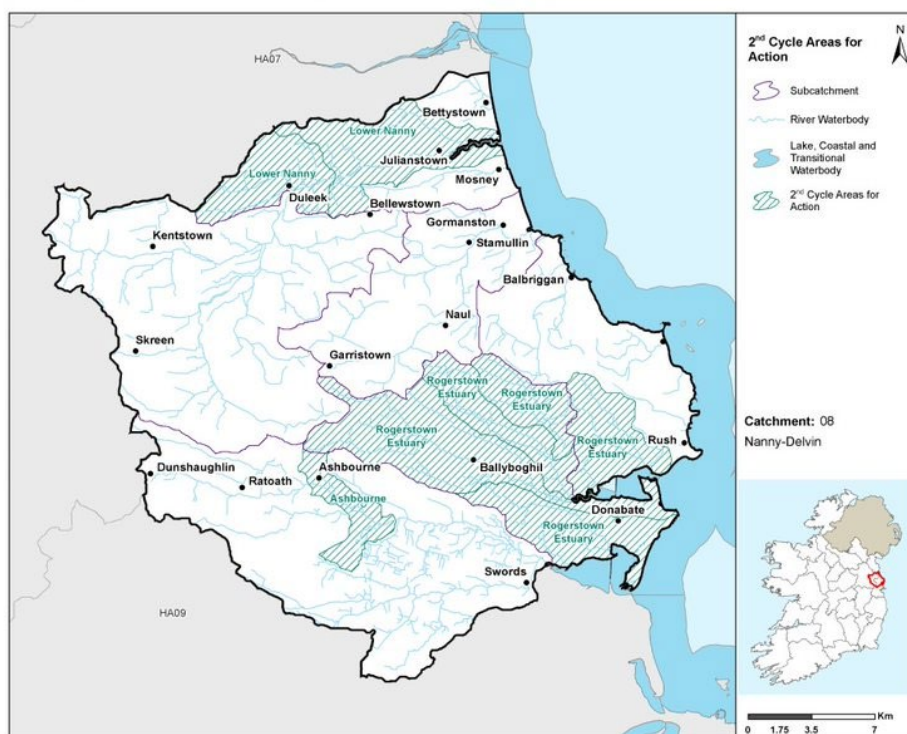


Figure 21: 2<sup>nd</sup> Cycle Areas for Action Locations

Table 6: 2<sup>nd</sup> Cycle Areas for Action

2 <sup>nd</sup> Cycle Area for Action	Number of Waterbodies	Sub-catchment	Local Authority	Reason for Selection
<b>Rogerstown Estuary</b>	5	08_6 08_2	Fingal	<ul style="list-style-type: none"> <li>• Building on improvements by IW, including sewer improvement in Turvey, installation of reed beds and discussion with Tesco on their facility.</li> <li>• Building on monitoring completed by Fingal County Council.</li> <li>• Discharges into two designated bathing waters (Portrane and Donabate).</li> <li>• Headwaters to Rogerstown Estuary.</li> <li>• Subcatchment project.</li> </ul>
<b>Lower Nanny Tillage</b>	2	08_5	Meath	<ul style="list-style-type: none"> <li>• Pilot project to examine impact of tillage on poorly draining soils.</li> <li>• The Nanny Meath river discharges into coastal waters which have both designated bathing and shellfish areas.</li> <li>• Building on existing improvements by Irish Water at Duleek waste water treatment plant.</li> <li>• One deteriorated waterbody.</li> </ul>
<b>Ashbourne Diffuse Urban</b>	1	08_3	Meath	<ul style="list-style-type: none"> <li>• Pilot project to address urban diffuse pressures with focus on 500m stretch of Broadmeadow_020.</li> </ul> <p>Building on work carried out by Meath and Irish Water to rehabilitate leaky sewers.</p>

2 <sup>nd</sup> Cycle Area for Action	Number of Waterbodies	Sub-catchment	Local Authority	Reason for Selection
				<ul style="list-style-type: none"> <li>Small and manageable area with single pressure (urban diffuse).</li> </ul>

## 8.2 Status Change in 2<sup>nd</sup> Cycle Areas for Action

- ◆ For Cycle 3, of the 8 waterbodies in the 2<sup>nd</sup> Cycle Areas for Action, there are 2 waterbodies at Moderate Status (Ballough Stream\_020 & Nanny (Meath)\_040), 3 waterbodies at Poor Status (Ballyboghil\_010, Broadmeadow\_020 & Nanny (Meath)\_050), and 3 waterbodies (Balloughstream\_010, Palmerstown\_010 & Turvey\_010) where status has not been assigned.
- ◆ There is an overall improvement in the status of one 2<sup>nd</sup> cycle Areas for Action waterbody across the catchment.<sup>8</sup>
- ◆ Of the 5 waterbodies within the 2<sup>nd</sup> Cycle Areas for Action which had status assigned, 4 experienced no change in status between Cycle 2 and Cycle 3 and Ballough Stream\_010 river waterbody experienced an improvement. The waterbody improvement was in the Rogerstown Estuary Areas for Action. The were no waterbody declines in any of the 2<sup>nd</sup> Cycle Areas for Action.

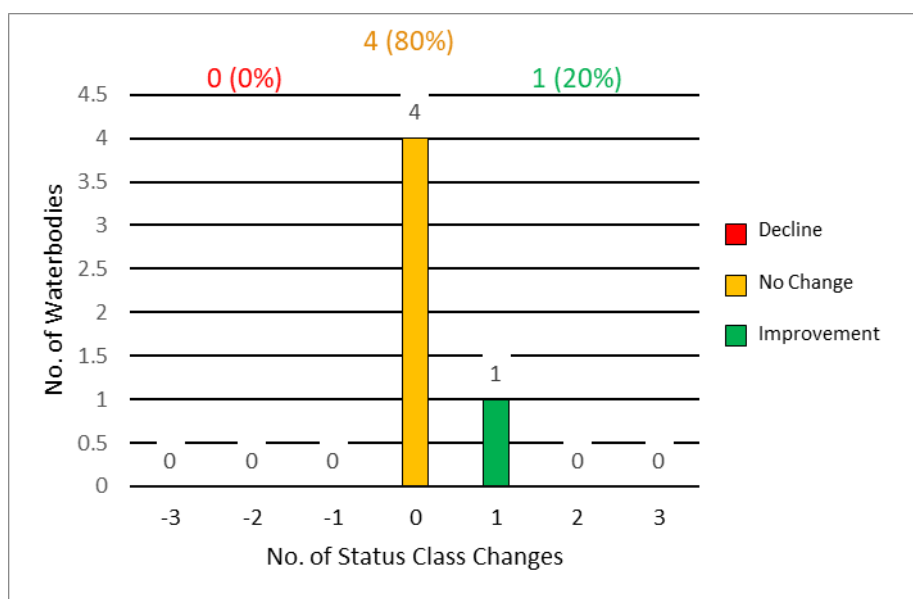


Figure 22: 2<sup>nd</sup> Cycle Areas for Action Waterbody Status Class Changes between Cycle 2 and Cycle 3

<sup>8</sup> 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.

### 8.3 Waterbody Risk in 2<sup>nd</sup> Cycle Areas for Action

- ◆ For the 8 waterbodies (all river waterbodies) in the 2<sup>nd</sup> Cycle Areas for Action, 7 (88%) of these are currently *At Risk* and 1 (13%) in *Review*.
- ◆ Figure 23 gives an overview of the breakdown of risk across waterbody types for both Cycle 2 and Cycle 3 in 2<sup>nd</sup> Cycle Areas for Action.
- ◆ Overall there is no change in the number of *At Risk* waterbodies in 2<sup>nd</sup> Cycle Areas for Action between Cycle 2 and Cycle 3.

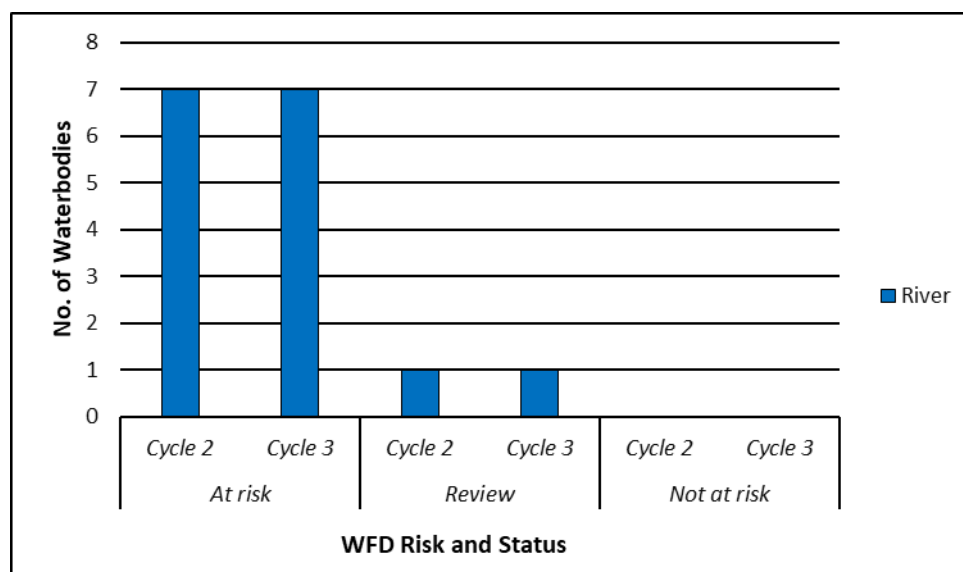
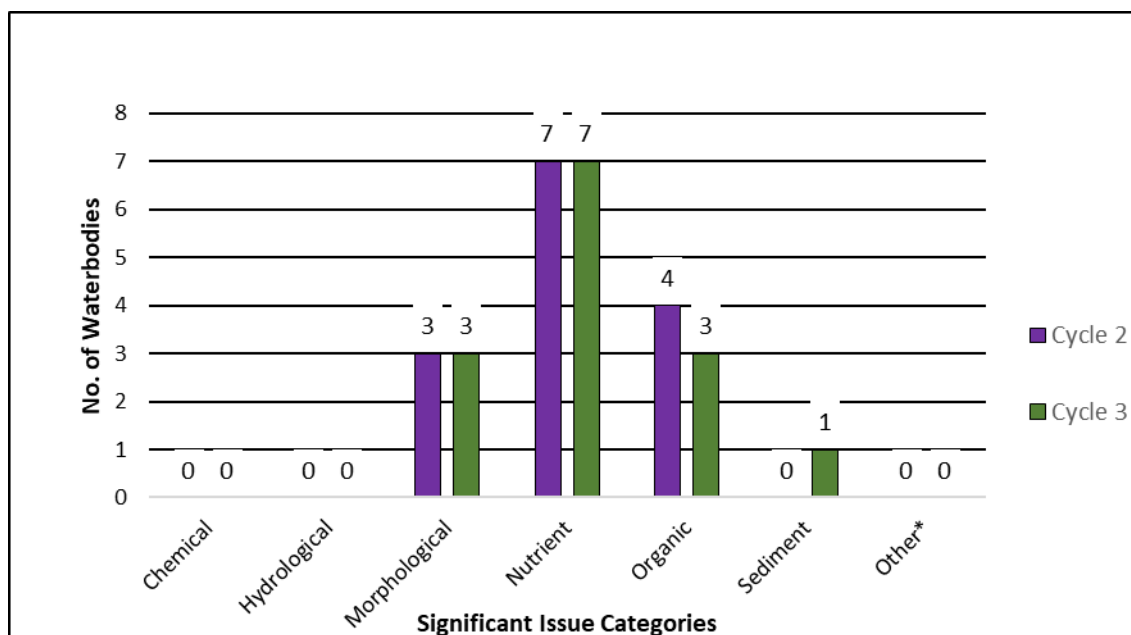


Figure 23: Number of waterbodies in each risk category in 2<sup>nd</sup> Cycle Areas for Action

### 8.4 Significant Issues in 2<sup>nd</sup> Cycle Areas for Action

- ◆ Based on the EPA assessment for Cycle 3, the significant issue in the 2<sup>nd</sup> Cycle Areas for Action is nutrient pollution impacting 7 all *At Risk* waterbodies (Figure 24). This is followed by organic pollution which is impacting 3 waterbodies (Broadmeadow\_020, Ballough Stream\_020 & Turvey\_010), morphological issues impacting 3 waterbodies (Broadmeadow\_020, Nanny (Meath)\_040 & Nanny (Meath)\_050) and sediment issues impacting 1 waterbody (Ballough Stream\_020).
- ◆ The number of 2<sup>nd</sup> Cycle Areas for Action waterbodies associated with nutrient and morphological significant issues remain the same between Cycle 2 and Cycle 3, organic pollution is impacting 1 less waterbody in Cycle, decreasing from 4 to 3. Sediment issues are now impacting 1 waterbody an increase from 0 in Cycle 2.



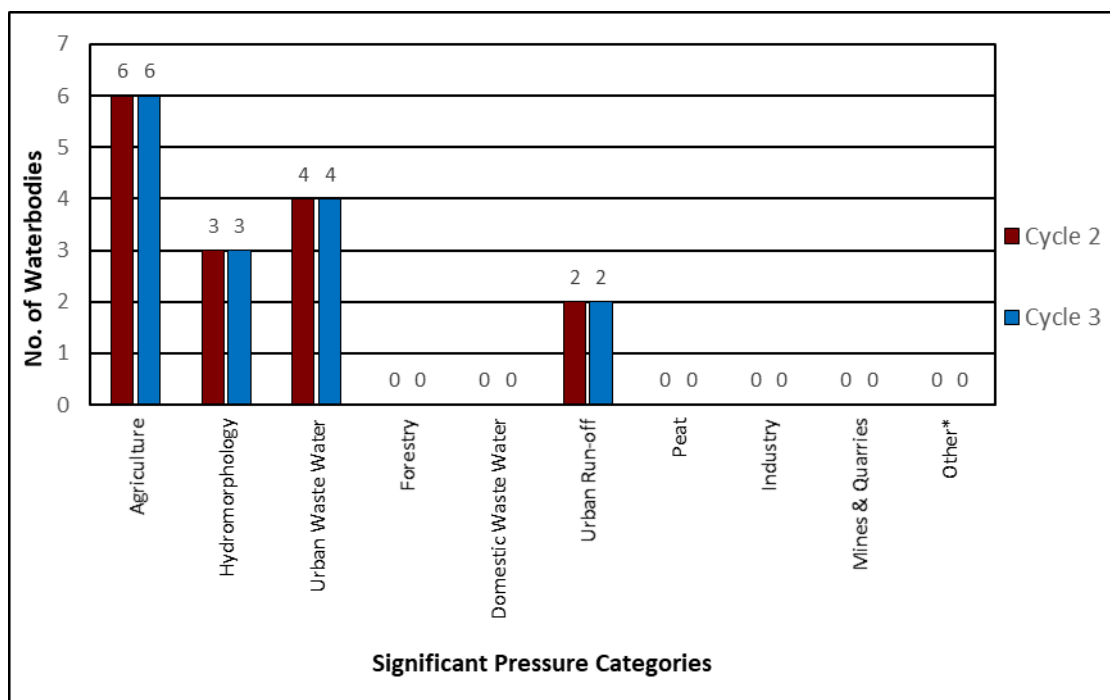
\*Other - Acidification, saline intrusion, elevated temperature, litter, microbiological pollution and unknown impacts have all been grouped into the "Other" issues category for the purpose of this report

Figure 24: Significant Issues across all 2<sup>nd</sup> Cycle Areas for Action Waterbodies

## 8.5 Significant Pressure in 2<sup>nd</sup> Cycle Areas for Action

- ◆ For Cycle 3, in 2<sup>nd</sup> Cycle Areas for Action waterbodies in the catchment the dominant significant pressures are:
  - Agriculture – 6 waterbodies (Ballyboghil\_010, Ballough Stream\_010, Ballough Stream\_020, Nanny (Meath)\_040, Nanny (Meath)\_050 & Turvey\_010) remain impacted in Cycle 3.
  - Hydromorphology – 3 waterbodies (Broadmeadow\_020, Nanny (Meath)\_040 & Nanny (Meath)\_050 remain impacted in Cycle 3.
  - Urban Waste Water - 3 waterbodies (Ballyboghil\_010, Broadmeadow\_020 & Ballough Stream\_020) are impacted in Cycle 3. Nanny (Meath)\_040 and Turvey\_010 which were impacted in Cycle 2 are no longer impacted by urban waste water however Ballyboghil\_010 has been added to the list in Cycle 3.
  - Urban Run-off – 2 waterbodies (Broadmeadow\_020 & Palmerstown\_010) remain impacted in Cycle 3.
- ◆ When comparing the significant pressures in the 2<sup>nd</sup> Cycle Areas for Action between Cycle 2 and 3 there has been no change in the number of waterbodies affected by each significant pressure category in the catchment.





\*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 25: Significant Pressures in 2<sup>nd</sup> Cycle Area for Action Waterbodies

## 9 3<sup>rd</sup> Cycle Recommended Areas for Action

### 9.1 Recommended Areas for Action Overview

- ◆ For the 3<sup>rd</sup> 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 3<sup>rd</sup> Cycle Plan is to capture all activity that is working to restore, improve and/or protect waterbodies.
- ◆ There are 10 Recommended Areas for Action, comprising of 35 waterbodies, selected for further characterisation and action in the catchment for the 3<sup>rd</sup> Cycle River Basin Management Plan. 30 of the 35 waterbodies in the 3<sup>rd</sup> Cycle Recommended Areas for Action are *At Risk*, 4 are in *Review* and 1 is *Not At Risk*. The 10 Recommended Areas for Action consist of 9 Areas for Restoration and 1 Area for Catchment Projects. LAWPRO are the proposed lead organisation in 5 Recommended Areas for Action, Meath County Council are the proposed lead in 3 Recommended Areas for Action. Fingal County and Meath County Council are the proposed joint leads on the Delvin Recommended Area for Action. GSI, EPA and Irish Water are the proposed joint lead in Bettystown Recommended Area for Action. The Recommended Areas for Action in the catchment are listed in Table 7 and shown in Figure 26. The reason for selecting each waterbody in a Recommended Areas for Action is provided in Appendix 3.

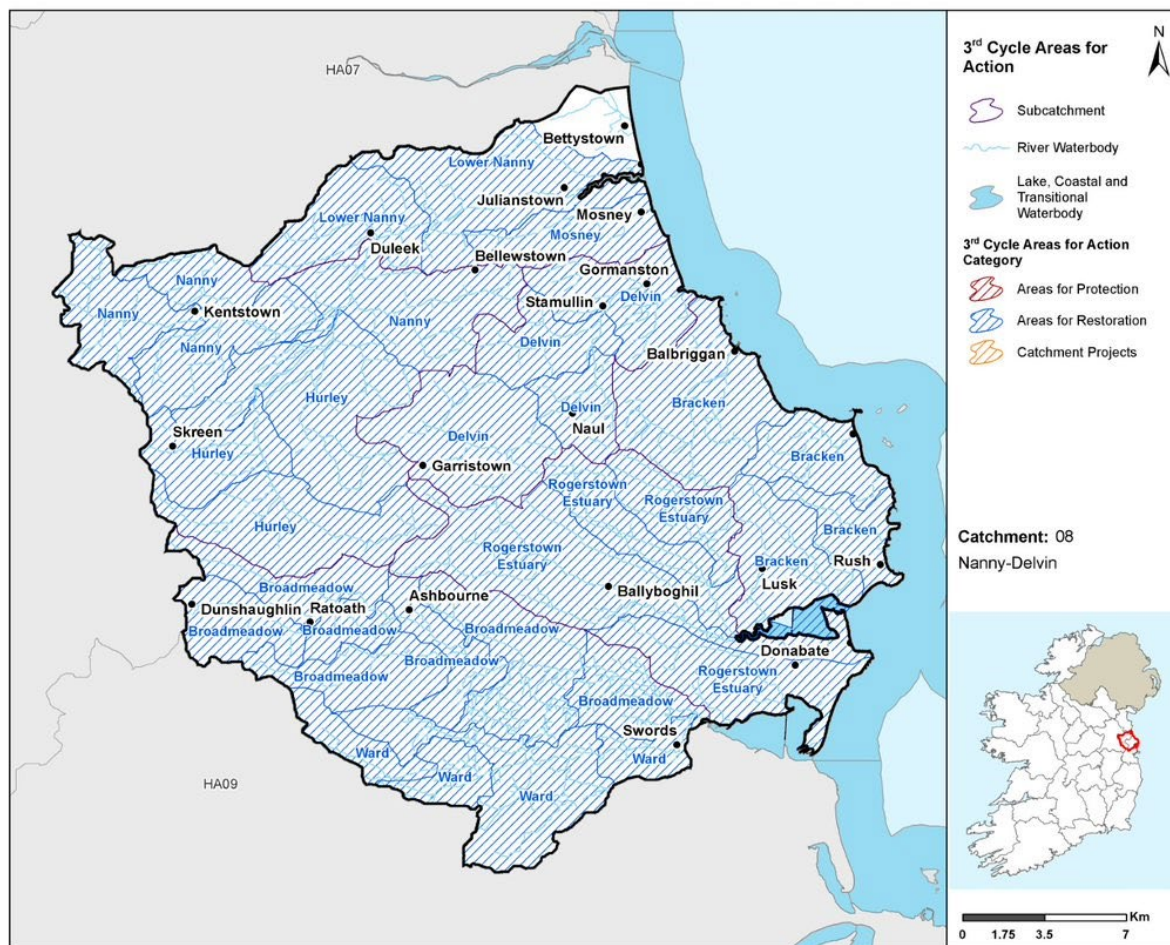


Figure 26: 3<sup>rd</sup> Cycle Recommended Areas for Action Locations

Table 7: 3<sup>rd</sup> Cycle Recommended Areas for Action Breakdown

3 <sup>rd</sup> Cycle Recommended Areas for Action	Number of Waterbodies	Recommended Areas for Action Category	Recommended Areas for Action Sub-category	Lead Organisation
<b>Rogerstown Estuary</b>	5	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
<b>Broadmeadow</b>	7	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
<b>Bracken</b>	4	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
<b>Delvin</b>	4	Restoration	LA Areas for Restoration Local Authorities	Fingal County Council and Meath County Council
<b>Nanny</b>	4	Restoration	LA Areas for Restoration Local Authorities	Meath County Council
<b>Hurley</b>	3	Restoration	LA Areas for Restoration Local Authorities	Meath County Council
<b>Mosney</b>	1	Restoration	LA Areas for Restoration Local Authorities	Meath County Council
<b>Lower Nanny</b>	2	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
<b>Ward</b>	4	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
<b>Bettystown GW</b>	1	Catchment Projects	Public Body Research	GSI and EPA and IW

## 10 Catchment Summary

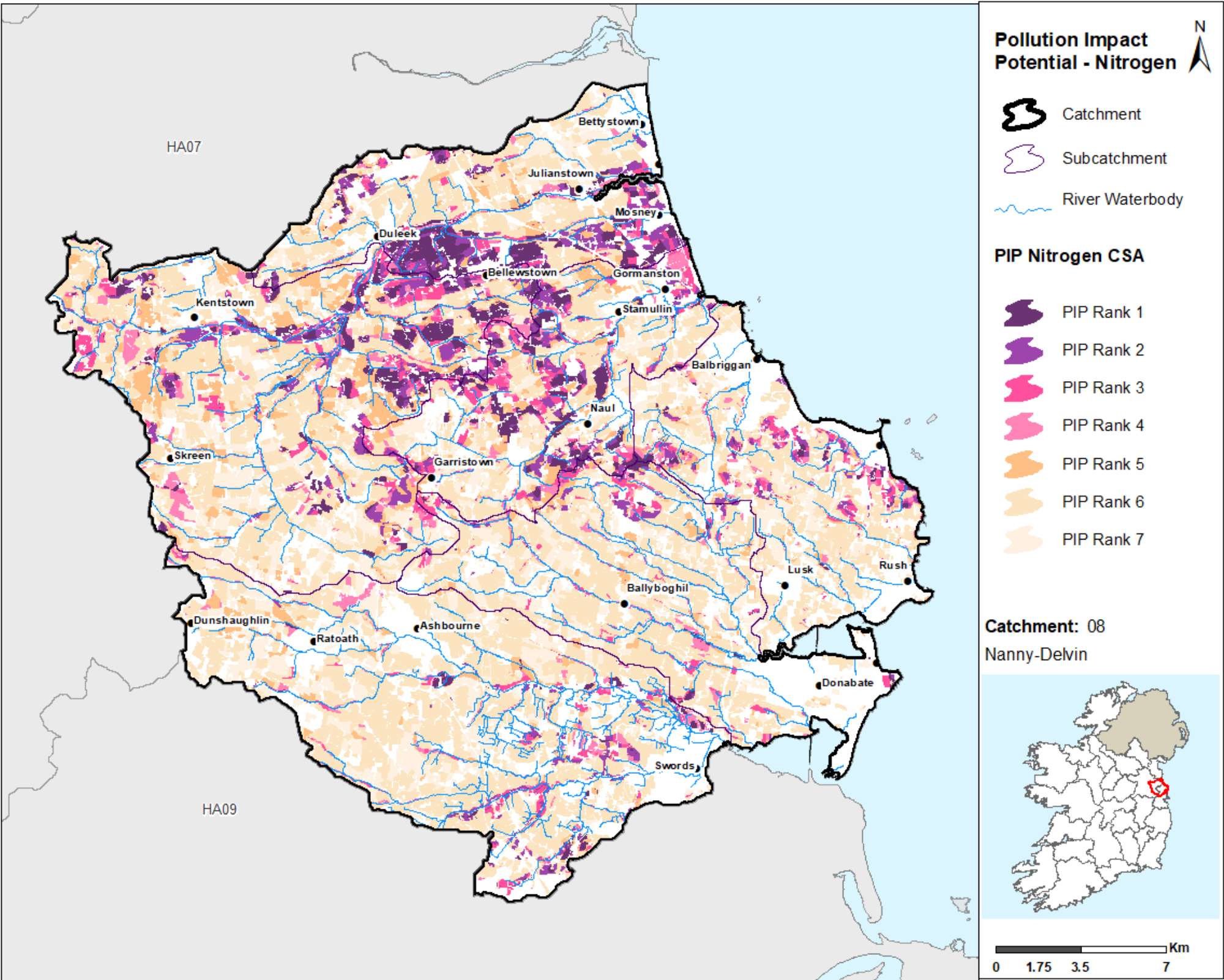
- Of the 34 river waterbodies, 28 are *At Risk* of not meeting their WFD objectives.
- 2 out of the 3 transitional waterbodies in the catchment are *At Risk* and impacted by eutrophication. Urban waste water, agriculture and domestic waste water are the significant pressures.
- 1 out of the 3 coastal waterbodies in the catchment is *At Risk* and impacted by eutrophication. Urban waste water is the significant pressure.
- There are 3 *At Risk* groundwater bodies out of 16.
- There has been an overall deterioration across the catchment with 34 waterbodies *At Risk* in Cycle 3 compared to 31 waterbodies *At Risk* in Cycle 2.
- The main significant issues are impacts from nutrient pollution, followed by organic pollution, morphological impacts and sediment issues.
- The main significant pressures are agricultural pressures followed by hydromorphological pressures urban waste water, domestic waste water and urban run-off.
- The main impacts and pressures driving the change between Cycle 2 and Cycle 3 are increases in waterbodies impacted by nutrient pollution particularly from agricultural sources, urban wastewater and domestic waste water. There has also been a notable increase in sediment issues.
- Between Cycle2 and Cycle 3 there was an increase in the number of waterbodies in all significant pressure categories with the exception of Urban waste water which reduced by four waterbodies.
- There was no change in the number of waterbodies *At Risk* in the 2<sup>nd</sup> Cycle Areas for Action since Cycle 2.
- There are 10 3<sup>rd</sup> Cycle Recommended Areas for Action for Cycle 3. They comprise of 35 waterbodies with 30 waterbodies *At Risk*, 4 in *Review* and 1 *Not At Risk*.

## Appendix 1

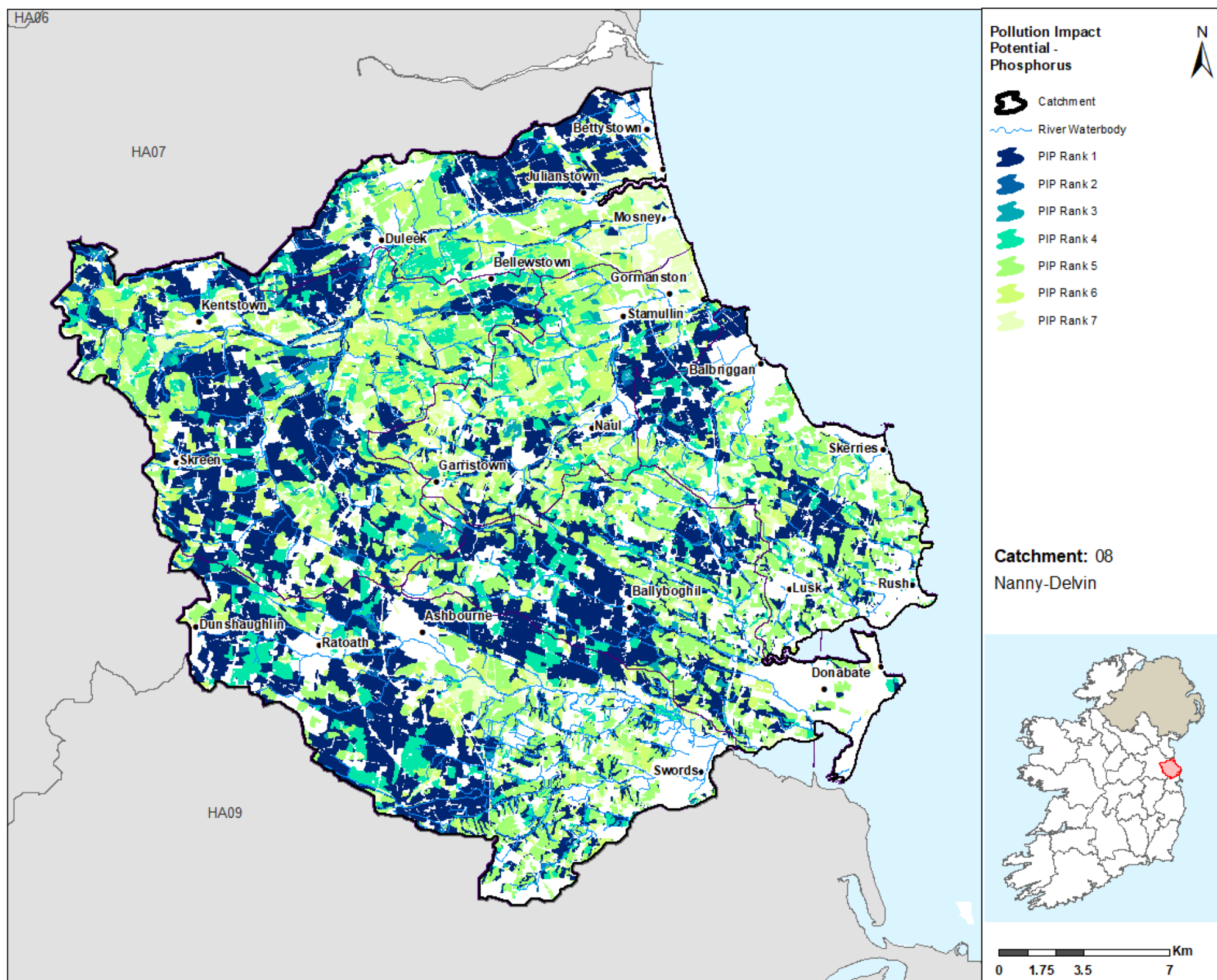
### High ecological status objective waterbodies

Waterbody Name	Waterbody Type	Waterbody Code	Status 2013-2018
Northwestern Irish Sea (HA 08)	Coastal	IE_EA_020_0000	High

Appendix 2  
Pollution Impact Potential Mapping







## Appendix 3

### Summary information on all waterbodies in the Nanny Delvin Catchment

Subcatchment Code	Waterbody Code	Waterbody Name	Waterbody Type	Risk 10-15	Risk 13-18	Status 10-15	Status 13-18	High Ecological Status Objective Waterbody	Significant Pressures	Recommended Areas for Action Name	Recommended Areas for Action (reasons for selection)
08_6	IE_EA_08B012200	BALLYBOGHIL_010	River	At risk	At risk	Poor	Poor	No	Ag, UWW	Rogerstown Estuary	existing PAA Ag, UWW significant pressures 2027 EO  NPWS IE0000208 - Rogerstown Estuary SAC Estuaries
08_3	IE_EA_08B020400	BROADMEADOW_010	River	At risk	At risk	Poor	Poor	No	Ag, Hymo, UR, UWW	Broadmeadow	Proposed by MH Ashbourne Urban was PAA in 2nd cycle but in reality, the work needed to improve status of Broadmeadow at Ashbourne is work needed in upstream catchment rather than immediate urban inputs. So some logic to adding upper Broadmeadow ( Ratoath and Dunshaughlin branch ) to PAA for LAWPRO. Previous MCC work and MMU work in 1st cycle, poorly drained soils, limited extent to which further Meath CC work might achieve improvements? Could be good case to see if LAWPRO / ASSAP approach can bring some new tools that can help.
08_3	IE_EA_08B020600	BROADMEADOW_020	River	At risk	At risk	Poor	Poor	No	Hymo, UR, UWW	Broadmeadow	Existing PAA _Ashbourne. To be expanded to take account of upstream WBs which contribute significant load to this WB. Expand PAA downstream to take account of other At risk WBs Renamed to Broadmeadow Ag, Hymo, URO, UWW all significant pressures 2027 EO.
08_3	IE_EA_08B020700	BROADMEADOW_030	River	At risk	At risk	Poor	Poor	No	Ag, DWW, Hymo	Broadmeadow	Linked to Ashbourne PAA 1) In addition to the Ashbourne PAA & the 4 WBs which input to it (suggested as PAA above), the remainder of the Broadmeadow River and the entirety of the Ward river, complete the catchment area of the Broadmeadow Estuary. In order to have a holistic approach, all waterbodies need to be targeted to affect an improvement in the status of the estuary
08_3	IE_EA_08B020800	BROADMEADOW_040	River	At risk	At risk	Poor	Poor	No	Ag, Hymo	Broadmeadow	Linked to Ashbourne PAA 1) In addition to the Ashbourne PAA & the 4 WBs which input to it (suggested as PAA above), the



											remainder of the Broadmeadow River and the entirety of the Ward river, complete the catchment area of the Broadmeadow Estuary. In order to have a holistic approach, all waterbodies need to be targeted to affect an improvement in the status of the estuary
08_6	IE_EA_08B031500	BALLOUGH STREAM_010	River	At risk	At risk	Unassigned	Unassigned	No	Ag	Rogerstown Estuary	Ag significant pressure  2027 EO Existing PAA - unassigned to undertake further characterisation in 3rd cycle
08_6	IE_EA_08B031600	BALLOUGH STREAM_020	River	At risk	At risk	Poor	Moderate	No	Ag, UWW	Rogerstown Estuary	existing PAA 2027 EO Ag, UWW significant pressures 2027 EO  NPWS IE0000208 - Rogerstown Estuary SAC Estuaries
08_2	IE_EA_08B310940	BALCUNNIN_010	River	Review	Review	Unassigned	Unassigned	No		Bracken	Expand to complete Sub catchment. Unassigned WB.
08_5	IE_EA_08B330980	BETAGHSTOWN_010	River	Review	Review	Unassigned	Unassigned	No			
08_1	IE_EA_08D010080	DELVIN_010	River	At risk	At risk	Poor	Poor	No	Ag, DWW, Hymo	Delvin	Proposed by MH Border catchment with Fingal, increasing MRP in recent years, high MRP in upper catchment, agri + MWWTPs suspected significant pressures. There are pressures in the lower catchment such as Stamullen WWTP and Section 4 discharges, however MRP is above EQS before Stamullen. Catchment investigations in 1st cycle by MMU. Catchment has probably received less attention from Meath CC as it's a border catchment so LAWPRO approach could be of benefit. If proposed area for action was to be reduced then focus on 2 uppermost waterbodies 010 and 020.
08_1	IE_EA_08D010250	DELVIN_020	River	At risk	At risk	Moderate	Moderate	No	Ag, Hymo, M+Q	Delvin	Proposed by MH Border catchment with Fingal, increasing MRP in recent years, high MRP in upper catchment, agri + MWWTPs suspected significant pressures. There are pressures in the lower catchment such as Stamullen WWTP and Section 4 discharges, however MRP is above EQS before Stamullen. Catchment investigations in 1st cycle by MMU. Catchment has probably received less attention from Meath CC as it's a border catchment so LAWPRO approach could be of benefit. If proposed area for action was to be reduced then focus on 2 uppermost waterbodies 010 and 020.
08_1	IE_EA_08D010300	DELVIN_030	River	Review	At risk	Unassigned	Unassigned	No	Ag, DWW, Ind	Delvin	Proposed by MH Border catchment with Fingal, increasing MRP in recent years, high MRP in upper catchment, agri + MWWTPs suspected significant pressures.

											There are pressures in the lower catchment such as Stamullen WWTP and Section 4 discharges, however MRP is above EQS before Stamullen. Catchment investigations in 1st cycle by MMU. Catchment has probably received less attention from Meath CC as it's a border catchment so LAWPRO approach could be of benefit. If proposed area for action was to be reduced then focus on 2 uppermost waterbodies 010 and 020.
08_1	IE_EA_08D010400	DELVIN_040	River	At risk	At risk	Poor	Poor	No	Ag, UWW	Delvin	Proposed by MH Border catchment with Fingal, increasing MRP in recent years, high MRP in upper catchment, agri + MWWTPs suspected significant pressures. There are pressures in the lower catchment such as Stamullen WWTP and Section 4 discharges, however MRP is above EQS before Stamullen. Catchment investigations in 1st cycle by MMU. Catchment has probably received less attention from Meath CC as it's a border catchment so LAWPRO approach could be of benefit. If proposed area for action was to be reduced then focus on 2 uppermost waterbodies 010 and 020.
08_3	IE_EA_08D030300	DUNSHAUGHLIN STREAM_010	River	Review	At risk	Good	Poor	No	Ag, DWW, Hymo	Broadmeadow	Proposed by MH Ashbourne Urban was PAA in 2nd cycle but in reality the work needed to improve status of Broadmeadow at Ashbourne is work needed in upstream catchment rather than immediate urban inputs. So some logic to adding upper Broadmeadow ( Ratoath and Dunshaughlin branch ) to PAA for LAWPRO. Previous MCC work and MMU work in 1st cycle, poorly drained soils, limited extent to which further Meath CC work might achieve improvements? Could be good case to see if LAWPRO / ASSAP approach can bring some new tools that can help.
08_3	IE_EA_08F010500	FAIRYHOUSE STREAM_010	River	At risk	At risk	Poor	Poor	No	Ag, DWW, Hymo	Broadmeadow	Proposed by MH Ashbourne Urban was PAA in 2nd cycle but in reality the work needed to improve status of Broadmeadow at Ashbourne is work needed in upstream catchment rather than immediate urban inputs. So some logic to adding upper Broadmeadow ( Ratoath and Dunshaughlin branch ) to PAA for LAWPRO. Previous MCC work and MMU work in 1st cycle, poorly drained soils, limited extent to which further Meath CC work might achieve improvements? Could be good case to see if LAWPRO / ASSAP approach can bring some new tools that can help.
08_4	IE_EA_08F050930	FLEMINGSTOWN (Meath)_010	River	Review	Review	Unassigned	Unassigned	No		Nanny	complete sub-catchment

08_4	IE_EA_08H010200	HURLEY_010	River	At risk	At risk	Moderate	Moderate	No	Ag, Hymo	Hurley	At risk WB 2027 EO Ag; hymo significant pressure
08_4	IE_EA_08H010280	HURLEY_020	River	Review	Not at risk	Good	Good	No		Hurley	To complete sub-catchment
08_4	IE_EA_08H010400	HURLEY_030	River	At risk	At risk	Moderate	Moderate	No	Ag, Hymo, Other	Hurley	At risk WB 2027EO Ag; UWW significant pressure
08_2	IE_EA_08M010900	MATT_010	River	At risk	At risk	Unassigned	Unassigned	No	Hymo, UR	Bracken	Ballbriggan regeneration scheme; community involvement. Hymo and Urban runoff significant pressures. 2027 EO
08_5	IE_EA_08M020100	MOSNEY_010	River	At risk	At risk	Poor	Poor	No	Ag, DWW, UR	Mosney	To complete sub catchment Beyond 2027 Toxic impacts
08_2	IE_EA_08M030500	MILL STREAM (SKERRIES)_010	River	At risk	At risk	Unassigned	Unassigned	No	UR	Bracken	To complete Sub catchment - At risk WB. Urban runoff significant pressure 2027 EO
08_4	IE_EA_08N010110	NANNY (MEATH)_010	River	At risk	At risk	Poor	Poor	No	Ag, DWW, Hymo, UWW	Nanny	Catchment has been subject to a lot of MCC efforts in previous cycles, lot of pressures in catchment, not an easy one to improve but a lot of work already there and familiarity with issues. Some improvements seen up to 2015 in phys-chem in upper catchment. Kentstown WWTP has improved since 2016, some further improvements since 2019 but will remain a pressure prone to overflows. Not much focus previously in section from 08N010110 to 08N010280 and 08N010400 on land use pressures. Some intensive agri also.
08_4	IE_EA_08N010280	NANNY (MEATH)_020	River	At risk	At risk	Poor	Moderate	No	Ag, Hymo, UWW	Nanny	Catchment has been subject to a lot of MCC efforts in previous cycles, lot of pressures in catchment, not an easy one to improve but a lot of work already there and familiarity with issues. Some improvements seen up to 2015 in phys-chem in upper catchment. Kentstown WWTP has improved since 2016, some further improvements since 2019 but will remain a pressure prone to overflows. Not much focus previously in section from 08N010110 to 08N010280 and 08N010400 on land use pressures. Some intensive agri also.
08_4	IE_EA_08N010400	NANNY (MEATH)_030	River	At risk	At risk	Unassigned	Moderate	No	Ag, Hymo, Ind	Nanny	Catchment has been subject to a lot of MCC efforts in previous cycles, lot of pressures in catchment, not an easy one to improve but a lot of work already there and familiarity with issues. Some improvements seen up to 2015 in phys-chem in upper catchment. Kentstown WWTP has improved since 2016, some further improvements since 2019 but will remain a pressure prone to overflows. Not much focus previously in section from 08N010110 to

											08N010280 and 08N010400 on land use pressures. Some intensive agri also.
08_5	IE_EA_08N010500	NANNY (MEATH)_040	River	At risk	At risk	Moderate	Moderate	No	Ag, Hymo	Lower Nanny	existing PAA - transition strategy 2022 Ag, Hymo, UWW significant pressures Poor drainage - beyond 2027  MH to work in upstream WBs IFI no reason given
08_5	IE_EA_08N010700	NANNY (MEATH)_050	River	At risk	At risk	Poor	Poor	No	Ag, Hymo	Lower Nanny	existing PAA - transition strategy 2022 Ag, Hymo significant pressures Poor drainage - beyond 2027  IFI no reason given
08_2	IE_EA_08P030930	PALMERSTOWN_010	River	Review	Review	Unassigned	Unassigned	No		Bracken	To complete subcatchment. Uassigned WB Formerly in Roigerstown Estuary PAA but moved to new PAA as within the same Sub - catchment  NPWS IE0000208 - Rogerstown Estuary SAC Estuaries
08_3	IE_EA_08R010150	RATOATH STREAM_010	River	At risk	At risk	Poor	Poor	No	Ag, DWW, Hymo, UR	Broadmeadow	Proposed by MH Ashbourne Urban was PAA in 2nd cycle but in reality the work needed to improve status of Broadmeadow at Ashbourne is work needed in upstream catchment rather than immediate urban inputs. So some logic to adding upper Broadmeadow ( Ratoath and Dunshaughlin branch ) to PAA for LAWPRO. Previous MCC work and MMU work in 1st cycle, poorly drained soils, limited extent to which further Meath CC work might achieve improvements? Could be good case to see if LAWPRO / ASSAP approach can bring some new tools that can help.
08_6	IE_EA_08T020700	TURVEY_010	River	At risk	At risk	Unassigned	Unassigned	No	Ag, UR	Rogerstown Estuary	Existing PAA - unassigned to undertake further characterisation in 3rd cycle 2027 EO Ag,URO,UWW significant pressures
08_3	IE_EA_08W010050	WARD_010	River	Review	Review	Unassigned	Unassigned	No		Ward	Separate PAA within 08_3 subcatchment. Headwaters
08_3	IE_EA_08W010070	WARD_020	River	At risk	At risk	Poor	Moderate	No	Ag, Hymo, UWW	Ward	Separate PAA within 08_3 subcatchment. Ag, Hymo, UWW significant pressures 2027 EO
08_3	IE_EA_08W010300	WARD_030	River	Review	At risk	Good	Moderate	No	Ag, Other, UR, UWW	Ward	Separate PAA within 08_3 subcatchment. Ag, other, URO, UWW significant pressures 2027 EO
08_3	IE_EA_08W010610	WARD_040	River	At risk	At risk	Poor	Poor	No	Hymo, UR	Ward	Separate PAA within 08_3 subcatchment. Ag, Hymo, UWW significant pressures 2027 EO

07_17, 08_1, 08_2, 08_5, 08_6, 09_17	IE_EA_020_0000	Northwestern Irish Sea (HA 08)	Coastal	Review	Not at risk	Good	High	Yes			
08_2	IE_EA_040_0000	Rockabill	Coastal	Not at risk	Review	Unassigned	Unassigned	No			
08_6, 09_17	IE_EA_060_0000	Malahide Bay	Coastal	At risk	At risk	Moderate	Moderate	No	UWW		
08_5	IE_EA_030_0100	Nanny Estuary	Transitional	Review	Review	Unassigned	Unassigned	No			
08_2, 08_6	IE_EA_050_0100	Rogerstown Estuary	Transitional	At risk	At risk	Bad	Bad	No	Ag, DWW	Rogerstown Estuary	Expand existing PAA to include the estuary. Nitrate issues being addressed in inputting WBs.  Ag, DWW significant pressures 2027 EO
08_3, 08_6, 09_17	IE_EA_060_0100	Broadmeadow Water	Transitional	At risk	At risk	Moderate	Poor	No	DWW, UWW		
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, 08_4, 08_5, 09_10, 09_3, 09_7, 09_9, 14_14, 14_16, 14_3	IE_EA_G_002	Trim	Groundwater	At risk	At risk	Good	Good	No	Ag, DWW, 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			
08_2, 08_3, 08_6, 09_10, 09_17, 09_4	IE_EA_G_011	Swords	Groundwater	Not at risk	Not at risk	Good	Good	No			
08_1, 08_2, 08_4, 08_5	IE_EA_G_012	Duleek	Groundwater	Review	Not at risk	Good	Good	No			
07_19, 08_1, 08_2, 08_3, 08_4, 08_6, 09_10	IE_EA_G_014	Lusk-Bog of the Ring	Groundwater	Not at risk	Review	Good	Good	No			
07_1, 07_17, 08_4, 08_5	IE_EA_G_016	Bettystown	Groundwater	At risk	At risk	Poor	Poor	No	Ag, M+Q	Bettystown GW	The GWB has deteriorated in status due to abstraction pressures. These are likely to be represened in other areas of the country in the future.  GSI are conducting research (together with EPA hydrometrics and IW) into the absraction

											pressures and groundwater resources in this GWB. A PAA status would allow this already existing work to be highlighted via the WFD process.
											Deteriorated waterbody; GWB has deteriorated in status due to abstraction pressures. Build on existing programmes and community group initiatives.
07_1, 07_19, 08_4, 08_5	IE_EA_G_020	Realtage	Groundwater	Review	Not at risk	Good	Good	No			
07_1, 07_15, 07_17, 08_4, 08_5	IE_EA_G_021	Donore	Groundwater	Review	Not at risk	Good	Good	No			
06_14, 07_1, 07_15, 07_17, 08_5	IE_EA_G_025	Drogheda	Groundwater	Review	Not at risk	Good	Good	No			
07_1, 07_19, 08_4	IE_EA_G_028	Hill of Tara	Groundwater	Review	Not at risk	Good	Good	No			
07_19, 07_20, 08_3, 09_10	IE_EA_G_031	Dunshaughlin	Groundwater	Not at risk	Not at risk	Good	Good	No			
08_1, 08_2, 08_6	IE_EA_G_033	Hynestown	Groundwater	Review	Not at risk	Good	Good	No			
08_1, 08_2	IE_EA_G_039	Balbriggan	Groundwater	Review	Not at risk	Good	Good	No			
08_2	IE_EA_G_043	Balrothery	Groundwater	Review	Not at risk	Good	Good	No			
08_3	IE_EA_G_062	Industrial Facility (P0014-03)	Groundwater	At risk	At risk	Poor	Poor	No	Ind		
08_2	IE_EA_G_088	Waste Facility (W0009-02)	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.